

RUNNING HEAD: Impacts on frequency of participation

**Repeat Participation as a Function of Program Attractiveness, Socializing  
Opportunities, Loyalty and the Sportscape Across Three Sport Facility Contexts**

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## Abstract

Effects of sport facility services of program attractiveness, socializing opportunities customer loyalty, and the sportscape on frequency of participation at three different types of sport facilities; special purpose – health and fitness centers, single-purpose – tennis, golf or swim pool amenities, and multi-use – gymnasias were examined. The purpose of the study was to identify differences between, and effects on, participation at different types of participant sport facilities due to service quality. Data were collected on a sample of 1199 participants from a mid-sized east coast Australian city. Linear restrictions testing determined that the three sport facility types were significantly different in the ways in which the constructs affect repeat participation. The sportscape has the most impact on participation frequency at fitness facilities, and minimal impact on participation at multi-sport facilities. Implications for retaining customers at each facility type are discussed.

Understanding motives for participation in sport and recreation activities has long been a subject of inquiry. In 1928, Lehman and Witty stated that “play activity is a function of multitudinous variables and is not to be explained easily” (p. 394). They did suggest however, that people’s desire for participation in, and selection of, activities are driven through reflection and satisfaction of a felt need.

Since that time, researchers have continued to identify the “multitudinous variables” that attract consumers to participate in sport and contribute to their enduring involvement with sport activities. Variables found to influence consumers’ sport participation have varied widely and have included task-oriented motives, (e.g., fun and exercise) and social integration motives (e.g., play with people) (Shapiro, 2003), psychological constructs such as intrinsic (e.g., personal competence and self-confidence) and extrinsic rewards (e.g., social approval and material incentives) (Ryska, Hohensee, Cooley, & Jones, 2002), health issues of weight and stress management (Kilpatrick, Herbert, & Bartholomew, (2005), and even travel (Funk, Toohey, & Bruun, 2007; Gibson, 1998).

Evaluations of service quality dimensions by consumers on provision and delivery of sport or recreation pursuits have also been shown to affect participation (MacKay & Crompton, 1988). Further studies into service quality evaluations by consumers for sport and recreation delivery included the environment in which these pursuits took place. In these studies data were either combined across multiple sport and recreation facility types (e.g., Crompton, MacKay, & Fesenmaier, 1991; Wright, Duray, & Goodale, 1992) or gathered from facilities of the same type (e.g., Afthinos, Theodorakis, & Nassis, 2005;

Kim & Kim, 1995) to explore more deeply the effects of consumers' evaluations on sport and recreation service quality provision and delivery.

However, evaluations of dimensions of sport and recreation service quality provision and delivery have seldom been empirically examined across various types of environments to determine whether such evaluations remain consistent and therefore expected or whether they vary by setting. Furthermore, no research appears to investigate the effects of service quality on participation. Consequently, the purpose of this research is twofold: (1) to identify whether relationships among service quality dimensions vary as a function of facility type, and (2), to determine the effects that these relationships have on participation. Understanding relationships and their effects between dimensions would assist managers of sport facilities and venues to more effectively allocate resources to either improving or maintaining appropriate levels of service quality. It would also advance the growing body of literature surrounding service quality provision within sport facility contexts.

The next section of this paper provides a literature review that discusses the importance of participation for sport facilities followed by a discussion of the service quality dimensions under investigation in this study: program attractiveness, opportunities for socialising, facility loyalty and elements of the sportscape. The literature review concludes with a statement of hypotheses for testing. The method section describes procedures and measures used to gather data with a description and rationale for statistical analyses performed. Results and discussion of findings are explained in relevant sections that also provide limitations to this study.

## **Literature Review**

### **Participation**

Sport facilities must compete against an array of leisure opportunities available to consumers making revenue generation challenging (“Fans Demand”, 1990). Attracting high levels of participation at facilities is vital for the financial success of the facility. Not only is it important for sport facilities to continually attract new customers but they also must retain those that currently attend the facility. Customer retention is a more cost-effective marketing strategy as it costs two-and-a-half-times less to retain customers than to recruit new ones (Fischbach, 2006). Further, long-term retention is associated with increased customer loyalty which permits opportunities to implement premium pricing strategies (Kim & Kim, 1995). Retaining existing customers clearly assists bottom-line operations and ultimately, the success of sport facilities. Alas, customer retention is dependent on the delivery of high quality services (Fornell & Wernerfelt, 1987; Parasuraman, Zeithaml, & Berry, 1988). The provision of high quality services enhances customer satisfaction, which also leads to customer retention (Howat, Murray, & Crilley, 1999).

Participant sport facilities plan and schedule programs and activities (LaRue, Walker, & Krogh, 1997) that offer consumers at all levels (social to elite) opportunities to play, train, exercise, or otherwise be involved in sport or recreational pursuits (Sotiriadou, 2005). Examples of participant sport facilities include golf courses, tennis clubs, aquatics centres, health and fitness centres, and gymnasias.

Most participant sport and recreation facilities require customers to purchase a membership to gain access to the facility and the services provided within. These

memberships are for a designated period of time, whereupon consumers' wanting to continue using the facility must repurchase another membership. The link between quality services and customer retention is a strong one (Venetis & Ghauri, 2004), yet it is dependent on one critical factor – customers must experience the services. Therefore, the frequency with which customers use the facility's services is a vital factor in decisions to repurchase (Fischbach, 2006). Thus, participant sport facilities have an ongoing stake in providing their members with high quality services that encourage ongoing membership. However, most sport facilities also offer casual member options or promotional trial campaigns. Consequently, providing high quality services would be beneficial in capturing these more casual customers.

Membership types can impact customer evaluations of service quality expectations. Afthinos, Theodorakis and Nassis (2005), suggested customers of private and public fitness centers differed in their expectations of service quality. Customers from public facilities had lower expectations for service quality while those participating at private facilities were more demanding of service delivery. Membership levels were also found to have a relationship with customer retention (Bhattacharya, 1998) whereby members who downgraded memberships or were on lower membership levels were more likely to let memberships lapse and not renew. Hence, providing high service quality experiences for customers are important for participation and customer retention as customers appear willing to remain with a facility and pay a premium provided service quality expectations are met (Wei, Hung, Yang, Hsu & Ma, 2010).

According to Fischbach (2006) customers who regularly frequent sport facilities are more likely to repurchase memberships and to continue using the facility than those

who do not. Clearly, customers who value their experience are more likely to seek out further experiences with the facility. This provides a further benefit to the sport facility. More customers in the facility can increase revenue through secondary spend on items such as food and beverage, clothing, equipment, and other merchandise, and augmented services not included in memberships such as physiotherapy, massage, and private training (Westerbeek et al. 2005). Thus, for sport facilities to optimize revenue generation through customer membership repurchase and secondary spend, sport facilities need customers to attend, and therefore experience services, regularly and often. High quality service plays a key role in customers' usage frequency as it is a core aspect of the overall participation experience (Crawford, Greenwell, & Andrew, 2007).

## **Dimensions**

### **Programs**

Among the services offered at sport facilities, programs are the primary service under most consideration by people when deciding to participate at a facility (Afthinos, et al., 2005; Elliott & Hamilton, 1991). Afthinos, et al. (2005) found programming was among the most desired aspects of services for customers of fitness centers while Elliott and Hamilton (1991) indicated that people's first strategy in deciding to participate in sport and leisure activities was to identify what "they are in the mood to do" (p. 328). Thus, for sport facilities to entice customers to regularly participate at their facility, providing attractive programs is a key factor.

