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**THE INFLUENCE OF SERVICE QUALITY ON SATISFACTION AND BEHAVIORAL INTENTIONS OF FOOTBALL SPECTATORS: A STUDY IN PERNAMBUCO FOOTBALL****A INFLUÊNCIA DA QUALIDADE DE SERVIÇOS NA SATISFAÇÃO E NAS INTENÇÕES COMPORTAMENTAIS DE ESPECTADORES DO FUTEBOL: UM ESTUDO NO FUTEBOL PERNAMBUCANO**

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**RESUMO**

O objetivo deste estudo foi examinar a influência da percepção da qualidade do serviço na satisfação e nas intenções comportamentais dos espectadores do Campeonato de Futebol Profissional de Pernambuco de 2017 - Brasil. Os dados foram coletados em dia de jogos, a partir de um questionário adaptado, composto por quatro variáveis. A amostra foi composta por espectadores da competição, dividida em dois momentos (1º. n=386 / 2º. n= 620). Os dados foram analisados através da análise de equações estruturais de duas etapas no AMOS 24. Após o refinamento do modelo, os resultados do modelo estrutural [ $\chi^2(314) = 762,849$  ( $p < .001$ )  $\chi^2/df = 2,42$ ; GFI = .92; CFI = .95; RMSEA = .05] indicaram que a performance dos jogadores influenciou positivamente tanto a satisfação ( $\beta = .76$ ,  $p < .001$ ) quanto as intenções comportamentais ( $\beta = .33$ ,  $p < .001$ ). Por sua vez, a experiência como torcedor influenciou de forma positiva unicamente as intenções comportamentais dos espectadores ( $\beta = .38$ ,  $p < .001$ ). Conclui-se que para o clube prestar um serviço de qualidade, bem avaliado por parte dos espectadores, principalmente em relação aos aspectos do jogo/jogadores é um caminho para satisfazê-los e gerar intenções comportamentais positivas.

**Palavras-chave:** Marketing. Comportamento do consumidor. Gestão da qualidade.

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**ABSTRACT**

The aim of this study was to examine the influence of service quality perception on spectators' satisfaction and behavioral intentions in the Pernambuco Professional Football Championship of 2017 - Brazil. Data were collected on match days, using an adapted questionnaire, consisting of four variables. The sample was composed of spectators at the competition, divided into two moments (1st. n = 386 / 2nd. n = 620). The data were analyzed through two-step structural equation modeling in AMOS 24. After the refinement of the model, the results of the structural model [ $\chi^2(314) = 762.849$  ( $p < .001$ )  $\chi^2 / df = 2.42$ ; GFI = .92; CFI = .95; RMSEA = .05] indicated that the players' performance positively influenced both satisfaction ( $\beta = .76$ ,  $p < .001$ ) and behavioral intentions ( $\beta = .33$ ,  $p < .001$ ). In turn, the crowd experience had a positive influence only on the spectators' behavioral intentions ( $\beta = .38$ ,  $p < .001$ ). It is concluded that provision of service quality, positively evaluated by the spectators, especially in relation to the aspects of the game/players, is a way for the club to satisfy them and generate positive behavioral intentions.

**Keywords:** Marketing. Consumer behavior. Quality management.

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**Introduction**

Football is a business with a high economic impact<sup>1,2</sup>. Evidence of this can be seen in the FIFA Global Transfer Market Report<sup>3</sup>, which showed values of international transfers in 2019 of USD 7.35 billion, 5.8% more than in 2018. The European football market continues to increase in revenue terms, reaching €28.4 billion for 2017/18<sup>4</sup>. In 2018, the Brazilian football industry generated a 0.72% impact on the Brazilian Gross Domestic Product (GDP), moving R\$ 52.9 billion, of which R\$ 11.0 billion were directly<sup>5</sup>. Besides the economic dimension already mentioned, football attendance has been verified as one of the main leisure and entertainment activities of contemporary society<sup>6,7</sup>.

