

Customer Satisfaction With Game and Service Experiences: Antecedents and Consequences

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Sport marketing researchers have generally studied two types of satisfaction at sporting events: game satisfaction and service satisfaction. One gap in the literature is studying the two types together. A model of the relationships between service quality, core product quality, game and service satisfaction, and behavioral intentions is proposed and tested. Data were collected from spectators at a professional baseball game in Japan ($n = 283$) and at two college football games in the United States ($n = 343$). The results in both Japan and the United States indicate that game atmosphere was a strong predictor of game satisfaction whereas stadium employees and facility access were the major antecedents of service satisfaction. Game satisfaction had a significant impact on behavioral intentions across the two settings, although the service satisfaction-behavioral intentions relationship was significant only in Japan. The research findings, managerial implications, limitations, and directions for future research are discussed.

Customer satisfaction with a product can create long term benefits for firms including positive word-of-mouth, cross-buying, and customer loyalty (Anderson, Fornell, & Lehmann, 1994; Palmatier, Dant, Grewal, & Evans, 2006). To lower customer defection rates and increase customer loyalty, both practitioners and academicians have acknowledged that customer satisfaction is a key element in any customer retention strategy (Cronin, Brady, & Hult, 2000; Cronin & Taylor, 1992; Oliver, 1999). For spectator sports, customer satisfaction has been viewed as a significant predictor of intentions to attend future sporting events (Cronin et al., 2000; Kwon, Trail, & Anderson; 2005; Wakefield & Blodgett, 1996). Sport marketing researchers to date have investigated two types of customer satisfaction: game satisfaction (Madrigal, 1995; Kwon, Trail, & Anderson; 2005; Trail, Anderson, & Fink, 2005) and service satisfaction (Wakefield & Blodgett, 1996). A gap in the existing literature is assessing the influence of game and service satisfac-

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tion together. The current project is one of the first empirical studies designed to examine the antecedents and consequences of both game and service satisfaction.

Services marketing researchers suggest that a customer's perceptions of a core product and ancillary services may coexist as antecedents of customer satisfaction and behavioral intentions (Mittal, Kumar, & Tsiros, 1999; Parasuraman, Zeithaml, & Berry, 1994). Surprisingly, there is a lack of research in sport marketing examining both the core product (e.g., player performance and team characteristics) and ancillary services (e.g., concessions, facility amenities, and security) together. A few studies to date have examined core product and service quality together (Greenwell, Fink, & Pastore, 2002; Tsuji, Bennet, & Zhang, 2007); the focus of these studies, however, has been primarily on game satisfaction, not on service satisfaction. As evidenced by Wakefield and Blodgett (1996), the inclusion of service satisfaction will increase the predictive power of service quality for behavioral intentions. A more thorough analysis of the factors affecting both game and service satisfaction, and the impact of satisfaction on behavioral intentions is warranted because sport marketing research has advanced with little understanding of the overlap between a core product and ancillary services with game or service-specific satisfaction (Mittal et al., 1999). There are numerous ancillary services at sporting events including concessions, promotional activities, and security, but the roles of these services and the employees who provide them have not been well-studied despite the recognized importance of service employees as a factor influencing consumers' satisfaction and repurchase intentions (Cronin & Taylor, 1992; Dobholkar, Shepherd, & Thorpe, 2000).

The purposes of the current study were to: (1) propose a model of the relationships between service quality, core product quality, customer satisfaction, and behavioral intentions and (2) examine the relationships between the proposed constructs. Working with the two types of customer satisfaction, game and service satisfaction, we examined the relative impact of ancillary service and core product quality on satisfaction and behavioral intentions (see Figure 1).

Theoretical Background and Hypotheses

Customer Satisfaction at Sporting Events

Customer satisfaction is defined as a pleasurable fulfillment response toward a good, service, benefit, or reward (Oliver, 1997). Customer satisfaction is a prime determinant of customer retention, positive word-of-mouth, improved profits, and lower marketing expenditures (Anderson et al., 1994; Oliver, 1999; Palmatier et al., 2006). Achieving customer satisfaction should be a primary goal for most firms, particularly service delivery firms that manage intangible and heterogeneous assets (Cronin & Taylor, 1992).

There are two important reasons why customer satisfaction is significant for service firms. First, customer satisfaction based on a customer's subjective judgment of services is one of the best criteria for evaluating services. Since it is difficult to maintain consistent service performance due to the intangible and heterogeneous aspects of services, customer satisfaction has been understood in relation to service quality (Cronin & Taylor, 1992; Dobholkar, Shepherd, & Thorpe, 2000; Parasuraman, Zeithaml, & Berry, 1994). Second, customer satisfaction increases the likelihood of enhanced customer loyalty (Cronin et al., 2000; Oliver, 1997) and

repurchase behavior (Cronin & Taylor, 1992; Oliver, Rust, & Varki, 1997; Seiders, Voss, Grewal, & Godfrey, 2005). These findings are consistent in sport contexts. Sport products have been found to have a statistically significant effect on game satisfaction, and intentions to attend future sporting events (Brady, Voorhees, Cronin, & Bourdeau, 2006; Kwon et al., 2005; Zhang, Smith, Pease, & Lam, 1998). Wakefield and Blodgett (1996) investigate the relationships between consumers' service quality perceptions, customer satisfaction, and repurchase intentions across football, baseball, and casino settings. They found that customer satisfaction with the service environment had a significant effect on repurchase intentions in all three settings. Customer satisfaction is not only a criterion to evaluate service quality, but is also a predictor of repeat patronage.

Customer satisfaction is defined in the current study as a customer's pleasurable, fulfillment response to the entertainment of sport competition and/or ancillary services provided during a game. Service satisfaction is defined as a customer's overall satisfaction with the services experienced at a sporting event. Game satisfaction is defined as a customer's overall satisfaction with the game experience in relation to the sport competition on the field.

Antecedents of Customer Satisfaction at Sporting Events

An important issue to consider is the extent to which customer satisfaction is influenced by the provision of a quality service and a quality core product. A few studies have sought to predict customer satisfaction based on perceptions of the core product and ancillary services (Brady et al., 2006; Greenwell et al., 2002; Tsuji et al., 2007). With respect to the core product, scholars have identified outcome valence (i.e., feelings about the outcome of a game), home team characteristics (i.e., team standings, win/loss record, the number of star players, and team history), opponent characteristics (i.e., both conference and national rankings), game attributes (i.e., aggressive plays, speed of a game, and player appeal), a sense of enjoyment, and basking in reflected glory (BIRG) as direct or indirect predictors of game satisfaction and attendance intentions (Brady et al., 2006; Greenwell et al., 2002; Madrigal, 1995; Tsuji et al., 2007; Zhang, Pease, Smith, Lee, Lam, & Jambor, 1997). Linked to ancillary services, researchers paid close attention to the service environment (Brady et al., 2006; Greenwell et al., 2002; Tsuji et al., 2007; Wakefield & Blodgett, 1996) and stadium employees (Brady et al., 2006; Greenwell et al., 2002; Tsuji et al., 2007) and found significant relationships between these service factors and customer satisfaction. The study results of Brady et al. (2006) and Tsuji et al. (2007) revealed that core product quality had a stronger effect on game satisfaction than service quality. However, others indicate that ancillary services, such as stadium employees, may be more predictive of customer satisfaction than the core product (Greenwell et al., 2002). Indeed, these findings are inconsistent with each other, focus to a lesser extent on service-specific satisfaction, and only explain a small fraction of this issue. Further research is needed to assess the relative contribution of a core product and ancillary services to a customer's perceptions of game and service satisfaction. As illustrated in Figure 1, the proposed antecedents of service and game satisfaction are service quality and core product quality, respectively.

