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Perceptions of dimensions of service quality and recreational benefits in collegiate recreational sports programs

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PERCEPTIONS OF DIMENSIONS OF SERVICE QUALITY AND RECREATIONAL BENEFITS IN COLLEGIATE RECREATIONAL SPORTS PROGRAMS

An Abstract of a Dissertation

Submitted

in Partial Fulfillment

of the Requirements for the Degree

Doctor of Education

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December 2013

ABSTRACT

An enduring and essential element of collegiate recreational sports programs is an emphasis on providing high quality, high impact programs and services. In addition, participants in collegiate recreation settings have an expectation to receive benefits as a result of their participation.

If recreational sport programs cannot meet the expectations of participants in their pursuit of these benefits, continued participation is unlikely. As collegiate recreational professionals work to continually improve their programs and services, they should also understand the needs and wants of their participants. Understanding what participant needs and wants are should allow leisure service providers to improve the programs and services offered in the recreational sports setting and more effectively deliver expected benefits.

The purpose of the study is to explore dimensions of service quality and perceived recreational benefits in recreational sports programs. In addition, the study will explore how institutional type as reflected in its mission impacts on these factors. Also, the study seeks to explore dimensions of service quality and perceptions of recreational benefits when reviewing program areas such as intramurals, aquatics and fitness. The study is also designed to explore dimensions of service quality and perceptions of recreational benefits and other important variables such as participant types, national origin, gender and ethnicity. Quantitative methods will be used to analyze responses from participants from each of the three institutions.

Results indicate that a relationship does exist between service quality and benefits in collegiate recreation programs. Additionally, differences were found between the three institutional types, the three types of programs as well as gender. No differences were found between ethnic groups and there was not enough of a response in national origin to complete an analysis.

Although a well-documented body of knowledge exists in recreational sports, service quality and leisure benefits, few studies have investigated the relationship of dimensions of service quality and perceived recreational sports benefits. This study aims to add to the existing recreational sports body of knowledge.

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Dr. William Callahan, Committee Member

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DEDICATION

This dissertation is dedicated to those individuals who serve their fellow humans in an effort to improve quality of life in leisure settings. Specifically, this dissertation is dedicated to the countless individuals who each day provide high quality, high impact services for students, faculty and staff at North American colleges and universities. The provided high quality and high impact programs and services literally change people's lives on a daily basis. To those who serve beyond their campuses in the National Intramural-Recreational Sports Association, your work does not go un- noticed and this dissertation is also dedicated to you. You know who you are!

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INTRODUCTION

An enduring and essential element of collegiate recreational sports programs is an emphasis on providing high quality, high impact programs and services. In addition, participants in collegiate recreation settings have an expectation to receive benefits as a result of their participation. These high quality programs and services and expectations of benefits have a relationship to the participant's interaction with staff working in recreational sports settings (Miller, 2000, p. 63; Mawson, 1993, p. 101). Therefore, service quality is often viewed as an essential element which is reflected in the mission of recreational sports programs.

This study is focused on linking the two management elements. The first being dimensions of service quality. And the second being perceived recreational benefits. These are important factors which may influence the success for recreational sports programs.

The National Center for Education Statistics (n.d.) reports that 21 million students were enrolled in postsecondary education institutions during 2011 in the United States. In addition, Canada's National Statistics Agency reports that 1.95 million students were enrolled in universities in 2010/ 2011 (Statistics Canada, n.d.). Many of these college and university students as well as faculty and staff rely on the wellness and recreation centers on their college campuses for their fitness and recreation needs.

The National Intramural-Recreational Sports Association (NIRSA), the leader in recreational sports, provides a description of the importance of recreational sports:

> The construction boom reflects the growing knowledge among both campus recreation professionals and university administrators that participation in recreational sports programs and activities is a key determinant of college satisfaction, success, recruitment and retention. Long after the campus tour "wow" factor wears off, students improve their emotional well- being, reduce stress, and learn a great deal about leadership, diversity, and team building by participating in recreational sports. The positive effects of this participation on students' overall development can be significant and lifelong (NIRSA, 2009).

The importance of recreational sports programs has been documented in a number of ways, most notably by NIRSA. In 2004, NIRSA conducted a study that reported that participation in recreational sports programs correlates to overall college satisfaction and success. Further, heavy users were happier then light users; they were more socially orientated and rated diversity of the student population as an important determinant of college satisfaction and success. Also, the study found positive results in recruitment and retention of students and scholastic achievement (NIRSA, 2004).

The history of collegiate recreation is well documented. The first recreational sports programs found at the colonial colleges were the club rowing teams formed at Yale and Harvard in 1843 and 1844 respectively (Lumpkin, 1998). Rapid development and expansion of recreational sports programs on college and university campuses over the past 150 years has occurred (NIRSA, 2009, p. 5). It is estimated that there are nearly 4,800 recreational sport programs operating on campuses throughout the United States and Canada (Canadian Information Centre for International Credentials, n.d.; National Center for Education Statistics, n.d.). These programs provide a wide array of services including intramural sports activities, fitness programs, outdoor pursuits, aquatics and others (Lindsey, 2012; Young, Ross & Barcelona, 2003). Over time, terms used to define sponsoring administrative units which provide such services have been known as

intramural sports, campus recreation, recreational services, wellness services and others. In this study, the term “recreational sports” has been adopted as it is the most widely used and identified name in the literature. Today, the study of recreational sports programs and services includes its historical factors; philosophy; administration and human resource management; programming and gender specific programming; co- recreational programming; the value and importance of recreational sports; facility use and management; and risk management.

As Parasuraman, Zeithaml and Berry (1988) state in emphasizing the importance of service quality “. . . delivering superior service quality appears to be a prerequisite for success, if not survival, of such businesses in the 1980’s and beyond” (p. 13). The concept of service quality continues to be a dominant and important management factor which is studied and is prominent in the literature. Ipson, Rehman and Stegen (2010) state the value of service quality, especially as it relates to future marketing of programs is that:

> . . . exceptional service helps retain customers, attracts more customers, and develops an organization reputation that induces customers and prospects alike to do business with the organization in the future. This benefit is achieved by satisfying current customers who then recommend the programs or services to friends, relatives, and acquaintances and who, by their comments develop and augment the positive community relations reputation in the marketplace (p. 372).