Programs that attract participants are typically those that satisfy the needs, wants, and motives of customers (Kotler, Roberto, & Lee, 2002). Needs, wants and motives of customers for participating in programs can be many and varied and include, seeking

health-related benefits such as decreased body fat, improved weight management, enhanced aerobic fitness, increased muscle and bone strength (Volek, Vanheest, & Forsythe, 2005; Vuori, 1998), reducing diabetes, hypertension, congestive heart failure or depression (Brunet, Plotnikoff, Raine, & Courneya, 2005; Coats, 2005; Sallis & Owen, 1999; Stewart, et al., 2005) which, can lead to further benefits for participants such as decreased medical costs, greater physical and psychological well-being and job satisfaction (Ready, Naimark, Tate, & Boreskie, 2005). Other needs, wants or motives for participation in programs offered at sport facilities include sport skill acquisition and accomplishment, social opportunities (Crawford, et al., 2007), fun and enjoyment (McDermott, 2006). Still others participate to satisfy their interest in the activity, to improve their looks, to cope better, to escape, to challenge themselves physically, to relax, or to experience thrills and excitement (Kniveton, 2005). In short, there is a plethora of potential motives for membership in a sport or fitness facility.

Yet, some researchers have noted that many instructors and owner/managers of sport facilities assume that their customers' only or primary motive for participating in programs at sport facilities is to become fit and healthy (Kniveton, 2005; Yates, Edman, Crago, Crowell, & Zimmerman, 1999). Based on this assumption, instructors are predominantly trained to focus on the instrumental aspects of an activity ignoring the broad range of needs, wants, and motives that actually influence customers' initial decisions to participate and to purchase membership in a sport facility. By focusing only on the instrumental needs and motives of members, facility managers fail to assist customers to enjoy the process (i.e., the experience itself). It is through the less tangible, process-oriented, experiential aspects of membership that customers create affective and

psychological bonds that can enhance satisfaction and loyalty. Alternatively, customer dissatisfaction or even a lack of affective connection to the facility can lead to less frequent attendance, and eventually, failure to renew one's membership (Kniveton, 2005). Therefore, problems of customer retention can exist for managers of sport facilities if programs lose their attractiveness to customers as they either did not or have not continued to meet the needs, wants, and desires of customers.

### **Socialising opportunities**

The social aspects of sport facility membership are not always the most salient driver of purchase, but are often critical aspects of customers' day-to-day experiences of the facility and its programs. Socializing is the second consideration people undertake when deciding to participate in sport and leisure programs (Elliot & Hamilton, 1991). In particular, selecting programs "[that] their friends are doing" (p. 328) was found an important factor in people's decision making process for participation. Afthinos, et al. (2005) also found evidence suggesting socializing might be a second order motive for participating at sport facilities. Their research showed that only 0.7% of people stated their primary purpose for using facilities was for socialization, yet "opportunities to meet people" was listed positively among the desired aspects of services sought by customers. This suggests the centrality of social opportunities to customers' experiences of the facility and their engagement in the facility's programs.

However, the indication that socializing is a second order determinant for participation at sport facilities might not be so definitive. Green (2005) argued there is a need for an "assortment of program variations to cater to a diverse and changing array of participant motivations" (p. 239) that range from social to task specific. She indicated

that some participants might be motivated predominantly by social outcomes from participation suggesting that for some, socializing could be a primary motivator for participation at sport facilities. Philipp and Brezina (2002) found that African Americans rated “socializing with others” of greater importance to them for their sports participation than Euro-Americans, while Diehl and Berg (2006) suggested that retirees sought programs that provided opportunities for them to socialize with others as this was a, “major component of engagement with life” (p. 222). Thus, as Green indicates, social opportunities via sport participation may vary in its capacity to motivate people to participate. Wherever people place social opportunities as they weigh their purchase decision, it is clear that the social aspects of participation affect customers’ experience of the facility and its programs, thus it would be expected to impact their frequency of attendance and satisfaction with facility services. In fact, the social bonds that develop among customers and between customers and staff are important precursors to customer loyalty (Athanasopoulou & Mylonakis, 2009).

### **Loyalty**

Customer loyalty is highly associated with participant retention at sport facilities (Alexandris & James, 2003), and service quality has been identified as a significant driver of that loyalty (Zeithaml, Parasuraman, & Berry, 1996). Positive perceptions of sport facility services can enhance customer loyalty as they value their experiences with the facility (Park, 1996). The quality of service, including the social bonds that are part of the sport facility experience, drive up the perceived value of the membership, making customers less likely to switch to other facilities (Beatty & Kahle, 1988; Pritchard, Howard, & Havitz, 1992). Customer loyalty to participant sport facilities has been shown

to emerge from customers' perceptions of high quality service provision that meets or exceeds participants' expectations of programs (Alexandris & James, 2003) and facility specific (i.e., sportscape) factors (Wakefield & Sloan, 1995).

### **Sportscape factors**

Sportscape factors were originally developed within the context of spectator sport facilities to evaluate spectators' experiences while attending games in stadia and arenas (Wakefield & Sloan, 1995). Based on the proposition by Bitner (1992) that the "servicescape" or the physical surroundings of service encounters would affect individuals' behaviors in terms of their decisions to stay, explore, spend money, return or avoid places, Wakefield and Sloan (1995) hypothesized that spectators would be affected similarly when attending sports events at stadiums. Termed the "sportscape" by Wakefield and Sloan (1995), factors comprising this concept that are believed to be salient to spectators' evaluations of their stadium experience include vehicle parking, stadium and amenity cleanliness, crowding, fan control, food, and service (see Wakefield & Sloan, 1995, for more detailed description of factors).

Factors of the sportscape were found to influence spectators' affective experiences with, and desires to, attend and spend time in the sport facility (Wakefield, Blodgett & Sloan, 1996; Wakefield & Sloan, 1995). Importantly, they have also been shown to predict repeat attendance (Hill & Green, 2000). With the exception of the cleanliness dimension, researchers measuring service quality elements of participant sport facilities have paid little attention to other aspects of the sportscape (i.e., parking, crowding, food

and beverage), and have not examined the effects of the sportscape on frequency of use or repurchase intentions.

Most sport facilities that attract customers as participants provide parking as a service. It is anticipated that providing parking makes it easy for customers to access facilities, thereby increasing the likelihood of participation and retention. Yet, effects of parking on frequency of participation at sports facilities appear to have gone untested. Sports facilities tend to suffer from varying demand for services. Throughout a day, peak times can see facilities extremely overcrowded, creating long waits for services or resulting in waiting lists for desired programs (Wright, et al., 1992). However, the positive effects of crowding in sport facilities on repeat participation are less clear. As with spectator sport facilities, it may be that some crowding adds to the value of experience. Cleanliness of facilities and food and beverage services were found by Afthinos et al. (2005) and Kim and Kim (1995) as desired services deemed important but effects of this service on repeat participation were not discussed. Thus, the use of sportscape factors and its application to participant sport facilities appears useful and appropriate in gaining an understanding of parking, crowding, cleanliness and food and beverage dimensions of service quality and their effects on patronage.

### **Sport facility types**

Westerbeek et al. (2005) indicated there are different types of sport facilities as “few facilities can cater to the needs of all consumers” (p. 16). They suggested differences among types of sport facilities provide management with varying implications in delivery of services. Crompton and MacKay (1989) found that variance of service quality existed in recreation program delivery as they stated; “dimensions of service

quality will not be of equal importance to participants in selected recreation programs and across selected recreation programs” (p. 374). Hence, variance in other service quality dimensions are likely across different types of sport facilities indicating that effects found for one service dimension at a particular type of facility may not be found at another.

