

SERVICE QUALITY DIMENSIONS IN SPECTATOR SPORT: AN ANALYSIS OF THE TWENTY-TWENTY CRICKET LEAGUE MATCHES IN SOUTH AFRICA

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-Abstract-

Since their inception, twenty-twenty (T20) cricket league matches have gained tremendous popularity and are heralded in South Africa with the potential of increasing the spectator support base in cricket. The purpose of this study was to enhance an understanding of service quality by examining the service quality dimensions in T20 cricket events in South Africa. A convenience sample of 250 T20 cricket spectators in the Gauteng province of South Africa participated in a survey using a structured self-administered questionnaire. The factor analysis procedure resulted in the extraction of six primary dimensions, namely service personnel, game atmosphere, facility access, facility aesthetics, home team quality and opposing team characteristics. The model was tested using confirmatory factor analysis, which showed a good-fit of the data to the model. Among the service quality dimensions, facility access was rated the most important dimension. The study recommends that managers use the suggested dimensional framework to measure service quality in T20 cricket. Managers can also use this framework and measurement scale as a diagnostic tool to identify strengths and weaknesses in their services, thus providing guidance for potential areas of improvement.

Keywords: Spectators, T20 cricket, Service quality, exploratory factor analysis, Confirmatory factor analysis.

JEL: Classification: M31, M39

1. INTRODUCTION AND BACKGROUND TO THE STUDY

The increased interest in service quality has motivated many scholars to research this topic in sport. Through the years, sport has escalated from being simply a game to a form of recreation, encompassing entertainment and leisure (Braunstein & Zhang 2005). To date, service quality studies in sport in South Africa have focused on identifying the dimensions of quality in different sport and recreational activities (Saayman, Saayman & Du Plessis, 2005; Van Heerden, 2012; Jooste, Van Wyk & Steyn, 2013; Scholtz, Kruger & Saayman, 2015; Tichaawa, Bama & Swart, 2015; Kruger & Saayman, 2016). Cricket evolved from the 16th century from a recreational activity to a professional sport with international matches being played since 1844 (Noorbhai & Noakes, 2015), including South Africa. To this end, cricket in South Africa became a career not only for players but also for managers, coaches and the corporate world (Easton, 1996). South Africa is ranked among the best in the world in cricket and this could be ascribed to the country's aspiring youth and junior cricket players (Jooste, Toriola, Van Wyk & Steyn, 2014).

A notable period in cricket history was the introduction of the twenty-twenty (T20) version, which was started by the England and Wales Cricket Board (ECB) for the inter-country competition in 2003. T20 is one of the three current forms of cricket recognised by the International Cricket Council (ICC). This type of cricket is also known as being 'fast and furious', meaning that extra entertainment such as music, dancing and fireworks (Dhurup & Niyimbanira, 2012) is present at the event. In addition it is the most modern and exciting form of cricket also therefore, is often referred to as 'sportainment', which refers to a combination of sport and entertainment. In the context of spectator sport events, T20 cricket events create a particular image and offer spectators the opportunity to enjoy cricket as a memorable encounter.

As the different forms of sport compete for the same spectators, it becomes essential to understand why spectators prefer a certain format of the game (Scholtz et al., 2015). Of all the role players in cricket, the spectator is the most important since they generate income for sport stadia and create an atmosphere or aura at the event (Kruger & Saayman, 2016). One of the most important factors for sport organisations is meeting the needs and expectations of cricket spectators. Major spectator sport events constitute a large expanding and competitive industry, which, provides the impetus to offer a high-quality event service quality by sports organisations (Ko, Zhang, Cattani & Pastore, 2011). Spectators are the primary

consumers of T20 cricket league matches and they assess the service performance with the level of service quality based upon unique experiences and service outcomes. This, in turn, will provide an important guide or tool in identifying the major determinants of requisite service quality of T20 cricket matches for changing the sport into a fascinating and memorable encounter. In addition, spectators' perceptions on quality of service at T20 cricket matches is critical so that sport administrators are able to track these perceptions and direct resources in areas highlighted by spectators as crucial.

2. LITERATURE REVIEW

Ko and Pastore (2004) provided three dominant theoretical explanations that account for the management of service quality, namely the conceptualisation, dimensions and the measurement of service quality. For the purpose of this study, these areas, which warrant further investigation in order to improve the service quality research, are briefly accentuated in this section.