Service Quality. Previous research has examined the topic of service quality and the dimensions of service quality as predictors of customer satisfaction (Cronin

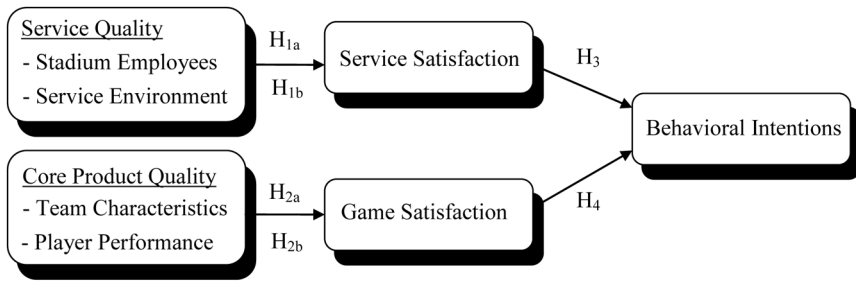


Figure 1 — A model of assessing the antecedents and consequences of two types of satisfaction.

& Taylor, 1992; Dabholkar et al., 2000; Mittal et al., 1999). Five dimensions of service quality are believed to predict customer satisfaction: reliability, assurance, empathy, responsiveness, and tangibles (Parasuraman, Zeithaml, & Berry, 1988, 1994). These dimensions have been confirmed to transcend different types of services; they form the SERVQUAL model which has been widely adopted to describe service quality. It is also true, however, that the SERVQUAL model has been criticized (Cronin & Taylor, 1992; Cronin & Taylor 1994; Peter, Churchill, & Brown, 1993) because service quality has been confused with customer satisfaction which is measured using a performance-minus-expectation equation. Thus, what Parasuraman et al. (1988) measure is satisfaction with quality, not satisfaction with the service a customer experiences (Oliver, 1997). In contrast, Cronin and Taylor (1992) argue that service quality is better described as a customer's perceptions of the performance of service delivery. Accordingly, service quality simply refers to how well services are delivered to the customer.

In the field of sport marketing, service quality as a predictor of customer satisfaction and game attendance has received some attention (Greenwell et al., 2002; Hill & Green, 2000; Tsuji et al., 2007; Wakefield & Blodgett, 1996). Milne and McDonald (1999) suggest that a critical challenge for sport marketers is managing the core product and ancillary services. The core product, a sport competition between the two teams, is unpredictable and beyond managerial control. Ancillary services, on the other hand, include factors such as stadium employees, facility layout, accessibility, seating comfort, and information signs which can be influenced through managerial control (Greenwell et al., 2002; Wakefield & Blodgett, 1996; Zhang et al., 1998). As previously noted, the role of stadium employees has not been well-studied despite the acknowledged importance of service employees' influence on customer satisfaction and repurchase intentions (Cronin & Taylor, 1992; Oliver, 1997).

Services marketing researchers clearly define service quality as the interaction with the service environment and the frontline employees (Brady & Cronin, 2001; Cronin & Taylor, 1992; Parasuraman et al., 1988). In the current study, the quality of stadium employees is defined as a customer's perceptions of the attitudes and behaviors of stadium employees based on the interactions with ticket sellers, ticket takers, ushers, and concession clerks. On the other hand, the service environment is associated primarily with the built environment (Bitner, 1992).

Wakefield, Blodgett, and Sloan (1996) conceptualize the stadium environment and refer to it as the "sportscape" based on Bitner's (1992) "servicescape." Although servicescape consists of three environmental dimensions (i.e., ambient conditions, space/functions, and signs, symbols and artifacts), sportscape focuses only on two dimensions, (1) space/functions and (2) signs, symbols, and artifacts, because these two dimensions are under the control of the team management while ambient conditions are difficult to control in the context of sport, specifically for outdoor settings. However, we pay a great deal of attention to atmospherics in the current study because atmosphere at sporting events, while similar, is more than ambiance.

Research indicates that atmosphere consists of various background characteristics which contribute to a customer's overall feeling in the stadium (Bitner, 1992; Brady & Cronin, 2001; Kahle, Aiken, Dalakas, & Duncan, 2003). More specifically, atmosphere is associated not only with the ambiance of the stadium, but also with the festive, party-like atmosphere of the game, history of a game, perceived rivalry, attractiveness of team colors and logos, and courteousness of event staff (Kahle et al., 2003; Melnick, 1993). Based on these thoughts, we define the quality of the service environment as a customer's evaluative perceptions of the stadium environment based on his/her interactions with facility space, layout, information signs, and atmosphere. In this investigation, service satisfaction is identified as a consequence of a customer's perceptions of the quality of the services provided by stadium employees and the quality of the service environment. Accordingly, the following hypotheses are derived:

H_{1a} : The customer's perceptions of the services provided by stadium employees have a positive impact on his/her service satisfaction.

H_{1b} : The customer's perceptions of the service environment have a positive impact on his/her service satisfaction.

Core Product Quality. The core product in the spectator sport industry includes numerous characteristics. Mason (1999) identifies a number of aspects believed to be unique to spectator sport products: game schedule, league designed home territory, special series of league games such as play-offs, uncertainty of game outcomes, interclub competitiveness, rivalry between clubs, seasonality of league games, and hedonic experiences (i.e., a sense of entertainment and drama). According to Schaaf (1995), the core product at a sporting event refers to the entertainment of competition based on the uncertainty of game outcome, or physical goods or services associated with the excitement of the sporting event, or both.

The definition of the core product in spectator sports includes game-related components, which are key determinants of whether an element is the core product or ancillary services. According to Mullin, Hardy, and Sutton (2007), the core product usually consists of the set of items that influence a customer's perceptions of the quality of a game. Previous research supports this conceptualization and provides the basis for our conclusion that the core product in sport is derived from sport-related factors such as the quality of the home and opposing teams, winning percentage, place in the standings, team history, number of star players on the team, reputation of the team, strategies, and skills (Braunstein, Zhang, Trail, & Gibson, 2005; Ferreira & Armstrong, 2004; Hansen & Gauthier, 1989; Zhang et al., 1997).

