RELATIONSHIP BETWEEN SPORTSCAPE AND BEHAVIORAL INTENTION OF SPECTATOR: CASE OF FOUR PROFESSIONAL MAJOR LEAGUE SPORT EVENTS

By

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(Under the Direction of Kevin K. Byon)

ABSTRACT

Effects of the sportscape on spectators' revisit intention at four different types of professional sports leagues; major league baseball, national football league, national basketball league, and national hockey league were examined. The purpose of this study was to identify differences between spectators at different types of professional sport events. Data were collected by online survey from 481 persons who attended professional sport events by online survey. In order to examine the data, confirmatory factor analysis and regression analysis were used. A regression analysis was employed to test relationship between the independent variables and dependent variables. The result indicated that NBA and MLB spectators tend to considered that aesthetic of sport venue significantly effects on their revisit intention. In the case of NFL sport event participants, layout accessibility was the most important for their intention of next participation. In the case of NHL sport events participants, the most number of sportscape factors influence spectators' revisit intention.

INDEX WORDS: Sportscape; Venue; Stadium; Physical environment; Major league; Wait time

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DEDICATION

To my family

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CHAPTER 1

INTRODUCTION

As competition between sport industries has increased, an analysis of spectators' experiences in the service provider's environments could increase competitiveness for the service provider (Andreu, Bigne, Chumpitaz & Swaen, 2006). The spectators' experiences greatly influence their future behavior, such as revisiting the facility (e.g., Mehrabian & Russell, 1974). In other words, improving the physical environment to provide positive experiences to spectators could be a competitive strategy for the sport service provider. According to Bitner (1992), the physical environment was coined as 'servicecape'. Bitner indicated that the servicecape or the physical environment of service had important influence about individuals' behavioral intention, such as avoiding or frequent attending the facility, spending their time and money at the place. Wakefield and Sloan (1995) indicated that physical environment of sport venue similarly affects spectators' behavioral intention. The service quality at sport venues was coined as 'sportscape'. They have researched the elements of service quality at sport venues based on spectators' experience at sport venue (i.e., vehicle parking, stadium and amenity cleanliness, crowding, fan control, food, and service). Scholars in sport management have examined effects of sportscape on behavioral intention at sport venues. For example, Hill and Green (2000) examined the relationship between sport fans' loyalty, future attendance intention, and perception of the sportscape factors (i.e., parking, cleanliness, crowdedness, and food and beverage service). Yoshida and James (2011) examined aesthetic quality (i.e., atmosphere and crowd experience) and functional quality (i.e., frontline employees, facility accessibility, and seat comfort).

According to the research of Lee, Lee, Seo, and Green (2012), service quality at sport venue was coined 'sensoryscape' because spectators are likely to have a feeling about their experience at sport venue. The sencoryscape included five factors (i.e., sight, sound, touch, smell, taste), and the sight (i.e., architecture, scoreboards, and the venue's decoration and colors) and the touch (i.e., comfortable seating and spatial arrangement of the aisles and seat) factors contained physical environment elements. In sum, previous studies have consistently acknowledged that physical environment significantly affects spectators' behavioral intention.

Statement of the Problem

Teams, cities and major league team owners want to renovate stadiums to benefit the teams and cities through the creation of landmarks, achievement of public purpose, and opportunities for media exposure (Martin, 2004). In addition, as a stadium becomes a deteriorated facility, spectators could have a negative perception of the stadium because of the problems related to its capacity and amenities. For these reasons, in order to maintain a competitive stadium, a team needs to make certain revenue to construct new stadiums or renovate its facility (Cheffins, 1999).

As stadiums have become renovated, their physical environments have changed. More sections, concession stands, bathrooms, parking lot, and gates have been built. However, spectators still spend considerable amount of time waiting in line for stadium concession stands, bathrooms, and exit gates (Baker & Jones, 2011). Since customers commonly perceive waiting as a negative experience, having to wait could be an important factor in spectators' feelings of pleasure in a stadium (Dickson, Ford & Laval, 2005). Since wait time could create negative experiences for spectators, the wait factor needs to be considered closely as an effect on customers' perception about service quality at sport venues.

Previous studies of sport management field included similar environmental elements related with waiting, such as crowding, crowdedness and crowd experience (Hill & Green, 2000; Wakefield & Sloan, 1995; Yoshida & James, 2011). However, the aspect of view about crowd experience was different with waiting experience. The most concept of crowdedness focused on positive side of crowding. According to the study of Hocking (1982), crowd at sport event could positively influence spectator as excitement and entertainment value. Hill and Green (2000) indicated that spectators who support the home team are likely to consider that crowds are important for their entertainment. On the other hand, waiting focus on more negative and concrete concept than crowding. For example, Hueter and Swart (1998) presented 3.3 minutes for average wait time to indicate that the leaving rate of customers starts to dramatically increase. Since crowdedness was comparatively abstract than waiting concept, wait time concept may be easy environmental factor to manipulate for sport managers, even though crowdedness was revealed as important sportscape factor for spectator's satisfaction or behavioral intention.

In addition, every sport spectator has different needs, wants, attitudes and behavioral intentions (Quick, 2000). In order to gain a further understanding of consumer markets and provide better service, sports organizations have found it beneficial to classify meaningful segments from huge spectator populations (Woo, Trail, Kwon & Anderson, 2009). Some scholars have reported the psychological connections between consumers and various sport objects to classify meaningful groups (Beaton et al., 2009; Beaton et al., 2011; Funk et al., 2011; Filo et al., 2011). In the sport management field, Hill and Green (2012) examined sportscape, program attractiveness, socializing opportunities, loyalty, and future attendance intention to identify differences between different types of sport facilities (i.e., fitness facilities, tennis, golf amenities, and gymnasia). Their purpose was to identify segments from participants of single-

sport facilities, multi-sport facilities, and special purpose facilities. In another study by Hill and Green (2000), the relationship between loyalty, future attendance intention, and perceptions of the sportscape were examined in three different contexts: (a) supporting the home team and not supporting the home team, (b) winning team and losing team, and (c) major league team and minor league team. A study by Yoshida and James (2010) examined the relationship between game satisfaction, service satisfaction, service quality, and core product quality in two contexts: professional baseball games in Japan and two college football games in the United States. Since every sport and sport venue has different features and formats, spectators may have different perceptions about the most significant environmental factors, according to sport. However, physical environment and service quality at sport venue has seldom been examined in the context of the four major sport leagues. Furthermore, previous studies have seldom examined the direct effect of sportscape on revisit intentions. The effects of other factors, such as loyalty of fans, opponent characteristics, or player performance were also important in predicting spectators' behavioral intentions. However, in order to manipulate physical environment elements to improve and maintain competitiveness of the four major league's service environments, an examination of the direct relationship between sportscape and revisit intention was necessary.

Sport organizations and governments have planned, built, and changed designs of internal and external physical environments of stadiums, but the influence of physical environment design on the spectators who use these facilities may not be fully understood (Dhurup, Mofoka & Surujlal, 2010). Therefore, vital information could be lacking to measure service quality for changed stadium environments.

Purpose of Research

The purpose of this study is to bridge these gaps by examining the relationship between a various sportscape factors that includes eight factors (i.e., scoreboard quality, layout aesthetic, space allocation, venue accessibility, seating comfort, venue cleanliness, employees and wait time) and spectators' revisit intention. Furthermore, this conceptual framework was tested across the four major league sport events in U.S.: MLB, NBA, NHL, and NFL. The segmentation of spectators' environmental perceptions according to sport leagues could be helpful for sport service providers to have a greater understanding of consumers' wants and needs. Thus, sport service providers could garner more effective renovation strategies to approach consumers' needs for each sport. The results of this study could also contribute to the body of knowledge by developing a sportscape conceptual framework model specific to various sport venues.

CHAPTER 2

LITERATURE REVIEW

Service Quality

Service quality is defined by customers' experiences and feelings in judging the service that companies provide for customers (Abdullah & Rozario, 2009). According to the research of Bitner and Hubbert (1994), service quality is the general impression customers have about the relative inferiority or superiority of the organization and its services. Gronroos (1990) and Ko and Pastore (2004) claimed that service quality needs to describe the features of the services and the system for delivering sport consumers' opinions. Ko and Pastore (2004) also claimed that consumers assess and determine the level of service quality by their sense of purpose achievement, service delivery process, and overall experience.

For measuring service quality, researchers have developed various scales. Parasuraman, Zeithaml and Berry (1988) developed the SERVQUAL scale to measure the difference between the customer's expected performance and actual performance. This scale included five dimensions: tangible, reliability, responsiveness, customer assurance, and empathy. This scale was used by other researchers to measure service quality. For example, Crompton, MacKey, and Fesenmaier (1991) applied the SERVQUAL scale with its original five factors and four new factors, RECQUAL, as an instrument for recreation centers. Wright, Duray, and Goodale (1992) applied SERVQUAL and RECQUAL to measure the satisfaction of college and university students pertaining to recreation. In order to develop the Center for Environmental and Recreation Management-Customer Service Questionnaire (CERM-CSQ), the SERVQUAL and

RECQUAL scales were combined. The CERM-CSQ scale identified four dimensions to measure service quality: core services, staff quality, facilities and secondary services. In the process of service delivery, many scholars have developed frameworks and dimensions to measure the physical environment. Bitner (1992) developed the scale of Servicescape to measure physical environment quality, which includes three main dimensions: ambient conditions, spatial payout and functionality, and signs, symbols, and artifacts. Wakefield, Blodgett and Sloan (1995) found that the three dimensions of Sportscape had a direct relationship with consumer perceptions of service quality through applying Bitner's conceptual framework.

