Managing Service Quality: An International Journal

Validation of Eventserv-Short: A brief measure of customer satisfaction with game day services

David S. Martin Ryan Howell Christopher Newman Kelly Martin

The current issue and full text archive of this journal is available at
www.emeraldinsight.com/0960-4529.htm

Validation of Eventserv-Short

A brief measure of customer satisfaction with game day services

David S. Martin
Department of Nutrition, Dietetics and Hospitality Management, Auburn University, Auburn, Alabama, USA
Ryan Howell
Department of Psychology, San Francisco State University, San Francisco, California, USA
Christopher Newman
Department of Marketing, University of Arkansas, Fayetteville, Arkansas, USA, and
Kelly Martin
Department of Consumer and Design Science, Auburn University, Auburn, Alabama, USA

Abstract

Purpose – The purpose of this paper is to validate a shortened measure of consumers' satisfaction with the service quality at sporting events. The scale's ability to predict both customer satisfaction and future behavioral intentions is also measured.

Design/methodology/approach – The measure, entitled Eventserv-Short, was tested across the five most popular American sports and across two levels (collegiate and professional). An online survey was utilized with a total of 854 respondents.

Findings – Results showed that Eventserv-Short is a reliable and valid measure of satisfaction with service quality that is invariant across various sporting events; also, Eventserv-Short predicts overall customer satisfaction and future behavioral intentions.

Originality/value – The paper's importance is demonstrated by the measure's consistent performance across the different types of sports and settings. Further, these results show that researchers and managers can now more quickly, reliably, and accurately measure consumers' satisfaction with the service quality they perceive while attending sporting events.

Keywords Sporting events, Customer satisfaction, Consumer behaviour, Sports fans

Paper type Research paper

Introduction

Every year, spectators from around the globe flock to stadiums, arenas, and other types of sporting venues in order to consume a wide range of sports products. Indeed, fan participation in, and consumption of, sporting events drives both the popularity and profitability of sports (Smith and Stewart, 2007). Both professional and collegiate sports teams have also become more focussed on the overall experience that fans have while attending sporting events. A salient example of this focus on fan experience comes from Major League Baseball (MLB), in which both the Chicago Cubs and the Texas Rangers have created a new position entitled Director of Fan Experiences. The Cubs have invested heavily in this endeavor; the director has a staff of 25 at her disposal to ensure that each person in attendance at Wrigley Field has a positive experience and attends future games. College football has also begun to evaluate the

Managing Service Quality
Vol. 22 No. 4, 2012
pp. 386-398

0960-4529
DOI 10.1108/09604521211253487

fan experience, with several universities, such as Auburn University, creating a dedicated text address where fans can send anonymous messages to a "command center." This system allows fans to immediately inform the stadium managers about a range of problems (e.g. congestion, bad service, overflowing toilets, and even badly behaving fans) that interfere with a fan's satisfaction and the quality of service at the venue.

Researchers have also followed suit, with several studies focussing on the activities associated with attending a live sporting event in order to measure how fans' experience affects their overall satisfaction and future behavioral intentions (Ko *et al.*, 2011; Kouthouris and Alexandris, 2005; Martin *et al.*, 2010; McDonald *et al.*, 1995). This research has demonstrated several important findings, including first, that the outcome of the game is not the sole determinant of fan satisfaction (Brady *et al.*, 2006; Pons *et al.*, 2006), second, that a fan's experience is complex and multi-dimensioned (Bristow and Sebastian, 2001; Martin *et al.*, 2010; Theodorakis *et al.*, 2001), and finally, that the overall fan satisfaction with a sporting event depends on the degree to which it satisfies consumers with quality service (Ko *et al.*, 2009).

Statement of the problem

As noted by Theodorakis and Alexandris (2008, p. 163) "[…] the lack of a widely accepted, valid and reliable leisure service quality model is a major limitation of the leisure quality literature so far." The purpose of this study is to address this issue by presenting a shortened version of the Eventserv measure (see Martin and O'Neill, 2010) as a potential scale that can be utilized across a variety of sporting event venues, at both the collegiate and professional level. In addition, this new measure will also be tested in regards to its ability to explain a fan's overall satisfaction with a particular sporting event and their future behavioral intentions.

The importance of the fan experience

The overall importance of customer satisfaction and future behavioral intentions on the success of a firm has not been lost on operators, marketers or researchers. Indeed, customer satisfaction and future behavioral intentions have been a central focus of many researchers over the years (Anderson and Mittal, 2000; Homburg *et al.*, 2005; Mano and Oliver, 1993; Oliver, 1994, 1997). For example, customer satisfaction has been found to play a key role in the services industry (Edvardsson *et al.*, 2000) and satisfaction with services is of paramount importance in regards to both customer loyalty and retention. Ko *et al.* (2011) have also concluded that service quality is important in both sports and sports management, especially in regards to consumer loyalty.