In addition, Ipson et al. (2010) discuss the necessity of using research to further the understanding of perceived dimensions of service quality. They note that “... measures of service quality can be calculated, gaps in the services provided can be identified, and the organization can tell whether its customer’s expectations are being met” (p. 372).

Elements in the study of dimensions in service quality usually include the facility where one's leisure experience occurs as well as the interaction with staff within which they engage. Fried (2010) suggests that managers play a key role in managing facilities and personnel. He writes ". . . this is one of the critical skills for a manager- providing the highest level of service possible given the strengths and weaknesses inherent in the facility and its personnel" (p. 31). Aspects of customer service (a pre- cursor to the dimensions of service quality) in the area of recreational sports were found in the literature as early as the 1960's. As Mueller and Mitchell (1960) have suggested, there has been a "… focus on staff, facilities and equipment and the need for continuously expanding and improving these program and services components" (p. 25). However, significant research work in dimensions of service quality specific to recreation settings did not occur until well into the 2000s.

The period between1960-2000 witnessed the development of service quality measures by Parasuraman, Zeithaml and Berry (1985) as well as a number of other researchers. Seminal work in service quality in the marketing literature reveal that Parasuraman et al. (1985) suggest five dimensions for measuring service quality including: (a) tangibles, (b) reliability, (c) responsiveness, (d) assurance, and (e) empathy.

The original SERVQUAL studies focused on a number of industries including (a) appliance repair and maintenance; (b) retail banking; (c) long distance telephone; (d) securities brokerage; and (e) credit cards. Since 1985, service quality has been further studied in a variety of settings including: fast food restaurants, libraries, tourism,

public utilities, photography, amusement parks, dry cleaning establishments and department stores (Babakus & Boller, 1992; Brady & Cronin, 2001; Brady & Robertson, 2001; Chadee & Mattson, 1996; Dabholkar, Thorpe & Rentz, 2001; Hernon, Nitecki & Altman, 1999; Oh, 1999).

Use of service quality measures specific to recreational sports was pioneered by Osman, Cole and Vessell in 2006 closely followed by the work of Ko and Pastore (2007) and most recently by Shonk, Carr and DeMichelle (2010). Osman et al. (2006) studied service quality, user satisfaction and behavior intentions while Ko and Pastore (2007) developed the Scale for Services Quality in Recreational Sports (SSQRS). Shonk and his colleagues (2010) studied service quality, user satisfaction and social identity using the SSQRS.

Ko and Pastore (2007) have suggested that there are four dimensions of service quality: (a) program quality; (b) interaction quality; (c) outcome quality; and (d) the physical environment. These four dimensions were supported by 11 program attributes including: (a) range of program; (b) operational times; (c) information; (d) client-employee interaction; (e) inter-client interaction; (f) physical change; (g) valence; (h) sociability; (i) ambient condition; (j) design; and (k) equipment.

As noted, perceived recreational benefits is the second dimension of the study. Participants seek recreational benefits or the expectations of recreational benefits that maybe derived from one's leisure experiences (Edginton, Hudson, Dieser & Edginton, 2004). If recreational sport programs cannot meet the expectations of participants in their pursuit of these benefits, continued participation is unlikely. As collegiate recreational

professionals work to continually improve their programs and services, they should also understand the needs and wants of their participants. Understanding what participant needs and wants are should allow leisure service providers to improve the programs and services offered in the recreational sports setting and more effectively deliver expected benefits. The pursuit of recreational benefits is therefore directly related to program service quality and therefore deserves further investigation.

Many recreational facilities, especially those on college and university campuses, are multi-use facilities. These facilities accommodate diverse users and diverse programs and services. Multiple studies show the need for individualizing program specific activities as types of participants (heavy and light users), activity types (hockey players and painting class participants), types of institutions (private and public) have all shown different results in either dimensions of service quality or perceptions of recreational benefits.

Ipson et al. (2010) have noted that the future of leisure services may very well be driven on the profession's ability to document benefit outcomes with research as well as providing programs and services that deliver valued benefits. Thus, the study of perceived recreational benefits which can be derived from participation in recreational sports programs is also an important management dimension. It has been a topic that has been featured in the literature during the past several decades. Driver, Brown and Peterson (1991) suggest that ". . . where benefits are viewed as improved or desired conditions of individuals, groups, and society- is used to define and quantify the

magnitudes of the positive impacts from production and use of leisure services (p. ix).

Lewis and Kaiser (1991) further suggest:

> Managers responsible for providing recreation opportunities to the public need to have an understanding of how leisure benefits individuals and society. Competition for scarce resources makes it no longer sufficient for managers to simply carry out the mission of providing recreation opportunities without more sophisticated information (p. 21).

This need for management to understand benefits and be able to analyze and evaluate their importance is further stated by Lewis and Kaiser (1991):

> Although it can be tempting for public managers and analysts to ignore leisure benefits; they must be considered in making adequate resource evaluations and in justifying programs. Simply, leisure benefits are too important to many people to ignore their magnitude and value when justifying programs and budgets, formulating and analyzing policies and making investment decisions… Obviously, public administrators need information on the benefits of leisure to help evaluate the merits of leisure service programs against competing program needs (p. 22).

NIRSA (2004) has offered that there are 12 primary benefits that may be derived from participation in recreational sports (in order of importance) as follows:

(a) improves emotional well-being; (b) reduces stress; (c) improves happiness; (d) improves self confidence; (e) builds character; (f) makes students feel like part of the college community; (g) improves interaction with diverse sets of people; (h) is an important part of college life; (i) teaches team-building skills; (j) is an important part of the learning experience; (k) aids in time management; and (l) improves leadership skills. (NIRSA, 2004, p. 18). Wankel and Berger (1991) further potential benefit attributes: "studies indicate that fun or enjoyment is on the most important reasons for participating in sport or physical activity (p. 123)." Haun (1965) also provides a philosophical view of fun and enjoyment: "Fun is the steadfast goal of recreation, but not its purpose."