Servicescape

Kotler (1973) suggested environmental atmospherics could be used as a marketing tool. This notion stimulated marketing scholars to examine the area of servicescape (Dhurup, Mofoka&Surujlal, 1999). Mehrabian and Russell (1974) proposed a theoretical framework of Stimulus (S) – Organism (O) – Response (R), known as SOR to analysis about the relationship between customers' response and their physical environments. Since little direct physical contact exists when customers use services, the physical environment greatly influences service consumers (Baker, 1996). Bitner (1990) claimed that services provided in physical environments influenced customer satisfaction. The customer's satisfaction was identified by three antecedents (i.e., expectations, perceived service performance, and attributions) and these elements were influenced by marketing mix. The definition of marketing mix is "the controllable variables that an organization can coordinate to satisfy its target market" (McCarthy and Perreault, 1987, p. 35). According to Bitner (1992), more detailed servicescape factors were examined and identified across different types of facilities, such as hotels, restaurants, hospitals, banks, telephone companies, and insurance companies. The framework of this study includes environmental

dimensions, holistic environment, internal responses of employee and customer, and behavior. The environmental dimensions include temperature of venue, air quality, noise level, music, odor, layout, equipment, furnishings, signage, personal artifacts, and style of decoration. Bitner indicated that the actions of customers and employees' level of ability were closely related to physical surroundings and conditions. Bitner also mentioned that servicescapes had close relationships with customers' satisfaction and identified two important aspects of servicescape: spatial layout and functionality and elements related to aesthetic appeal.

Hoffman and Turley (2002) defined servicescape as a term describing the physical environment offering services to consumers. Servicescape includes tangible and intangible factors that lead to the service experience. Failure to maintain the stadium in good condition could to discourage spectators (Jan & Michael, 2012).

Sportscape

Wakefield and Blodgett (1994) applied the servicescape theory that based on Bitner's (1992) research of sport facilities and found that customers' perceptions about the quality of facility have a direct and positive relationship with feelings of excitement and an indirect relationship with revisit intention. Wakefield and Blodgett (1994) applied the servicescape dimension to sports, and their results showed the positive relationship between exciting emotions and spectators' perception of stadium quality. According to their study, experiencing excitement and stimulation is one of the main reasons customers use leisure services. In other words, when consumers experience the leisure service, the degree of emotion, such as arousal or excitement, could be a major factor in their satisfaction with the service experience. Since the servicescape could manage the customers' emotion with the service, the servicescape could then be a significant factor for the service provider. Turley and Fugate (1992) also claimed that customers'

perceptions of facilities could strongly influence service quality and affective responses. Furthermore, the relationship among perception, service quality and affective responses is especially strong for entertainment facilities.

Hill and Green (2000) examined the relationship between perceptions of the sportscape, loyalty, and future attendance intention in three different three contexts (i.e., major league rugby team, minor league rugby team, and winning or losing). According to their study, sportscape factors were important in predicting behavioral intentions of spectators who did not support the home team. They also indicated that the spectators' psychological involvement and loyalty had comparatively more effect on spectators than sportscape factors. Another study by Hill and Green (2012) examined the relationship between sportscape (i.e., food and beverage, cleanliness, crowdedness, and parking), customer loyalty, socializing opportunities, and program attractiveness in three different contexts: fitness centers, single-sport facility (i.e., tennis, golf, and swim pool amenities), and multi-sport facility (i.e., gymnasia). Every sportscape factor had a close relationship with participation frequency at fitness centers. In the case of single-sport facilities, food and cleanliness sportscape factors presented significant relationships with frequency of participation with mediating factors (i.e., program attractiveness). Food, cleanliness, crowdedness, and parking factors affected the frequency of participation at multi-sport facilities.

Yoshida and James (2010) stated that the service quality at sport venues was based on spectators' interactions with the venue space, layout, signage, and atmosphere. They focused on two sportscape dimensions (i.e., space/functions and signs, symbols, and artifacts), excluding ambient conditions because ambient conditions are difficult for management to control. Their study revealed that the sportscape elements, game satisfaction, and behavioral intentions had a close relationship at both professional baseball games in Japan and college football games in the

United States. They also revealed that sport fans of the United States were likely to have comparatively stronger revisit intention regardless of sportscape elements than spectators in Japan because of their loyalty for their favorite team.

Behavioral Intentions

Mehrabian and Russell (1974) proposed two different spectator behaviors, approach and avoidance. Approach behaviors mean spectators' positive behaviors, such as staying or exploring in the service environment. On the other hand, avoidance behaviors include a desire to leave the environment. Previous scholars have employed behavior intentions, such as repurchasing willingness, willingness to purchase more in the future, and willingness for word-of-mouth, within Mehrabian and Russell's framework (Baker et al., 2002; Hightower et al., 2002; Macintosh & Lockshin, 1997).

In addition, Donovan and Rossiter (1982) claimed that an understanding of customers' intentions could be used to predict buying behavior. Shim, Eastlick, Lotz, and Warrington (2001) also insisted that behavior intention could influence customers' behavior. In the marketing field, many scholars have argued that behavior intention is the cause of customers' behavior because intention to lead a behavior has been considered an indicator of customers' actual behavior (Fishbein & Ajzen, 1975).

For an entertainment facility, Turley and Fugate (1992) proposed that service quality, facility evaluation and outcome of facility have strong, close relationships. Donovan, Rossiter, Marcoolyn, and Nesdale (1994) also provided evidence that consumers spend more money than they expected when they are in a positive mood about the facility. If customers have a negative perception toward the physical environment of the facility, they are not likely to visit it again

(Bagozzi, Gopinath, & Nyer, 1999). Therefore, this study also considered that revisit intention is a result that is affected by spectators' feelings of pleasure.

Hypothesis Development

Wakefield and Blodgett (1994) applied the servicescape theory based on Bitner's (1992) research of sport facilities and found that customers' perceptions about the quality of facility have a direct and positive relationship with feelings of excitement and an indirect relationship with revisit intention. Hill and Green (2000) examined the relationship between perceptions of the sportscape, loyalty, and future attendance intention in three different contexts. Yoshida and James (2010) stated that the service quality at sport venues was based on spectators' interactions with the venue space, layout, signage, and atmosphere.

Previous scholars included the aesthetic aspect in the functional quality dimension (Baker, Parasuraman, Grewal, & Vass, 2002; Bitner, 1992; Wakefield et al., 1996). Previous studies have continuously indicated the effect of scoreboard quality as an aesthetic and functional aspect of the sportscape (Hill & Green, 2000; Gladden & Funk, 2002; Wakefield & Blodgett, 1994, 1996; Wakefield et al., 1996). These findings led to the following hypothesis.

H1: Scoreboard quality factor exhibits a positive relationship to the spectators' revisit intention within a facility.

H2: Venue aesthetics factor exhibits a positive relationship to the spectators' revisit intention within a facility.

Previous studies have continuously investigated an indirect relationship between layout and accessibility. For example, Wakefield, Blodgett, and Sloan (1996) indicated an indirect relationship between layout accessibility, space allocation and behavioral intention. They also

mentioned that comfortably designed seats with ample space and maintaining cleanliness could enhance customers' satisfaction and behavioral intention, such as re-patronage. Yoshida and James (2010) indicated that service quality dimensions included space allocation. Yoshida and James (2011) supported that the functional qualities that include employees, allocation, and accessibility as elements with an important role to maintain competitive service quality at sport venues for sport managers. These finding lead to the following hypotheses:

H3: Space allocation factors exhibit a positive relationship to the spectators' revisit intention within a facility.

H4: Venue accessibility factor exhibits a positive relationship to the spectators' revisit intention within a facility.

H5: Interaction between employees and spectators exhibits a direct and positive relationship to the spectator's revisit intention within a facility.

H6: Seating comfort factor exhibits a positive relationship to the spectators' revisit intention within a facility.

H7: Venue cleanliness factor exhibits a positive relationship to the spectators' revisit intention within a facility.

There have been few studies on wait time dimensions to examine the relationship between service qualities and revisit intention within a sportscape. However, many scholars in the domain of hospitality have researched the relationship between wait time and customers' pleasure emotion (Chou & Liu, 1999; Hueter & Swart, 1998; Hwang & Lambert, 2008; Swart & Donno, 1981).

Baker and Jones (2011) provided reliable evidence for the positive relationship between a facility's physical environment and emotions with response to wait time. Durrande-Moreau also claimed that customers' emotions about wait time and satisfaction have a close relationship (Durrande-Moreau, 1999). The likelihood of waiting and customers' perception of probable waiting negatively influence customers' emotions and satisfaction. According to a study by Hui and Tse, the prediction of a wait usually increases customers' anxiety and frustration (Hui & Tse, 1996). However, this anxiety could be influenced positively or negatively by the diversions offered to fill wait time.

Baker and Jones (2011) defined the waiting fill time as "the extent to which customers are provided with diversions during any time in which they wait for services" (p. 53). They also indicated that the perception of waiting fill time could be different as experience of individuals. Customers' anxiety could be influenced positively by the diversions to fill wait time. According to Taylor (1994), distractions may lead to a more positive perception about wait time. Therefore, distractions and filling wait time may be considered as an outlier factors to measure the relationship between wait time and customers' positive or negative emotions.

The concept of wait time has been indicated with definite measuring value. According to Hueter and Swart (1998), the leaving rate of customers starts to exponentially increase after wait time beyond 3.3 minutes. When the average wait time was under 3 minutes, customers were indifferent to waiting and only 2.5% of fast food customers left the wait line. Another restriction is influence of outliers. Since outliers can influence wait time, researchers should consider outliers in measuring the relationship between customers' dissatisfaction and wait time, such as in the results of the above study, in which the average wait time was 3.3 minutes (Kokkinou & Cranage, 2013).

In the sport management field, Hightower, Brady, and Baker (2002) mentioned that wait time was one of the controllable sportscape factors. They supported the positive and direct relationship between wait time, service quality and behavioral intentions. Based on the support garnered in previous studies, the wait time factor was defined as spectator perceptions about wait time for entering or exiting the gate and receiving service at the stadium. These findings led to the following hypothesis.

H8: Perception of wait time exhibits a direct and positive relationship to the spectator's revisit intention within a facility.