The measurement of fan experience

Developing a measure that can be used to assess the overall quality of spectator sports and the fans' resulting satisfaction and future behavioral intentions has been of great interest to researchers for some time now (e.g. Martin *et al.*, 2008, 2010; McDonald *et al.*, 1995; Kelly and Turley, 2001; Ko *et al.*, 2011; Theodorakis *et al*, 2001). Academic interest the measurement of fan satisfaction was spurred by the development and testing of the TEAMQUAL measure by McDonald *et al.* (1995). Following the development of TEAMQUAL (McDonald *et al.*, 1995), numerous researchers have addressed the

measurement of fan experience through a series of studies that have taken one of two different approaches:

(1) modifying the SERVQUAL measure for use in a sporting context (McDonald *et al*, 1995; Martin *et al.*, 2008; Kouthouris and Alexandris, 2005); and

(2) developing new measures specifically tailored for use at spectator sports (Theodorakis *et al.*, 2001; Kelly and Turley, 2001; Martin *et al.*, 2010; Ko *et al.*, 2011).

While these efforts have been productive, each approach has also encountered limitations. First, the specialized measures developed specifically to be used in spectator sporting events all suffer from one major limitation: a lack of testing across a variety of different types of sports, at both the collegiate and professional level. The most recently published study (Ko *et al*, 2011) tests their new measure entitled the Model of Event Quality for Spectator Sport across only one type of sport, MLB. The Kelley and Turley model (2001) was tested solely using college basketball fans, the Theodorakis *et al.* (2001) study examined professional basketball. The study conducted by Martin *et al.* (2010) suffered from the same weakness of only being tested on college football fans. However, the study was notable for the fact that when tested utilizing confirmatory factor analysis (CFA) the model proposed by the authors was upheld and the new measure, Eventserv, was able to explain 65.4 percent of the variance in overall customer satisfaction.

Next, previous research has been limited by the lack of ability of the items to accurately predict customer satisfaction and future behavioral intentions. For example, Kouthouris and Alexandris (2005) tested the SERVQUAL scale in the sport tourism industry and found that only two of the five factors were significant in predicting both customer satisfaction and future behavioral intentions of the respondents. More recently, Martin *et al.* (2008) utilized the SERVQUAL scale on nearly 1,000 college football fans and found that the five factor structure typically supported by SERVQUAL was not upheld. The study conducted by McDonald *et al.* (1995) changed the original five dimensions of the SERVQUAL scale to include items such as ticket takers, ticket ushers, merchandisers, concessionaires, and customer representatives, thus ignoring important variables such as signage and parking. The omission of important variables in McDonald *et al.*'s (1995) study was a notable limitation because the variables excluded by the researchers have been found in more recent studies to have a statistically significant bearing on a fan's overall satisfaction with the game day experience and their future behavioral intentions (Ko *et al.*, 2011; Martin *et al.*, 2008).

Lastly, a major limitation of previous fan satisfaction measures was identified by industry professionals when asked to review the Eventserv measure (2009). The measure was sent to directors of sales and marketing for several National Basketball Association (NBA) franchises, as well as to operations managers in both the National Football League (NFL) and collegiate football stadiums. All of the industry professionals surveyed provided feedback that the length of the Eventserv measure was its major weakness. With 32 questions, the individuals surveyed were concerned about the real-world applicability of such a long measure. Therefore, the researchers identified that the major limitations of previous measures were the lack of a measure generalized for use across multiple types of sporting events at both the professional and collegiate level; the proper inclusion of items that accurately predict overall satisfaction and future behavioral intentions; and the lack of a measure

that is short enough to appeal to a real-world audience. Thus the present study has three main goals:

(1) to test a modified (shortened) version of the Martin *et al.* (2010) measure across five different sporting events at two different levels (professional and collegiate);

(2) examine the ability of this modified scale, entitled Eventserv-Short, to predict both the overall satisfaction of respondents and their future behavioral intentions; and

(3) to compare the predictive effectiveness of the new shortened scale to the original.

The current study

The measure, to be entitled Eventserv-Short, will be validated across five different types and levels of sports including professional football (NFL); college football (NCAA, all divisions); professional baseball (MLB); professional basketball (NBA); and professional hockey (National Hockey League (NHL)).