Driver (1990) further suggest that benefits in leisure settings are numerous and can be categorized into four dimensions including: (a) personal benefits, (b) social and cultural benefits, (c) economic benefits, and (d) environmental benefits. These four dimensions yield numerous attributes**.** Attributes derived from the four dimensions of benefits can be thought of as elements in both the social and physical environment which may contribute to one's perception of the quality of their leisure experience.

Benefits derived from participating in leisure pursuits have been extensively reviewed in numerous ways including: (a) the benefits approach to leisure (BAL) and the benefits approach to management (BAM; Allen, Wright & Harwell, 1995; Driver, 1995; Godbey, 1995; Stynes, 1995; Witt, 1995); (b) recreational sports (Bryant, Banta & Bradley, 1995; Haines, 2001; Kovac & Beck, 1997; Lindsey, 2012; Lindsey & Sessoms, 2006; NIRSA, 2004; Rabinowitz & Frauman, 2009); (c) collegiate sport clubs (Veltri, Miller & Harris, 2009); (d) recreational sport employment (Hackett, 2007; Schuh, 1999), (e) community satisfaction/ quality of life (Allen, 1990); (f) community recreation programming (Tinsley & Eldredge, 1995; Trice & Wood, 1958, Wankel & Berger, 1991); and (g) tourism (Eagles, 1992). The body of knowledge related to benefits and the dimensions of service quality provide a rich understanding for categorizing and even defining each construct however, it does not provide for an understanding of the relationship between perceived recreational benefits and the dimensions of service quality.

Figure 1 provides a model portraying each of the elements of this study. Three basic elements are offered in the model: (a) dimensions influencing the provision of a recreational sports program; (b) dimensions of service quality; and (c) perceived recreational benefits. Several dimensions which may influence the provision of a recreational sport program will be included in the model and will serve as a basis for identifying the dependent research variables of the study. These include: (a) type of institution; (b) type of program; (c) participant type; (d) national origin; (e) gender; and (f) ethnicity.

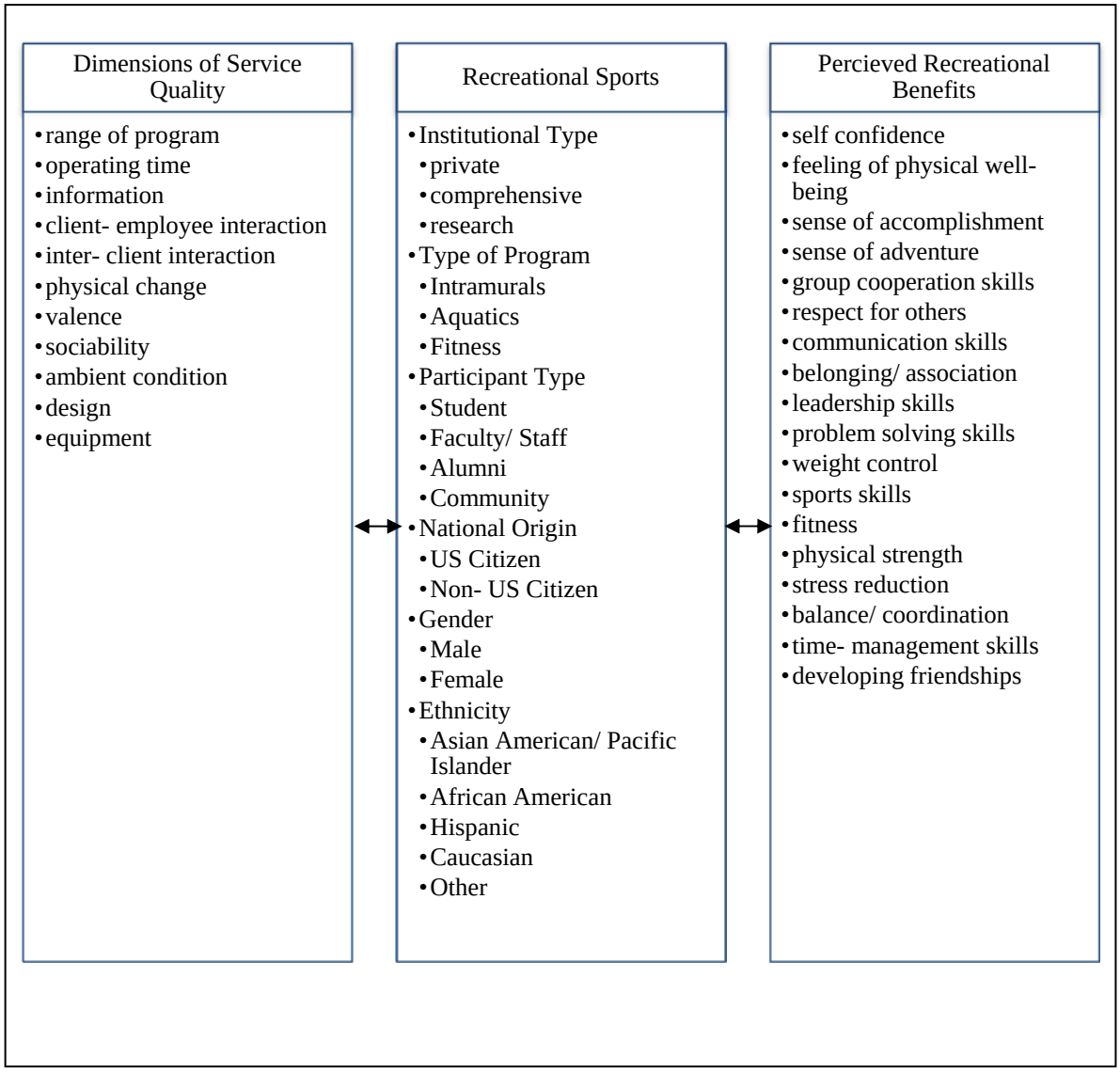

Figure 1. Theoretical Model for Dimensions of Service Quality and Perceived Recreational Benefits in Recreational Sports

Service quality dimensions, which serve as the independent variables to be studies include: (a) range of program; (b) operating time; (c) information; (d) client-employee interaction; (e) inter-client interaction; (f) physical change; (g) valence; (h) sociability; (i) ambient condition; (j) design; and (k) equipment.