Quick (2000) insisted that every sport spectator has different needs, wants, attitudes and behavioral intentions. In order to gain a further understanding of consumer markets and provide better service, sports organizations have seen the necessity of classifying meaningful segments within huge spectator populations (Woo et al., 2009). Some scholars have reported the psychological connections between consumers and various sport objects to classify meaningful groups (Beaton et al., 2009; Beaton et al., 2011; Funk et al., 2011; Filo et al., 2011). These researches led to the following hypothesis:

H9: Spectators exhibit different perceptions about the most significant environmental factors according to sport.

CHAPTER 3

METHODOLOGY

Participants

A total of 481 respondents participated in the survey study. Research participants were over 18 years old adult and participation in the survey was voluntary. The requirement of participation in the study was that individual must have attended at least one professional major league sport event within the previous 12 months. The participants of this study would be familiar with the sport event products and services that they bought with these sampling conditions (Petrick, 2002). The data was collected through Amazon Mechanical Turk. Mechanical, Turk introduced by Amazon in 2005, has become popular for collecting experimental data. The link for the questionnaire was posted at Mechanical Turk with the requirement that respondents be over 18 years old and residents of the United States. As shown in Table 2, nearly 80% of the participants were between 18 and 40 years old. Participants 23 to 30 years old formed the biggest percentage, 44.1%, and the lowest portion of participants was between 51 to 70 years old, 7.7%. The ethnicity of most participants was Caucasian, 77.8%. Nearly 70% of the participants' household income was less than $50,000.

Instruments

The questionnaire for this study was based on a multi-time statement of previous research studies on servicescape and sportscape (Bettencourt & Wenger, 1998; Hui & Tse, 1996; Houston, Wakefield, Blodgett & Sloan, 1996; Wakefield & Blodgett, 1996). The factors--(a) Scoreboards Quality, (b) Seat Comfort, (c) Space Allocation, (d) Venue Accessibility, and (e) Venue

Aesthetics--were adopted from the major concept of Wakefield, Blodgett, and Sloan (1996). Scoreboards Quality was constructed with three items, and the other factors were constructed with four items. According to the previous studies, the items showed internal consistency: (a) Scoreboard Quality = .87, (b) Seating Comfort = .88, (c) Space Allocation = .87, (d) Stadium Accessibility = .85, and (e) Facility Aesthetics = .84. The four items of (f) Venue Cleanliness factor were utilized to measure customers' perceptions about cleanliness of bathrooms, food service areas, walkways and exits, based on the conceptual framework of Wakefield and Blodgett (1996). In order to test the reliability of construct items, Cronbach's alpha was used, and items of Venue Cleanliness were significant (alpha = .82). The Employee factor was added to the scale based on the servicescape conceptual framework of Bitner (1992) and Baker (1986). The servicescape scale that included three items for Employee factor was significant (alpha = .93) and slightly modified. The Wait time factor in the scale contained five items (alpha = .90) and was based on the literature of Taylor (1994) and Hightower et al. (2002). Responses of all items were measured on a 7-point Likert-type scale ranging from 1 for "strongly disagree" to 7 for "strongly agree". Additionally, demographic variables included age, gender, ethnicity, household income, education, occupation, and professional sport game most recently attended.

Procedures

The questionnaire that included 42 items was designed to be completed in under ten minutes to prevent participant anxiety. In order to compare the results, the questionnaires were posted at Amazon Mechanical Turk with different requirements for participants who had experienced at least one of the major league sport events--MLB, NFL, NBA, and NHL--within the previous 12 months. A total of 481 were collected (MLB = 122, NFL = 115, NBA =119, NHL = 125). Completing a questionnaire, on average, took approximately 7 minutes.

Data Analyses

In order to examine the basic characteristics of the data, procedures from the Statistical Package for the Social Science (SPSS 21.0) were used to calculate descriptive statistics, including central tendency (e.g., mean), measures of variability (e.g., standard deviation), and data normality (e.g., skewness and kurtosis).

Confirmatory factor analysis (CFA) was used to examine the factor structure of the conceptual model. CFA was conducted using AMOS 21.0. In order to measure the goodness of model fit indices, Standardized Root Mean Square Residual (SRMR), Root Mean Square Error of Approximation (RMSEA), Tucker-Lewis Index (TLI), and Comparative Fit Index (CFI) were used in this study. The values of RMSEA should be under at least .10 to avoid unacceptable fit. In order to be acceptable fit, the range of RMSEA should be from .06 to .08. If the values of RMSEA were between .08 and .10, it would be considered mediocre fit (Hu & Bentler, 1999). As far as value of SRMR is concerned, the smaller the better. Values of SRMR between .10 and .05 could be considered as acceptable fit (Hu & Bentler, 1998). In the case of CFI, if the value CFI was greater than .95, it would be considered a close fit. Values greater than .90 could be an acceptable fit. In addition, convergent validity and discriminant validity were assessed. Average variance extracted (AVE) was used to examine convergent validity and internal consistency reliability was assessed by Cronbach's alpha (Hair, Anderson, Tatham, & Black, 1998).

A regression analysis was employed to test the relationship between the independent variables (i.e., scoreboard quality, venue aesthetics, space allocation, layout accessibility, employees, seat comfort, venue cleanliness, and wait time) and dependent variables (i.e., revisit

intention). A regression analysis also examined the hypothesized relationships (i.e., H1, H2, H3, H4, H5, H6, H7, and H8).

CHAPTER 4

RESULTS

Descriptive Statistics

Descriptive statistics including means and standard deviations of all variables are

Descriptive statistics including means and standard deviations of all variables are

presented in Table 4-4. A total of 481 questionnaires were collected, 122 from the MLB spectators, 115 from the NFL spectators, 119 from NBA spectators, and 125 from NHL spectators. The fourth item of aesthetics factor (*M* = 5.61, *SD* = 1.12) was found to be the most important factor for spectators who attended all four major sport events. The next largest values were "The scoreboards are entertaining to watch" (*M* = 5.55, *SD* = 1.15) and "The venue maintains clean food service area" (*M* = 5.52, *SD* = 1.05). On the other hand, the lowest value was the first item of wait time factor, "Overall, there was not too much waiting while at the event" (*M* = 4.61, *SD* = 1.52).

According to Table 4-4, the MLB spectators also considered that the venue aesthetic (AES 4), " This is an attractive venue," to be the most important factor (*M* = 5.88, *SD* = .98). The next two largest values were "Overall, the venue is kept clean" (*M* = 5.77, *SD* = .92) and "The venue's layout design makes it easy to get to your seat" (*M* = 5.74, *SD* = 1.08) in cleanliness. The lowest value in the MLB results was the third item of wait time factor, "During the event, there is no delay or waiting to receive service from employees" (*M* = 4.63, *SD* = 1.27).

For the NFL spectators, the scoreboard quality item (SCOR 1), "The scoreboards are entertaining to watch", was rated the highest (*M*= 5.53, *SD* = 1.30). The next two largest values

were the second item of cleanliness factor, "The venue maintains clean food service area" (*M* = 5.48, *SD* = 1.08) and "Overall, the venue is kept clean" (*M* = 5.43, *SD* = 1.15), also in cleanliness factor. The lowest value in the results of NFL was same wait time item seen in the MLB case, "During the event, there is no delay or waiting to receive service from employees" (*M* = 4.25, *SD* = 1.49).

For the NBA spectators, the scoreboard quality was also the most important environmental factor. The item (SCOR 3), "The scoreboards provide interesting statistics", was rated the highest (*M* = 5.71, *SD* = 1.12). The next two largest values were the fourth item of cleanliness factor (*M* = 5.65, *SD* = .92) and "The scoreboards are entertaining to watch" (*M* = 5.67, *SD* = 1.01) in scoreboard quality factor. The lowest value in the results of NBA was also the item of wait time factor, "Overall, there was not too much waiting while at the event" (*M* = 4.73, *SD* = 1.45).

The NHL spectators considered that the venue cleanliness item, "Overall, the venue is kept clean," was the most important factor (*M* = 5.70, *SD* = .99). The next two largest values were both included in venue aesthetic factor, "The venue is decorated in an attractive fashion" (*M* = 5.57, *SD* = 1.06) and "This is an attractive venue" (*M* = 5.59, *SD* = 1.12). The lowest value was "Overall, there was not too much waiting while at the event" (*M* = 4.66, *SD* = 1.52) in the first wait time factor.

To sum up, while the value of items related to wait time was commonly the lowest, the values of venue cleanliness items were commonly in the top three for participants who attended four major league sport events. In addition, mean scores of revisit intention variable's first item (RI 1), "I would like to come back to this sport event at this venue," and fourth item (RI 4), "I am willing to spend more than I planned for this sport event at this venue," indicated that spectators

highly desire to revisit the events but show comparatively less desire to spend their money above their planned budget.

Confirmatory Factor Analyses

Thirty-five items under nine factors were submitted to a CFA and the goodness of model fit was revealed. Table 4-5 shows that the chi-square statistic was significant ($\chi^2 = 1539.324$, $p < .001$). The score of chi-square indicated that the conceptual model was statistically significant. However, chi-square value could be sensitive to sample size (Kline, 2005). Hoyle (1995) insisted that examining alternative fit indices is necessary. Thus, the normed chi-square, RMSEA, CFI and ECVI were examined in this study. Since, the normed chi-square ($\chi^2/df = 2.938$) was under the cut-off value (i.e. <3.0), the model fit was acceptable. The values of RMSEA and RMSEA CI (RMSEA = .064, CI = .060-.067) indicated that the model fit is reasonable fit (i.e. <.08) (Browne & Cudeck, 1993). CFI was .905, which was considered acceptable (i.e. >.90). As a result of the factor analyses, the conceptual model in this study was revealed as an appropriate model to measure the relationship between sportscape factors and revisit intention.