In this sense, from the perspective of football clubs, achieving a good average spectator attendance at their games should be an organizational goal since this is an important

source of direct and indirect revenue<sup>8</sup>. On the other hand, for fans, going to the games is one of the main manifestations of support for their club. Therefore, it is important to mention that one of the factors influencing the positive behavior of spectators is the consumer experience quality on the match day<sup>9</sup>. According to Yoshida<sup>10</sup>, experience quality is defined as the sport consumers judgment about the excellence or superiority of the total experience, based on their direct and indirect interactions with a sports organization and other consumers, evidenced through multiple factors.

In Brazil, holding a 2014 FIFA World Cup has made the country a protagonist in the world of football. Thus, an expectation and favorable environment were created for changes related to modernization and the provision of service quality in sporting events. However, the reality nowadays is that several faults are still observed in the clubs' management models, especially when dealing with the theme of services provided to the spectators on game days. More specifically, in the *Campeonatos Estaduais*, responsible for the development of football and for a long time the main championships in the country<sup>11</sup>, there is a current reduction in the average public attendances and stadium occupation rates<sup>6,12</sup>. This is a worrying scenario, which may be related to the services offered by sports clubs on match days, as the presence of spectators in the stadium represents an increase in club revenues. Therefore, analyzing the service quality in these competitions could offer clubs relevant information about the impact of this construct on the presence of fans in the stadium.

Several studies have suggested that a good perception of the service consumed is associated with satisfaction<sup>13,14</sup> and positive behavioral intentions of spectators regarding sporting events<sup>15,16</sup>. However, one gap in the literature is the study of the influence of service quality on satisfaction and behavioral intentions together. In addition, it has been evidenced that this relationship is strongly influenced by the cultural context in which the research was applied<sup>14,17</sup>, demonstrating the need for these kinds of studies in other cultural and geographical contexts<sup>13,18</sup>. Therefore, there is a need to analyze the consequences (*i.e.* satisfaction and behavioral intentions) jointly in a football championship in Brazil.

Thus, although some evidence is already available in the literature on global sports marketing, in Brazil there are few studies and little scientific evidence on this theme. In this sense, the purpose of the current study was to examine the influence of service quality perception on spectators' satisfaction and behavioral intentions, in the Pernambuco Professional Football Championship of 2017 - Brazil.

## Methods

### *Instrument*

The instrument used was an adapted questionnaire proposed by Biscaia et al.<sup>16</sup> consisting of four sections: 1. service quality; 2. satisfaction; 3. behavioral intentions; and 4. demographics. This scale was chosen for two main reasons: (I) it was applied in Portuguese (Brazil official language) and (II) it was developed in the context of professional football (Portugal). The model evaluates the service quality variable from ten first-order constructs: player performance, opponent characteristics, referees, frontline employees, facility access, seat space, security, facility design, game atmosphere, and crowd experience. It should be noted that the dimensions composing the model agree with the Brazilian cultural context. Each dimension of the service quality was evaluated from three items (Total = 30 items), satisfaction from three items, and behavioral intentions from four items. All items were measured on a seven-point Likert scale (1 = Strongly disagree, not satisfied, not likely at all, to 7 = Strongly agree, extremely satisfied, and extremely likely).

Regarding the content validity of the questionnaire, despite being in the Portuguese language, some adaptations were necessary due to the differences between the Portuguese

used in Brazil and in Portugal. This process was conducted by a panel of experts composed of two Brazilian university professors with experience in questionnaire content validity and three members of a research group in sport management, all previously informed with respect to the study purpose and the description of each dimension and their respective items. Following this, the items were randomly placed in a questionnaire for the data collection. It is important to explain that a refined questionnaire was applied at the second moment of data collection, described later.