A review of the literature suggests that there are two important constructs pertaining to the core product at sporting events: team characteristics (i.e., winning percentage, place in the standings, team history, number of star players on the team, and the quality of the opposing team) and player performance which is captured by players' on-field performance (i.e., skill, strategy, team effort, and drama; Garvin, 1984; Greenwell, 2001; James & Ross, 2004; Zhang et al., 1997). In the current study, team characteristics are defined as a customer's perceptions of the home and opposing teams' basic features based on team standing, winning percentage, number of star players, and team history. Player performance is defined as a customer's perceptions of a player's physical and technical superiority to perform well, play hard, and show exciting plays. With respect to customer satisfaction, it is hypothesized that a customer's perceptions of the core product dimensions influence his/her overall game satisfaction. The theoretical base of this relationship rests on a clear distinction between the core product and ancillary services in sports. It seems logical that the aforementioned dimensions of core product quality (i.e., team characteristics and player performance) are sport-specific and are associated more with a sense of pleasure, excitement, and achievement than with functional services (Madrigal, 1995; Trail, Robinson, Dick, & Gillentine, 2003). In line with this thought, it is expected that satisfaction which is derived from the core product is a more emotional construct than satisfaction with ancillary services. Further, a customer's game satisfaction is primarily derived from his/her perceptions of the core product. This leads to the following hypotheses:

H_{2a} : The customer's perceptions of team characteristics have a positive impact on his/her game satisfaction.

H_{2b} : The customer's perceptions of player performance have a positive impact on his/her game satisfaction.

Consequences of Customer Satisfaction

There is a surprising lack of research examining the consequences of customer satisfaction in the context of sporting events. To date, intentions to attend future sporting events are the most widely-used outcome in the sport marketing literature (e.g., Kwon et al., 2005; Trail et al., 2005; Wakefield & Blodgett, 1996). Repurchase intentions, however, have been criticized by marketing researchers who suggest that such intentions do not sufficiently explain the depth of a customer's commitment to rebuy preferred goods or services (Oliver, 1999; Zeithaml, Berry, & Parasuraman, 1996). Oliver (1999) suggests that customers' variety seeking needs and monopolistic market competition blind their repurchase intentions because variety seekers likely purchase competitors' products or services, while a monopolistic market forces customers to buy a specific firm's products over time.

In response to the inadequacy of repurchase intentions as an outcome measure, Zeithaml et al. (1996) indicate that behavioral intentions should consist of multidimensional outcomes. Zeithaml et al. (1996) identified five dimensions of behavioral intentions: (1) loyalty to company, (2) propensity to switch, (3) willingness to pay more, (4) external response to problem (negative word-of-mouth), and (5) internal response to problem (complaints to employees). Adapting the conceptualization of Zeithaml et al. (1996), Cronin and his colleagues focused on the positive aspects

of behavioral intentions and developed three indicators of behavioral intentions: repurchase intentions, positive word-of-mouth intentions, and customer loyalty (Brady et al., 2006; Cronin et al., 2000). Consistent with the work of Cronin et al. (2000), we define behavioral intentions at sporting events as a customer's favorable intentions to (1) recommend the team to other customers, (2) attend the team's future sporting events, and (3) remain loyal to the team. Based on the theory of the quality-satisfaction-behavioral intentions chain (Cronin & Taylor, 1992; Dobholkar et al., 2000; Zeithaml et al., 1996), it is hypothesized that two types of customer satisfaction at sporting events, service and game satisfaction, will affect behavioral intentions. Thus, the following two hypotheses are proposed:

H₃: Satisfaction with the service customers experience at a sporting event has a positive impact on their behavioral intentions.

H₄: Satisfaction with the game customers watch at a sporting event has a positive impact on their behavioral intentions.

Method

Setting

The study was conducted in professional and college sport settings in Japan and the United States respectively. For the Japanese sample, spectators of a professional baseball team were selected because the team was renowned for "Americanized" secondary entertainment activities, such as fireworks, cheerleaders, mascots, giveaways, and various coach-fan interactive activities centered on an American head coach. For the United States sample, spectators at two Division I-A college football games at a large southeastern university were chosen to provide an examination of the proposed model in a different setting based on three dimensions, sport, level, and country. The settings selected provided an opportunity for assessing the external validity of the proposed model.

Scale Development

Construct Definition. Although the major objective of the current study was to test the proposed model of service and core product quality, satisfaction, and behavioral intentions, a scale development procedure was followed to ascertain whether the measures were valid and reliable. The procedure used in the current study was based on Churchill's (1979) recommendations for scale development. The first stage in Churchill's (1979) procedures is the specification and definition of the construct domain. In the current study, the researchers specified and defined the construct domain based on a thorough review of the relevant literature and presented the information in the earlier sections.

Item Generation. The second stage in the scale development process is generation of an initial sample of items. The researchers used a deductive approach to generate an initial pool of 56 items based on previous research. The instruments used included measures of service quality, core product quality,

customer satisfaction, and behavioral intentions. Service quality consisted of two subdimensions: service environment and stadium employee. As noted by Bitner (1992), service environment should include three elements: (1) atmosphere, (2) space/layout, and (3) signs. Atmosphere was measured with a three-item scale adapted from Brady and Cronin (2001). The scale was expected to measure a customer's perceptions of the background features of environmental cues which were characterized by an appealing theme, color, music, and temperature. To measure space/layout and signs, four subscales (i.e., seating comfort, layout accessibility, space allocation, and sign) adapted from Wakefield and Blodgett's (1996) sportscape scale were used. The stadium aesthetics and scoreboards dimensions of the sportscape measure were excluded because the definition of service quality indicates that a customer's service quality perceptions should be associated more with the convenience, efficiency, and ease of the facility than the visually pleasing characteristics of scoreboards and stadium design (Berry, Seiders, & Grewal, 2002). Parking access was also excluded because many Japanese spectators used public transportation, such as subways. To measure the interactions with stadium employees, a nine-item scale was adapted from Brady and Cronin's (2001) interaction quality scale. This scale was preferred because it was generated based on a thorough review of the literature, supported by empirical evidence, and was intended to measure three different types of employee quality: employee attitude, behavior, and expertise.

Core product quality included player performance and team characteristics based on Garvin's (1984) definition of quality. James and Ross's (2004) player skill and effort scale and Funk, Ridinger, and Moorman's (2003) excitement scale were used to assess perceptions of player performance. For team characteristics, we focused on the quality of the home team (Greenwell et al., 2002) and the opponent (Madrigal, 1995). A five-item scale was adopted from Greenwell's (2001) core product scale to measure each team's characteristics. All quality items were measured on a 7-point Likert type scale ranging from "*strongly disagree* (1)" to "*strongly agree* (7)" (see Appendix).

Service and game satisfaction and behavioral intentions were measured with a scale adopted from Brady and colleagues (2005). Customers' pleasurable responses to the game and services they experienced were captured using a seven-point Likert type scale ranging from "Strongly Disagree (1)" to "Strongly Agree (7)" (see Appendix). Behavioral intentions included three different types of behavioral consequences: (1) intentions to attend future sporting events, (2) positive word-of-mouth intentions, and (3) customer loyalty (Cronin et al., 2000). Using a 7-point Likert type scale ranging from "*very low* (1)" to "*very high* (7)," participants were asked to rate the likelihood of their acting on the suggested behaviors (see Appendix).

Content Analysis. To assess the content validity of the items in the survey form, three sport marketing researchers from three different universities in the United States conducted a content analysis. Each expert received an e-mail from the researchers, which included the purpose of this study and content analysis, explanation of the procedures, construct definitions, and a list of the items. Keeping the construct definitions in mind, the reviewers were asked to evaluate the relevance of each item. The reviewers provided suggestions for changing words and phrases in the items. At this stage, 17 out of the 56 items were revised.