Hypothesis Testing

Table 4-5 presents the results of regression analysis. The relationship between sportscape factors and revisit intention was examined by regression analysis according to each sport (i.e., NBA, MLB, NFL, and NHL). The result revealed that sportscape factors had a significant effect on revisit intention ($p < .001$) in all four major league sport participants. Table 6 presents which hypotheses were significant in each major league sports. In the case of NBA, hypothesis 2, "Venue aesthetics factor exhibits a positive relationship to the spectators' revisit intention within a facility", was revealed as significant ($\beta = .368$, $p < .01$). The relationship between the venue aesthetics factor and revisit intention was also significant in MLB ($\beta = .491$, $p < .01$). In the case

of NFL, hypothesis 4, "Venue accessibility factor exhibits a positive relationship to the spectators' revisit intention with in a facility", indicated that the venue accessibility factor had an important effect on revisit intentions for spectators of NFL sport event ($\beta = .337$, $p < .05$). Lastly, the results for NHL indicated that five factors were significant: scoreboard quality ($\beta = .205$, $p < .01$), venue aesthetic ($\beta = .462$, $p < .01$), space allocation ($\beta = -.247$, $p < .05$), layout accessibility ($\beta = .398$, $p < .01$), and employees ($\beta = .250$, $p < .01$).

CHAPTER 5

DISCUSSION

The purpose of this study was to identify differences between spectators at different types of professional sport events. Effects of the sportscape on spectators revisit intentions at four different types of professional sports leagues--major league baseball, national football league, national basketball league, and national hockey league--were examined. The discussion consists of the following sections: summary of findings, implications, limitations and directions for future research, and conclusion.

Summary of Findings

This study showed that the sportscape is an important determinant of spectators' revisit intentions. The results of regression analysis supported the statistically significant relationship among factors of the conceptual model in this study. This study illustrates that consumers who like to attend NBA and MLB venues are likely to consider that the aesthetic quality of the venue has more influence on their behavioral intention to visit the venue in the future than other environmental elements. Wakefield, Blodgett and Sloan (1996) reported that aesthetic quality was one of the important sportscape factors because consumers tend to form first impressions based on the appearance of the venue. In order to maintain the attractiveness of the servicescape, service providers continuously renovate and develop their facility (Wakefield et al., 1996). The current study's major finding is that aesthetic quality should be considered as an especially important environmental factor at NBA and MLB venues.

The results indicated that spectators considered layout accessibility to be the most significant environmental factor at NFL venues. According to the previous findings, layout accessibility is one of the important environmental factors in leisure service because comfortable entering and exiting of a venue help consumers to enjoy the primary service offering. Appropriate layout design could decrease customers' confusion and enhance ability to reach their destinations, such as seats, concessions, and restrooms. Thus, customers could find their desired destination by effective layout design.

According to the current study's findings, consumers who attended NHL sport events are likely to consider comparatively more environmental factors than consumers who attended MLB, NBA, and NFL in deciding to re-visit the sport venue. Similar to the case of MLB and NBA, venue aesthetic quality is also one of the significant factors for NHL venues. As in the case of the NFL, layout accessibility is also an important factor for consumers who visit NHL venues. In addition, the number of employees available to offer services and the kindness of employees influence spectator's revisit intentions. The scoreboard quality also affected NHL fans' revisit intentions. Wakefield, Blodgett and Sloan indicated that the reason for the scoreboard's important role is not only presenting statistics for game, but also providing entertainment between plays or periods (Wakefield et al., 1996). Lastly, space allocation factor is comparatively less important than the other important factors for NHL venues (i.e., venue aesthetic quality, scoreboard quality, layout accessibility, and employees), but the results revealed a reasonable relationship between ample space (i.e., concession area, walkway, restroom, etc.) for handling crowd and revisit intention.

Implication

The findings of the current study could provide several managerial implications for both academics and practitioners in sport management. Theoretically, this research contributes toward examining previous sportscape factors and developing knowledge of a sportscape conceptual model. A modified sportscape conceptual model was proposed and confirmed.

According to the results, hypothesis 9, “Spectators exhibit different perception about the most significant environmental factor according to the types of sport”, was supported. Especially, unlike the results of NBA, NFL, and MLB, the result of NHL indicated that NHL spectators were influenced by many sportscape elements because of the game's format. This result may be explained in that NHL sport events have comparatively longer periods between games to maintain the appropriate condition of the arena's ice. Thus, participants of NHL sport events may have more chance to walk around and use various facilities, such as concession area, than other major league sport events. The result of NBA and MLB may be explained that spectators who participated in these sport events are likely to continuously concentrate upon their games because both games' formats have comparatively short breaking time. In addition, in the case of NBA game's format, the game time is also comparatively short as 48 minutes. On the other hand, the game time of MLB is more than two hours. Despite the long game hours, spectators are likely to continuously stay their seat and concentrate upon their game without too much tension because the tempo of game is not urgent. For these reasons, spectators of NBA and MLB sport events may have not enough chance to be influenced by physical environment, but only venue aesthetic because they can contact the venue's attractiveness, features of architecture or decoration before they start to concentrate upon their games. Not like NBA and MLB, NFL game format has an urgent tempo. Thus, participants of NFL events are likely to want to easily access their frequent

destinations to keep sight of the game. This reason may explain that spectators consider layout accessibility to being the most significant environmental factor at NFL venues.

In addition, Quick (2000) insisted that every sport spectator has different needs, wants, attitudes and behavioral intentions. Thus, it is necessary to classify a meaningful segment from huge spectator populations to gain a further understanding of consumer markets (Woo et al., 2009). The findings of the current study provide a meaningful segment from spectator populations according to types of sport. Since spectators' behavioral intention is influenced by environment in regard to types of sport, future researchers need to classify the target population for appropriate results of sportscape conceptual models. The findings of this study can provide the basis to develop a more comprehensive sportscape framework.

Practically, the results provide guidance for successful sport facility management. Spectators of sport events are less likely to want to stay at the venue and less likely to revisit for future events when they spent too much time waiting in line, or their seats were uncomfortable, or the appearance of sport facilities was not attractive. The consumers' perception about cramped environment is directly influenced by venue accessibility, space allocation, wait time and employees. In order to improve these environment elements and maintain their customers' visitation, some space could be reallocated for frequent destinations (i.e., concession area, gate, restrooms, etc).

Service providers need certain revenue to maintain their competitive facilities (Cheffins, 1999). However, the revenue is limited and owners and sport facility managers need to gain a further understanding of consumer markets for a preferential renovation list. The findings of the current study suggest that owners and managers should consider preferential environmental factors and manipulate them according to types of sports. For example, according to the findings

of this study, scoreboard quality was not a significant environmental factor at MLB sport facilities for spectators' revisit intention (p = .988). If some owners of MLB stadiums preferentially focus on developing scoreboard quality, consumers may not want to enter or stay in the venue because they are dissatisfied with the venue's aesthetic quality, as MLB fans are likely to consider venue aesthetics significant for their re-visit intention. NBA fans also consider aesthetics is significant environmental factor. Therefore, NBA and MLB owners or managers should strive to improve aesthetic elements, such as venue design or decoration, to maintain their consumers' visiting.

Furthermore, cross-marketing may be an effective strategy based on the findings of this current study. For instance, both spectators of MLB and NBA have perceptions that a venue's aesthetic quality is the most important factor. If fans of MLB attended NBA sport events and they were satisfied with the aesthetic quality of the NBA arena, the fans may have a high possibility of attending future NBA events at the same venue.

Limitations and Future Research

Several limitations were present and should be addressed. According to the results of this current study, the effect of wait time factors was not considered as an important environmental factor of spectators to having revisit intentions in four major league sport contexts. However, this result could be explained as other sportscape factors partially include wait time elements. In other words, participants of this study's survey may consider that wait time questions related to questions of employees, layout accessibility, and space allocation factors. For example, one of the questions about Employees was 'There is enough employees at stadium to service customers' and one of the questions for Wait time was 'During the event, there is no delay or waiting to receive service from employees.' Despite CFA values of Employees and Wait time factors were

acceptable, participants may be confused these questions. For this reason, even though the results presented that wait time factors had a low influence over revisit intentions of spectators, the wait time elements may still be worthy to consider as important factors of sportscape and spectator's revisit intention.

Many previous researches related to sportscapes included consumers' emotions. Many scholars who study emotional responses of retail consumers use dimensions to represent positive and negative emotions. For instance, Mehrabian and Russell (1974) indicated that the PAD emotional states include three dimensions: pleasure, arousal, and dominance. For the area of leisure sport events, the positive relationship between a spectator's perception of stadium quality and positive emotion was proven (Hightower et al., 2002). Therefore, future research should investigate emotion between sportscape factors and revisit intention as a role of moderation.

Thirdly, it may be limited because data were collected via online survey. The participants had already left the sport venues when they participated in the survey for this study. The target population was adults over 18 years' old who had attended one of the four major league sport events in the United States within the past 12 months. Thus, if the participants attended their sport events 11 months ago, the experience could be vague. In addition, the location of target population was limited to the United States and the ethnicity of most participants was Caucasian. If data was collected from different location or population, the result may different.

Finally, according to previous literature, wait time is one of the significant factors for consumers' satisfaction. However, the results of this current study indicated that wait time did not significantly influence consumers' revisit intentions. It could be explained that wait time factors was closely related to layout accessibility, space allocation, and employees because these

factors included cramped environment elements. Therefore, future research is needed to modify the wait time factor.

The results of the current study reveal that factors of a modified sportscape model (i.e., scoreboard quality, venue aesthetic, space allocation, layout accessibility, employees, seat comfort, venue cleanliness, and wait time) positively influence consumers' behavioral intention, according to sport. When considering the reliability and validity of this conceptual model, the scale can be used as a marketing tool for professional team sports managers to further understand their spectators' perceptions of the sport environment. It also can be meaningful for future researchers who try to develop sportscape models.

REFERENCES

Abdullah, D., & Rozario, F., (2009), Influence of service and product quality towards customer satisfaction: A case study at the staff cafeteria in the hotel industry. *World Academy of Science, Engineering and Technology, 53,* 185-190.