### *Participants and data collection*

To test the validity and reliability of the measurement model in the Brazilian football context, a first data collection was performed. For the sample size definition, the item-to-response ratio proposed by Hinkin<sup>19</sup> was used, ranging from 1:4-1:10, to perform a factor analysis. Data were collected during seven matches randomly selected from the Pernambuco Professional Football Championship of 2016. The selected matches were played at different points throughout the competition (*i.e.* qualifying phase (n=3) and semifinals and finals (n=4)). During the qualifying phase the disputes were between teams from the capital against teams from the inland cities, while in the final phase, all matches were played by teams from the capital, popularly known as “derbies”. Regarding the facilities, the selected matches were played in the stadiums of the three teams from the capital (*i.e.* *Arena de Pernambuco* = 2; *Ilha do Retiro* = 2; *Arruda* = 3).

Prior to the start of the game, a team of seven researchers and a supervisor were placed next to the stadium gates and ticket office to collect the data. Spectators were approached and asked if they would participate in the study, after which they received and answered the questionnaire. A total of 527 questionnaires were applied using a convenience sampling method. As an inclusion criterion, it was established that the spectator needed to have attended at least one game in the current season because of the need for cumulative experience of past games. Exclusion criteria were defined as: incomplete questionnaires and the same answer on more than 10 consecutive items. After the eliminations, a final number of 386 questionnaires was considered valid, with a response rate of 73.2%.

A second moment of data collection was performed with the purpose of identifying the influence of the service quality on the satisfaction and spectators' behavioral intentions. The same pattern was followed as established in the first moment, regarding the procedures of collection and sample definition. However, for the second collection, 12 matches of the following season (year 2017) of the same championship were randomly selected (*i.e.* qualifying phase (n=10) and semifinals and finals (n=2)). As in the first data collection, the matches of the qualifying phase were played between clubs in the capital and inland, and in the finals the local derbies. With respect to the stadiums, the matches were distributed as follows (*Arena de Pernambuco* = 6; *Ilha do Retiro* = 3; *Arruda* = 3). A total of 784 questionnaires were collected, of which 164 were excluded due to the previously detailed exclusion criteria. Therefore, a response rate of 79% was obtained, which is equivalent to a sample of 620 spectators.

In the two data collection phases, all participants involved signed a free and informed consent form, in accordance with the rules established by the Ethics and Research Committee of the University of Pernambuco, to which the study was submitted and approved (Legal Opinion CEP/UPE: 124108/2015).

### *Data analysis*

A two-step maximum likelihood structural equation model (SEM) was performed using the statistical software AMOS 24.0<sup>20</sup>. In step one, a confirmatory factor analysis (CFA) was conducted to assess the measurement model. Several goodness of fit measures were

adopted, including: The ratio of chi-square to its degrees of freedom ( $\chi^2/df$ ), Comparative fit index (CFI), Goodness-of-fit index (GFI), and Root mean square error of approximation (RMSEA). Internal consistency of the constructs was estimated through Cronbach's alpha coefficients using SPSS 24.0 and composite reliabilities (CR). Convergent validity was evaluated through the average variance extracted (AVE) and discriminant validity was established when AVE for each construct exceeded the squared correlations between that construct and any other<sup>21</sup>. Second, the SEM was estimated to test the research hypotheses. The statistical significance was assumed at a  $p < 0.05$  level.

## Results

### *Preliminary analysis*

In the preliminary analysis, severe outliers identified from the visual diagnostic with boxplots were excluded. The absence of multicollinearity was attested by the values of the Variance Inflation Factor (VIF)  $< 5$ <sup>20</sup>. With respect to normality of data distribution, the Mardia's coefficient values were 158.78 (Sample 1) and 245.84 (Sample 2), indicating departures from normality. However, according to Maroco<sup>20</sup> these tests are very sensitive for large sample sizes, so are infrequently used in applications of SEM. Alternatively, for the same author, if all manifest variables present skewness (sk) and kurtosis (ku) close to 0, it is assumed that the assumption of multivariate normality is plausible. Thus, skewness values for all items were less than 2.0 and kurtosis values were less than 5.0. Consequently, according to Kline<sup>22</sup>, the assumption of multivariate normality is plausible. It should be noted that these analyzes were tested for both samples and the results were considered acceptable for the literature.