By examining the effects of service quality dimensions across different types of participant sport facilities, this research seeks to gain a deeper understanding of the industry-specific ways that service delivery may differentially impact on customers, particularly on repeat participation. On the basis of the literature reviewed above, the following hypotheses are tested:

**H<sub>1</sub>:** The effects of program attractiveness, social opportunities, and loyalty will differentially affect repeat participation across the three facility contexts.

**H<sub>2</sub>:** The effects of the sportscape will differentially affect program attractiveness, social opportunities, and loyalty across the three facility contexts.

**H<sub>3</sub>:** Perceptions of the sportscape will directly impact frequency of participation, over and above their indirect impact through program attractiveness, social opportunities, and loyalty.

**H<sub>4</sub>:** The relationship between dimensions of the sportscape and participation frequency will vary by facility context.

The relationships among the variables (as per **H<sub>3</sub>**) are illustrated in the conceptual model shown in Figure 1. The relationships in the model are expected to vary somewhat by facility type (as per **H<sub>1</sub>**, **H<sub>2</sub>**, and **H<sub>4</sub>**).

Insert Figure 1 about here

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## **Method**

Data gathered for this study were collected via survey responses from 1199 Australian adults participating at 17 sport facilities located within a 15km radius of a mid-sized coastal Australian city. Participants were sampled from among current participants attending one of three different sport facility types: special purpose (i.e., health and fitness centers), single-purpose (i.e., tennis, golf or swimming facilities), and multi-use facilities (i.e., gymnasias). Overall, six facilities in the facility sample were designated as special purpose in that they were health and fitness centers, eight facilities were deemed single purpose as the sample contained three golf courses, three tennis centers, one aquatic facility and one ice rink while the sample also contained three multi-purpose facilities.

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Insert Table 1 about here

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### **Sport facility types**

Health and fitness centers are typically categorized as special purpose facilities as they contain spaces and equipment designed for specific activities and outcomes such as weight training and exercise machines, areas to conduct group exercise classes for aerobic workouts and other activities, swim and spa pools, saunas, health-shops, snack bars, restaurants, child-care facilities, member lounges and cafes. Personal trainers and instructors are usually also available for customer support. Health and fitness centers in this study were privately owned and operated and were for-profit enterprises.

Single-purpose sport facilities were those that provided consumers with only one sporting opportunity. These facilities were either privately owned and operated or were provided by government who leased operations to managers that administered them for profit.

Multi-use facilities were defined as those venues containing multi-activity opportunities such as gymnasias that included basketball, volleyball, badminton and other court sports, rock-climbing, boxing and wrestling facilities. Gymnasias were either owned by governmental institutions or not-for-profit organizations such as Salvation Army and Police Citizens Youth Clubs (similar in nature to YMCA). These facilities were considered to operate for the public good with revenue raised being returned for continued operation of the facility.

### **Sampling and Procedure**

Convenience sampling was used for each facility type. Data were gathered at various times throughout the day over an eight week period by 40 different survey administrators. Participants at facilities were approached at random while they were waiting for the commencement of their program or activity and asked to complete a survey. Respondents were advised that their answers would remain anonymous, there were no right or wrong answers and that they should answer questions as honestly as possible. These procedures reduce common method bias which has been found to influence behavioral research results (Podsakoff, MacKenzie, Lee, & Podsakoff, 2003). Table 1 illustrates the total number of responses collected from each facility type as well as key demographics. Although Table 1 shows the percentage of male and female respondents and mean age of

participants among sport facility types to be similar, mean personal income varied by facility type. Health and fitness centers and single-purpose facilities attracted middle-income participants while gymnasias appealed to lower income participants. This finding would be expected due to the nature of membership costs at health and fitness centers and fees to participate in sports offered at single-purpose facilities such as golf and tennis (see Loy, 1972; Napton & Laingen, 2008).

### **Measures**

Respondents completed a survey that included measures of program attractiveness, social opportunities and loyalty to the facility. They also indicated the number of times per week they attended the facility. Respondents also rated the following elements of the facility: (1) parking, (2) cleanliness, (3) crowdedness, and (4) food and beverage services. Lastly, gender, age, and income were measured.

Program attractiveness was measured using an adaptation of items from the customer service quality (CSQ) core service efficiency and effectiveness performance indicator questionnaire developed by the Centre for Environmental and Recreational Management (CERM). This CSQ questionnaire was developed for specific application to sport and leisure facilities (see Howat, Absher, Crilley, Milne, 1996). Five statements were rated using a 6-point Likert-type scale ranging from strongly disagree (1) to strongly agree (6). The following statements were rated: (1) “programs offered by this facility are available at convenient times”, (2) “I enjoy the programs offered by this facility”, (3) “there is a wide variety among programs offered at this facility”, (4) “the programs offered at this facility are of high quality”, and (5) “the programs at this facility are excellent value”. Responses to the five items were averaged to provide an overall

measure of program attractiveness. The resulting scale was internally consistent with a Cronbach's  $\alpha$  of 0.77.

Consumers' perceptions of the social opportunities available at their facility were measured using an adaptation of the two items from the QUESC (Quality Excellence of Sports Centers) instrument, which was developed to assess service quality in sport centers (see Kim & Kim, 1995). The two statements were rated using a 6-point Likert-type scale ranging from strongly disagree (1) to strongly agree (6). The following statements were rated: (1) "this facility offers adequate facilities to socialize with others" and, (2) "this facility offers enough programs for people to get together to socialize". Responses to the two items were averaged to provide an overall measure of consumers' perceptions of social opportunities at the sport facility. The resulting scale was reliable (Cronbach's  $\alpha = .80$ ).

A three-item scale was used to measure respondents' loyalty to the facility. This scale was adapted from a brand commitment scale developed by Beatty and Kahle (1988) that measured the degree to which a person expressed loyalty to a brand. Prior work using this scale achieved a Cronbach's alpha score of .75 (Beatty & Kahle, 1988). Statements were rated using a 6-point Likert-type scale ranging from strongly disagree (1) to strongly agree (6). The following statements were rated: (1) "I consider myself loyal to this facility", (2) "Even if another facility was less expensive, I would NOT use that facility", and (3) "I would recommend this facility to others". The items were averaged to provide an overall measure of loyalty. Scale reliability was measured at  $\alpha = .75$  in this study, which is consistent with prior use of this scale.

Four elements of the sportscape were measured using the scales developed by Wakefield and Sloan (1995). Wakefield and Sloan (1995) reported confirmatory factor analysis goodness-of-fit scores of .970 on items measuring sportscape factors, indicating the measures demonstrate convergent and divergent validity. Initially this scale was intended to measure spectators' responses to sport facilities. For the purpose of this study, the scale was adapted to measure consumers' responses to participant sport facilities. A four-item subscale was used to rate facility parking, while each of the other subscales (i.e., cleanliness, food and beverage service, and crowdedness of the facility) was measured via a three-item subscale. Each item was rated on a 6-point Likert-type scale, ranging from strongly disagree to strongly agree. Items within each subscale were averaged to provide an overall rating for that element of the sportscape. The reliability of each scale was acceptable (Nunnally & Bernstein, 1994), ranging from 0.63 for cleanliness to 0.77 for food and beverage. Reliabilities for all scales are listed in Table 2. Linear transformations were conducted to aid in the interpretability of the scores. Consequently, a score of zero indicated indifference (neither agree nor disagree); positive scores indicate agreement; negative scores indicate disagreement.