The model depicts a large number of potential benefits including: (a) self confidence; (b) feeling of physical well-being; (c) sense of accomplishment; (d) sense of adventure; (e) group cooperation skills; (f) respect for others; (g) communication skills; (h) belonging/ association; (i) leadership skills; (j) defining problems; (k) problem solving skills; (l) study habits; (m) weight control; (n) sports skills; (o) fitness; (p) physical strength; (q) stress reduction; (r) balance/ coordination; (s) time-management skills; (t) developing friendships; (u) understanding written information; and (v) handling several tasks at once.

This model offers opportunities for empirical testing and therefore will provide for validation and support of the model. Like other models, the information presented abstracts and simplifies elements within recreational sports programs at colleges and universities. Further, it enables opportunities for defining each of the elements and then empirical testing to enable prediction.

In order to effectively and efficiently manage these programs and services, knowledge of these two variables (service quality and recreational benefits) is critical. It is evident that recreational sports programs must be providing high quality and excellence to meet the expectations of individuals (Osman et al., 2006). As indicated, individuals seek benefits or the expectation of benefits from their leisure experiences (Edginton et al., 2004, p. 20). This is the case in recreational sports programs as in other leisure program settings. Thus, the two constructs of perceived dimensions of service quality and perceived recreational benefits become important factors influencing the success of recreational sports programs. However, there have been few empirical studies

investigating the relationship between dimensions of service quality and perceived recreational benefits in the area of recreational sports.

Purpose of the Study

The purpose of the study was to explore dimensions of service quality and perceived recreational benefits in recreational sports programs. In addition, the study explored how institutional type as reflected in its mission impacts on these factors. Also, the study sought to explore dimensions of service quality and perceptions of recreational benefits when reviewing program areas such as intramurals, aquatics and fitness. The study was also designed to explore dimensions of service quality and perceptions of recreational benefits and other important variables such as participant types, national origin, gender and ethnicity. Lastly, the study was designed to explore recruitment and retention and other important variables such as year in school (under-classman, upper-classman and graduate), type of program (intramural, aquatics and fitness) and ethnicity.

Statement of the Problem

This study was designed to examine the relationship between dimensions of service quality and perceived recreation benefits the in recreational sports programs. The study explored how institutional type as reflected in its mission impacts on these factors. Further, the study sought to explore dimensions of service quality and perceived recreation benefits when reviewing program areas such as intramurals, aquatics and fitness. The study also examined dimensions of service quality and perceived recreation benefits by: (a) participant types (students, faculty/staff, alumni and community members); (b) national origin; (c) gender; and (d) ethnicity. Lastly, the study examined

recruitment and retention by year in school (under-classman, upper-classman and graduate), type of program (intramurals, aquatics and fitness) and ethnicity.

Research Questions

The following research questions have been developed for this study:

1. Is there a relationship between dimensions of service quality and perceived recreational benefits?
2. Does the type of the respondent's type of institution impact on perceptions of service quality and perceived recreation benefits?
3. What are the respondent's perceptions regarding dimensions service quality as related to the program areas of intramurals, aquatics and fitness?
4. What are the respondent's perceived recreational benefits in relationship to the program areas of intramurals, aquatics and fitness?
5. What are the respondent's perceptions regarding dimensions of service quality as related to one's position at one's institution (participant type), national origin, gender and ethnicity?
6. What is the respondent's perceived recreational benefits in relation to position at one's institution (participant type), national origin, gender and ethnicity?
7. Is there an association between recruitment and one's year in school, type of program and ethnicity?
8. Is there an association between retention and one's year in school, type of program and ethnicity?

Hypotheses

The following statements have been crafted in null form to facilitate statistical analysis:

1. There is no statistically significant relationship between the respondent's perceived dimensions of service quality and recreational benefits.
2. There is no statistically significant difference between the respondent's institution and the impact on their perceptions of dimensions of service quality and perceived recreation benefits.
3. There is no statistically significant difference between the respondent's perceptions of dimensions service quality and program areas such as intramurals, aquatics and fitness.
4. There is no statistically significant difference between the respondent's perceived recreational benefits and program areas such as intramurals, aquatics and fitness.
5. There is no statistically significant relationship between the respondent's perceptions regarding dimensions of service quality and one's position within their institution (participant type), national origin, gender and ethnicity.
6. There is no statistically significant relationship between the respondent's perceived recreational benefits and one's position within their institution (participant type), national origin, gender and ethnicity.
7. There is no statistically significant association between recruitment and one's year in school, type of program and ethnicity.

8. There is no statistically significant association between retention and one's year in school, type of program and ethnicity.

Definition of Terms

The following definitions have been provided for further understanding of terms used in this study:

1. Assurance: refers to knowledge and courtesy of employees and their ability to inspire trust and confidence (Parasuraman et al., 1988).
2. Empathy: refers to caring, individualized attention the firm provides its customers (Parasuraman et al., 1988).
3. Interaction Quality: the subjective perception of how the service is delivered and reflects the participant's perception of interactions which take place during the service encounter. An employee's behavior, attitude, and expertise are typical of the items found in this category (Ko & Pastore, 2007).
4. Intramurals: … a combination of the Latin word "intra" meaning "within" and "muralis" meaning "wall." When used as an adjective with the term sport, it refers to sport events for members confined within the wall or jurisdiction of a setting. Intramural sport represents structured sport participation, which requires design and leadership for its provision (Mull, Bayless, Ross & Jamieson, 1997).
5. Leisure: a multi- dimensional construct in which one is relatively free from constraints, has a feeling of positive affect, is motivated by internal forces, and has a sense of perceived freedom (Edginton et al., 2004).