Back Translation. To minimize discrepancies between the original instrument and the translated instrument, back translation was conducted. The survey instrument was first translated into Japanese by one of the researchers. To test the equivalence between the original and Japanese instruments, back-translation into English was conducted by another native of Japan who was also fluent in English. To verify the accuracy of the translation, a third party, a doctoral student in English literature, was asked to assess differences in meaning between the original and back-translated instruments. The comparison of the two forms led to the conclusion that the two instruments were conceptually equivalent.

First Data Collection

Hinkin (1995) reviewed a large body of organizational behavior research and noted that an item-to-response ratio ranging from 1:4–1:10, indicating that four subjects per item is the minimum for factor analysis. In line with this thought, 224 subjects (56 items \times 4) were deemed the minimum needed for the first data collection. Data were collected from people attending a professional baseball game in the eastern Tokyo metropolitan area. Questionnaires were distributed in the stands before the game started. The researchers used a proportionate sampling method which was stratified by both age and gender. Before distributing the questionnaires, seven trained surveyors observed an assigned block of the stands to estimate the percentage of those attending based on gender (1 = female, 2 = male) and age (1 = ages between 18 and 29, 2 = ages between 30 and 49, 3 = ages of 50 and above). Each assistant was responsible for distributing 66 self-administered questionnaires according to the estimated percentages based on gender and age.

From the 460 questionnaires distributed, 413 were returned for a response rate of 89.8%. Forty-seven questionnaires were not returned; there was no indication why individuals chose not to return the forms. Among the questionnaires returned, 41 were rejected because items were left blank, yielding a usable response rate of 80.9% ($n = 372$). We further eliminated subjects who had never attended their favorite team's home games in the current season because this study attempted to examine consumers' decision making based on their cumulative experiences of past games. Research on service quality and customer satisfaction indicates that customers' recent experiences need to be probed to make sure that they have enough service experiences offered by the service provider (Bolton & Drew, 1991; Brady & Cronin, 2001; Dabholkar, Thorpe, & Rentz, 1996; Homburg & Giering, 2001). Given this implication, we eliminated an additional 89 subjects (new attendees), leaving 283 cases. Of the total sample, 67.5% of the respondents were male. Age was measured as a categorical variable; more than one-third of the subjects were in the 30–39 age range (39.9%), 26.6% were between 40 and 49 years old, and 24.4% were between 20 and 29 years old.

Although all survey items were adopted from existing scales, the factor structure including both core product and service quality needed to be explored because only a few studies tested these two constructs together (Greenwell et al., 2002; Tsuji et al., 2007), and none have included the construct of player performance (Garvin, 1984). In the current study, the items measuring player performance were generated from a combination of three different measures: physical skills, team effort, and excitement (Funk et al., 2003; James & Ross, 2004). Furthermore, previous research has one important limitation: researchers included the aesthetic aspect of service

quality (i.e., game atmosphere) in the dimension of functional service quality (i.e., frontline employees, accessibility, and facility layout; Baker, Parasuraman, Grewal, & Voss, 2002; Bitner, 1992; Wakefield et al., 1996). An inability to distinguish the conceptually distinct constructs of functional and aesthetic service quality prevents us not only from studying service quality in an aesthetic service environment, but also from discovering important relationships between these dimensions and respective outcome variables. Given this implication, we employed an exploratory factor analysis (EFA) to distinguish between the functional and aesthetic aspects of service quality at the early stages of the study.

EFA was computed to ascertain the factor structure composed of both the core product and services. When the factor model was analyzed using the maximum likelihood method with the rotated factor solution, six constructs emerged: (1) facility access, (2) facility space, (3) stadium employees, (4) opponent characteristics, (5) player performance and (6) game atmosphere. These six factors explained 61.40% of the total variance in the factor model. As Cronbach's alpha coefficients ranged from .82 to .96, the identified constructs were internally consistent. After eliminating the items which failed to exceed the cutoff point of .50 of factor loadings, communalities, and item-to-total correlations (Hair, Black, Babin, & Anderson, 2005), the number of items was reduced to 39. The revised model of the relationships between perceived quality, customer satisfaction, and behavioral intentions is shown in Figure 2.

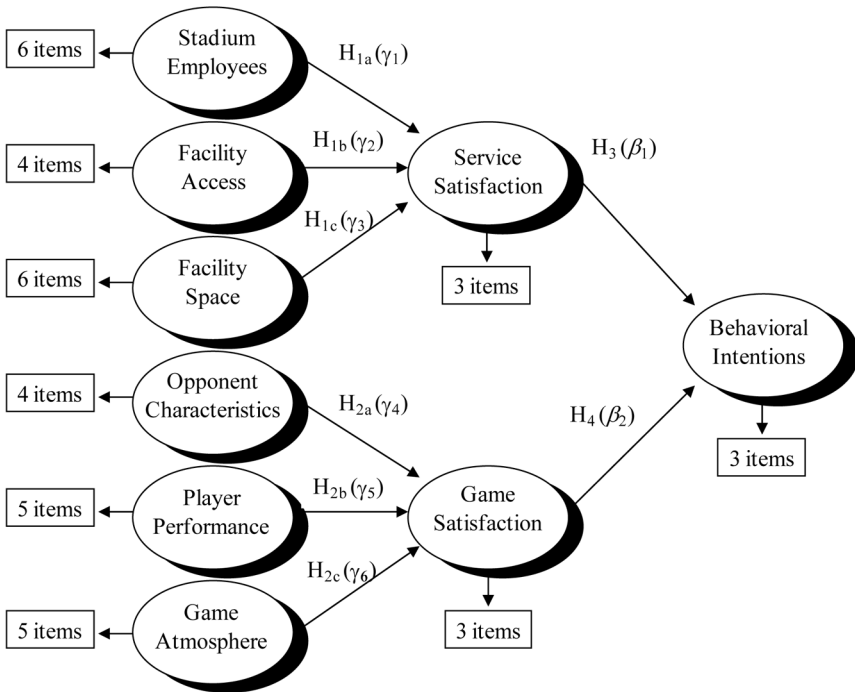


Figure 2 — A revised comprehensive model of assessing the antecedents and consequences of game and service satisfaction.

With respect to the service environment, two distinct factors were identified: (1) facility access pertaining to information signs and facility layout and (2) facility space pertaining to seats in the stands and space allocation in the concourse area. These two dimensions are consistent with Bitner's (1992) space/function dimension of servicescape. Given these findings, the research hypotheses were modified as follows (see Figure 2):

H_{1b} : The customer's perceptions of facility access have a significant positive impact on his/her service satisfaction.

H_{1c} : The customer's perceptions of facility space have a significant positive impact on his/her service satisfaction.

Evidence from the data analysis also revealed that the home team's characteristics failed to load on any constructs, whereas opponent characteristics were found to be a distinct dimension. This led to the addition of H_{2a} (see Figure 2):

H_{2a} : The customer's perceptions of opponent characteristics have a significant positive impact on his/her game satisfaction.