In order to accomplish the goals of this validation we will examine the item-total correlations of all 32 items of the original Eventserv measure (for detailed information see Martin and O'Neill, 2010) to select the items for Eventserv-Short; examine the factor structure and reliability of Eventserv-Short; test for differences in means, standard deviations, internal consistency, and for equivalence of factor structure (following the guidelines by Tabachnick and Fidell, 1989) across the five most attended sporting events; and evaluate the relationship between markers of positive game day experiences and satisfaction with game day services. Thus, for Eventserv-Short to be considered a generalizable short form of Eventserv, the new scale should explain much of the variance in satisfaction with game day services and have a similar factor structure across the five major sporting events. In addition, to be considered a valid short form of Eventserv, the new scale should predict future behavioral intentions of the respondents.

Methods: participants and procedure

Numerous studies have confirmed the validity of web-based studies on volunteer populations (e.g. Gosling *et al.*, 2004), including the specific validity of the online measurement of well-being (Howell *et al.*, 2010). Based on the findings of these studies, and in order to incorporate samples from as many different types of sports as possible, we recruited participants from popular web sites (i.e. Craigslist, Facebook). Participants accessed the study through a link embedded in an online advertisement. Participants were offered the opportunity to enter a raffle to win one of ten gift certificates, valued at $25 each. A total of 854 participants (63.7 percent female; $M_{age} = 29.99$, $S = 11.76$; 56.4 percent European American) completed the survey. Each participant described the last sporting event they had attended (noting what type of sport they watched) and described their satisfaction with the game day services; and rated their intentions to attend and recommend attending, or to avoid and discourage attending, a future game at this venue. Of the 854 participants, 635 reported attending a professional football game (the NFL), a college football game (all divisions), a professional baseball game (MLB), a professional basketball game (the NBA) or a professional hockey game (the NHL). These were the only sports in which at least 40 participants described the same league or sporting type. All analyses are conducted on this subset of (635) participants.

Measures

To form the scale scores for satisfaction with game day services and FBI the constructs were formed by averaging all items (after reverse coding, if necessary).

Satisfaction with game day services

The respondents' satisfaction with the game day services was measured with Eventserv (for detailed information see Martin and O'Neill, 2010). Briefly, the original Eventserv measure (Martin and O'Neill, 2010) was developed and tested utilizing a variety of techniques and statistical procedures. Scale development was based on multiple focus groups over a three-month period. After completing changes as dictated by said focus groups, the scale was then evaluated by three industry professionals in stadium operations. Again, changes were made to the measure based on the feedback received from these industry experts. After the data had been collected, a series of statistical tests were conducted included reliability testing via Cronbach's α with a threshold of 0.5 or above being required (Pedhazur and Schmelkin, 1991). Overall, the Eventserv measure achieved an α level of 0.928 (Martin and O'Neill, 2010). Individual factors were also tested and achieved scores ranging from 0.745 through 0.901. Exploratory testing of the Eventserv measure was conducted via factor analysis utilizing a varimax rotation with the minimum acceptable loading set at 0.40. Based on the results of the factor analysis, three scale items were removed from the Eventserv measure. In total the Eventserv measure was able to explain 65.4 percent of the variance. CFA was conducted via structured equation modeling utilizing Amos version 7. Results were favorable with CFI at 0.947 and the NFI at 0.941. The RMSEA score was 0.086 with a χ^2 of 167.032, with 19 degrees of freedom and a p value < 0.001, thus indicating that the model was a good fit for the data.

Participants were instructed to "think back to your game-day experience. Please rate your level of satisfaction with respect to the points below" (1 = very dissatisfied; 5 = highly satisfied). Example items were "the variety of beverage choices inside the stadium," "the cleanliness of the restrooms inside the stadium," and "the speed at which lines for food and beverage outlets moved."

Future behavioral intentions

Intentions to attend, and recommend others attend, a future game at this venue (i.e. positive future behavioral intentions) were measured with four items (e.g. "how likely is it that you would recommend attendance to others based on this game day experience?," "my experience at this game has increased the likelihood that I will return to see another of this team's games in the future"). Intentions to avoid and discourage others from attending a future game at this venue (e.g. negative future behavioral intentions) were measured with two items (e.g. "my experience at this game has decreased the likelihood that I will return to see another of this team's games in the future," "I have told my friends and family not to bother seeing this team play in person"). Participants rated the likeliness of each item (1 = highly unlikely; 5 = highly likely) or their agreement with each item (1 = not true; 5 = very true).

Results: developing Eventserv-Short

Examination of item-total correlations

In order to select the items that would be used to form Eventserv-Short, we examined the corrected item-total correlations between each of the 32 items from the original Eventserv and the rest of the scale. We used the corrected item-total correlation

because, in this procedure, the item being correlated is not considered part of the scale. Without this correction the correlation between the item and the scale would be inflated, as the item would count twice when determining the correlation. From this analysis, nine of the 32 items had corrected item correlation >0.60; however, two of those items were fairly redundant with the rest of the scale ("the number of security staff inside the stadium" and "the friendliness of the vendor staff inside the stadium") and were dropped from Eventserv-Short (see Table I for the final seven items).