6. NIRSA: the National Intramural-Recreational Sports Association headquartered in Corvallis, Oregon. A non-profit representing 4000 students, faculty and staff members located mostly in the United States and Canada with some members living outside North America. NIRSA is the leading organization in many areas: training and professional development, intramural sports, sport clubs, recreation facilities, fitness programming, outdoor recreation, wellness programs, informal recreation, and aquatics programs. NIRSA's has 740 institutional members, of whom 94% are colleges and universities which represent over 5.5 million recreation centers users (NIRSA, 2004).
7. Outcome Quality: refers to the outcome of the service act and represents what the participant receives from the services. In this dimension, the participant evaluates the outcome of the experience in terms of physical (i.e. fitness and skills) and social benefits and overall attitude toward what he/she actually gain through the services (Ko & Pastore, 2007).
8. Physical Environment: refers to ambiance condition, facility design, and equipment are typical of the items included in this category. Ambiance condition refers to background characteristics of the environment such as temperature, lighting, noise, music, and scent. Design quality is defined by both the functional and aesthetic nature of the facility. Equipment includes the devises used to enhance the sport experience (Ko & Pastore, 2007).
9. Program Quality: refers to the participant's relative perception about the excellence of the program. The range of activity programs, operating times, and

dissemination of program information are typical of items included in this category (Ko & Pastore, 2007).

10. Recreational Sports Programs: includes programming sport activity for fitness and fun. It is a diverse area that incorporates five program divisions: instructional sport, informal sport, intramural sport, extramural sport, and club sport. Each division represents varying abilities and diverse interests in playing cooperative or competitive activity in the game form (Mull et al., 1997).
11. Reliability: refers to ability to perform the promised service dependably and accurately (Parasuraman et al., 1988).
12. Responsiveness: refers to willingness to help customers and provide prompt service (Parasuraman et al., 1988).
13. Service Quality: the discrepancy between consumer's perceptions of services offered by a particular firm and the expectations about the firms offering such services (Parasuraman et al., 1988).
14. Tangibles: refer to physical facilities, equipment and appearance of personnel (Parasuraman et al., 1988).
15. Valence: refers to consumer's post consumption evaluation whether the service outcome was good or bad, regardless of their evaluation of any other aspect of the service experience (Brady & Cronin, 2001).

Assumptions of the Research

The following assumptions were identified for this study:

1. Respondents answered the questionnaire honestly.

2. Respondents understood the questionnaire.
3. The instrument was both reliable and valid.
4. Respondents were representative of the population of recreational sports programs.

Study Limitations and Delimitations

The following limitations were identified for this study:

1. The ability of individuals to understand and effectively interpret the meaning of dimensions related to service quality and perceived recreational benefits.
2. The ability of one's language skill as related to understanding the meaning of terminology used in the study may be a limiting factor.
3. The ability of individuals to accurately and honestly complete the study questionnaire.
4. The ability of parents to accurately reflect the perceptions of the dimension of service quality and perceived recreational benefits when offering judgments regarding their children's or youth's participation in recreational sports programs within which they are enrolled.
5. The ability of the respondents to not only have access to the technology to complete the Survey Monkey instrument, but also understand how to use it.

The following delimitations were identified for this study:

1. The study will be delimited to three Midwestern colleges/universities: one liberal arts college, one comprehensive university and one research based university.

2. This study will be delimited to three basic program areas: intramural sports, aquatics and fitness programs.
3. The study will include and be delimited to several participant groupings including students, faculty/staff, alumni, and community.
4. The study is delimited to individuals who are enrolled or registered in select colleges/universities recreational sports programs during the spring 2013 academic semester. The study will not include individuals participating in informal drop-in type programs.

Significance of the Study

Recreational sports programs have become increasingly important in colleges and universities. Such programs support the total student development concept which suggests that a variety of dimension in college or students learning environment contributes to their overall development (NIRSA, 2004). In addition, recreational sports programs have been shown to positively impact on the recruitment and retention of students and one's overall satisfaction of their college life experience. It is evident that such programs may contribute to the development of healthy active lifestyles thereby enhancing the wellbeing and quality of life of college and university students. Recreational sports programs have served for many students as a sag way to enhance forms of interactive and communication with faculty, staff, and administrators in a positive fashion outside the classroom settings (Lindsey, 2012).

Increasingly, there has been greater emphasis placed on effective management and the adoption of greater measures of accountability when related to the provision of

recreational sports programs (Mull et al., 1997, p. 250). Dimensions of service quality are at the heart of providing high impact programs of great excellence for college and university students, faculty, staff, alumni, and community members. In addition, crafting a benefit structure is useful in addressing the needs of participants. Individuals seek benefits or the expectations of benefits rather than signing up or purchasing activities. Benefits management has become an important element in the administration of recreational sports programs nearly universally.

This study will provide a greater understanding of interactive effects of dimensions of service quality and perceived benefits in the recreational sports area. Perhaps, as the first study to view these dimensions in relationship to one another, the study will offer significant insights into both of these dimensions especially as it is viewed according to institutional type, type of program, and participant type. Again, few studies have examined recreational sports studying the relationship between these dependent and independent variables.

CHAPTER 2

LITERATURE REVIEW

Introduction

This study was designed to examine the relationship between dimensions of service quality and perceived recreation benefits in recreational sports programs. The study explored how institutional type as reflected in its mission impacts on these factors. Further, the study sought to explore dimensions of service quality and perceived recreation benefits when reviewing program areas such as intramurals, aquatics and fitness. Last, the study examined dimensions of service quality and perceived recreation benefits by: (a) participant types (students, faculty/staff, alumni and community members); (b) national origin; (c) gender; and (d) ethnicity. This chapter presents a comprehensive review of the literature related to recreational sports, dimensions of service quality and perceived recreational benefits.