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Insert Table 2 about here

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### **Data Analysis**

Tests for linear restrictions were conducted to determine whether regression weights were consistent across the three facility contexts. Tests were conducted in the following sequence: (1) A fully restricted model (regression weights the same in all

contexts) was tested against a fully unrestricted model (regression weights allowed to vary by context) was tested for the effects of program attractiveness, social opportunities, and loyalty on frequency of participation. A significant  $F$ -value would indicate that, overall, the regression weights vary by context. (2) To determine which of the three variables' relationship with participation varies by context and which remain constant, three tests for linear restrictions were calculated. In each of the three, one of the regression weights was restricted (i.e., was not allowed to vary). These tests were, essentially, a comparison of model fit between the single variable restricted model and the totally unrestricted model. A significant  $F$ -test indicates better prediction by the fully unrestricted model. (3) Once each single variable was tested, a final model was calculated with the combined restricted and unrestricted variables included as per the previous analyses. At this stage, the regression weights for the still unrestricted variables were examined. Any weights that are within two standard errors of one another will be determined to be similar and will be replaced with a regression weight restricted to just two of the three contexts in the final model. For example, if the impact of loyalty on participation is determined to be unrestricted, but the  $B$  for loyalty to the multi-sport and single-sport facilities overlap, but both are different from that of fitness centers, the final model will restrict the regression weight for loyalty to be the same for single- and multi-sport facilities, but remain unrestricted for fitness centers.

The entire sequence will be repeated, testing the linear restrictions across the three contexts to determine the similarity and differences in the effects of the four sportscape dimensions on each of the three previous variables: program attractiveness, social opportunities, and loyalty. As before, significant  $F$ -tests indicate better prediction by the

unrestricted model. All tests indicated differences across facility contexts, therefore, three separate hierarchical regressions were run to determine whether (and which) sportscape dimensions had additional, direct impacts on repeat participation in addition to any indirect effects through program attractiveness, social opportunities, and loyalty. Lastly, the standardized regression weights were used to create a path model for each facility type. Where tests identified restrictions, the models reflect similar regression weights; where no restrictions were identified the betas will be specific to the context.

## Results

Means and standard deviations for each variable are presented in Table 3. Hypotheses in this study were correlational in nature, and required tests of relationships among variables. Program attractiveness, socializing opportunities, loyalty to the sport facility and sportscape evaluations were tested to examine the ways in which these variables predicted consumer's frequency of participation. As there were three categories of sport facility, tests for linear restrictions were conducted to test the hypothesis that the effect of the independent variables differed across the three contexts (Katos, Lawler, & Seddighi, 2000).

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Insert Table 3 about here

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Analysis proceeded in the following manner. First, an  $F$ -ratio was calculated to determine whether the effect of program attractiveness, social opportunities, and loyalty on participation frequency was equivalent across the three contexts. They were not;  $F(8, 1154)=12.99, p<.001$ . Next, three additional tests were calculated to determine which of

the three variables affected participation differently by context. Each test restricted one of the three variables while allowing the others to vary by context. If the *F*-ratio is significant, the variable should remain unrestricted (i.e., it varies by context); if it is not significant, the regression weight is the same across the three contexts. The *F*-ratios for each test are provided in Table 4. Two of the three variables, social opportunities and loyalty vary by context, thus Hypothesis 1 is partially supported.

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Insert Table 4 about here

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Tests for linear restrictions were then calculated to determine whether the sportscape affects program attractiveness, social opportunities, or loyalty differently across the three facility types. As before, an overall test for linear restrictions was calculated first. The overall test was significant, thus tests were done to determine which of the sportscape dimensions behaved differently across the facility types. Table 5 shows the overall and specific tests for linear restrictions for the effect of the sportscape dimensions on each of the three facility variables: program attractiveness, social opportunities, and loyalty. All three overall tests were significant, meaning that the sportscape dimensions affect each of the variables in different ways for each facility type. Hypothesis 2 is supported.

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Insert Table 5 about here

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Evaluations of cleanliness affect customers' perceptions of program attractiveness in similar ways across each of the contexts, however the effects of the other sportscape dimensions on program attractiveness vary as a function of the facility type. Examination of the standard errors of the regression weights provided greater clarity regarding the contextual differences. Regression weights that were less than two standard errors apart were not considered to be significantly different, indicating that the two contexts did not differ. The final model for each set of linear restrictions accounts for these restrictions. So, cleanliness affects program attractiveness in the same way for all three facility types. Parking behaves similarly for both single-sport and multi-sport facilities, but differently in the fitness center context. Crowdedness and food and beverage behave differently across all contexts.

Customers' perceptions of the social opportunities available at the facility varied by context as well. The relationship between cleanliness and social opportunities was different for each of the three facility types. Food and beverage worked similarly in both single and multi-sport facilities, but differently for fitness facilities. Perceived crowdedness behaved the same in the fitness and single-sport facilities, but worked differently in the multi-sport facilities.

Parking's effect on customer loyalty remained constant across the three facility types. But, perceptions of cleanliness affected loyalty in different ways for each of the three facility types. Food and beverage affected loyalty in similar ways across single- and multi-sport facilities, but this relationship was different in the fitness context. Lastly, perceptions of crowdedness behaved similarly for fitness and single-sport facilities, but did not have the same relationship with loyalty in the multi-sport context.

Since the earlier tests showed that the models differ by context, hierarchical regressions were run separately for each facility type to determine whether there was any direct effect of the sportscape on participation frequency given the effects of program attractiveness, social opportunities, and loyalty. Based on the earlier tests, the variables in Block 1 consisted of the variables that significantly predicted participation frequency. This varied by context and is reflected in the differences between the three hierarchical regression models. All four sportscape dimensions were entered in Block 2 in order to test Hypothesis 3 – do the sportscape factors directly impact participation frequency, over and above their indirect impact through program attractiveness, social opportunities, and loyalty.

The sportscape has an additional, direct effect on participation frequency for customers of fitness facilities. Program attractiveness, social opportunities, and loyalty explain 25.8% of the variance in participation;  $F(3, 373)=43.20, p<.001$ . Three of the four dimensions (parking, cleanliness, and crowdedness) explain a further 16.7 percent of the variance in participation;  $F_{change}(4, 369)=26.80, p<.001$ . Program attractiveness and customer loyalty explain 22.3 percent of the variance in participation frequency at single-sport facilities;  $F(2, 625)=89.59, p<.001$ . Perceptions of parking and crowdedness have a small, but significant additional direct impact on participation of 1.7%;  $F_{change}(4, 621)=9.71, p<.001$ . Cleanliness and food and beverage services do not directly impact participation frequency. There were no direct effects of the sportscape dimensions on participation at multi-sport facilities;  $F_{change}(4, 133)=2.04, p=.092$ . Consequently, Hypothesis 3 is partially supported. The relationships among the variables (including the standardized regression weights) are presented for each context in Figures 1-3. It is

important to note that the standardized regression weights reported reflect the linear restrictions tests reported throughout.

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Insert Figure 2 about here

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Insert Figure 3 about here

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Insert Figure 4 about here

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Examination of the figures shows clear support for Hypothesis 4. That is, different aspects of the sportscape drive participation across the three facility types. Food and beverage affect participation indirectly, through program attractiveness, for all contexts. It has no direct effect on participation in any facility type. However, it does have an indirect effect, through loyalty, for both fitness and single-sport facilities, albeit a stronger impact for single-sport facilities. Cleanliness has a strong, positive direct effect on participation at fitness facilities, a negative direct effect on participation at single-sport facilities, and no effect of any kind on multi-sport participation. Perceived crowdedness has a small, positive direct effect on participation in fitness and single-sport facilities, but again, no effect on participation at multi-sport facilities. It also has numerous indirect effects on participation at fitness facilities, and one (through loyalty) for single-sport facilities. Like most of the sportscape dimensions, parking has no effect on multi-sport participation. However, it has both a negative direct effect and positive indirect effect on

participation at single-sport facilities. The strong, negative, direct effect of parking perceptions on participation frequency is complemented by the multiple indirect effects of parking for fitness facilities. In short, the sportscape has the strongest impact on participation at fitness facilities, and almost no impact on multi-sport facilities.