Examination of factor structure and reliability

We first examined the factor structure of Eventserv-Short by conducting a principle components analysis (PCA) using only the five most attended sporting events (see Table I). For the initial PCA, the Scree plot analysis (eigenvalue >1 and Catell "hill" test) demonstrated that these seven items formed a single factor solution (e.g. only the first eigenvalue was >1.00) with all seven items positively loading onto the same factor. Factor loadings (the correlation between items and factor score) were all above 0.55 with four items having loadings higher than 0.70. Eventserv-Short was able to explain 45 percent of the variance in satisfaction with the game day services with the single factor attaining an eigenvalue of 3.12 (the second factor attained an eigenvalue of 0.98). The scale scores formed from these seven items were internally consistent (Cronbach's $\alpha = 0.81$). Because more than 60 percent of our participants were

Please rate your level of satisfaction with…	Total sample	Professional football NFL	College football all divisions	Professional baseball MLB	Professional basketball NBA	Professional hockey NHL
Items	*Factor loadings*					
The quality of beverages inside the stadium	0.55	0.48	0.56	0.53	0.62	0.68
The number of restrooms available inside the stadium	0.56	0.57	0.51	0.55	0.64	0.53
The amount of time it takes to get around once inside the stadium	0.57	0.55	0.53	0.59	0.63	0.54
The service you received from food and beverage vendors	0.73	0.76	0.77	0.71	0.68	0.78
The service you received from all other stadium personnel	0.76	0.79	0.81	0.75	0.73	0.73
The overall safety and security of the stadium	0.74	0.75	0.74	0.76	0.79	0.51
The friendliness of the security staff at the stadium	0.73	0.67	0.72	0.73	0.82	0.79
Percent of variance explained by first eigenvalue	44.89	44.13	45.28	44.28	49.58	43.75
Sample size	635	83	122	316	69	45
Mean	3.79	3.70	3.72	3.83	3.82	3.72
SD	0.59	0.64	0.58	0.58	0.60	0.53
Cronbach's α	0.81	0.83	0.82	0.80	0.82	0.79

Notes: Means, SDs, and α coefficients did not differ between sporting events or gender ($p<0.05$), based on the appropriate inferential test

Table I.
Testing the Eventserv-Short for equivalence across sporting events

female, we examined the factor structure again separately by gender. For both females and males the single-factor solution was replicated with all loadings being >0.55; also, the loading of these females and males were nearly identical as demonstrated by the strong positive correlation of the loadings ($r = 0.95$) between females and males.

Next, we conducted five separate PCA (i.e. a PCA for each of the five major sports) and extracted only a single factor. To test for factor equivalence, we used the criteria suggested by Tabachnick and Fidell (1989); that is, the same number of factors should account for about the same amount of variance in the construct and the relationships between factors should be the same. First, across all five sports, the single-factor solution accounted for about the same amount of variance (43.75-49.58 percent) in satisfaction with the game day services. Second, to measure the degree to which factor loadings are similar, we computed the correlations between the five sets of independent loadings. The correlational patterns of the loadings were strong and positive when examining the NFL, College Football, MLB, and the NBA (rs ranged from 0.67 to 0.93). The NHL had a lower set of correlations with the other four sports (rs ranged from 0.28 to 0.57); however, these correlations were still positive, and the low correlations were due to different loadings on two items. Specifically, for the attendees of NHL games, the item "the quality of beverages inside the stadium" loaded more strongly on Eventserv-Short, and the item "the overall safety and security of the stadium" loaded more weakly on Eventserv-Short. Thus, the percent of variance explained by the first factor of Eventserv-Short and the near identical pattern of the factor loading on Eventserv-Short supports the equivalence of Eventserv-Short across the five major sporting leagues.

Testing for differences in means, standard deviations, internal consistency, and factor equivalency across five sporting events

When testing for significant differences in means, standard deviations, and reliability coefficients across sporting events, we found no significant differences. Mean differences were compared by computing a one-way ANOVA; differences in standard deviations were tested with Levene's test for equal variance. To examine for equivalence of reliability, we compared the reliability coefficient (Cronbach's α) and tested for significant differences using the Fisher-Bonett test (Kim and Feldt, 2008). See Table I for the means, standard deviations, and reliability coefficients of Eventserv-Short for each of the five major sporting leagues.