### *Characteristics of spectators*

Considering the sample, the majority were men, aged between 18 and 66 years of age. In terms of educational level, the majority had completed higher education, were fan club members, and had attended more than five games in the season. Table 1 summarizes the characteristics of the participants from the two samples.

**Table 1.** Sample characteristics

Characteristics	2016		2017		
	Mean	SD	Mean	SD	
Age	32.40	11.36	34.70	13.97	
	<b>N (386)</b>	<b>%</b>	<b>N (620)</b>	<b>%</b>	
Sex	Male	341	88.3	519	83.7
	Female	45	11.7	101	16.3
Education	Middle School	8	2.1	18	2.9
	High School	120	31.1	221	35.9
	Higher Education	258	66.8	377	61.2
Fan club membership	Yes	278	72.0	437	70.5
	No	108	28.0	181	29.2
Games in season	1	12	3.1	85	13.8
	2	18	4.7	67	10.9
	3 – 5	67	17.4	161	26.2
	More than 5	289	74.9	302	49.1

**Note:** SD = Standard deviation

**Source:** The authors

### *Measurement model*

The results of the CFA showed a poor fit to the data [ $\chi^2 (563) = 1088,307 (p < .001)$ ,  $\chi^2/df = 1.93$ , GFI = .87, CFI = .98, RMSEA = .49. Additionally, the AVE values for facility

access, security, and seat space were lower than the squared correlations, indicating lack of discriminant validity. Based on this evidence, the items with the highest factorial weight of each dimension and according to the item content were selected and merged into a single dimension labeled facility functions. This finding is consistent with prior studies suggesting that the functional quality factors can be divided into frontline employees and facility functions<sup>23,24</sup>.

All AVE values were close to or greater than the 0.50 standard for convergent validity<sup>21</sup>. However, the AVE values for opponent characteristics (.46), crowd experience (.47), and game atmosphere (.38) were below the suggested standard. The first two dimensions were maintained in the model as the AVE value was only marginally below. In turn, the game atmosphere was excluded due to lack of convergent validity.

As shown in Table 2, after these refinement procedures, the results of the final measurement model showed an acceptable fit to the data [ $\chi^2(314) = 622,546$  ( $p < .001$ ),  $\chi^2/df = 1.98$ ; GFI = .90; CFI = .94; RMSEA = .05]. The final model included a total of 28 items, with three items representing satisfaction and each service quality dimension (*i.e.* player performance, opponent characteristics, referees, frontline employees, facility functions, facility design, crowd experience), and four items representing behavioral intention measures. All item factor loadings ranged from 0.61 to 0.90, higher than the cut-off point of 0.50<sup>25</sup>. Cronbach's alpha coefficients were satisfactory ( $\alpha \geq 0.70$ ) for all scales, ranging from 0.70 to 0.87, demonstrating good levels of internal consistency<sup>26</sup>. Additionally, composite reliability values were all above the suggested .70 cut-off point, ranging from 0.72 to 0.88. Finally, the decrease in MECVI shows that the refined model has greater stability in the investigated population<sup>20</sup>.

**Table 2.** Factor loadings ( $\lambda$ ), Cronbach's alpha ( $\alpha$ ), composite reliabilities (CR), and average variance extracted (AVE)

Dimensions	$\lambda$	$\alpha$	CR	AVE
<b>Player performance</b>		.81	.81	.58
My team gives 100% every game	.728			
Players on my team have superior skills	.794			
My team plays hard all the time	.767			
<b>Opponent characteristics</b>		.70	.72	.46
Opposing teams have good win/lose records	.619			
Opposing teams have star players	.756			
Opposing teams are high quality teams	.650			
<b>Referees</b>		.82	.82	.61
The referees are credible	.782			
The referees are honest in applying the rules of the game	.821			
The referees correctly apply the rules of the game	.735			
<b>Frontline employees</b>		.85	.85	.66
The attitude of the employees at the stadium shows that they understand my needs	.831			
The employees at the stadium respond quickly to my needs	.765			
I can rely on the stadium employees taking actions to address my needs	.844			
<b>Facility functions</b>		.76	.77	.52
Signs at the stadium help me know where I am going	.767			
The stadium provides comfortable seats	.640			
Entrances and exits at the stadium are made safely	.758			
<b>Facility design</b>		.81	.81	.59
The stadium is attractive	.787			
The stadium's architecture gives it an attractive character	.697			
The stadium is decorated in an appealing way	.811			

Continuing Table 2...