### **Discussion**

Program attractiveness remained a constant predictor of participation frequency across all three facility contexts. This finding is reasonable as consumers' decisions for participating in leisure activities are primarily driven by what "they are in the mood to do" (Elliott & Hamilton, 1991, p. 328). Thus, programs themselves are important factors that come under consideration in the initial stage of a consumer's decision to engage in an activity. This decision process typically occurs prior to seeking out a facility that hosts the desired program.

However, results also show that factors apart from program attractiveness (i.e., social opportunities, loyalty and sportscape factors) also affected participation frequency. Interestingly, these effects occur for consumers only after they have chosen to attend the facility to engage in their chosen activity. Thus, these effects transpire after the initial decision of program selection and the decision of which facility a consumer will choose to participate in that program.

Factors that affect participation frequency that occur as part of the participation experience at the facility provide issues for managers. Firstly, managers must consider customers' entire experience at the facility, not just the programming. Secondly, these factors do not consistently influence consumers' participation frequency in the same way

for all sport facility contexts. Hence, in order for facility managers to maximize customer participation frequency they need to understand which factors are unique to their facility context and in what ways they are influencing participation.

Elements of the sportscape within participant sport facilities were also key in affecting consumers repeat participation. This is consistent with prior research that indicated these factors play an important role in service quality and behavioral intent (O'Neill, Getz, & Carlson, 1999; Shilbury, 1994; Tomlinson, Buttle, & Moores, 1995; Wakefield & Sloan, 1995). Findings that sportscape factors can significantly influence a consumer's behavior for use of participative sport facilities suggest the sportscape, originally developed to measure stadium service quality factors as perceived by spectators, can also be useful to understanding sport facilities that cater to participants.

Closer inspection of sportscape variables suggested the importance of elemental factors of the sportscape as they were found to directly influence participation frequency. However, the significance and direction of influence was not consistent across all facility contexts. Crowdedness and parking directly influenced participation frequency for fitness and single-sport facilities. However, more perceived crowding led to higher participation rates, and positive evaluations of parking led to lower frequency of participation.

The positive coefficients for crowdedness on participation frequency at fitness and single-purpose facilities indicated that the more crowded the sport facility became the increased likelihood for repeat participation. This finding is consistent with other work showing that the crowd at a sport event can assist in building a sense of excitement and add entertainment value to the event (Hocking, 1982). It would seem that using facilities

that are populated are particularly important for participants as it may assist with their motivation and in creating a favorable atmosphere within the facility.

The negative direct influence of parking on participation frequency is interesting as it would be expected that as ease, location, safety and availability of parking increased it would also increase participation frequency. However, the negative result suggests that as ease, location, safety and availability of parking decreases consumer participation frequency increases and conversely those who do find these elements of parking favorable tend to frequent facilities less. This result could be explained through satiation of previous consumption (Baucells & Sarin, 2007).

Baucells and Sarin (2007) argue that evaluations of consuming a utility occur each time a utility is consumed but time between consumption periods has differing effects on evaluations. Shorter time intervals between consumption periods lower the current consumption evaluation from its previous evaluation. Carry over evaluations from previous consumption are layered over current evaluations creating a cumulative effect decaying evaluations further. Repeated consumption of a utility over a short time period results in a large build up and reinforcement of evaluations. Conversely, greater time periods between consumption periods result in less carryover effects from prior evaluations. Evaluations tend to occur afresh each time with no or little cumulative effect from previous evaluations negating any carryover evaluations. Hence, participants who regularly frequent fitness and single-sport facilities are more likely to hold carryover evaluations about parking leading to a cumulative decay of parking evaluations. Thus, satiation of consumption suggests why elements of parking become depressed for participants, who are regular users of facilities.

Facility managers could assist to reduce satiation of consumption effects of parking for customers with higher participation frequencies by including parking within loyalty rewards programs. Linear relationships show that parking has a positive direct relationship to loyalty which in turn directly influences participation frequency. Adding reserved or restricted parking areas as part of loyalty rewards packages could reduce or negate decaying cumulative evaluations about parking for more regular users giving them “recognition” for their high attendance. Car parking and crowdedness appear to be two factors that warrant further investigation to gain a deeper understanding and explanation of these unusual relationships. Use of qualitative methods may be helpful here in gaining a deeper understanding of these relationships.

Cleanliness of facilities was also found to have direct relationships for participation frequency at fitness and single-sport facilities; however the influence was positive for the former facility and negative for the latter. Cleanliness of sport facilities was the most important aspect among service provisions (Afthinos, et al., 2005) and was therefore expected to have a positive effect across all sport facility contexts. Reasons for cleanliness influencing participation in a positive direction only at fitness facilities is unclear and more work appears warranted to gain a deeper understanding. However, consumers at fitness facilities demonstrated increased participation frequencies with perceptions of more cleanliness at the facility. Participants, particularly those who frequent fitness facilities on a more regular basis, appear to be cognizant of the hygiene issues surrounding these types of facilities and appreciate the cleanliness of such facilities rewarding managers with increased use.

Food and beverages offered at the three facility types provided no direct influence on participation frequency. However food and beverages offered did directly influence program attractiveness across the three facility contexts and, in turn, program attractiveness influenced participation frequency. Hence, food and beverage services had an indirect influence on participation. As food and beverage is an important secondary spend item for facilities to gain extra revenue, opportunities exist for facility managers to capitalize upon the indirect relationship to participation frequency by ensuring participants are satisfied with the types of food and beverages on offer, particularly those that enhance the experience for participating within programs.

Prior research showed that customers seek socializing opportunities through attendance at sport facilities (Afthinos, et al., 2005; Diehl & Berg, 2006; Philipp & Brezina, 2002). Green (2005) argued sport participants can also be motivated predominantly by social outcomes from participation and suggested that for some people, socializing could be a primary motivator for use of sport facilities. Those studies revealed that customers can and do desire socializing opportunities at sport facilities.

Yet, this study found that social opportunities only influenced participation frequency at fitness facilities. However; this score was in the negative direction revealing that consumers who saw fewer social opportunities participated the most. This result shows that socializing opportunities became less of a reason for driving repeat participation at fitness facilities as attendance increases. Two reasons could explain this finding. Firstly, people who attend fitness facilities on a more regular basis could be those who are engaging in serious leisure (see Stebbins, 2007). If this were true, then these people are highly motivated from and satisfied by the benefits they gain through their

participation in their chosen activity and as such, do not require other services offered by the facility such as socializing opportunities. A second explanation could be that the lack of opportunities to socialize is more salient to those attending more frequently. More investigation is needed to determine which reason might be more accurate. If the second point were true, then fitness centers need to improve the delivery of their social program service, particularly for more regular users.

Furthermore, the finding that social opportunities are not found to influence participation at single purpose and gymnasium facilities also indicates such services may be underperforming across facility types. Given that prior research shows that customers seek social opportunities through participation in sport, results indicate that facilities are missing opportunities to positively influence customer participation, member retention, and revenue generation through secondary spend by not providing appropriate social opportunities. Alternatively, it may be that customers see the social opportunities as integrated into the sport experience itself, therefore have little need for additional social spaces provided by the facility.

Even so, Stebbins (1997) states that there are different ways people socialize and their behavior in that setting is dependent upon whether these people are engaging in serious or casual leisure. Hence, it appears simply not good enough to provide social opportunities in fitness facilities and expect them to cater to the needs of all participants in the same ways. Providing appropriate social opportunities requires facility managers to understand the unique social requirements of those engaged in casual and serious leisure. It could be that differing relationships exist between provision of social opportunities for casual and serious leisure participants. Hence, further investigation is needed in this area.