Comparison of Eventserv-Short to Eventserv in game day experiences and satisfaction

To test the generalizability of Eventserv-Short when administered to attendees of different sporting venues, we compared the relationship between the scale scores for satisfaction with game day services when using Eventserv and Eventserv-Short with each of following variables: positive future behavioral intentions, negative future behavioral intentions, positive emotions experienced at the sporting event, negative emotions experienced at the sporting event, and team identity (see Table II for correlational patterns). First, the corrected correlation between Eventserv-Short and Eventserv (sans the seven items used to measure Eventserv-Short) was strong, positive, and significant ($r[633] = 0.84$, $p < 0.001$) – this indicates that both sets of items are measuring the same construct. Second, both Eventserv-Short and Eventserv demonstrated the expected correlational patterns. There were no significant differences in the strength of correlations, between satisfaction with game day

services or future behavioral intentions. Thus, using the seven-item Eventserv-Short measure provides the same information as the 30-item Eventserv measure.

Conclusion of research findings and comparison of measures

Through the comparison of factor structure and reliability, means, standard deviations, internal consistency, and predictive ability of Eventserv-Short to the original Eventserv scale, the new Eventserv-Short instrument was found to be an adequate measure of fan satisfaction with game day services. In addition, the scale was found to be equally effective when tested across five different sporting events, which demonstrates the generalizability of the instrument for use in a variety of types of sporting venues.

Discussion

The purpose of this study was to create a shorter reliable and valid survey that could be more easily used by other researchers and practitioners in the "real world" across multiple types of sporting events. The current study presents strong evidence that the Eventserv-Short measure is indeed a reliable and valid measure of satisfaction with game day services that allows academics and practitioners to compare customer responses across different sports franchises, different types of sports, and even different levels of sport (i.e. both professional and collegiate). Additionally, the current study has addressed limitations of previous studies by providing support for a new measure that can accurately assess future behavioral intentions and customer satisfaction, while also being short enough in length to be widely utilized in real-world scenarios. The advantages of multiple researchers having the ability to use the same basic measure to assess fans' satisfaction with game day services should not be underestimated. Potential positive benefits include being able to accurately measure similarities and differences between different groups of fans across several different criteria (e.g. gender, nationality, type of sport, etc.) and being able to compare the results of multiple studies longitudinally in order to measure changes in consumers' preferences over time.

Another advantage of a shorter measure is that it reduces the potential for survey fatigue experienced by the respondents and increases the likelihood that participants will complete the measure, which can lead to increased reliability, validity, and more representative distributions of results. In turn, the higher quality data will allow managers to make more sound decisions regarding sporting services and operations. Furthermore, shorter measures are typically less expensive to administer because respondents are not required to spend as much time answering questions and they can be more easily incorporated in modern technology such as texting or applications for different mobile devices. Shorter measures also offer greater efficiency to researchers in

Construct	Mean (SD)	α	1	2	3	4
1. Eventserv	3.58 (0.53)	0.94	–			
2. Eventserv-Short	3.79 (0.59)	0.81	0.84**	–		
3. Positive future behavioral intention	3.70 (0.99)	0.79	0.27**	0.29**	–	
4. Negative future behavioral intention	1.35 (0.73)	0.68	−0.22**	−0.23**	−0.34**	–

Notes: The correlation between Eventserv and Eventserv-Short has been corrected by eliminated the overlapping items from Eventserv. $N = 635$

Table II. Comparing the correlations between Eventserv and Eventserv-Short

regards to administration, analyzing, and reporting, thus directly addressing researchers' critiques of the lack of a universal scale to measure consumer satisfaction with sporting event services. Lastly, the shorted measure answers the critiques of industry professionals in response to the longer Eventserv measure.

Managerial implications

Research has demonstrated that sporting venues must measure and understand attendees' overall game day satisfaction with services and experience because individual attendance at sporting events is not merely predicted by the win-loss record of the sports team (Brady *et al.*, 2006). Upon reviewing the original Eventserv measure, industry professionals indicated that the measure was simply too long to be utilized in a real-world setting. Eventserv-Short has answered that need by providing a much shorter (seven questions vs 32) scale that has been tested across a variety of both professional and collegiate sporting events. Thus, the current project may prove useful to both the owners and operators of sporting event venues for several reasons.

First, Eventserv-Short is able to accurately and quickly measure an attendee's satisfaction with the game day services at a sporting event venue. Therefore, Eventserv-Short can provide sporting event managers with timely and easy-to-collect feedback which will allow them to tailor their services to provide the most satisfying experience possible for their fans. This increased satisfaction can possibly lead to more positive future behavioral intentions, such as increased attendance at a sporting event venue, which has been shown to predict ticket purchases, merchandise sales, positive word of mouth, and increased donations to collegiate athletic programs (Martin *et al.*, 2008, 2010; Martin and O'Neill, 2010).