Andrus, D. (1986). Office atmospherics and dental service satisfaction. *Journal of Professional Service Marketing, 1(4),* 77–85.

Angels.com. (2013). Premium Seating Guide. http://losangeles.angels.mlb.com/ana/ticketing/suites_map.jsp (Last visited Oct, 6, 2013)

Bagozzi, R., Gopinath, M., & Nyer, P. (1999). The role of emotions in marketing. *Journal of the Academy of Marketing Science 27,* 184-206.

Baker, M.J. (1986). The role of the environment in marketing services: the consumer perspective. *In: Cepeil, J.A. (Ed.), The Services Challenge: Integrating for Competitive Advantage. American Marketing Association, Chicago,* 79-84.

Baker, M.J., Parasuraman, A., Grewal D., & Voss GB. (2002). The influence of multiple store environment cues on perceived merchandise value and patronage intentions. *Journal of Marking, 66(2),* 120–141.

Baker, T., & Jones, S. A. (2011). The inevitable queue: exploring the impact of wait time at sporting events. *International Journal of Sports Marketing & Sponsorship, (13),* 49-59.

Beaton, A.A., Funk, D.C. & Alexandris, K. (2009) Operationalizing a theory of participation in physically active leisure. *Journal of Leisure Research, (41),* 177-203.

Beaton, A.A., Funk, D.C., Ridinger, L. & Jordan, J. (2011) Sport involvement: A conceptual and empirical analysis. *Sport Management Review, (14),* 126-140.

Bitner, M.J. (1990). Evaluating service encounters: the effect of physical surroundings and employee responses. *Journal of Marketing, 54,* 69-82.

Bitner, M.J. (1992). Servicescapess: The impact of physical surroundings on customers and employees. *Journal of Marketing, 56,* 57-71.

Bitner, M.J., Booms, B,H., & Mohr, L.A. (1994). "Critical Service Encounters: The Employee's View." *Journat of Marketing, 58,* 95-106.

Bitner, M.J. & Hubbert, A.R. (1994). Encounter satisfaction versus overall satisfaction versus quality: *The* customer's voice. In R.T. Rust & R.L. Oliver (Eds.). *Service quality: New directions in theory and practice,* 72-84.

Brauer, R.L. (1992). Facilities planning: The user requirements method. *New York: AMACOM.*

Bost, E. (1987). Ladenatmosphere und Konsumerntenverhalten. Physica, Heidelberg, Germany.

Browne, M. W. & Cudeck, R. (1993). Alternative ways of assessing model fit. *Bollen, K. A. & Long, J. S. (Eds.), Testing structural equation models*, 136~162.

Cheffins, B. R. (1999). Playing the Stock Market: "Going Public" and Professional Team Sports. *24 IOWA J.CORP.L.* 641-649.

Chou, C.-Y., Liu, H.-R., (1999). Simulation study on the queuing system in a fast-food restaurant. *Journal of Restaurant & Foodservice Marketing, 3,* 23–36.

Cockrill, A., Goode, M., & Emberson, D. (2008). Servicescapes matters -or does it? The special case of betting shops. *Marketing Intelligence and Planning, 26(2),* 189-206.

Crompton, J.L., MacICay, K.J., & Fesenmaier, D.R. (1991). Identifying dimensions of service quality in public recreation. *Journal of Park and Recreation Administration, 9,* 15-27.

Dhurup, M., Mofoka, M.A. & Surujlal, J. (2010). The relationship between stadium sportscapes dimensions, desire to stay and future attendance. *African Journal for Physical, Health Education, Recreation and Dance 16,* 475-490.

Dickson, D., Ford, R.C., & Laval, B. (2005). Managing real and virtual waits in hospitality and service organizations. *Cornell Hotel and Restaurant Administration Quarterly. 46,* 52-68.

Donovan, R.J., & Rossiter, J.R. (1982). Store atmosphere: an environmental psychology approach. *Journal of Retailing, 70,* 283-294.

Donovan, R.J., Rossiter, J.T., Marcoolyn, G., & Nesdale, A. (1994). Store atmosphere and purchasing behavior. *Journal of Retailing, 70(3),* 283-294.

Durrande-Moreau, A. (1999). Waiting for service: ten years of empirical research. *International Journal of Service Industry Management, 10,*171-183.

Dhurup, M., Mofoka, M.A., & Surujlal, J. (1999). The relationship between stadium sportscapes dimensions, desire to stay and future attendance. *African Journal for Physical, Health Education, Recreation and Dance, 16,* 475-490.

Feng, X. and Humphreys, B. R. (2008). Assessing the economic impact of sports facilities on residential property values: A spatial hedonic approach. *IASE/NAASE Working Paper Series,* 8-12.

Filo, K., Chen, N., King, C. & Funk, D.C. (2011). Sport tourists' involvement with a destination: a stage-based examination. *Journal of Hospitality & Tourism Research, 37,* 100-124.

Fishbein, M., Ajzen, I. (1975). Belief, attitude, intention, and behavior: an introduction to theory and research. *Reading, MA: Addison-Wesley.*

Funk, D.C., Beaton, A.A. & Pritchard, M.P. (2011). The stage-based development of physically active leisure: a recreational golf context. *Journal of Leisure Research, (43),* 268-289.

Gladden, J.M. and Funk, D.C. (2002), Developing an understanding of brand associations in team sport: Empirical evidence from consumers of professional sport, *Journal of Sport Management, (16),* 54-81.

Gronroos, C. (1990). Service management and marketing : managing the moments of truth in service *competition*. *Lexington, Mass. : Lexington Books.*

Hair, J. F., Anderson, R. E., Tatham, R. L., & Black, W. C. (1998). Multivariate data analysis (6th ed.). *Upper Saddle River, NJ: Prentice Hall*

Hansen, T. (2005). Understanding consumer perception of food quality: the cases of shrimps and cheese. *British Food Journal, 107(7),* 200-525.

Hightower, R., Brady, M., & Baker, T. (2002). Investigating the role of the physical environment in hedonic service consumption: an exploratory study of sporting events. *Journal of Retailing, 55(9),* 697-707.

Hill, B., & Green, B.C. (2000). Repeat attendance as a function of involvement, loyalty, and the sportscape across three football contexts. *Sport Management Review, (3),* 145-162.

Hill, B., & Green, B.C. (2012). Repeat participation as a function of program attractiveness, socializing opportunities, loyalty and the sportscape across three sport facility contexts. *Sport Management Review, (15),* 485-499.

Hocking, J. E. (1982). Sports and spectators: Intra-audience effects. *Journal of Communication, 32(1),* 100–108.

Houston, M.B., Betterncourt, L.A., & Wenger, S. (1998). The relationship between waiting in a service queue and evaluations of service quality: A field theory perspective. *Psychology & Marketing, 15,* 735-753.

Hoyle, R. H. (1995). Structural equation modeling: Concepts, issues, and applications. *Duke University, CA: Sage.*

Hueter, J., & Swart, W. (1998). An integrated labor-management system for Taco Bell. *Interfaces, 28,* 75–91.

Hu, L. T., & Bentler, P. M. (1998). Fit indices in covariance structure modeling: Sensitivity to underparameterized model misspecification. *Psychological Methods, 3(4),* 424–453.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling, 6, 1–55.*

Hwang, J., Lambert, C.U., 2008. The interaction of major resources and their influence on waiting times in a multi-stage restaurant. *International Journal of Hospitality Management, 27,* 541–551.

Hui, M. K., & Bateson, J.E.G. (1991). Perceived control and the effects of crowding and consumer choice on the service experience. *Journal of Consumer Research, 18,* 174-184.

Hui, M.K., & Tse, D. (1996). What to tell consumers in waits of different lengths: An integrative model of service evaluation. *Journal of Marketing, 60,* 81-90.

Izard CE. Human Emotions. New York: Plenum Press; 1977.

Jan, W., & Michael, C. (2012). Female spectator satisfaction and perceived service quality on university sporting grounds. *Gender & Behaviour, 10(2),* 4712-4731.

Kline, R. B. (1998). Principle and practice of Structural equation modeling. *New York: The Guilford Press.*

Kim, W.G., & Moon., Y.J. (2009). Customers' cognitive, emotional, and actionable response to the servicescapes: A test of the moderating effect of the restaurant type. *International Journal of Hospitality Management, 28,* 144-156.

Ko, Y.J., & Pastore, D.L. (2004). Current issues and conceptualizations of service quality in the recreation *sport* industry. *Sport Marketing Quarterly, 13,* 158-166.

Kokkinou, A., & Cranage, D. A. (2013). Using self-service technology to reduce customer waiting times. *International Journal of Hospitality Management, 33,* 435-445.

Kotler, P. (1973). Atmospherics as a marketing tool. *Journal of Retailing, 19(4),* 48-64.

Laurie, C. Fery. (2011). How The Smallest Market in Professional Sports Had the Easiest Financial Journey: The Renovation of Lambeau Field. *18 Sports Law. J, 259.*

Leclerc, F., Schmitt, B.H., & Dube, L. (1995). Waiting time and decision making: Is time like money? *Journal of consumer Research, 22,* 110-119.

Lee, Y. K., Lee, C. K., Lee, S. K., & Babin, B. J. (2008). Festivalscapes and patrons' emotions, satisfaction, and loyalty. *Journal of Business Research, (61),* 56-64.

Lee, S., Lee, H.J., Seo, W.J., & Green, C. (2012). A new approach to stadium experience: The dynamics of the sensoryscape, social interaction, and sense of home. *Journal of Sport Management, (26),* 490-505.

Levin. M, (1984), The placement and misplacement of you-are-here maps. *Environment and Behavior, 16,* 139-158.

Liljander V, Strandvik T. Emotions in service satisfaction. *International Journal of Service Industry Management, 8(2),* 148–69.

Macintosh, G., Lockshin L.S. (1997). Retail relationships and store loyalty: a multi-level perspective. *International Journal of Research in Marketing, 14(5),*487-497.