Chapter 2 is organized into eight (8) major sections. The first section is an introduction. The second section is focused on the topic of recreational sports. The third section is focused on the history of recreational sports. This is followed by a section dedicated to the value of recreational sports programs. The fifth section of the literature review is focused on the topic of research and recreational sports programs. The next section of the literature review is focused on dimensions of service quality. The seventh section is dedicated to the topic of perceived recreational benefits. The last section is focused on a summary of the literature.

Table 1 presents a comprehensive analysis of the literature topic by topic, section by section. As one can see, the first section is focused on the topic of recreational sports programs included four citations. The second section dedicated to the history of recreational sports programs includes eight citations. The third section focused on the value of recreational sports programs offers one citation. The fourth section is focused on relevant research on the topic of recreational sports programs and includes five citations. The fifth section of the literature review focused on dimensions of service quality and includes 16 citations. Last, the sixth section is dedicated to the topic of perceived recreational benefits and includes seven citations.

Table 1

Literature Review Sources

Study Areas	Sources
The Recreational Sports Program	NIRSA (1996); Mull, Bayless, Ross and Jamieson (1997); NIRSA (2004); Stier, Schneider, Kampf, Haines and Wilding (2005)
History of Recreational Sports Programs	Lumpkin (1998); Mueller and Mitchell (1960); Beeman, Harding and Humphrey (1974); Mueller and Reznik (1979); NIRSA (2013); AORE (2013); NIRSA (2009); NIRSA (2004)
Value of Recreational Sports Programs	NIRSA (2004)
Relevant Research on the Topic of Recreational Sports Program	Sweeney and Barcelona (2012); Lindsey (2012); NIRSA (1996); Ko and Pastore (2007); Shonk, Carr and DeMichelle (2010)
Dimensions of Service Quality	Parasuraman, Zeithaml and Berry (1985); Parasuraman, Zeithaml and Berry (1988); Shahin (2006); Chelladurai, Scott, Haywood-Farmer (1987); McKay and Crompton (1989); Hamilton, Crompton & More (1991); Wright, Duray and Goodale (1992); Baker and Fessenmaier (1994); Backman and Veldkamp (1995); Kim and Kim (1995); McDonald, Sutton and Milne (1995); Triado, Aparico and Rimbau (1996); Howat, Murray and Crilley (1999); Papadimitriou and Karteroliotis (2000); Alexandris, Dimitriadis and Kasiara (2001); Afthinos, Theodorakis and Nassis (2005), Lam, Zhang and Jensen (2005); Burns and Graefe (2006); Chung (2006); Dhurup, Singh and Surujal (2006); Osman, Cole and Vessell (2006); Ko and Pastore (2007); Lagrosen and Lagrosen (2007); Shonk, Carr and DeMichelle (2010); Demir and Cimen (2012); Soleymani, Zarie, Tojari and Ghafouri (2012)
Recreational Benefits	Driver (1990); Bryant, Banta and Bradley (1995); Kovac and Beck (1997); Haines (2001); Lindsey and Sessoms (2006); Lindsey (2012); Edginton, Hudson, Dieser and Edginton (2004)

The Recreational Sports Program

Table 2 shows descriptions of recreational sports programs found in the literature. As previously stated, the phrase “recreational sports program” is what is being used to identify a wide variety of programs found on college and universities campuses. This

name (recreational sports programs) is widely recognized within the literature. Multiple authors have provided descriptions of intramural programs, campus recreation programs, and wellness and recreation programs. Table 2 displays a variety of descriptions which include many of the previously mentioned names.

Table 2

Descriptions of Recreational Sports Program

Author	Descriptions
NIRSA (1996)	recreational sports have been an integral part of higher education for decades. They are a vital extension of the educational process, contributing to the physical and intellectual development of students, enhancing campus relations with local communities and augmenting the programming opportunities for campus constituencies.
Mull et al. (1997)	includes programming sport activity for fitness and fun. It is a diverse area that incorporates five program divisions: instructional sport, informal sport, intramural sport, extramural sport, and club sport. Each division represents varying abilities and diverse interests in playing cooperative or competitive activity in the game form.
NIRSA (2004)	participants in college recreational sports programs and activities include the following: organized recreational teams and league sport participants; fitness class participants; workout center/ recreation programs; exercise enthusiasts; organized sport clubs; aquatics enthusiasts; outdoor recreation enthusiasts; other participants in recreational sports and fitness programs, services and facilities.
Stier et al. (2005)	nine categories of recreational activities including: intramurals, club sports, open recreation, outdoor recreation, group exercise/ aerobics, aquatics, instructional programming, special events and youth and family activities.

Table 2 shows, that there are many ways to describe recreational sports programs. Many of the programs offered to today's college student, faculty and staff have been

recently developed. Today's recreational sports program is continuously changing to meet the needs and wants of its clientele and not only meet the ever changing trends in the field but also to create and develop the trends.

History of Recreational Sports Programs

Recreational sports programs were formed as early as the days of the Colonial Colleges in the 1800's. Following the English club team model, Yale and Harvard (1843 and 1844 respectively) developed rowing clubs (Lumpkin, 1998). Mueller and Mitchell (1960) discuss the English influence on American sport in the early 1860's and the further development of varsity sports as well as less structured intramural programs:

> Gradually in a somewhat similar manner the natural desire for sports and competition, which is strong in the normal youth, sought expression in impromptu challenge games on the part of students who were not skilled enough to make the varsity team. Students, of their own accord, began to rally around a unit. This unit at first was loosely organized, generally involved intramural competition between freshman and sophomore classes (p. 18).