Dimensions	$\lambda$	$\alpha$	CR	AVE
<b>Crowd experience</b>		.72	.73	.47
Being surrounded by thousands of fans at a game is a great experience	.629			
The crowd energy that I feel at games gets me excited	.786			
To hear the crowd cheer is fun	.639			
<b>Satisfaction</b>		.87	.88	.71
Degree of satisfaction with my team's games	.835			
Expectations fulfillment relating to my team's games	.893			
Comparison of my team's games with ideal games	.790			
<b>Behavioral intention</b>		.86	.86	.62
The probability that I will attend more games of my team	.786			
The likelihood that I would recommend my team games to other people	.905			
If I had to attend prior games again, I would make the same choice	.735			
Intention to buy other products and services from my team	.699			

Source: The authors

Descriptive statistics of the measures and their correlations are reported in table 3. Crowd experience had the highest mean score ( $M = 6.13$ ,  $SD = 0.95$ ), followed by facility design ( $M = 5.24$ ,  $SD = 1.35$ ) and player performance ( $M = 4.97$ ,  $SD = 1.20$ ). Regarding the satisfaction and behavioral intentions, the consequence with the highest average was the behavioral intentions ( $M = 6.20$ ,  $SD = 1.00$ ). All correlations between service quality dimensions and satisfaction were statistically significant at the 0.05 level, and the dimensions of player performance ( $r = .683$ ) showed strong positive correlations. On the other hand, in terms of behavioral intentions, three dimensions were not significantly correlated, the dimensions of crowd experience ( $r = .482$ ) and satisfaction ( $r = .457$ ) showed a moderate positive correlation.

**Table 3.** Descriptive statistics and correlation matrix

		Correlation Matrix									
	M	SD	1	2	3	4	5	6	7	8	9
1	4.97	1.20	1.00								
2	3.60	1.21	.347**	1.00							
3	3.36	1.34	.207**	.502**	1.00						
4	4.23	1.38	.232**	.425**	.326**	1.00					
5	4.18	1.38	.156**	.384**	.219**	.649**	1.00				
6	5.24	1.35	.128*	.095	.032	.397**	.433**	1.00			
7	6.13	0.95	.276**	.119*	.045	.242**	.156**	.315**	1.00		
8	5.17	1.17	.683**	.259**	.181**	.276**	.260**	.259**	.358**	1.00	
9	6.20	1.00	.359**	.031	-.002	.151**	.099	.230**	.482**	.457**	1.00

**Note 1:** 1 = Player performance, 2 = Opponent characteristics, 3 = Referees, 4 = Frontline employees, 5 = Facility functions, 6 = Facility design, 7 = Crowd experience, 8 = Satisfaction, 9 = Behavioral intentions,  $M$  = Mean;  $SD$  = Standard deviation.

**Note 2:** \*  $p < 0.05$ ; \*\*  $p < 0.01$

Source: The authors

### Structural model

The results of the measurement model in the second sample showed an acceptable fit to the data [ $\chi^2(314) = 745,371$  ( $p < .001$ ),  $\chi^2/df = 2,37$ ; GFI = .92; CFI = .95; RMSEA = .05], and acceptable psychometric properties. Consequently, the structural model was examined. The overall assessment of the structural model was found to be acceptable [ $\chi^2(314) = 762,849$  ( $p < .001$ ),  $\chi^2/df = 2,42$ ; GFI = .92; CFI = .95; RMSEA = .05]. The examination of the