Next, Eventserv-Short may give managers and operators of the sporting event venues a quick and effective means of generating a "blueprint" to success when it comes to satisfying their customers. The seven factors that make up the Eventserv-Short measure represent the seven most important aspects of the customer service experience by the respondents in this study, across five major sporting event types. Allowing managers and employees alike to focus on a relatively succinct number of variables this study, assessed in as brief of a form as possible, may aid in the development and training of employees, service standards, and quality systems inside of sporting event venues.

Finally, in this study, the researchers were able to demonstrate that increased satisfaction with game day services decreases an attendee's likelihood of avoiding, or actively discouraging others to avoid, a future game at a specific venue. This measurement and prediction of a fans' negative FBI has rarely, if ever been examined. The implications for managers is that providing a satisfying game day experience through attentive game day services can decrease fans' intent to avoid future games at the stadium, regardless of whether the team wins or loses.

Future research

An important area to explore with the Eventserv-Short measure is that of other major sports played around the world. Soccer (football) is perhaps the most popular sport around the globe, but was not addressed in the current study due to the low number of respondents who had recently attended a soccer match. Simply stated, soccer did not have a following in this study that was substantial enough for measurement. However, the world-wide attraction of soccer necessitates an understanding of what motivates soccer fans' satisfaction with game day services and their FBI. Additionally, administering this

scale to a more international audience regarding sports with more international appeal, such as cricket could add further external validity to the Eventserv-Short.

Other areas of research that may prove to be productive would be a more detailed examination of sports fans overall satisfaction and future behavioral intentions, specifically including factors other than a cognitive evaluation of the game day experience. The emotions generated during the game day experience in combination with the level of fan identification may also have a role to play in both the overall satisfaction of the consumer while attending a sporting event and their intention to return.

Finally, it may also be of interest to examine the differences in satisfaction with game day services across different cultures. The importance that soccer fans in Turkey place on the quality of food and beverage inside the stadium may be much different when compared to fans in Argentina. Such differences will be important not only for individual teams, franchises, and broader governing bodies, but should also be considered when conducting and promoting international sporting events like the World Cup (which draws fans from around the globe). Indeed, studies such as this would allow researchers to begin the process of building a body of evidence that is comparable across a multitude of factors including the type of sport (football vs basketball), the level (professional vs collegiate), cultural differences (fans in the USA vs fans in the UK) and so on.

Limitations

Although the current study assessed the generalizability of Eventserv-Short among five different sports, there are still many sports remaining that were not addressed. This limits the application of the results to other types of sports such has NASCAR and Boxing, and to sports in other countries. As noted in the future research section, spectators from different countries and cultures may place greater emphasis on different factors of the overall experience, thus changing both the managerial and marketing emphasis of each sporting event. Another issue with the respondent population is a lack of information about the person with whom they attended the sporting event. The researchers surmise that a group of four male college friends attending a professional baseball game will have different needs and wants than those same four customers when attending a game with their wives and children. This issue was not addressed in the current study, but such information would allow for a more customized consumer experience and well as better market segmentation and more effective marketing efforts. Another limitation of the current study is that while much shorter than the original Eventserv scale, it should be noted that the Eventserv-Short measure does not explain as much of the variance as its predecessor in regards to customer satisfaction. While a shorter scale has several advantages, the trade-off is a certain amount of predictive value, which some may find unattractive.

Conclusion

It is the researchers' belief that the current study is a potential first step in providing a universal scale that measures satisfaction with game day services across a vast array of sporting events. The value of such a scale for both researchers and operators is high and is intended to add to the current and future body of knowledge in regards to customer satisfaction and sporting event venues. There is much more work to be done in this regard, and having a tool that can be easily adapted to reliably work in a variety of settings offers distinct advantages. It is the researchers' belief that the new

Eventserv-Short measure is just that: a short, reliable, and valid way to measure the consumer's experience when attending a sporting event in person.

References

Anderson, E. and Mittal, V. (2000), "Strengthening the satisfaction-profit chain", *Journal of Service Research*, Vol. 3 No. 2, pp. 107-20.

Brady, M.K., Voorhees, C.M., Cronin, J.J. and Bourdeau, B.L. (2006), "The good guys don't always win: the effect of valence on service perceptions and consequences", *Journal of Services Marketing*, Vol. 20 No. 2, pp. 83-91.

Bristow, D. and Sebastian, R. (2001), "Holy cow! Wait 'til next year! A closer look at the brand loyalty of Chicago Cubs baseball fans", *Journal of Consumer Marketing*, Vol. 18 No. 3, pp. 256-75.