Martin, J. G. (2004). International Sports Law & Business in the 21st Century: Sports Facility Financing and Development Trends in the United States, *15 MARQ. Sports L.J.* 93-155.

Matthew, J. Parlow. (2002). Publicly Financed Sports Facilities: Are They Economically Justifiable? A Case Study of the Los Angeles Staples Center, *10 U.MIAMI BUS. L. Rev. 483-526.*

Miller, c. (1993). US European shoppers seem pleased with their supermarkets. *Marketing News, (27), 3.*

McGoldrick, P. J., & Pieros, C. (1998). Atmospherics, pleasure and arousal: The influence of response moderators. *Journal of Marketing Management, 14,* 173-197.

McCarthy. E. J., & William D. P. (1987), Basic Marketing, 9th ed. Homewood, IL: Richard D. lrwin. Inc.

Mehrabian, A., & Russell, J.A. (1974). An Approach to Environmental Psychology, Cambridge, MA: MIT Press.

Proshansky, H.M. (1978). The city and self identity. *Environment and Behavior, 10 (2),* 147-169.

Quick, S. (2000) Contemporary sport consumers: some implications of linking fan typology with key spectator variables. *Sport Marketing Quarterly, 9, 149-156.*

Russell, J. A., & Pratt, G. (1980). A description of the affective quality attributed to environments. *Journal of Personality and Social Psychology, 38(2),* 311-322.

Shank, D. M. (2005). Sports Marketing: A Strategic Perspective. (3rd ed.). New Jersey: Prentice Hall.

Shim, S., Eastlick, M.A., Lotz, S.L., & Warrington, P. (2001). An online prepurchase intentions model: the role of intention to search. *J Retail (77),* 397–416.

Snowdon, J.L., MacNair, E., Montevecchi, M., Callery, C.A., El-Taji, S., Miller, S., 2000. IBM journey management library: an ARENA system for airport simulation. *Journal of the Operational Research Society, 51,* 449–456.

Steffy G. (1990). Architectural lighting design. *New York, NY: Van Nostrand Reinhold.*

Spies, K., Hesse, F., & Loesch, K. (1997). Store Atmosphere, mood and purchasing behavior. *International Journal of Research in Marketing. 14(1),* 1-17.

Swart, W., Donno, L., 1981. Simulation modeling improves operations, planning, and productivity of fast food restaurants. *Interfaces, 11,* 35–47.

Turley, L.W., & Fugate, D.L. (1992). The multidimensional nature of service facilities: viewpoints and recommendations. *The Journal of Services Marketing, 6(3),* 37-53.

Taylor, S. (1994) Waiting for service: The relationship between delays and evaluation of service. *Journal of Marketing, 58, 56-69.*

Wakefield, K.L. & Blodgett, J.G. (1994). The importance of servicescape in leisure service settings. *Journal of Services Marketing, 8(3), 66-76.*

Wakefield, K.L. & Sloan, H.J. (1995). The effect of team loyalty and selected stadium factors on spectator attendance. *Journal of Services Marketing, (9), 153-172.*

Wakefield, K.L. & Blodgett, J.G. (1996). The effect of the servicescapess on customers' behavioural intentions in leisure service settings. *Journal of Service Marketing, 10(6),* 45-61.

Wakefield, K.L. & Blodgett, J.G. (1999). Customer response to intangible and tangible service factors. *Psychology Marketing. (16),* 51– 68.

Warshaw, P.R., Davis, F.D. (1985), Disentangling behavioral intention and behavioral expectation. *Journal of Experimental Social Psychology, (21),* 213–228.

Wener, R.E. (1985). The environmental psychology of service encounters. *In J.A. Czepiel, M.R. Solomon, & C.F. Surprenant (Eds.), The service encounters: Managing employee customer interaction in service business. Lexington, MA: Lexington Books,* 101-102

Wright, B.A., Duray, N., & Goodale, T.L. (1992) Assessing perceptions of recreation center service quality. An application of recent advancements in service quality research. *Journal of Park and Recreation Administration, 10,* 33-37.

Woo, B., Trail, G.T., Kwon, H.H. & Anderson, D. (2009) Testing models of motives and points of attachment among spectators in college football. *Sport Marketing Quarterly, 18,* 38-53.

Yoo, C., Park, J. & MacInnis, D. J. (1998). Effects of store characteristics and in-store emotional experiences on store attitude. *Journal of Business Research, 43(3),* 253-263.

Yoshida, M., & James, J.D. (2010). Customer satisfaction with game and service experiences: Antecedents and consequences. *Journal of Sport Management, (24),* 338-361.

Yoshida, M., & James, J.D. (2011). Service quality at sporting events: Is aesthetic quality a missing dimension? *Journal of Sport Management, (14),* 13-24.

Zajonc, R.B. (1980). Feeling and thinking: preferences need no inferences. *American Psychologist, 35,* 151-175.

Table 4-1: Definition of Sportscape Factors ($N = 481$)

Dimensions	Brief description of the dimensions
Employee	Customers' perception about employees, such as number of employees or how friendly they are.
Scoreboard Quality	Entertaining scoreboard with essential statistics shown with high definition and quality
Seating Comfort	Ample of knee and elbow room between seats, appropriately sized concession stands
Space Allocation	Adequate restrooms, walkways, and concession stands in order to manage large crowds
Venue Accessibility	Easy entrance, exists, safe parking, modern stadium layout
Venue Aesthetics	Stadium attractiveness, features, architecture and decor
Venue Cleanliness	Clean restrooms, seating, concession, entrance and exists
Wait Time	Customer's perception about waiting time for entering or exiting gate, and receiving service at the stadium.

Source: Wakefield, Blodgett & Sloan (1996)

Table 4-2: Frequency distributions for the demographic variables ($N = 481$)

Variable	Category	Frequency (%) ($N = 481$)	Cumulative %
Gender	Male	363 (75.5)	75.5
	Female	118 (24.5)	100
Age	18-22	50 (10.4)	10.4
	23-30	212 (44.1)	54.5
	31-40	120 (24.9)	79.4
	41-50	62 (12.9)	92.3
	51-70	37 (7.7)	100
Ethnicity	Caucasian	374 (77.8)	77.8
	African American	22 (4.6)	82.4
	Hispanic	31 (6.4)	88.8
	Asian	47 (9.8)	98.6
	Pacific Islander	2 (.4)	99
	Other	5 (1.0)	100
Education	High School	64 (13.3)	13.3
	Some College	166 (34.5)	47.8
	College Degree	205 (42.6)	90.4
	Graduate School	46 (9.6)	100
Household income	Below $25,000	157 (32.6)	32.6
	$25,000-49,999	180 (37.4)	70
	$50,000-74,999	90 (18.7)	88.7
	$75,000-99,999	29 (6.0)	94.7
	$100,000-149,999	20 (4.2)	98.9
	Above $150,000	5 (1.0)	100
Attended game	MLB	122 (25.4)	25.4
	NFL	115 (23.9)	49.3
	NBA	119 (24.7)	74
	NHL	125 (26.0)	100

Table 4-3: Descriptive Statistics for the Scale of Sportscape Variables ($N = 481$)

Variable	*M*	*SD*	Skewness	Kurtosis
1. The scoreboards are entertaining to watch (SCOR 1)	5.55	1.15	-.88	.85
2. The scoreboards add excitement to the game (SCOR 2)	5.37	1.13	-.72	.65
3. The scoreboards provides interesting statistics (SCOR 3)	5.51	1.16	-.99	1.39
4. The venue is painted in attractive colors (AES 1)	5.47	1.11	-.68	.47
5. The venue's architecture gives it an attractive character (AES 2)	5.42	1.24	-.83	.64
6. The venue is decorated in an attractive fashion (AES 3)	5.50	1.12	-.88	.83
7. This is an attractive venue (AES 4)	5.61	1.12	-1.05	1.44
8. The venue's layout design makes it easy to get to the kind of concessions you want (ACC 1)	5.29	1.08	-.79	1.13
9. The venue's layout design makes it easy to get to your seat (ACC 2)	5.33	1.23	-.99	1.36
10. The venue's layout design makes it easy to get to the restrooms (ACC 3)	5.27	1.17	-.84	.76
11. Overall, this venue's layout design makes it easy to get where you want to go (ACC 4)	5.40	1.17	-1.02	1.55
12. The concession stands are big enough to handle the crowds (ALLO 1)	5.07	1.30	-.71	.20
13. The restrooms are large enough to handle the crowds (ALLO 2)	5.17	1.29	-.86	.64
14. The walkways are wide enough to handle the crowds (ALLO 3)	5.45	1.16	-1.08	1.68
15. This stadium allows enough space to handle the crowds (ALLO 4)	5.43	1.12	-.92	1.35
16. There are enough employees at stadium to service customers (EM 1)	5.08	1.34	-.84	.22
17. The employees are helpful (EM 2)	5.19	1.23	-.79	.68
18. The employees are friendly (EM 3)	5.19	1.21	-.69	.43
19. There is plenty of knee room in the seats (SEAT 1)	4.89	1.33	-.63	-.03
20. There is plenty of elbow room in the seats (SEAT 2)	4.85	1.38	-.65	-.09
21. The seat arrangements provide plenty of space (SEAT 3)	5.21	1.25	-.85	.65
22. This stadium provides comfortable seats (SEAT 4)	5.06	1.26	-.63	-.02
23. The venue maintains clean bathrooms (CLN 1)	5.33	1.25	-.89	.61
24. The venue maintains clean food service area (CLN 2)	5.52	1.05	-.78	1.05
25. The venue maintains clean walkways and exits (CLN 3)	5.46	1.15	-.83	.65
26. Overall, the venue is kept clean (CLN 4)	5.50	1.08	-.92	1.44
27. Overall, there was not too much waiting while at the event (WT 1)	4.61	1.52	-.26	-.90
28. During the event, the time I spend waiting for service is minimal (WT 2)	4.84	1.41	-.49	-.45
29. During the event, there is no delay or waiting to receive service from employees (WT 3)	4.62	1.38	-.31	-.64
30. I get through the entrance gates quickly without too much waiting (WT 4)	5.12	1.31	-.79	.27
31. I am able to exit the stadium quickly without too much waiting (WT 5)	4.94	1.50	-.74	-.08
32. I would like to come back to this sport event at this venue (RI 1)	6.05	1.15	-1.71	3.79
33. I would recommend this sport event to my friends and family (RI 2)	6.00	1.13	-1.38	2.19
34. I am willing to stay longer than I planned this sport event at the venue (RI 3)	5.38	1.45	-.849	.19
35. I am willing to spend more than I planned this sport event at this venue (RI 4)	4.69	1.58	-.430	-.47