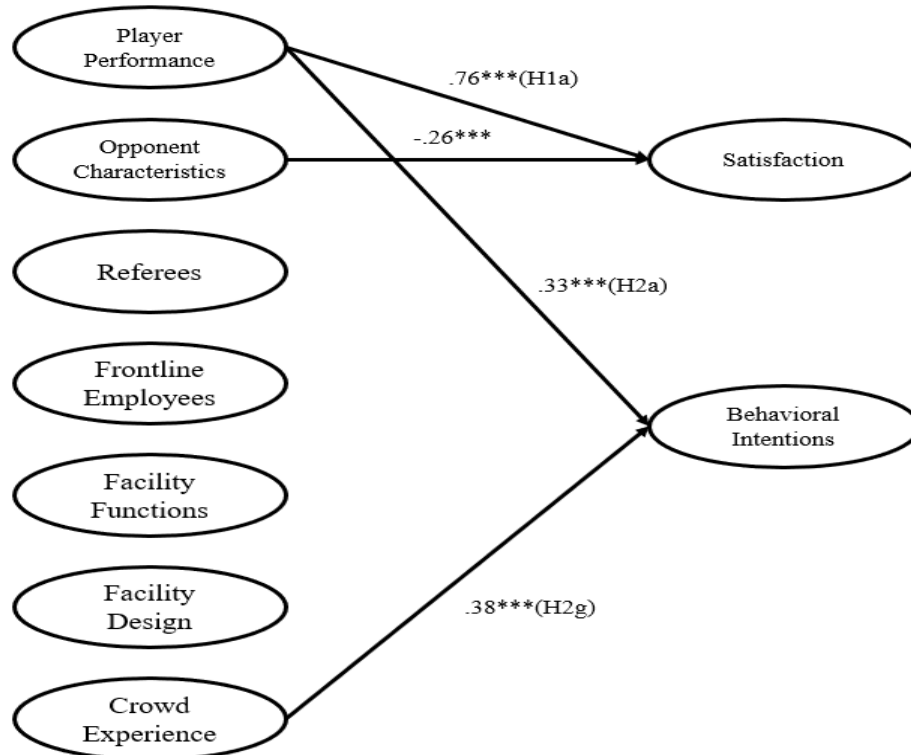
structural model included a test of the overall model fit and tests of the hypothesis. Hypotheses H1 and H2 were specified as:

H1 - There is a positive influence of service quality on satisfaction, specifically: a) player performance; b) opponent characteristics; c) referees; d) frontline employees; e) facility functions; f) facility design; and g) crowd experience have a positive influence on spectator satisfaction.

H2 - There is a positive influence of service quality on behavioral intentions, specifically: a) player performance; b) opponent characteristics; c) referees; d) frontline employees; e) facility functions; f) facility design; and g) crowd experience have a positive influence on spectator behavioral intentions.

Player performance was the only service quality dimension that showed a positive significant influence on satisfaction ( $\beta = .76, p < .001$ ), supporting H1a. In turn, opponent characteristics ( $\beta = -.26, p < .001$ ) showed a significant negative influence on satisfaction, consequently H1b was not supported. The remaining dimensions were not significant in predicting satisfaction and H1c, H1d, H1e, H1f, and H1g were not supported. All dimensions together accounted for approximately 71% of the variance in satisfaction ( $R^2 = .71$ ).

Concerning the influence of service quality on the spectator’s behavioral intentions, player performance ( $\beta = .33, p < .001$ ) and crowd experience ( $\beta = .38, p < .001$ ) were positively significant, supporting H2a and H2g. However, the hypotheses H2b, H2c, H2d, H2e, and H2f were not supported. Additionally, 46% of the variance in behavioral intention ( $R^2 = .46$ ) was explained by the service quality dimensions. Figure 1 reports the significant relationships among the dimensions.