2.1 Conceptualisation

Traditionally, service quality has been conceptualised as the difference between customer expectations regarding a service or product to be received and perceptions of the service or product to be received (Parasuraman, Zeithmal & Berry, 1985; Asubonteng, McCleary & Swan, 1996; Grönroos, 2001). Relevant to consumer satisfaction theory, this conceptualisation of service quality has its origins in the expectancy-disconfirmation paradigm, which is based on the premise that consumers form satisfaction judgements by evaluating actual product or service quality (Triandis, Anderson & Fink, 2000). However, service quality in its contemporary conceptualisation within sport management and leisure research, has been defined as the direction and the degree of difference between customers service perceptions and expectations, such as the comparison of consumer expectations with actual service performance (Eraslan & Cimen, 2016).

2.2 Dimensions

To date, different scholars have introduced different models of service quality and as a result, the perceptions of service quality are based on a variety of dimensions. These varied models are premised on developing a conceptual framework that will capture the unique features of sport and recreation service, its delivery system and customers' participative motives. The pioneer studies on service quality models

started with Nordic scholars, Lehtinen (1982) and Grönroos (1984) who used overall categorical terms and developed service quality models based on three dimensions, namely physical quality, interactive quality and output or corporate quality (Yarimoglu, 2014). The aforementioned authors assert that in examining the determinants of quality, it is necessary to make a distinction between quality associated with the process of service delivery and quality associated with the outcome of service, judged by the consumer, after the service is performed (Kitchroen, 2004). Later, American scholars such as Parasuraman et al. (1985; 1988) developed the best-known customer oriented model called SERVQUAL in an attempt to identify important aspects of perceived service quality. These authors identified ten quality dimensions, which later were regrouped in the well-known RATER model, comprising reliability, assurance, tangibles, empathy and responsiveness dimensions (Brown & Moore, 2012).

2.3 Measurement

An instrument for identifying and measuring the quality of a service is critical, as measurement is one of the foundations for developing service quality (Mehralian, Babapour & Peiravian, 2016). With specific emphasis in measuring customer perceptions of service quality, Parasuraman et al. (1985; 1988), developed the SERVQUAL scale, which constituted an important landmark in the service quality literature. Whilst the original SERVQUAL instrumentation has undergone refinements, its primary content stood the test of time as the most widely used and tested instrument and remained an established framework for the measurement of external service quality. Several studies have found that the SERVQUAL model may not fit all types of businesses because service factors can differ according to different industries (Cronholm & Salomonson, 2014; Lee, Hsieh & Cheng, 2016). Later, Cronin and Taylor (1992) triggered the SERVPERF model based on performance only measure of SQ and excluded the expectations component of SQ due to these being scored consistently high. Similarly, the following researchers also attempted to measure service quality in the specific context of spectator sports (Kelley & Turley, 2001; Ko & Pastore, 2004; Theodorakis & Alexandris, 2008; Calabuig, Mundina & Crespo, 2010; Ko et al., 2011; Calabuig-Moreno et al., 2016).

3. PROBLEM STATEMENT

Despite the popularity of cricket spectatorship in South Africa, little is known about the factors that determines service quality in T20 cricket league matches.

Identifying and exploring the service quality dimensions that are linked to the patronage of cricket spectators is yet to be explored within South Africa T20 cricket matches. Understanding the perceived service quality dimensions that are influential to spectators watching cricket may be a key to the success in identifying essential dimensions that are influential to the patronage of cricket spectators. Although a number of service quality studies focused on identifying the dimensions of quality of different sports and recreation activities, no study, to the knowledge of the authors, has explored the service quality dimensions in the context of T20 cricket matches in a developing country such as South Africa.

The apparent gap that exists between the actual outcome of service consumption in cricket and the current conceptualisation of service quality in generic recreational sport programs as well as those from the general services marketing literature, also warrant that this study should be undertaken. Furthermore, the results of this study may effectively address concerns as highlighted by Ko et al. (2011) study, suggesting that a comprehensive industry-specific measurement instrument should be developed to measure event service quality.

4. PURPOSE OF THE STUDY

The purpose of this study was to explore and identify cricket spectators' perceived service quality of T20 league matches in South Africa.

5. RESEARCH METHODOLOGY

The study was a single cross-sectional, quantitative research design. This design was adopted in order to quantify the collected data and to generalise the results from the sample to the population of interest (Malhotra, 2010).

5.1 Sampling design and ethical issues

Since there was no sampling frame for the study, a non-probability survey sampling procedure was used to seek information from a conveniently selected sample of 300 spectators from three stadiums located in the Gauteng province of South Africa. The sample comprised spectators who attended games at the RamSlamT20 challenge during the 2016 season in Gauteng. Out of the total 300 questionnaires that initially were distributed, 250 usable questionnaires were retrieved for the final data analysis. In administering the questionnaire, various ethical considerations were adhered to. The participants' rights to anonymity, confidentiality, privacy or non-participation, protection from harm and victimisation were adhered to.