Items pertaining to exciting play and atmosphere loaded on a single construct. Since a sense of excitement is one of the most important characteristics of the core product, we view game atmosphere as a distinct dimension of core product quality, which will influence game satisfaction. Thus, the following additional hypothesis was generated (see Figure 2):

H_{2c} : The customer's perceptions of game atmosphere have a significant positive impact on his/her game satisfaction.

Second Data Collection

Eighteen trained surveyors collected data from sport spectators who attended two Division I-A college football games at a large southeastern university in the United States. Using a fan-intercept technique, survey questionnaires were distributed around the stadium before the games started. To collect data as systematically as possible, the researchers estimated when, where, and how many people met in respective areas based on observations of previous games. Each assistant was assigned to an area where at least 100 people were present. Questionnaires were distributed to people around the stadium; from the 430 questionnaires distributed, 399 were returned for a response rate of 92.8%. Thirty-one of the questionnaires were not returned to the surveyors. Three of the forms returned were rejected because items were left blank, yielding a usable response rate of 92.1% ($n = 396$). We excluded an additional 53 participants who had never attended their favorite team's home games in the current season to focus on consumers' cumulative experiences of past games (Bolton & Drew, 1991; Brady & Cronin, 2001; Dabholkar et al., 1996; Homburg & Giering, 2001). This left 343 cases in the United States sample. Of the total sample, 55.1% of the respondents were male. Age was measured with a categorical variable; 37.4% were in the 20–29 age range, 18.4% were between 30 and 39 years old, and 8.6% were between 40 and 49 years old. 86.6% were White, whereas 6.8% were Black.

Results

Assessment of the Measures

Using SPSS 15.0, descriptive statistics (means, standard deviations, and correlations) were calculated and are reported in Table 1. The mean factors scores pertaining to core product quality are slightly higher than those of the factors pertaining to service quality. To assess group differences between the Japanese and United States samples, a multivariate analysis of variance (MANOVA) was conducted with the proposed nine constructs (see Table 1). The results indicated the MANOVA null hypothesis of equality of the mean scores for the nine constructs between the two groups was rejected at the .01 significance level (Wilks's Lambda = .685, $F[9, 616] = 31.45$, $p < .01$; see Table 1). A univariate analysis of variance (ANOVA) was employed for each of the nine constructs to identify more specific differences across the two samples (see Table 1). The computed F values for facility access, facility space, player performance, game satisfaction, and behavioral intentions were statistically significant and were 36.31, 12.50, 63.30, 20.95, and 20.67, respectively (see Table 1).

The results indicated that facility functionality and behavioral intentions were more highly evaluated by the United States spectators than by the Japanese spectators, whereas player performance and game satisfaction were more highly assessed by the Japanese spectators than by the United States spectators. Partial eta-squared (η_p^2) was also computed as an index of effect size (Cohen, 1973; see Table 1). Partial eta-squared is similar to R^2 in a regression analysis and can be deemed as the amount of variance in a dependent variable that is explained by a categorical independent variable. The partial eta-squared values for the nine constructs ranged from .01 to .09, indicating that the contributions of the two groups to the dependent variables were small.

The psychometric properties of the items were assessed through an examination of internal consistency via SPSS 15.0, and a confirmatory factor analysis using LISREL 8.52. Scale statistics, including Cronbach's alpha coefficients and factor loadings, are presented in Table 2. For both samples, Cronbach's alpha coefficients for all factors were greater than the conventional .70 criterion, indicating that the proposed constructs were internally consistent. All items loaded on their respective factors, and factor loadings ranged from .60 to .90 for the Japanese sample and .50 to .89 for the United States sample, providing evidence the items accurately captured the respective factors (Anderson & Gerbing, 1988; Hair et al., 2005). A further assessment of convergent and discriminant validity was conducted by an examination of average variance extracted (AVE). The computed AVE values for the nine constructs ranged from .53 to .78 in the Japanese setting and from .50–.73 in the United States setting, providing evidence of convergent validity (Fornell & Larcker, 1981). Discriminant validity was assessed by comparing the AVE value for each construct with the squared correlations between the respective constructs. Since none of the squared correlations exceeded the AVE values for the nine constructs, discriminant validity was indicated.

Table 2 also presents the results of the global fit indices for assessing how well the proposed measurement models fit the data for the two samples. Because of

Table 1 Descriptive Statistics and Group Differences Between Japanese and United States Consumers

Japanese Professional Baseball Spectators (n = 283)		Correlation Matrix								
		1	2	3	4	5	6	7	8	9
1. Stadium employees		1.00								
2. Facility access		.76	1.00							
3. Facility space		.65	.72	1.00						
4. Opponent characteristics		.45	.37	.32	1.00					
5. Player performance		.58	.47	.39	.46	1.00				
6. Game atmosphere		.56	.59	.44	.51	.65	1.00			
7. Service satisfaction		.64	.59	.53	.38	.56	.69	1.00		
8. Game satisfaction		.38	.39	.32	.37	.51	.71	.71	1.00	
9. Behavioral intentions		.32	.31	.19	.32	.39	.56	.53	.54	1.00
United States College Football Spectators (n = 343)		1	2	3	4	5	6	7	8	9
1. Stadium employees		1.00								
2. Facility access		.69	1.00							
3. Facility space		.65	.60	1.00						
4. Opponent characteristics		.51	.55	.53	1.00					
5. Player performance		.58	.47	.56	.55	1.00				
6. Game atmosphere		.61	.63	.48	.57	.58	1.00			
7. Service satisfaction		.75	.71	.57	.47	.45	.65	1.00		
8. Game satisfaction		.50	.59	.41	.52	.49	.73	.65	1.00	
9. Behavioral intentions		.20	.34	.15	.28	.22	.47	.32	.40	1.00
Group Comparisons ^a										
Japan (n = 283)	Mean	4.64	4.74	4.11	5.16	5.39	5.72	5.41	5.94	6.14
	SD	(1.23)	(1.21)	(1.28)	(1.14)	(1.05)	(1.02)	(1.05)	(.99)	(1.12)
United States (n = 343)	Mean	4.81	5.30	4.47	5.00	4.63	5.59	5.25	5.53	6.51
	SD	(1.03)	(1.31)	(1.15)	(1.30)	(1.05)	(1.16)	(1.23)	(.87)	(1.31)
	F-value ^b	3.26	36.31	12.50	3.58	63.30	2.37	3.47	20.95	20.67
	p-value	n.s.	< .01	< .01	n.s.	< .01	n.s.	n.s.	< .01	< .01
	η_p^{2c}	.01	.06	.02	.01	.09	.01	.01	.03	.03

Note. All correlations were statistically significant at the .01 level ($p < .01$, two-tailed); *SD* = standard deviation;

n.s. = Not significant.