In some cases, intramural activities were the pre- cursor to the development of intercollegiate varsity activities: "…. the early intramural games may be considered as the forerunners for our modern interscholastic and intercollegiate competition" (Beeman, et al., 1974, p. 1). Program supervision and acceptance was also scarce during this time period: "there was little or no faculty supervision; in many instances, there was active opposition by faculty concerning student participation in these rough and vigorous exercises" (Beeman et al., 1974, p. 1).

Mueller and Mitchell (1960) further show a progression and development collegiate recreation:

> between the years of 1905 and 1912, the number of student-controlled activities increased to the point that authorities recognized the necessity for some stronger and more permanent centralized authority….. in 1913, Michigan and Ohio State Universities each inaugurated a Department of Intramural Athletics (p. 19).

By the 1920's, programs existed but a body of professional knowledge did not. The first book specifically written on the topic of intramurals was written by the "father of intramurals" Elmer D. Mitchell (Mueller & Reznik, 1979). This time period also included the first intramural sports building in the United States, located at the University of Michigan (Mueller & Reznik, 1979). The continued growth in intramural activities was influenced by historical events including WWI. Mueller and Mitchell (1960) describe the growth and need in programs: "….the importance ascribed to athletics in the training camps following the First World War and correspondingly… contributed to the great boom in college intramural sports which began in 1918" (p. 16). In 1933, government support of facilities led to expanded programs and services: "Federal aid in the construction of facilities … newly acquired buildings, athletic fields, tennis courts, golf courses, and swimming pools extended the scope of the intramural programs" (Mueller & Mitchell, 1960, p. 22). Beeman et al. (1974) also recognize the importance to the growth in intramural programming related to world events: "…. development of intramural programs during and closely following World Wars I and II…increased interest in athletics among returning veterans… many expressed a desire to participate in organized competition on the intramural level.." (pp. 1-2).

During the 1950's, the National Intramural Association (NIA) was founded by Dr. William Wasson and 11 others from historically and predominantly black colleges (NIRSA, 2013). In addition, other associations were specifically targeting meetings and

conferences focused on intramural activities including the College Physical Education Association, the American Association of Health, Physical Education and Recreation and the National Association for Physical Education of College Women (Mueller & Mitchell, 1960).

In 1968, AAHPER (American Association of Health, Physical Education and Recreation) sponsored a national conference to discuss campus wide recreational programs including intramurals (Mueller & Reznik, 1979, p. 20). This event could be considered a historic event as it sparked a discussion of holistic approach of recreation programming, not just programming in intramural sports. Other topics discussed at this conference included: organization and administration, financing, facilities, student participation, leadership, professional leadership and training and identification of the responsibility for campus recreation (Mueller & Reznik, 1979, p. 20).

The 1970's also brought about change and growth in intramurals: "…. there was a significant shift of interest among college students from traditional support of intercollegiate sports to support of intramural programs serving all students….significant increase in the number of women participating in a great variety of sports" (Beeman et al., 1974, p. 2). This was closely followed by the 1972 enactment of the Educational Amendment Act which included Title IX (Mueller & Reznik, 1979).

The field of recreational sports saw many changes in the 1980's. The Certified Recreational Sports Specialist program was adopted providing professionals in the field with a certification showing their commitment to the field as well as their knowledge of the field. The NIRSA adopted a professional Code of Ethics and the national office was

opened to support the work of the association in Corvallis, Oregon. The first NIRSA executive school was also held in this decade (NIRSA, 2013).

The 1990's was also an exciting decade in the development of recreational sports programs. Where the 1970's had a few fitness equipment companies dominating the market, the 1990's saw an explosion in the number of companies competing for market share while using research and development to show product innovation and the establishment of trends. This decade also saw a trend in the building of the new era of campus recreation and wellness facilities. Outdoor recreation programs became the norm in this period and the further development of aquatics programming became prevalent. Specifically, these two programs (outdoor recreation and aquatics) gained support from national associations. Although the Association of Outdoor Recreation and Education was established in the 1980s, it did not see yearly national conferences until the 1990's (AORE, 2013). The 1990's also included the NIRSA developing a national aquatic symposium specifically for their members working in aquatics related positions. Funding of recreational sports programs also changed in this period. Development of new facilities and new programming options offered on campus required funding alternatives. Where recreational sports programs were traditionally supported with university general funds, students were now asked to support new facilities and programs through mandatory recreational fees.

The early 21st Century saw economic problems and difficulties for colleges and universities. These economic problems and difficulties include: (a) increase competition from private and for profit institutions; (b) a reduction in state appropriations;

and (c) reduction in financial aid from states and the federal government. These problems and difficulties have led to institutions increasing tuition, looking for private support and a reducing various university services. Even with these economic problems faced by the institutions, the need for further development of recreational sports programs has been recognized by administrators. There has been an explosion in the building of new campus recreation centers as well as renovations of older facilities (NIRSA, 2009). NIRSA (2004) estimates that $3 billion will be spent on new construction and $1.3 billion on renovations to existing facilities between 2004-2009. The value of these facilities and the programs housed within have been researched not only by NIRSA but also individual institutions recreational sports departments, faculty and staff and other student affairs groups within the institutions. A landmark study (commissioned by the NIRSA) was completed by the Kerr and Downs Research Group and reported in 2004. This study included 2600 students from 16 different colleges and universities. This study focused on a wide range of topics including: (a) student satisfaction and success, (b) allocation of money on campus, (c) happiness with college experience, (d) benefits of recreational sports, (e) selected behaviors and recreational sports participation, (f) departmental budgets and (g) departmental expenditures. NIRSA (2004) found that participation in recreational sports activities correlates with overall college satisfaction and success. In addition, heavy recreational sports users were happier then light users and heavy users were serious students concerned about the same academic standards and quality of education as other students. Heavy users were more socially oriented, and rated diversity of the student population as a more important determinant of their college

satisfaction and success then did other students. This study also found a number of perceived recreational benefits from recreational sports program participation including: (a) improved emotional well- being, (b) reduced stress, (c) improved happiness, (d) improved self- confidence, (e) builds character, (f) assists in making students feel like part of the college community, (g) improves interaction with diverse sets of people, (h) is an important part of college social life, (i) teaches team building skills, (j) is an important part of the learning experience, (k) aids in time management, and (l) improved leadership skills (NIRSA, 2004). Participants in this study also showed positive and negative behaviors such as participating in community service, not smoking, attending religious services and a heavy course load while also using alcohol and illegal drugs and missing school or work and cheating in college (NIRSA, 2004).