5.2 Data collection and procedure

A screening question was posed upon approaching possible respondents to ensure that spectators who had not previously attended T20 cricket matches, as well as first time attendees at cricket matches, were excluded from the study, as they have no reference point to judge overall service quality of the T20 cricket matches. The three stadiums selected as survey sites were namely Willowmoore Park (Benoni), New Wanderers (Johannesburg) and Supersport Park (Centurion). The questionnaires were administered at strategic locations such as at the entrance of the cricket stadiums or outside the cricket stadiums. In most cases, the questionnaires were administered face-to-face by three trained fieldworkers to ensure that they were properly completed. Participants were given sufficient time to complete the questionnaire and were assured of anonymity.

5.3 Measuring instrument and questionnaire design

The main data collection instrument that was used for the study was adapted from Yoshida and James (2010) scales. Proper modifications were done on the core product, ancillary services and sportscape dimensions of service quality to suit the South African context. The self-administered structured questionnaire comprised two sections, namely Section A that requested the respondents to provide their demographic profile and Section B that assessed the respondents perceived service quality in T20 cricket league matches. All the measurement items for Sections B were anchored on a seven-point Likert-type format with responses ranging from 1=strongly disagree to 7=strongly agree, in order to express the degree of disagreement/agreement.

5.4 Data analysis

The Statistical Package for the Social Sciences (SPSS) version 24.0 was used to capture and analyse the data. Descriptive statistics inform of frequencies were used to establish the sample profile. An exploratory factor analysis was used to establish the factor structure using the principal components analysis (Varimax rotation method). The Analysis of Moments Structures package (AMOS) version 24.0 was used to establish the goodness of fit of the data to the measurement model.

6. RESULTS

6.1 Sample composition/profile

The sample comprised more male spectators (n= 150; 60%) compared to females (n= 100; 40%). The sampled spectators were fairly evenly distributed across the following age categories: between 18-25 years (n=65; 26%), between 26-33 years (n=60; 24%) and between 34-41 years (n=67; 26.8%). Those spectators who were between 42-49 years (n=32; 12.8%) and 50 years and over (n=26;10.4%) constituted the remainder in the sample.

6.2 Exploratory factor analysis

The Kaiser Meyer Olkin (KMO) measure of sampling adequacy (0.808; > 0.5) indicates that the patterns of correlation are reliably compact and yield distinct and reliable factors (Field, 2005). Similarly, Bartlett's test of sphericity revealed that the approximate chi-square was 2028.399 (df=153) at an observed significance level $p < 0.000$. Both test results indicate adequate factorability of the data (Pallant, 2010). Table 1 reports on the factor loadings, reliability, means and standard deviations. Moreover, the cumulative explained variance = 59.98% which is considered satisfactory for exploratory factor analysis (Malhotra, 2010).

Table 1: Exploratory factor analysis and reliability

No	Subscale items	Factor loadings	Eigenvalue	Cronbach alpha	Total Variance explained	Means	SD
<i>Service employees</i>			4.079	0.902	15.107	4.834	1.023
1	Rely on the employees at this stadium being friendly	.823					
2	The attitude of the employees	.867					
3	Employees shows that they understand your needs	.862					
4	Rely on the stadium employees to address your needs	.857					
5	The employees at this stadium respond quickly to your needs	.778					
6	Employees professional knowledge	.568					

No	Subscale items	Factor loadings	Eigenvalue	Cronbach alpha	Total Variance explained	Means	SD
<i>Facility access</i>			1.120	0.653	6.447	5.6656	0.721
7	Signs at this stadium help you know where you are going	.629					
8	Signs at this stadium give clear directions	.750					
9	The stadium layout makes it easy to get to your seat	.766					
<i>Facility aesthetics</i>			1.741	0.706	8.714	5.471	0.837
10	There is plenty of elbow room in the seating area	.535					
11	The arrangement of the seats provides plenty of space	.695					
12	This stadium provides comfortable seats	.671					
13	The walkways are wide enough to handle the crowds	.648					
14	This stadium provides enough space to handle the crowds	.683					
<i>Opposing team quality</i>			2.865	0.850	10.612	5.245	0.812
15	Opposing teams are high quality teams	.760					
16	Opposing teams have good win/loss records	.886					
17	Opposing teams have a good history	.858					
18	Opposing teams have star players	.785					
<i>Home team quality</i>			2.447	0.780	9.064	4.851	0.717
19	Your team's players perform well-executed plays	.738					
20	Players on your team have superior skills	.724					
21	Your team plays hard all the time	.782					
22	Your team gives 100% every time	.700					
<i>Game atmosphere</i>			2.353	0.714	9.045	4.639	0.925