^a Overall MANOVA test for the nine factors (Wilks's Lambda = .685, $F[9, 616] = 31.45, p < .01$)

^b Univariate ANOVA tests associated with $F(1, 624)$

^c Partial eta-squared

Table 2 Summary Results of Measurement Models

Construct	Number of Items	Japan (<i>n</i> = 283)			United States (<i>n</i> = 343)		
		α	λ	AVE	α	λ	AVE
Stadium employees	6	.96	.82–.90	.78	.92	.76–.87	.67
Facility access	4	.91	.82–.87	.72	.81	.64–.80	.54
Facility space	6	.91	.66–.90	.63	.88	.50–.89	.56
Opponent characteristics	4	.82	.71–.75	.53	.80	.66–.76	.50
Player performance	5	.87	.60–.89	.58	.92	.76–.87	.69
Game atmosphere	5	.89	.72–.87	.63	.87	.69–.82	.57
Service satisfaction	3	.82	.74–.80	.61	.85	.79–.82	.65
Game satisfaction	3	.82	.73–.82	.61	.89	.82–.88	.73
Behavioral intentions	3	.87	.80–.85	.69	.86	.78–.86	.68
	$\chi^2(df)$	χ^2/df	<i>p</i>	RMSEA	CFI	NNFI	AGFI
Japanese sample	1417.17 (666)	2.13	< .01	.063	.98	.98	.76
United States sample	1587.30 (666)	2.38	< .01	.064	.98	.98	.78

Note. AVE = average variance extracted; *df* = degree of freedom; RMSEA = root mean square error of approximation; CFI = comparative fit index; NNFI = nonnormed fit index; AGFI = adjusted goodness of fit index

the large sample size, the chi-squares were significant. The ratios of chi-square to degrees of freedom were within the acceptable range of 2–3 in both settings (Hair et al., 2005). The values of the root mean square error of approximation (RMSEA) were .063 in Japan and .064 in the United States that were smaller than Hair et al.'s (2005) criterion of .08. The comparative fit index (CFI) and nonnormed fit index (NNFI) were greater than the cutoff point of .90 in both settings (Hair et al., 2005). The adjusted goodness of fit index (AGFI) values, however, were lower than is desired (.76 in the Japanese sample and .78 in the United States sample). AGFI is sensitive to the degrees of freedom (the difference between the number of observed variances and covariances and the number of parameter estimates) and penalizes a complex model (Hair et al., 2005). Given this implication, it is not surprising that the proposed complex, but theoretically supported model resulted in the low AGFI values. The overall assessment of the fit indices indicated that the measurement models were an acceptable fit to the data. Consequently, the structural model was examined.

Comprehensive Model Testing

An examination of the hypothesized relationships was achieved through structural equation modeling (*SEM*) using LISREL 8.52. Table 3 shows the results of the comprehensive model testing. Similar to the measurement models, the global fit indices were computed to assess how well the theorized model fits the data. The hypothesized model demonstrated an acceptable fit to the data in both Japanese

Table 3 Summary Results of Comprehensive Model Testing

		Japan (<i>n</i> = 283)			United States (<i>n</i> = 343)			
Path		Path coefficient	<i>R</i> ²	Path coefficient	<i>R</i> ²			
H _{1a}	Stadium employees → Service satisfaction (γ ₁)	.41**		.41**				
H _{1b}	Facility access → Service satisfaction (γ ₂)	.30*		.54**				
H _{1c}	Facility space → Service satisfaction (γ ₃)	n.s.	.55	n.s.		.83		
H _{2a}	Opponent characteristics → Game satisfaction (γ ₄)	n.s.		n.s.				
H _{2b}	Player performance → Game satisfaction (γ ₅)	n.s.		n.s.				
H _{2c}	Game atmosphere → Game satisfaction (γ ₆)	.80**	.66	.80**		.72		
H ₃	Service satisfaction → Behavioral intentionns (b ₁)	.21**		n.s.				
H ₄	Game satisfaction → Behavioral intentions (b ₂)	.53**	.42	.46**		.25		
		χ ² (<i>df</i>)	χ ² / <i>df</i>	<i>p</i>	RMSEA	CFI	NNFI	AGFI
	Japanese sample	1596.34 (679)	2.35	< .01	.069	.98	.97	.76
	United States sample	1660.19 (679)	2.45	< .01	.065	.98	.98	.77

Note. * *p* < .05; ** *p* < .01; n.s. = Not Significant

[$\chi^2(df)$ = 1596.34 (679), χ^2/df = 2.35, *p* < .01; RMSEA = .069; CFI = .98; NNFI = .97; AGFI = .76] and United States settings [$\chi^2(df)$ = 1660.19 (679), χ^2/df = 2.45, *p* < .01; RMSEA = .065; CFI = .98; NNFI = .98; AGFI = .77; RMSEA = .065]. Accordingly, we proceeded to examine the structural model.

Table 3 also shows the summarized results of the comprehensive model testing in both Japanese and American settings. With respect to H_{1a}, H_{1b}, and H_{1c}, stadium employees (Japan, γ_1 = .41, *p* < .01; United States, γ_1 = .41, *p* < .01) and facility access (Japan, γ_2 = .30, *p* < .05; United States, γ_2 = .54, *p* < .01) had a statistically significant impact on service satisfaction, whereas facility space did not affect service satisfaction. These results were consistent across the two samples. In addition, as expected in H_{2c}, the hypothesized path between game atmosphere and game satisfaction was positive, significant, and the strongest in the relationships for both samples (Japan, γ_6 = .80, *p* < .01; United States, γ_6 = .80, *p* < .01). However, it should be noted that opponent characteristics and player performance were not significant predictors of game satisfaction in either setting. In summary, two of the three hypothesized relationships between perceived service quality and service satisfaction were supported. One of the hypothesized relationships between perceived core product quality and game satisfaction was supported (see Table 4).

Table 4 Hierarchical Regression Results

Independent variables	Dependent variable: Behavioral intentions			
	Japan (<i>n</i> = 283)		United States (<i>n</i> = 343)	
	Model 1	Model 2	Model 1	Model 2
Control variable				
Number of games attended in the current season	.16**	.10*	.19**	.19**
Service satisfaction	-	.28**	-	.08
Game satisfaction	-	.34**	-	.35**
<i>R</i> ²	.03	.35	.04	.20
ΔR^2		.32**		.16**

Note. Model 1 (attendance frequency model) only examines the effect of the control variable (the number of games attended in the current season) on behavioral intentions; Model 2 (satisfaction model) examines the effect of service and game satisfaction on behavioral intentions in addition to the effect of attendance frequency on the dependent variable; * $p < .05$; ** $p < .01$

The difference between Japanese and United States spectators regarding the quality-satisfaction-behavioral intentions chain was whether service satisfaction had a significant effect on behavioral intentions. For the Japanese sample, both service satisfaction and game satisfaction had a statistically significant influence on behavioral intentions (service satisfaction \rightarrow behavioral intentions, $\beta_1 = .21, p < .01$; game satisfaction \rightarrow behavioral intentions, $\beta_2 = .53, p < .01$) whereas, for the United States sample, only the hypothesized path between game satisfaction and behavioral intentions was significant (game satisfaction \rightarrow behavioral intentions, $\beta_2 = .46, p < .01$; see Table 3). Thus, research evidence underpinned H_3 while H_4 was partially supported in the Japanese setting.

The ability of the hypothesized model to explain variation in service and game satisfaction was assessed by R^2 values. The R^2 values for service satisfaction were .55 for Japanese spectators, and .83 for American spectators. As noted by the R^2 values for game satisfaction, the three core product factors explained 66% of the variance in game satisfaction for the Japanese sample, and 72% for the American sample. Lastly, the R^2 values for behavioral intentions were .42 in the Japanese setting and .25 in the American setting.