**Figure 1.** Structural model with the significant influences among latent variables

Note: \*\*\*  $p < 0.01$

Source: The authors

## Discussion

Considering the originality and theoretical implications, the current study extended the literature by investigating two service quality consequences together, specifically, satisfaction and behavioral intentions of professional football spectators, particularly based on disagreements in the results from the few existing studies. In addition, testing and refining an existing model of service quality perception in a country where there have been few studies on this subject is relevant, since studies of this nature tend to be influenced by the cultural context in which they are developed. Regarding the empirically investigated relationships, it is highlighted that at least one of the dimensions of service quality has a significant predictive value in satisfaction and behavioral intentions.

The joint analysis of satisfaction and behavioral intentions as a result of the service quality perception fills a relevant gap in the literature, since in addition to understanding a holistic assessment of service encounters through satisfaction, understanding behavioral intentions is important in that it tries to predict whether the relationship between the spectator and the club will endure in the future. It is important to note that the few studies that address the two variables show contrasting and inconclusive results, more specifically in relation to predictive values and effect strength<sup>15,18</sup>.

In the first step of this study, some divergences from the original model proposed by Biscaia et al.<sup>16</sup> were evidenced. The lack of discriminant validity between accessibility, security, and seat space dimensions has already been presented in other studies developed during the FIFA World Cup in Brazil<sup>27,28</sup>. In some studies these have been evaluated as a single dimension<sup>29,30</sup>. According to Yoshida and James<sup>23</sup>, functional quality can be divided into frontline employees and facility functions.

Regarding the game atmosphere, the lack of convergent validity can be justified by the deficiency in intangible promotional activities such as: half-time shows, fan-player interactions, and promotional goods. The sale of memorable experiences and the creation of pleasant social environments are still very unusual in football matches in Pernambuco and, thus, due to the absence of evaluation elements and the lack of convergent validity, it was decided to exclude the dimension. However, in addition to the game atmosphere, the aesthetic quality, addressed in Yoshida and James<sup>23</sup>, remained under analysis in the model, in the crowd experience and facility design, since it is pointed out as an essential element in service quality evaluation<sup>31</sup>.

The results of the structural model indicated that player performance had a significant and positive influence on satisfaction. Previous studies have also shown that game quality are important dimensions and determine the spectator's satisfaction<sup>15,16,18</sup>. In Theodorakis et al.<sup>18</sup>, outcome quality (*i.e.* game quality and team performance) exerted a stronger effect on satisfaction than functional quality, and 45% of the variance in spectators' satisfaction was accounted for by the two quality dimensions. Foroughi et al.<sup>17</sup> report that there is a positive and significant relationship between game quality, augmented service, interaction, outcome and environment, and fan satisfaction. In comparison with our study, the results can be connected with the fact that the spectators' observed are fans of the three main clubs in the State, who regularly participate in the most important national competitions and have a higher financial contribution compared to other clubs, which could result in the creation of stronger teams. In this regard, it is important to note that although the marketing director has little or no influence on the selection of the team players, the player tactics, and game performance<sup>15,32</sup>, they should participate in the club's strategic decision-making process with respect to athlete recruitment.

In relation to the other dimensions, some aspects should be highlighted, first the negative effect of the opponent's characteristics on spectator satisfaction. This fact can be



justified by the high degree of rivalry between the teams that participated in the competition under investigation, since it is between clubs in the same state, where the fans of the opposing clubs are well known to each other (*e.g.* friends and family), constantly discuss soccer (*i.e.* spectators do not recognize the quality of the opposing team), or even because they consider the championship to be of poor technical quality. Except for the three main clubs, the remaining teams do not participate in the most relevant national competitions and have a low budget, which makes it difficult to purchase good players and create more competitive squads. It should be noted that these results are in accordance with Biscaia et al.<sup>16</sup> where the opponent characteristics also had a negative effect on the satisfaction of football spectators in Portugal. In Yoshida and James<sup>33</sup>, the same dimension had no influence on satisfaction in two different samples of spectators. These results suggest that the spectators are not interested in the need for cooperation between the clubs, but instead are interested in victory and a good performance from their team.