Note. SCOR = scoreboard quality; AES = venue aesthetic; ALLO = space allocation; ACC = layout accessibility; EM = employees; SEAT = seat comfort; CLN = venue cleanliness; WT = wait time; and RI = revisit intention

Table 4-4: Descriptive Statistics for Comparisons among Four Major League Sports ($N = 481$)

Variable		All ($N = 481$)		MLB ($N = 122$)		NFL ($N = 115$)		NBA ($N = 119$)		NHL ($N = 125$)	
		M	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
1.	SCOR 1	5.55	1.15	5.48	1.12	5.53	1.30	5.67	1.01	5.51	1.14
2.	SCOR 2	5.37	1.13	5.19	1.17	5.40	1.22	5.53	1.02	5.35	1.07
3.	SCOR 3	5.51	1.16	5.59	1.03	5.38	1.34	5.71	1.12	5.43	1.07
4.	AES 1	5.47	1.11	5.59	1.03	5.33	1.25	5.52	1.03	5.44	1.13
5.	AES 2	5.42	1.24	5.74	1.08	5.23	1.36	5.41	1.06	5.30	1.25
6.	AES 3	5.50	1.12	5.56	1.08	5.34	1.38	5.52	.94	5.57	1.06
7.	AES 4	5.61	1.12	5.88	.98	5.37	1.37	5.61	.93	5.59	1.12
8.	ACC 1	5.29	1.08	5.39	.99	5.18	1.09	5.26	1.20	5.31	1.05
9.	ACC 2	5.33	1.23	5.32	1.23	5.23	1.33	5.40	1.19	5.38	1.18
10.	ACC 3	5.27	1.17	5.37	.98	5.07	1.32	5.37	1.15	5.28	1.20
11.	ACC 4	5.40	1.17	5.48	1.22	5.21	1.32	5.51	1.06	5.38	1.06
12.	ALLO 1	5.07	1.30	5.29	1.17	4.37	1.49	5.12	1.25	5.11	1.25
13.	ALLO 2	5.17	1.29	5.34	1.03	4.89	1.41	5.29	1.32	5.16	1.36
14.	ALLO 3	5.45	1.16	5.54	1.07	5.36	1.36	5.40	1.09	5.50	1.10
15.	ALLO 4	5.43	1.12	5.60	1.01	5.23	1.29	5.50	.99	5.38	1.15
16.	EM 1	5.08	1.34	5.20	1.19	4.96	1.34	5.35	1.26	5.30	1.19
17.	EM 2	5.19	1.23	5.39	1.05	5.26	1.18	5.40	.99	5.28	1.13
18.	EM 3	5.19	1.21	5.33	1.12	5.14	1.15	5.34	1.21	5.16	1.23
19.	SEAT 1	4.89	1.33	4.89	1.20	4.77	1.33	4.91	1.40	4.80	1.49
20.	SEAT 2	4.85	1.38	4.88	1.15	4.57	1.48	4.82	1.46	4.70	1.48
21.	SEAT 3	5.21	1.25	5.28	1.15	4.95	1.39	5.06	1.33	4.95	1.33
22.	SEAT 4	5.06	1.26	4.84	1.17	4.73	1.36	5.09	1.30	5.02	1.38
23.	CLN 1	5.33	1.25	5.31	1.18	4.82	1.50	5.45	1.16	5.11	1.39
24.	CLN 2	5.52	1.05	5.66	.89	5.48	1.08	5.63	.98	5.52	1.08
25.	CLN 3	5.46	1.15	5.66	.95	5.32	1.33	5.56	1.13	5.55	1.04
26.	CLN 4	5.50	1.08	5.77	.92	5.43	1.15	5.65	.92	5.70	.99
27.	WT 1	4.61	1.52	4.73	1.47	4.29	1.61	4.73	1.45	4.66	1.52
28.	WT 2	4.84	1.41	4.96	1.29	4.40	1.57	4.89	1.45	5.00	1.26
29.	WT 3	4.62	1.38	4.63	1.27	4.25	1.49	4.80	1.41	4.78	1.29
30.	WT 4	5.12	1.31	5.34	1.21	4.77	1.54	5.13	1.21	5.23	1.22
31.	WT 5	4.94	1.50	5.16	1.34	4.59	1.59	4.87	1.53	5.13	1.49
32.	RI 1	6.05	1.15	6.14	1.19	6.02	1.29	6.07	1.02	5.98	1.11
33.	RI 2	6.00	1.13	6.11	1.17	5.99	1.20	5.96	.99	5.93	1.16
34.	RI 3	5.38	1.45	5.49	1.49	5.36	1.56	5.35	1.40	5.32	1.38
35.	RI 4	4.69	1.58	4.60	1.69	4.66	1.70	4.66	1.51	4.85	1.40

Note. SCOR = scoreboard quality; AES = venue aesthetic; ALLO = space allocation; ACC = layout accessibility; EM = employees; SEAT = seat comfort; CLN = venue cleanliness; WT = wait time; and RI = revisit intention

Table 4-5: Model Fit of Conceptual Framework ($N = 481$)

	χ^2	*df*	χ^2/df	RMSEA	RMSEA CI	TLI	CFI	ECVI
Eight-factor (35 items)	1539.32	524	2.94	.06	.06-.07	.89	.91	3.79

CI = confidence interval

Table 4-6: Summary Result for Reliability Assessments ($N = 481$)

Variables	λ	α	CR	AVE
Employee (3 items)		.80	.82	.60
There are enough employees at stadium to service customers.	.65			
The employees are helpful.	.86			
The employees are friendly.	.81			
Layout Accessibility (4 items)		.85	.85	.59
The venue's layout design makes it easy to get to the kind of concessions you want.	.77			
The venue's layout design makes it easy to get to your seat.	.78			
The venue's layout design makes it easy to get to the restrooms.	.81			
Overall, this venue's layout design makes it easy to get where you want to go.	.72			
Scoreboards Quality (3 items)		.83	.84	.63
The scoreboards are entertaining to watch.	.90			
The scoreboards add excitement to the game.	.75			
The stadium provides interesting statistics.	.73			
Seat Comfort (4 items)		.87	.87	.62
There is plenty of knee room in the seats.	.77			
There is plenty of elbow room in the seats.	.79			
The seat arrangements provide plenty of space.	.85			
This stadium provides comfortable seats.	.75			
Space Allocation (4 items)		.84	.84	.54
The concession stands are big enough to handle the crowds.	.80			
The restrooms are large enough to handle the crowds.	.70			
The walkways are wide enough to handle the crowds.	.73			
This stadium allows enough space to handle the crowds.	.77			
Venue Aesthetics (4 items)		.86	.86	.60
The venue is painted in attractive colors.	.76			
The venue's architecture gives it an attractive character.	.78			
The venue is decorated in an attractive fashion.	.79			
This is an attractive venue	.77			

Table 4-6: Summary Result for Reliability Assessments ($N = 481$) (continued)

Variables	λ	α	CR	AVE
Venue Cleanliness (4 items)		.84	.85	.59
The venue maintains clean bathrooms.	.63			
The venue maintains clean food service area.	.79			
The venue maintains clean walkways and exits.	.85			
Overall, the venue is kept clean.	.79			
Wait Time (5 items)		.86	.86	.56
Overall, there was not too much waiting while at the event	.65			
During the event, the time I spend waiting for service is minimal.	.81			
During the event, there is no delay or waiting to receive service from employees.	.79			
I get through the entrance gates quickly without too much waiting.	.76			
I am able to exit the stadium quickly without too much waiting.	.73			
Revisit Intention (*4 items*)		.83	.85	.59
I would like to come back to Gladiator's event at the Gwinnett Center.	.88			
I would recommend Gladiator's event at the Gwinnett Center to my friends.	.92			
I am willing to stay longer than I planned Gladiator's event at the Gwinnett Center.	.69			
I am willing to spend more than I planned Gladiator's event at the Gwinnett Center.	.52			

Table 4-7: Summary of result for regression analysis ($N = 481$)

	df	R^2	ΔR^2	*F*	*Sig.*
NBA (n=119)	8	.46	.42	11.87	.000***
MLB (n=122)	8	.48	.44	12.83	.000***
NFL (n=115)	8	.33	.28	6.53	.000***
NHL (n=125)	8	.62	.59	23.87	.000***

Note. Independent Variables: scoreboard quality, venue aesthetic, space allocation, layout accessibility, employees, seat comfort, venue cleanliness, wait time. Dependent Variable: Revisit intention.
*** $p < .001$; ** $p < .01$; * $p < .05$

Table 4-8: Comparison of Regression Analysis between Four Major League Sports ($N = 481$)

		H1 (SCOR-RI)	H2 (AES-RI)	H3 (ALLO-RI)	H4 (ACC-RI)	H5 (EM-RI)	H6 (SEAT-RI)	H7 (CLN-RI)	H8 (WT-RI)
NBA ($N = 119$)	*β*	-.02	.37	.23	.25	.08	-.13	-.12	.08
	t	-.16	3.29	1.71	1.65	.83	-1.20	-1.10	.70
	Sig.	.87	.00**	.09	.10	.41	.23	.27	.49
MLB ($N = 122$)	*β*	.00	.49	.18	.13	-.02	-.02	.05	-.01
	t	.02	5.20	1.40	1.06	-.17	-.16	.44	-.06
	Sig.	.99	.00**	.16	.29	.87	.87	.66	.95
NFL ($N = 115$)	*β*	.19	-.13	-.09	.34	.22	-.05	.24	-.03
	t	1.96	-.96	-.62	2.13	1.67	-.39	1.80	-.21
	Sig.	.05	.34	.54	.04*	.10	.69	.08	.83
NHL ($N = 125$)	*β*	.21	.46	-.25	.40	.25	-.07	-.03	-.06
	t	2.88	4.72	-2.27	4.10	3.10	-.85	-.32	-.71
	Sig.	.005**	.00**	.03*	.00**	.00**	.40	.75	.48

Note. H1 = scoreboard quality-revisit intention; H2 = venue aesthetic-revisit intention; H3 = space allocation-revisit intention; H4= layout accessibility-revisit intention; H5 = employees-revisit intention; H6= seat comfort-revisit intention; H7= venue cleanliness; and H8 = wait time-revisit intention. *p<.05. **p<.01.