Considering the fact that the customers' evaluations of the proposed nine constructs were based on their past experiences in the current season, it might be expected that attendees who had a higher attendance frequency were more likely to attend future sporting events (Kumar & Shah, 2004). To account for the effect of past attendance frequency on behavioral intentions, a hierarchical regression analysis with the number of games attended in the current season, customer satisfaction, and behavioral intentions was employed (see Table 4). In Model 1, in which the two satisfaction dimensions were not entered, past attendance frequency had a significant effect on behavioral intentions in both settings ($\beta_{\text{Japan}} = .16, p < .01$; $\beta_{\text{US}} = .19, p < .01$) but only explained 3% of the variance in behavioral intentions in the Japanese sample and 4% in the United States sample. In Model 2, in which two types of service and game satisfaction were entered, behavioral intentions were

influenced more by service ($\beta = .28, p < .01$) and game satisfaction ($\beta = .34, p < .01$) than by past attendance frequency ($\beta = .10, p < .05$) in the Japanese setting (see Table 4). For the United States sample, the results showed that behavioral intentions were predicted more by game satisfaction ($\beta = .35, p < .01$) than by past attendance frequency ($\beta = .19, p < .05$), although the relationship between service satisfaction and behavioral intentions was not significant ($\beta = .08, p = \text{n.s.}$). Most importantly, the inclusion of the two satisfaction dimensions significantly increased the variance in behavioral intentions ($\Delta R^2_{\text{Japan}} = .32, p < .01$; $\Delta R^2_{\text{US}} = .16, p < .01$), indicating that behavioral intentions are primarily a function of customer satisfaction, not past attendance frequency.

Discussion and Implications

The purpose of this study was to examine the relationships between service quality, core product quality, game and service satisfaction, and behavioral intentions. Since little effort has been made to identify the antecedents and consequences of satisfaction in the context of sporting events, we believe the study makes a significant contribution to the literature in four different ways. First, the model contributes to the sport marketing literature by identifying relative impacts of both service and core product quality on spectator satisfaction, and ultimately on behavioral intentions. A fundamental assumption of the theory of the quality-satisfaction-behavioral intentions chain is that providing high quality goods/services will enable firms to satisfy and retain their customers, to generate long-term benefits, and to survive in a competitive market (Cronin & Taylor, 1992; Dobholkar et al., 2000). In the current investigation, the most important theoretical evidence discovered was associated with the game atmosphere. The relationships between game atmosphere, game satisfaction, and behavioral intentions were statistically significant, strong, and consistent in both Japanese and American settings (see Table 3). These observations verify that creating an exciting game atmosphere will satisfy attendees, and positively influence the likelihood of returning for future events. More specifically, although atmosphere is composed of various background characteristics, such as noise, scent, crowd, lighting, and music, our research findings particularly highlight the importance of the atmosphere related to a sense of excitement derived from the core product. Thus, it is suggested that promoting game atmosphere in combination with the unique characteristics of the core product (i.e., player performance, team history, star player, rivalry, and community prestige) helps sport marketers to satisfy and retain their customers.

The second contribution the study makes is to advance our understanding of the effects of both the service environment and stadium employees on service satisfaction. Stadium employee and facility access were found to be the major predictors of service satisfaction in both Japan and the United States (see Table 3). The results lead us to suggest that customer satisfaction with the service experienced at sporting events is based in part on the attitudes and behaviors of numerous stadium employees. In addition, the facility access-service satisfaction relationship is consistent with Wakefield and Blodgett's (1996) study. From a managerial standpoint, the model can be used to understand that the felt convenience and ease of facility access, according to information signs and facility layout, will improve customers' service satisfaction.

Third, the study contributes to the literature by depicting how game and service satisfaction is formed. Unlike previous research, the model clearly emphasizes that the core product and ancillary services can be viewed as antecedents of the respective satisfaction dimensions. Research evidence found that service quality explained 55% and 83% of the variance in service satisfaction across the two samples. Likewise, core product quality accounted for 66% and 72% of the variance in game satisfaction for the two samples respectively. Indeed, it is suggested that the core product and services coexist as antecedents of game and service satisfaction. With respect to behavioral consequences, our model also provides insights regarding the relative impact of service and game satisfaction on behavioral intentions. In the Japanese setting, game satisfaction had a stronger effect on behavioral intentions ($\beta_2 = .53, p < .01$) than did service satisfaction ($\beta_1 = .21, p < .01$). On the other hand, evidence from the United States spectators revealed that only game satisfaction had a significant impact on behavioral intentions ($\beta_2 = .46, p < .01$). This may be a reflection of the sample since the United States respondents demonstrated stronger intentions to attend future sporting events than did the Japanese subjects (see Table 1). The likelihood that college football spectators will attend future sporting events of their favorite teams may be high regardless of their (dis)satisfaction with the services they experience. In contrast, Japanese professional baseball spectators might experience and rely on various services besides the game. From a marketing standpoint, it is implied that marketing professional sport teams should include efforts to foster customers' game and service satisfaction.

Limitations and Directions to Future Research

Several limitations and assumptions may have influenced the study's results. The first limitation might be the omission of important variables. For example, this study did not include various ancillary entertainment activities (i.e., cheerleaders, halftime shows, mascots, and giveaways) in the research model, because our model was largely based on the traditional definition of service quality, which was a customer's perception of the quality of the customer-service environment interaction and the customer-frontline employee interaction. Since the current definition and measures of service quality have been developed in labor-intensive services, not in new services such as online, machine-intensive, or self-service environments, future research should define the concept of ancillary entertainment quality and develop the measures. In addition, the current study did not examine the moderating effects of customer characteristics (i.e., gender, age, income, education, involvement, and relationship age) on the proposed relationships. It is desirable to identify what customer moderators highlight a specific condition in which the proposed relationships are stronger or weaker.

Second, regarding the exploratory factor analysis of the product quality items using data from the Japanese sample, it is not known whether additional items would have loaded on the final factors if the United States sample was used instead of the Japanese data. The exclusion of items based on the results with the Japanese sample may have influenced the psychometric properties of the service and core product quality constructs for the United States sample. The Japanese data were used to assess the reliability and validity of the scale items measuring the quality dimensions. Changes were made to the instrument without validating the factor

structure across the two settings. It is possible that if the original instruments were tested with a United States sample, the factor structure may have included additional items. It is too early to conclude that a United States sample has the same factor structure with respect to the quality dimensions as that found with the sample of Japanese sport consumers. Suggestions for future research include determining if the dimensions are conceptually sound in a cross-cultural setting, how consistently the dimensions are evaluated by consumers across different countries, and whether additional work is needed to further develop the concepts internationally. Due to the exploratory nature of studying the quality dimensions in the context of sporting events, it is the opinion of the authors that additional research is needed to ascertain whether Japanese and United States consumers score similarly or differently on the quality dimensions.

The third limitation is in relation to data collection. In the current study, the questionnaires were distributed at games, in the second half of the season in both Japan and the United States. Specifically, the United States subjects might have concluded their team had no chance of ending the season as the conference champion. Thus, it was inevitable that these customers' perceptions of the core product were relatively lower than those of Japanese spectators. It will be interesting to assess the effect of seasonality on customers' perceptions of the core product in future research.