The key then to participation and retention is to provide programs that cater to multiple motives of consumers simultaneously as this multiplies the benefits customers obtain through their participation (Green, 2005). Therefore, programs need to combine task-oriented training with time and opportunities to socialize to attract and retain participants. In this way, programs will cater to a range of markets rather than to any average participant.

Loyalty was found to be a significant predictor of participation for fitness centers and single purpose facilities, indicating that these facility types are capable of building a bond between themselves and consumers to facilitate repeat participation. As loyalty toward the facility increases, frequency of participation is also likely to increase. Facility managers could do well to either implement or continue with loyalty schemes as these are found to have positive effects on repeat purchase intentions, customer lifetime retention, and share of consumer expenditures (Bolton, Kannan, & Bramlett, 2000; Meyer-Waarden, 2007).

It is unclear why loyalty did not make an impact on participation at multi-sport facilities. Data suggest participants were unable to make value judgments on loyalty and quality of other service dimensions measured at these facilities. Consumers typically make value judgments about products and services through brand image, brand name and service quality attributes that are specific to each product such as its functionality and physical aspect (Olson & Jacoby, 1972). These value judgments permit consumers to make objective measurements which affect their loyalty and perceptions of service quality that in turn affect buying intentions (Fandos & Flavian, 2006). Perhaps then there were specific unique elements of loyalty and service quality within multi-sport facilities

that participants expect, but that are different from those found in fitness and single purpose facilities. One explanation may lay in the type of activities which occur in these facilities. Multi-sport facilities typically cater to team sports. Consequently, customers' loyalty may be more to their team and teammates than to the facility itself. If this is the case, managers would do well to build loyalty within teams. In any case, more investigation is needed on participant expectations and perceptions of loyalty and service quality at multi-use facilities to better understand the object of participants' loyalty and the ways in which those loyalties affect participation at these facility types.

Overall, and from a theoretical standpoint, results suggest that differing effects and relationships exist between services and the quality of those services among various types of participant sport facilities. Hence, this study not only supports the value and application of sportscape factors identified by Wakefield and Sloan (1995) to participant sport facilities, it also builds on their findings by showing that the effects of sportscape dimensions vary across participant sport facility types.

Data suggest that service quality provision at participant sport facilities requires managers to understand the unique consumer expectations relative to that facility. It cannot be assumed that the service provided at one sport facility will be met with similar responses from consumers at another. This could be important for organizations to understand, particularly those organizations that provide management services to many sport facilities. Trends in management for contract organizations show that one organization can manage multiple sport facilities. Reasons for such a management model are to utilize expertise developed and economies of scale creating efficiencies in management. However, results of this study indicate that caution needs to be taken when

adopting standard models of operation across sport facilities and expecting standard outcomes. It appears that service quality dimensions and customer expectations are unique to sport facility type, and can affect participation in different ways. To provide the best opportunities to affect consumer participation at sport facilities, managers need to understand the service quality dimensions unique to their facility that has greatest impact.

### **Limitations and directions for further research**

This study focused on members of sport facilities from a broad perspective, sampling casual through to yearly members, and participants of either public or private facilities. Obviously, the facilities and quality of private clubs are going to be much better and coupled with better known private clubs, participants' service expectations could be quite different from other types of facilities and perhaps membership types (see Afthinos, et al., 2005). While this was beyond the scope of this study, further research should explore the impact of membership and governance distinctions, such as public, not-for-profit, and private to gain a deeper understanding of customer service expectations across sectors.

A further limitation to this study was that a convenience sample of facilities from a single city was used. Although findings and implications from this study may be generalizable to sport facilities in other locations, this is not known with confidence particularly, given Kamphuis, et al (2008) reported effects of socioeconomic factors on sport participation. In their study they found that a combination of socioeconomic status (SES) factors such as neighborhood (feeling unsafe, low social network), household (material and social deprivation), and individual factors (low self-efficacy, perceived

negative outcome expectancies) can explain sports participation. Their study primarily focused on effects of these factors on non-participation, however, their findings indicate the possibility that relationships might exist between these SES factors and frequency of participation. Further investigation of participants from similar types of sport facilities from various locations with differing levels of SES factors appears warranted to provide a deeper understanding of such factors on sports participation. It could be that sport facility managers not only need to understand service quality factors affecting frequency of participation at their facility, but also specific SES factors of potential customers within the facility catchment area in order to enhance participation and broaden their potential markets.

Modes of transport may also affect perceptions of service quality and therefore participation. Providing safe and efficient transportation was found to be fundamental to a sustainable and successful tourism destination (Henderson, 2009). Hence, transport and travel to a sport facility may also impact on service quality perceptions well before customers reach the facility. This study focused on effects of car parking on customers' perceptions of service quality and therefore assumed all those taking part in the study may have driven themselves to the facility or were aware of car parks at facilities. Sport facilities may be experiencing indirect deleterious effects on service quality or loyalty prior to customers arriving at the facility due to service quality of various modes of transport or travel, such as bus or rail. Further investigation appears warranted on this dimension to determine if modes of transport or travel affect customer service quality or loyalty at sport facilities and to provide clearer direction on effects of car parking and travel for those who drive.

## **Conclusion**

Service quality dimensions of program attractiveness, social opportunities, loyalty, and the sportscape were found to predict participation frequency differently across three varied sport facility types: fitness centers, single purpose, and multi-use facilities. Service dimensions that are likely to contribute to participation at one type of sport facility may not contribute at another. Service provision at sport facilities is more complex than it appears. In order to retain customers and provide motivation for them to frequent sport facilities, managers should not assume participation is based solely on task specific activities or a need to be fit and healthy. Rather, they need to understand there may be multiple motives for the one service among the varied consumers attending their facility and cater to a broad range of needs.

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Table 1

*Key Demographics by Facility Type*

Facility Type	<i>n</i>	% male	<i>M (SD)</i>	<i>M(SD)</i>
			Age	Personal Income
Fitness	381	39.4	36.1 (13.9)	\$49,550 (\$3320)
Single-Sport	658	50.9	31.7 (13.6)	\$48,320 (\$3005)
Multi-Sport	160	41.3	33.6 (14.7)	\$37,170 (\$2970)

Table 2

*Scale Reliability*

Scale	Number of Items	$\alpha$
Program Attractiveness	5	.77
Social Opportunities	2	.80
Loyalty	3	.75
Parking	4	.68
Cleanliness	3	.63
Food and Beverage	3	.77
Crowdedness	3	.73

Table 3

*Means and Standard Deviations by Facility Type*

	Fitness		Single-Sport		Multi-Sport	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Visits per week	2.40	1.31	1.85	1.26	1.95	1.16
Program attractiveness	1.06	0.75	0.87	0.85	0.19	1.36
Socializing	0.76	1.07	0.59	1.01	0.08	1.65
Loyalty	0.89	0.99	0.88	0.95	0.15	1.27
Parking	0.98	0.72	0.82	0.76	0.94	0.91
Cleanliness	0.83	0.96	0.65	0.92	1.11	0.84
Food and Beverage	-0.3	1.32	0.25	1.10	0.28	1.23
Crowdedness	-0.62	1.16	-0.57	1.03	-0.10	1.03

Table 4

*Tests for Linear Restrictions – Participation on Program Attractiveness, Social Opportunities, and Loyalty*

Restricted Variable	<i>F</i> (df)	<i>p</i> -value	<i>Differ by context</i>
Program Attraction	<i>F</i> (2, 1154)= 0	<i>p</i> > .05	no
Social Opportunities	<i>F</i> (2, 1154)= 11.30	<i>p</i> < .001	yes
Loyalty	<i>F</i> (2, 1154)= 12.99	<i>p</i> > .05	yes