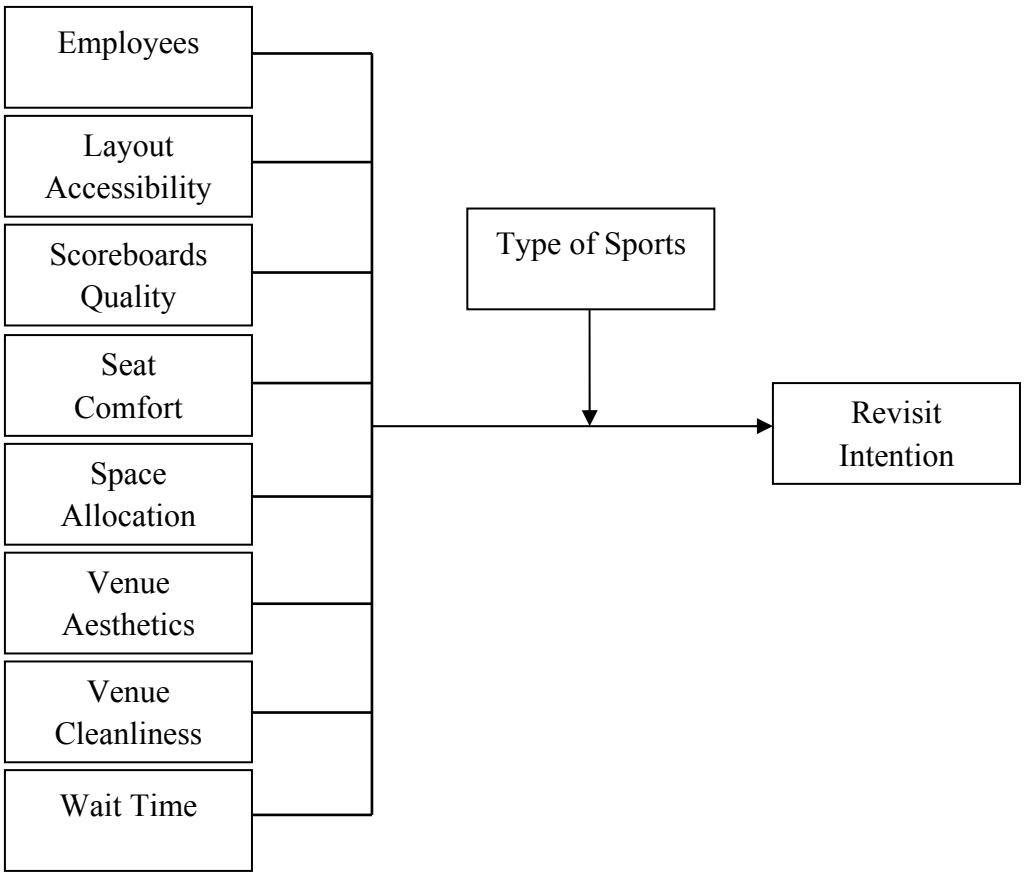

Figure 1: Conceptual Framework

APPENDIX

SPORTSCAPE AND REVISIT INTENTION QUESTIONNAIRE

Purpose: This questionnaire will be used to investigate the potential mediating effect of service quality in the relationship between physical environment of facility and revisit intention. The information collected in this questionnaire will be anonymous and solely used for research purposes. Your sincere and honest response is very much appreciated.

1. Have you had an experience of attending at least one of the 4 major league professional sport event (i.e., MLB, NBA, NHL, and NFL) within the past 12 months?

a. Yes □ b. No □

2. What kind of major league sport event did you attended for the last 12 months?:

a. MLB □ b. NFL □

c. NBA □ d. NHL □

Part I (Sportscapes): Please check the number that best represents how strongly you disagree or agree with the following statements.

	Scoreboards Quality	**Strongly Disagree**	**Disagree**	**Slightly Disagree**	**Neutral**	**Slightly Agree**	**Agree**	**Strongly Agree**
3.	The scoreboards are entertaining to watch.	1	2	3	4	5	6	7
4.	The scoreboards add excitement to the game.	1	2	3	4	5	6	7
5.	The stadium provides interesting statistics.	1	2	3	4	5	6	7
	Venue Aesthetics	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
6.	The venue is painted in attractive colors.	1	2	3	4	5	6	7
7.	The venue's architecture gives it an attractive character.	1	2	3	4	5	6	7
8.	The venue is decorated in an attractive fashion.	1	2	3	4	5	6	7
9.	This is an attractive venue	1	2	3	4	5	6	7

	Space Allocation	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
10.	The concession stands are big enough to handle the crowds.	1	2	3	4	5	6	7
11.	The restrooms are large enough to handle the crowds.	1	2	3	4	5	6	7
12.	The walkways are wide enough to handle the crowds.	1	2	3	4	5	6	7
13.	This stadium allows enough space to handle the crowds.	1	2	3	4	5	6	7
	Layout Accessibility	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
14.	The venue's layout design makes it easy to get to the kind of concessions you want.	1	2	3	4	5	6	7
15.	The venue's layout design makes it easy to get to your seat.	1	2	3	4	5	6	7
16.	The venue's layout design makes it easy to get to the restrooms.	1	2	3	4	5	6	7
17.	Overall, this venue's layout design makes it easy to get where you want to go.	1	2	3	4	5	6	7
	Seat Comfort	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
18.	There is plenty of knee room in the seats.	1	2	3	4	5	6	7
19.	There is plenty of elbow room in the seats.	1	2	3	4	5	6	7
20.	The seat arrangements provide plenty of space.	1	2	3	4	5	6	7
21.	This stadium provides comfortable seats.	1	2	3	4	5	6	7
	Venue Cleanliness	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
22.	The venue maintains clean bathrooms.	1	2	3	4	5	6	7
23.	The venue maintains clean food service area.	1	2	3	4	5	6	7
24.	The venue maintains clean walkways and exits.	1	2	3	4	5	6	7
25.	Overall, the venue is kept clean.	1	2	3	4	5	6	7

	Employee	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
26.	There are enough employees at stadium to service customers.	1	2	3	4	5	6	7
27.	The employees are helpful.	1	2	3	4	5	6	7
28.	The employees are friendly.	1	2	3	4	5	6	7
	Wait Time	Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
29.	Overall, there was not too much waiting while at the event	1	2	3	4	5	6	7
30.	During the event, the time I spend waiting for service is minimal.	1	2	3	4	5	6	7
31.	During the event, there is no delay or waiting to receive service from employees.	1	2	3	4	5	6	7
32.	I get through the entrance gates quickly without too much waiting.	1	2	3	4	5	6	7
33.	I am able to exit the stadium quickly without too much waiting.	1	2	3	4	5	6	7

Part II (Revisit Intention): Please check the number that best represents how strongly you disagree or agree with the following statements.

		Strongly Disagree	Disagree	Slightly Disagree	Neutral	Slightly Agree	Agree	Strongly Agree
34.	I would like to come back to this sport event at this venue.	1	2	3	4	5	6	7
35.	I would recommend this sport event to my friends and family.	1	2	3	4	5	6	7
36.	I am willing to stay longer than I planned this sport event at the venue.	1	2	3	4	5	6	7
37.	I am willing to spend more than I planned this sport event at this venue.	1	2	3	4	5	6	7

Part III (Demographics): Please respond to the following questions by printing in the space.

38. Your Age: _____ years old

39. Gender: a. Male □ b. Female □

40. Ethnicity: a. Caucasian □ d. Asian □

b. African-American □ e. Pacific Islander □

c. Hispanic □ f. Other □

41. Household Income (Annual):

a. Less than $25K □ d. $75K ~ $100K □

b. $25K ~ $50K □ e. $100K ~ $150K □

c. $50K ~ $75K □ f. More than $150K □

42. Highest Level of Education:

a. High School □ d. Graduate School □

b. Some College □ e. Other □

c. College Degree □

THANK YOU VERY MUCH FOR YOUR PARTICIPATION!

CORRELATION MATRIX FOR MAIN STUDY ($N = 481$)

Variable	ACC	SEAT	WT	CLN	ALLO	AES	EM	SCOR	RI
ACC	1								
SEAT	.81**	1							
WT	.76**	.71**	1						
CLN	.72**	.66**	.65**	1					
ALLO	.93**	.80**	.78**	.74**	1				
AES	.71**	.60**	.48**	.67**	.72**	1			
EM	.72**	.59**	.67**	.63**	.69**	.61**	1		
SCOR	.43**	.41**	.30**	.44**	.44**	.67**	.47**	1	
RI	.62**	.46**	.41**	.57**	.59**	.67**	.54**	.47**	1

Note. SCOR = scoreboard quality; AES = venue aesthetic; ALLO = space allocation; ACC = layout accessibility; EM = employees; SEAT = seat comfort; CLN = venue cleanliness; WT = wait time; and RI = revisit intention.
** $p < .01$