Fourth, the questionnaires were distributed to the subjects before the game. This study only collected data in both settings from spectators who arrived at the respective stadiums before the start of the respective games. In addition, it is important to note that, since data were collected before the game, the participants' responses were cumulative based on past games in the current season. Future research needs to understand how recent customer experiences influence their evaluations of sport products, satisfaction, and loyalty. In a similar fashion, future research should conduct a longitudinal study and examine the proposed relationships over time.

Fifth, this study did not examine the relationships between the core product and services. Zhang et al. (1997) define ancillary services as the set of items supporting the core product. Given this definition, it is quite conceivable that supplementary services and secondary entertainment activities may affect a customer's perceptions of the core product. In future research, the relationships between the core product, supplementary services, and ancillary entertainment activities should be examined.

Finally, more studies need to be conducted to better understand how game atmosphere is created. Game atmosphere was the strongest predictor of game satisfaction in both Japan and the United States. As indicated by the factor analysis, we operationalized this construct based on a combination of atmospherics and a sense of excitement. However, the literature on home advantage indicates that game atmosphere will be influenced by various intangible factors, such as team tradition, team quality, crowd density, crowd size, rivalry, and fans' enthusiasm (Courneya & Carron, 1992; Mizruchi, 1985; Schwartz & Barsky, 1977). To explore these reciprocal relationships between game atmosphere and various intangible factors, a further examination of game atmosphere needs to be tested in various spectator sport settings.

At a minimum, the current study offers new ideas to advance our knowledge of customer satisfaction and the antecedents of game and service satisfaction. The proposed model also serves to advance the study of sport marketing by examining

the impact of numerous constructs on sport consumer behavior. This is particularly important in relation to the complexity of the decision-making process. The ideas merit further research and are promising with respect to formulating an explanation of what factors contribute most to sport consumer behaviors. The proposed model and recommendations for future research provide numerous opportunities to continue advancing our knowledge of sport consumers.

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Appendix A Survey Items

Constructs	Items	Factor loadings	
		Japan	U.S.
Service Quality Dimensions			
Stadium employees ($\alpha_{\text{Japan}} = .96$; $\text{AVE}_{\text{Japan}} = .78$; $\alpha_{\text{US}} = .92$; $\text{AVE}_{\text{US}} = .67$)			
	1. You can rely on the employees at this stadium being friendly.	.82	.82
	2. The attitude of the employees at this stadium demonstrates their willingness to help attendees.	.88	.87
	3. The attitude of the employees at this stadium shows you that they understand your needs.	.90	.86
	4. You can rely on the stadium employees taking actions to address your needs.	.90	.83
	5. The employees at this stadium respond quickly to your needs.	.89	.76
	6. The stadium employees understand that you rely on their professional knowledge.	.90	.77
Facility access ($\alpha_{\text{Japan}} = .91$; $\text{AVE}_{\text{Japan}} = .72$; $\alpha_{\text{US}} = .81$; $\text{AVE}_{\text{US}} = .54$)			
	1. Signs at this stadium help you know where you are going.	.86	.80
	2. Signs at this stadium give clear directions of where things are located.	.87	.70
	3. The stadium layout makes it easy to get to your seat.	.84	.78
	4. The stadium layout makes it easy to get to the restrooms.	.82	.64
Facility space ($\alpha_{\text{Japan}} = .91$; $\text{AVE}_{\text{Japan}} = .63$; $\alpha_{\text{US}} = .88$; $\text{AVE}_{\text{US}} = .56$)			
	1. There is plenty of knee room in the seating area.	.66	.85
	2. There is plenty of elbow room in the seating area.	.71	.89
	3. The arrangement of the seats provides plenty of space.	.83	.82
	4. This stadium provides comfortable seats.	.90	.81
	5. The walkways are wide enough to handle the crowds.	.83	.50
	6. This stadium provides enough space to handle the crowds.	.80	.53
Core Product Quality Dimensions			
Opponent characteristics ($\alpha_{\text{Japan}} = .82$; $\text{AVE}_{\text{Japan}} = .53$; $\alpha_{\text{US}} = .80$; $\text{AVE}_{\text{US}} = .50$)			
	1. Opposing teams are high quality teams.	.75	.74
	2. Opposing teams have star players.	.74	.66
	3. Opposing teams have good win/loss records.	.71	.67
	4. Opposing teams have a good history.	.72	.76
Player performance ($\alpha_{\text{Japan}} = .87$; $\text{AVE}_{\text{Japan}} = .58$; $\alpha_{\text{US}} = .92$; $\text{AVE}_{\text{US}} = .69$)			
	1. Your team's players perform well-executed plays.	.60	.81
	2. Players on your team have superior skills.	.72	.76
	3. Your team gives 100% every game.	.75	.87
	4. Your team plays hard all the time.	.82	.83
	5. Players on your team always try to do their best.	.89	.87

(continued)

Appendix A (continued)

		Factor loadings	
Constructs	Items	Japan	U.S.
Game atmosphere ($\alpha_{\text{Japan}} = .89$; $\text{AVE}_{\text{Japan}} = .63$; $\alpha_{\text{US}} = .87$; $\text{AVE}_{\text{US}} = .57$)			
1.	At this stadium, you can rely on there being a good atmosphere.	.78	.82
2.	This stadium's ambience is what you want at a game.	.82	.72
3.	The (<i>team name</i>) understand that atmosphere is important to you.	.72	.80
4.	You enjoy the excitement surrounding the performance of the players.	.87	.76
5.	You like the excitement associated with player performance.	.78	.69
Satisfaction Dimensions			
Service satisfaction ($\alpha_{\text{Japan}} = .82$; $\text{AVE}_{\text{Japan}} = .61$; $\alpha_{\text{US}} = .85$; $\text{AVE}_{\text{US}} = .65$)			
1.	You are satisfied with the service you experience at this stadium.	.74	.82
2.	You are happy with the service you experience at this stadium.	.80	.79
3.	You are delighted with the service you experience at this stadium.	.80	.81
Game satisfaction ($\alpha_{\text{Japan}} = .82$; $\text{AVE}_{\text{Japan}} = .61$; $\alpha_{\text{US}} = .89$; $\text{AVE}_{\text{US}} = .73$)			
1.	You are satisfied with the game you watch at this stadium.	.78	.87
2.	You are happy with the game you watch at this stadium.	.82	.88
3.	You are delighted with the game you watch at this stadium.	.73	.82
Customer Outcome			
Behavioral intentions ($\alpha_{\text{Japan}} = .87$; $\text{AVE}_{\text{Japan}} = .69$; $\alpha_{\text{US}} = .86$; $\text{AVE}_{\text{US}} = .68$)			
1.	The probability that you will attend another sporting event of your team is*	.80	.78
2.	The likelihood that you would recommend (<i>team name</i>) game to a friend is*	.86	.82
3.	If you had to attend this game again, the probability you would make the same choice is*	.84	.86

Note. *These items were measured on a 7-point Likert-type scale ranging from *very low* (1) to *very high* (7); α = Cronbach's alpha coefficient; AVE = average variance extracted