No	Subscale items	Factor loadings	Eigenvalue	Cronbach alpha	Total Variance explained	Means	SD
23	At this stadium, you can rely on there being a good atmosphere	.612					
24	This stadium's ambience is what you want at a game	.750					
25	Your team understands that atmosphere is important to you	.600					
26	Excitement surrounding the performance of players	.627					
27	Excitement associated with player performance	.686					

6.3 Reliability and validity

The Cronbach's alpha coefficients were used to test the reliability of the multiple item rating scales used in this study. In Table 1, the Cronbach's alpha values for each of the service quality dimensions are outlined. The results of the reliability test indicate that all the Cronbach's alphas were above 0.70, except facility access (0.653) affirming the internal consistency of the measures used in the study (Maholtra, 2010). Construct reliability was assessed through the computation of composite reliabilities. These results, which are reported in Table 2, show satisfactory composite reliabilities thus providing evidence of construct validity. Discriminant validity was supported by the factor correlations as shown in Table 2, which were not perfectly correlated (i.e = 1), thus supporting discriminant validity (Bagozzi & Phillips, 1982). Convergent validity was accessed through the computation of correlation matrix as indicated in Table 2. The results show positive correlations between the constructs thus providing evidence of acceptable convergence.

6.4 Assessment of the measurement model

A confirmatory factor analysis (CFA) using Amos 24.0 was conducted to check the construct reliability and assess the measurement model for goodness of fit. Results from CFA showed that the chi-square/degree of freedom (<3.0 chi-square) was

significant ($\chi^2=547.567$, $df=362$, $p<0.01$). The other fit indices were examined and indicated that the measurement model was acceptable fit to the data: chi-square/ $df=1.513$ (recommended <3), Tucker-Lewis Index (TLI) was 0.916 (recommended >0.90); Incremental Fit Index (IFI) was 0.926 (recommended >0.90); Comparative Fit Index (CFI) was 0.925 (recommended >0.90) and the Root Mean Square Error of Approximation (RMSEA) was 0.045 (recommended between 0.03 to 0.08) (Bagozzi & Yi, 2012).

6.4 Correlations among factors

Correlation analysis was performed to determine the pattern of correlation among the extracted factors. The Spearman correlation coefficient (r) was used to evaluate the existence of such relationships. The results of the correlation analysis and composite reliabilities (CR) are reported in Table 2.

Table 2: Correlation matrix among factors composite reliabilities

Subscales	SEM	FAC	FAS	OTQ	HTQ	GAT	CR
Service employee (SEM)	1	.305**	.334**	.108	.198**	.097	0.91
Facility access (FAC)	.305**	1	.328**	.096	.217**	.094	0.66
Facility aesthetics (FAS)	.334**	.328**	1	.208**	.117	.141*	0.71
Opposing team quality (OTQ)	.108	.096	.208**	1	.204**	.108	0.86
Home team quality (HTQ)	.198*	.217**	.117	.204**	1	.358**	0.82
Game atmospherics (GAT)	.097	.94	.141*	.108	.358**	1	0.72

** Correlations are significant at $p<0.01$. * Correlations are significant at $p<0.05$

The correlation among the six factors of service quality, ranging from $r=0.094$ to $r=0.358$. Moderate correlations were found between service employees and facility access ($r=0.305$; $p<0.01$), between facility aesthetics and service employees ($r=0.334$; $p<0.01$); between facility aesthetics and facility access ($r=0.328$; $p<0.01$) between home team quality and game atmospherics ($r=0.358$; $p<0.01$).

7. DISCUSSION OF RESULTS

The **first factor**, labelled service employees, had an eigenvalue of 4.079 and comprised six items, which accounted for 15.107 percent of the total variance. The items that loaded onto this factor refer to the staff members who interact with the customers. The high-recorded mean of 4.834 for the dimension shown in Table 1 suggests that spectators recognise the significance of these variables within T20

cricket sport. This dimension also emerged as a dimension in other studies (Greenwell, Fink & Pastore, 2002; Theodorakis & Alexandris, 2008; Athansopoulou et al., 2012) thus providing evidence of the importance of service employees in enhancing service quality in spectator sports.