Table 5

*Tests for Linear Restrictions – Program Attraction, Social Opportunities and Loyalty on Sportscape*

Restricted Variable	<i>F</i> (df)	<i>p</i> -value	<i>Differ by context</i>
<b>Program Attraction</b>			
Overall	<i>F</i> (8, 1137)= 8.11	<i>p</i> <.001	Yes
Parking	<i>F</i> (2, 1137)= 4.50	<i>p</i> <.05	Yes
Cleanliness	<i>F</i> (2, 1137)= 0	<i>p</i> >.05	No
Crowdedness	<i>F</i> (2, 1137)= 3.60	<i>p</i> <.05	Yes
Food & Beverage	<i>F</i> (2, 1137)= 19.82	<i>p</i> <.001	Yes
Final Model	<i>F</i> (3, 1137)= 0.60	<i>p</i> >.05	
Cleanliness Parking*			No
			*Fitness vs other
<b>Social Opportunities</b>			
Overall	<i>F</i> (8, 1151)= 11.24	<i>p</i> <.001	Yes
Parking	<i>F</i> (2, 1151)= 7.36	<i>p</i> <.001	Yes
Cleanliness	<i>F</i> (2, 1151)= 28.61	<i>p</i> <.001	Yes
Crowdedness	<i>F</i> (2, 1151)= 14.71	<i>p</i> <.001	Yes
Food & Beverage	<i>F</i> (2, 1151)= 2.45	<i>p</i> >.05	No
Final Model	<i>F</i> (4, 1151)= 1.23	<i>p</i> >.05	
Food			No
Parking*			*Fitness vs other
Crowdedness*			*Multisport vs other
<b>Loyalty</b>			
Overall	<i>F</i> (8, 1136)= 7.59	<i>p</i> <.001	Yes
Parking	<i>F</i> (2, 1136)= 0.79	<i>p</i> >.05	No
Cleanliness	<i>F</i> (2, 1136)= 13.40	<i>p</i> <.001	Yes
Crowdedness	<i>F</i> (2, 1136)= 7.10	<i>p</i> <.001	Yes
Food & Beverage	<i>F</i> (2, 1136)= 3.89	<i>p</i> <.05	Yes

Final Model	$F(4, 1136) = 1.17$	$p > .05$	
Parking			No
Food & Beverage*			*Fitness vs other
Crowdedness*			* Multisport vs other

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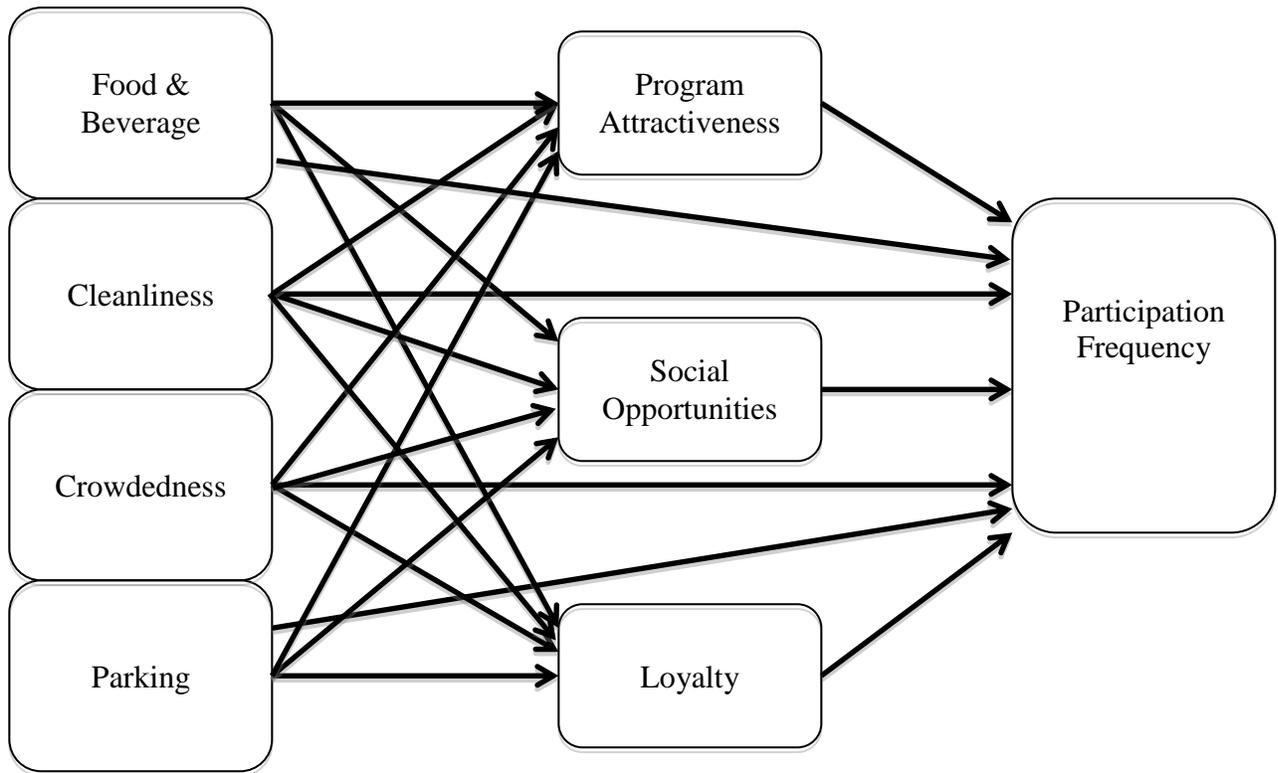