Edvardsson, B., Johnson, M.D., Gustafsson, A. and Strandvik, T. (2000), "The effects of satisfaction and loyalty on profits and growth: products versus services", *Total Quality Management*, Vol. 11 No. 7, pp. 917-27.

Gosling, S.D., Vazire, S., Srivastava, S. and John, P.O. (2004), "Should we trust web-based studies? A comparative analysis of six preconceptions about internet questionnaires", *American Psychologist*, Vol. 59 No. 2, pp. 93-104.

Homburg, C., Koschate, N. and Hoyer, W. (2005), "Do satisfied customers really pay more? A study of the relationship between customer satisfaction and willingness to pay", *Journal of Marketing*, Vol. 69 (April), pp. 84-96.

Howell, R.T., Rodzon, K.S., Kurai, M. and Sanchez, A.H. (2010), "A validation of well-being and happiness surveys for administration via the internet", *Behavior Research Methods*, Vol. 42 No. 3, pp. 775-84.

Kelley, S.W. and Turley, L.W. (2001), "Consumer perceptions of service quality attributes at sporting events", *Journal of Buissness Research*, Vol. 54 No. 2, pp. 161-6.

Kim, S. and Feldt, L.S. (2008), "A comparison of tests for equality of two or more independent alpha coefficients", *Journal of Educational Measurement*, Vol. 45 No. 2, pp. 179-93.

Ko, Y., Zhang, J, Cattani, K. and Pastore, D. (2011), "Assessment of event quality in major spectator sports", *Managing Service Quality*, Vol. 21 No. 3, pp. 304-24.

Ko, Y., Kim, Y., Kim, M. and Lee, J. (2009), "The role of involvement and identification on event quality perceptions and satisfaction. A case of US Taekwondo Open", *Asia Pacific Journal of Marketing and Logistics*, Vol. 22 No. 1, pp. 25-39.

Kouthouris, C. and Alexandris, K. (2005), "Can service quality predict customer satisfaction and behavioral intentions in the sport tourism industry? An application of the SERVQUAL model in an outdoors setting", *Journal of Sport Tourism*, Vol. 10 No. 2, pp. 101-11.

McDonald, M.A., Sutton, W.A. and Milne, G.R. (1995), "TEAMQUAL: measuring service quality in professional sports", *Sport Marketing Quarterly*, Vol. 4 No. 2, pp. 9-15.

Mano, H. and Oliver, R.L. (1993), "Assessing the dimensionality and structure of the consumption experience: evaluation, feeling and satisfaction", *Journal of Consumer Research*, Vol. 20 (December), pp. 451-66.

Martin, D.S. and O'Neill, M.A. (2010), "Scale development and testing: a new measure of cognitive satisfaction in sports tourism", *Event Management*, Vol. 14 No. 1, pp. 1-15.

Martin, D.S., Howell, R. and O'Neill, M.A. (2010), "The impact of positive affect, negative affect, and customer satisfaction on the future behavioral intentions of sports fans", *International Journal of Sport and Society*, Vol. 1 No. 2, pp. 101-16.

Martin, D.S., O'Neill, M.A., Hubbard, S.S. and Palmer, A. (2008), "The role of emotion in explaining consumer satisfaction and future behavioral intention", *Journal of Services Marketing*, Vol. 22 No. 3, pp. 224-36.

Oliver, R.L. (1994), "Cognitive, affective, and attribute bases of the satisfaction response", *Journal of Consumer Research*, Vol. 20 No. 3, pp. 418-30.

Oliver, R.L. (1997), "Varieties of value in the consumption satisfaction response", *Advances in Consumer Research*, Vol. 23 No. 7, pp. 247-54.

Pedhazur, E.J. and Schemelkin, L.P. (1991), *Measurement, Design, and Analysis: An Integrated Approach* (Student Edition). Hillsdale, NJ, LEA.

Pons, F., Mourali, M. and Nyeck, S. (2006), "Consumer orientation toward sporting events: scale development and validation", *Journal of Service Research*, Vol. 8 No. 3, pp. 276-87.

Smith, C.T. and Stewart, B. (2007), "The travelling fan: understanding the mechanisms of sport fan consumption in a sport tourism setting", *Journal of Sport and Tourism*, Vol. 12 Nos 3-4, pp. 155-81.

Tabachnick, B.G. and Fidell, L.S. (1989), *Using Multivariate Statistics*, 2nd ed., Harper & Row, New York, NY.

Theodorakis, N. and Alexandris, K. (2008), "Can service quality predict spectators' behavioral intentions in professional soccer?", *Managing Leisure*, Vol. 13 No. 3-4, pp. 162-78.