The other service quality dimensions did not present any significant predictive value in spectator satisfaction. In Navarro-García et al.<sup>30</sup>, the perceived quality in relation to the accessibility and comfort of the fans who attend a football event was positively and directly related to the satisfaction with the infrastructure. In fact, the ancillary service constructs in several studies are pointed out as fundamental attributes to understand the satisfaction of the spectators<sup>34,35</sup>. This means that in the current study context application, better clubs and manager interventions with respect to the mentioned dimensions, could lead to better evaluations and, consequently, spectator satisfaction. In another study developed in Pernambuco, the main negative points of satisfaction in relation to the club's services were relationships with fans, stadium infrastructure, food quality, and points of sale on match days<sup>36</sup>. However, it should be noted that some studies in professional football have identified that the core service quality has a greater influence on satisfaction than ancillary services<sup>17,18</sup>.

Regarding the influence of service quality dimensions on behavioral intentions, player performance, and crowd experience, a significant predictive value was obtained. This finding is consistent with Phonthanakitithaworn and Sellitto<sup>15</sup>, who evidenced a positive direct effect between outcome quality and aesthetic quality on behavioral intention to attend future games. The model explains 67% of the total variance in behavioral intention. Biscaia et al.<sup>16</sup> noted that the excitement of being part of the crowd leads to increased attendance in future events. In the spectator sport literature, Theodorakis and Alexandris<sup>37</sup> reported a significant effect produced by service quality dimensions in word-of-mouth communication and repurchase intentions. Shonk et al.<sup>38</sup> identified that event quality has a strong positive association with intention to return in Canoe Slalom World Championships.

Some managerial implications emerge from this study. First the football clubs should focus more on game quality and player performance when making managerial decisions (*e.g.* recruiting good players, conducting marketing campaigns that emphasize player performance, and increasing league competitiveness to attract better players). Regarding ancillary services, it should be noted that they were not well evaluated, which may have caused the non-significant effect of their respective dimensions on spectator satisfaction. In this sense, the actions of managers should be directed to providing detailed information about the stadium (*e.g.* mapping, improving signage, maintaining and cleaning, expanding, and improving accessibility). Concerning the interaction of fans with employees, we suggest creating a code of conduct for the employees, more rigorous criteria in the selection, and promoting continuous training.

Some limitations may have influenced the results of this study. First, data were collected from spectators from only three clubs, so results may not be representative of all. Second, the results are based on a convenience sample, so the generalization capacity to the entire country is limited and should be analyzed with caution. Third, in the adaptation of the

scale, we did not calculate the content validity coefficient and the lack of convergent and divergent validity in some variables indicates the need for other analysis in more regions of Brazil, to better understand how to measure perceived service quality. We did not distinguish spectators from fans, this was limited to considering all individuals as spectators. Finally, the present study also did not examine the moderating effects of the spectator characteristics on the relationship between the proposed variables and the mediating effect of satisfaction.

Therefore, future studies could; compare the service quality perception and satisfaction between clubs that compete at different technical levels, investigate whether there are differences between members and non-members of the club in the variables investigated, identify the mediating effect of satisfaction on the relationship between service quality and behavioral intentions, and assess the plausibility of this model in different sports (e.g. volleyball, basketball and athletics) and in different professional football competitions in Brazil to allow the generalization of the results with more confidence. Future studies should insert related variables to interact in the model, for example, perceived value and team identification. Finally, future longitudinal studies should be developed to analyze the proposed relationships throughout the season.

## Conclusion

In the context of some difficulties regarding attendance in football stadiums, we evidenced the importance of clubs building services with quality because of the impact on fans' satisfaction and behavioral intentions. Although it appears to be impossible to control the match outcome, the clubs need to investigate variables that can influence attendance, because this can increase the chances of the clubs maintaining a stable revenue during the season. In this way, sports clubs should consider how to better manage the experience of the spectators with the services of the entity, focusing on crowd experience in the stadium, while constantly trying to build a better squad on the field.

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