Figure 1. Conceptual Model

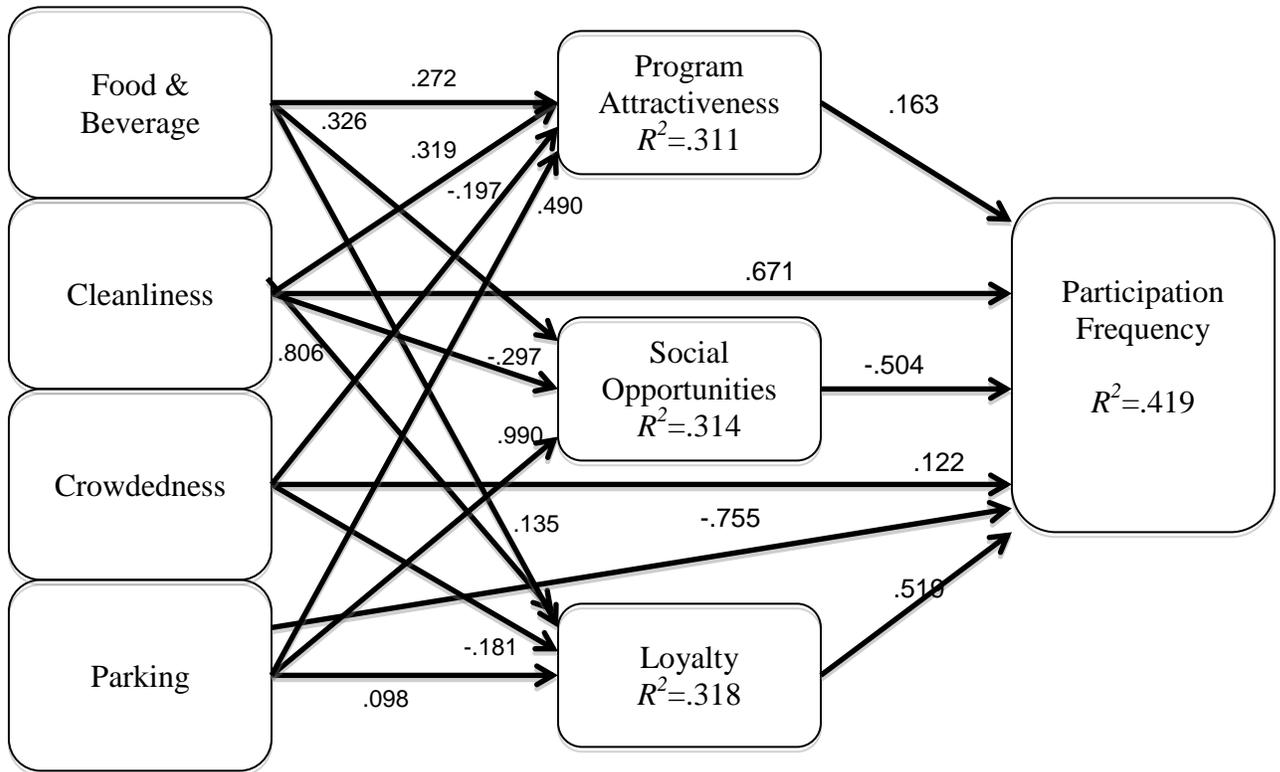


Figure 2. Fitness Facilities

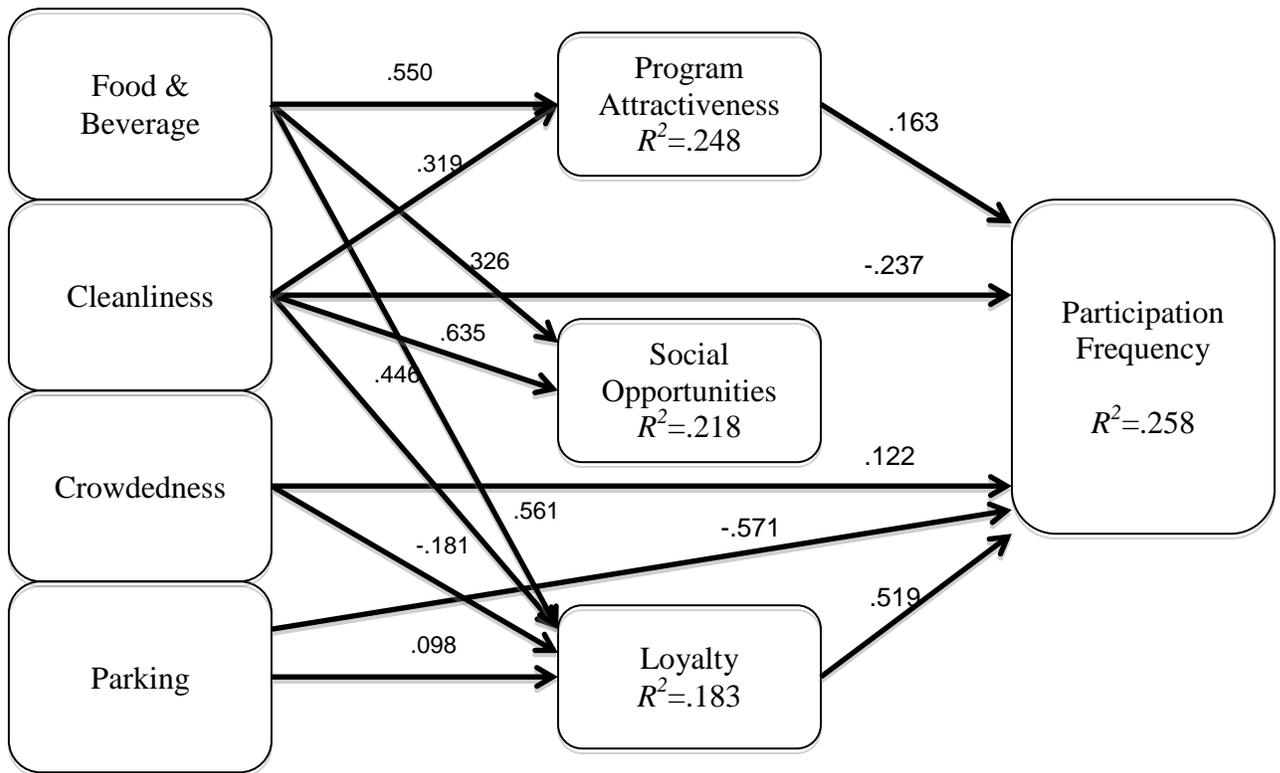


Figure 3. Single-Sport Facilities

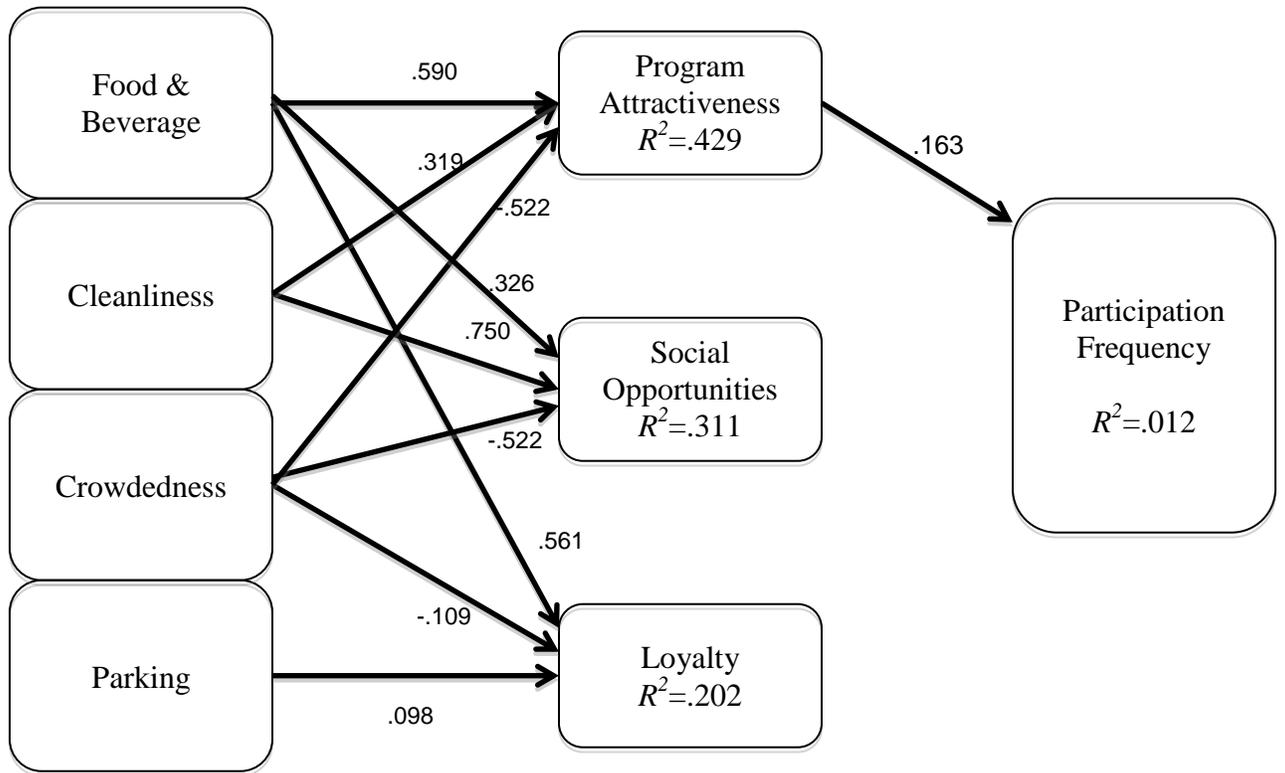


Figure 4. Multi-Sport Facilities