Theodorakis, N., Kambitsis, C., Laios, A. and Koustelios, A. (2001), "Relationship between measures of service quality and satisfaction of spectators in professional sports", *Journal of Managing Service Quality*, Vol. 11 No. 6, pp. 431-8.

Further reading

Gopalan, R. and Narayan, B. (2010), "Improving customer experience in tourism: a framework for stakeholder collaboration", *Socio-Economic Planning Sciences*, Vol. 44 No. 2, pp. 100-12.

Gronroos, C. (1983), "A service quality model and its marketing implications", *European Journal of Marketing*, Vol. 73 No. 4, pp. 36-44.

Gwynne, A., Devlin, J. and Ennew, C.T. (1998), "Service quality and customer satisfaction: a longitudinal analysis", *The British Academy of Marketing Annual Conference, Sheffield Hallam University, 8-10 July* , pp. 186-91.

Harris, M. and Harrington, H.J. (2000), "Service quality in the knowledge age: huge opportunities for the twenty-first century", *Measuring Business Excellence*, Vol. 4 No. 4, pp. 31-6.

Jamal, A. and Naser, K. (2002), "Customer satisfaction and retail banking: an assessment of some of the key antecedents of customer satisfaction in retail banking", *The International Journal of Bank Marketing*, Vol. 20 No. 7, pp. 335-54.

Klayman, B. (2009), "Like mustard, sports concessions get squeezed", available at: www.reuters.com/article/idUSTRE51982K20090210 (accessed July 16, 2010).

Koo, G., Hardin, R., McClung, S., Jung, T., Cronin, J., Vorhees, C. and Bourdeau, B. (2009), "Examination of the causal effects between the dimensions of service quality and spectator satisfaction in minor league baseball", *International Journal of Sports Marketing & Sponsorship*, Vol. 11 No. 1, pp. 46-59.

Lee, H., Yoo, D. and Lee, Y. (2000), "The Determinants of perceived service quality and its relationship with satisfaction", *Journal of Services Marketing*, Vol. 14 No. 3, pp. 217-31.

O'Neill, M. (1992), *Measuring Service Quality and Customer Satisfaction, Service Quality Management in Hospitality, Tourism and Leisure*, The Haworth Hospitality Press, New York, NY.

O'Neill, M.A., Getz, D. and Carlsen, J. (1999), "Evaluation of service quality at events: the 1998 Coca-Cola Masters Surfing event at Margaret River, Western Australia", *Managing Service Quality*, Vol. 9 No. 3, pp. 158-66.

Parasuraman, A., Zeithaml, V.A. and Berry, L.L. (1985), "A conceptual model of service quality and its implications for future research", *Journal of Marketing*, Vol. 49 (Fall), pp. 41-50.

Plunkett, J. (2009), *Plunkett's Sports Industry Almanac*, Plunkett Research, LLC, Houston, TX.

Reichheld, F. and Sasser, E. (1990), "Zero defections: quality comes to services", *Harvard Business Review*, Vol. 68 No. 4, pp. 105-11.

Rust, R.T. and Oliver, R.L. (1994), *Service Quality. New Dimensions in Theory and Practice*, SAGE, London.

Shaw, R. and McDonald, H. (2006), "Season-ticket holder satisfaction and sponsor-related behavior: evidence of a positive relationship", *International Journal of Sports Marketing & Sponsorship*, No. 4, pp. 318-25.

Theodorakis, N., Koustelios, A., Robinson, L. and Barlas, A. (2009), "Moderating role of team identification on the relationship between service quality and repurchase intentions among spectators of professional sports", *Managing Service Quality.*, Vol. 19 No. 4, pp. 456-73.

Van Leeuwen, L., Quick, S. and Daniel, K. (2002), "The sport spectator satisfaction model: a conceptual framework for understanding the satisfaction of spectators", *Journal of Sport Management Review*, Vol. 5 No. 2, pp. 99-128.

Wakefield, K.L. and Blodgett, J.G. (1994), "The importance of servicescape in leisure service settings", *Journal of Services Marketing*, Vol. 8 No. 3, pp. 66-76.

Wann, D.L. and Branscombe, N.R. (1993), "Sports fans: measuring degree of identification with their team", *International Journal of Sport Psychology*, Vol. 24 No. 1, pp. 1-17.

Watson, D. and Clark, L.A. (1994), *The PANAS-X: Manual for the Positive and Negative Affect Schedule – Expanded Form*, University of Iowa, Department of Psychology, Iowa City, IA.

Zeithaml, V., Leonard, B. and Parasuraman, A. (1996), "The behavioral consequences of service quality", *Journal of Marketing*, Vol. 60 (April), pp. 31-46.

Corresponding author
David S. Martin can be contacted at: martida@auburn.edu