The **second factor**, labelled facility access, had an eigenvalue of 1.120 and comprised three variables, which accounted for 6.447 percent of the total variance. It would appear that from the highest mean score of 5.666 in Table 1, spectators devote most of their time and attention to various aspects of facility access. Once inside the facility, spectators often spend hours consciously or sub consciously observing the stadium layout such as the exterior of the facility venue. Facility access such as signage and the general layout of stadiums were also consistent with findings from other studies confirming that spectators consider these variables essential among spectators in attending sport events (Brokaw, 2000; Hall, O'Mahony & Vieceli, 2009; Yoshida & James, 2010; Calabuig-Morena et al., 2016).

The **third factor**, labelled facility aesthetics, had an eigenvalue of 1.741 and comprised five items, which accounted for 8.714 percent of the total variance. The high mean score of 5.474 (Table 1) with regard to items associated with facility aesthetics is consistent with findings of Chang (2012), which affirmed that facility aesthetics positively influences spectators' emotions and future behavioural intentions. A pleasing facility aesthetics will have a positive effect on the perceived quality of the servicescapes and the movement of spectators during the service encounters (Cooper & Goodenough, 2007).

The **fourth factor**, labelled opposing team quality, had an eigenvalue of 2.865, and comprised four items, which accounted for 10.612 percent of the total variance. This dimension was rated as the third-highest service quality dimension with a mean value of 5.245, as reflected in Table 1. Like other sport, Twenty20 cricket opponent batsmen, bowlers and fielders require flowing and visually attractive movements at various moments during a game (Cratty, 1983). Studies undertaken by Lindgren, Tebelius and Fridlund (2000) further provides evidence that high level of fitness and opponent quality contribute to game quality.

The **fifth factor**, labelled home team quality, had an eigenvalue of 2.447 and comprised four items, which accounted for 9.064 percent of the total variance. The high mean score of 4.851 shown in Table 1 is indicative of the aspects of player performance that has become highly important due to the popularity of the game (Wickramasinghe, 2014). In cricket, a team's performance has become analogous

with national pride and diligence involved in team selection (Rama & Sharda, 2008; Ali & Khan, 2013).

The **sixth factor**, labelled game atmosphere, had an eigenvalue of 2.353 and comprised five items, which accounted for 9.045 percent of the total variance. The high mean score of 4.639 in Table 1 is indicative of how spectators devote most of their time and attention to various aspects of game atmosphere, *inter alia* interactions allowed in these virtual environments and technical points on how to access perception of the environment. The items that loaded onto this factor also relate to the environment in which cricket is played and encapsulate the surrounding as well as its accessory elements (Sloan, 1989; Gantz & Wenner, 1991).

8. LIMITATIONS AND IMPLICATIONS FOR FURTHER RESEARCH

Although the study provides important contributions to cricket spectator context, one should note limitations of the study that offer opportunities for future research. Since the present study was undertaken with a limited sample of 250 drawn from a convenience sample within the Gauteng region, the results cannot be generalised to the entire country. It may occur that spectators may evaluate these dimensions differently depending upon factors such stadium age and facilities in the stadium. Replication of the study to other major cities in South Africa, hosting similar T20 cricket matches, is desirable as it may yield different results. The measuring instrument adopted in the study was not developed specifically for cricket spectators and may not sufficiently represent the wide variety of service quality dimensions by spectators during T20 cricket matches. There is likelihood that future research may unearth some other dimensions of service quality that may not have been identified in the conceptual framework or factorial structure of the study. Furthermore, the difficulty associated with measuring perceptions due to the intangible feature of service quality is of significance. Future research might include studies to identify other factors influencing game atmosphere and game satisfaction in T20 cricket matches and highlight several areas of interest for spectators.

9. RECOMMENDATIONS

The basis of the study is to provide sport administrators insights into improving the efficiency and effectiveness of service quality and provide them with the opportunity to address issues influencing service delivery in T20 matches. The six dimensions of service quality can be used by the management of cricket clubs and

sport marketers to develop advertising messages around the dimensions to lure fans into stadiums thereby increasing the attendance figures, which contribute to the coffers of clubs. In so doing, T20 cricket league will increase their spectator base and improve their stadia to meet spectators' expectations of service quality. It further is recommended that managers use the suggested dimensional framework and measurement scale as a diagnostic tool in order to identify strengths and weaknesses in their services, thus providing guidance for potential areas of improvement. This can be done through periodic surveys among spectators.

10. CONCLUSION

The results of this preliminary factorial analysis do provide support that there are potentially six dimensions that engender service quality in T20 matches, namely stadium employees, facility access, facility aesthetics, opposing team quality home team quality and game atmosphere. These findings concur with results from earlier studies that suggest that spectators do take these factors into account in evaluating service quality in sport events sporting events. The recommendations emanating from the study provide managers with valuable insights into the factors that reflects spectators' perceptions of T20 cricket service quality.

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