Value of Recreational Sports Programs

The value of collegiate recreational sports programs to college campuses is well documented. The Kerr and Downs Research group also studied the value of recreational sports programs. The researchers concentrated on three research categories including: (a) value and contribution of recreational sports to participant lives, (b) economic impact of NIRSA member colleges and universities and (c) buying power of participants of recreational sports programs (NIRSA, 2004). In addition, the researchers found that the majority of literature in recreational sports programs was targeted on personality characteristics, college satisfaction, scholastic achievement, attrition rate and recruitment. Results of the study also showed consistency with other studies in the importance of

participation in intramurals and recreational sports programs as one of the most important predictors of college satisfaction.

Relevant Research on the Topic of Recreational Sports Programs

Research in the area of recreation sports programs has been completed in a number of areas. Table 3 presents literature found in recreational sports programs. Sweeney and Barcelona (2012) completed "An Integrative Review of Published Research in the Recreational Sports Journal, 1998-2010." This study is the only known comprehensive review of literature found in *Recreational Sports Journal (RSJ)*; the primary publication for the field of recreational sports. Table 3 moves beyond the Sweeney and Barcelona (2012) study to include articles found in other sources as well as those articles found in the RSJ since 2010. The categories or program areas used by Sweeney and Barcelona (2012) are used for ease in formatting. Those references in bold have been added to the original Sweeney and Barcelona chart and are relevant to this study.

Table 3

Studies Conducted in Recreational Sports

Study Area	Sources
Participation and constraints	Barcelona and Ross (2002); Young, Ross, and Barcelona (2003); Beggs, Stitt, and Elkins (2004); Collins, Valerius, King, and Graham (2001); Kanters (2000)
Administration	Daprano, Pastore, and Costa (2008); Ross and Young (2000); Connaughton, DeMichelle, Horodyski, and Dannecker (2002); Lee (1999); Kerr-Downs (2003)
Benefits/ outcomes	Schuh (1999), Hackett (2007); Dixon and Bixler (2007); Rabinowitz and Frauman (2009); Watson, Ayers, Zizzi, and Naoi (2006); Veltri, Miller, and Harris (2009); **Bryant, Banta and Bradley (1995); Kovac and Beck (1997); Haines (2001); Lindsey and Sessoms (2006); Lindsey (2012)**
Research/ program evaluation	Haines and Ferrell (2006); Haines and Fortman (2007)
Professional development	Bower, Hums, and Keedy (2005); Miller and Grayson (2006); Ross and Beggs (2007); Kaltenbaugh (2009); Pack, Jordan, Turner and Dannell (2007); Ross and Schurger (2007); Ball, Simpson, Ardovino and Skemp-Arlt (2008); Barcelona (2004); Jamieson and Toh (2001); Young, Ross and Barcelona (2003)
Physical and emotional health	Kanters (2000); Ferra, St. Laurent and Wilson (2008); Forrester, Arterberry and Barcelona (2006); Forrester, Ross, Hall and Geary (2007)
Facilities, equipment and technology	Burnett, Britten and Dearden (2008); Turman and Hendel (2004); Woosnam, Dixon and Brookover (2006); **NIRSA (1996)**
Marketing	Scott, Veltri and Wallace (1999); Osman, Cole and Vessell (2006); **Ko and Pastore (2007); Shonk, Carr and DeMichelle (2010)**
Risk behavior	Jackson, Walling and Thompson (2007)
Socio-demographic differences	Lindsey, Sessoms and Willis (2009); Anderson and Dixon (2009); Wininger (2004); Yoh, Mohr and Gordon (2008)

Note. Modified version of Sweeney and Barcelona, 2012

As Table 3 displays, the field of recreational sports programs is complex and wide ranging in terms of programs and services. As many of the researchers have stated, further research is needed to gain a better understanding of programs and services.

Dimensions of Service Quality

An important landmark study in the area of service quality was conducted by Parasuraman et al. (1988). This study provided the first effective model for studying service quality and is widely considered to be the genesis or seminal research in the study of service quality. Since 1988, the SERVQUAL study has been used in studies in its original state, modified for specific use and it has been widely scrutinized for its reliability which has led to a battery of testing.

Parasuraman et al. (1988) note that there are five dimensions influencing consumer's expectations of service quality including: (a) tangibles, (b) reliability, (c) responsiveness, (d) assurance and (e) empathy. Tangibles refer to physical facilities, equipment and appearance of personnel. Reliability refers to ability to perform the promised service dependably and accurately. Responsiveness refers to willingness to help customers and provide prompt service. Assurance refers to knowledge and courtesy of employees and their ability to inspire trust and confidence. Empathy refers to caring, individualized attention the firm provides its customers (Parasuraman et al., 1988).

The SERVQUAL instrument originally contained 97 items using a seven point likert scale ranging from strongly agree to strongly disagree. The 97 item instrument was first given to 200 adults, at least 25 years of age living in a metropolitan area in the

southwest. These 200 individuals represented five categories including: (a) appliance repair and maintenance, (b) retail banking, (c) long distance telephone, (d) securities brokerage, and (e) credit cards. Purification testing was conducted and reduced the 97 item instrument to a 54 item instrument which was further purified to an instrument containing 34 items. The 34 item instrument was then tested, using shopping mall customers (n = 200) aged 25 years and older on the east coast. Another purification was conducted resulting in a 22 item scale representing five dimensions.

Parasuraman et al. (1985) and Shahin (2006) note gaps in the SERVQUAL model. These gaps in the model include: (a) customer's expectations versus management perceptions, (b) management perceptions versus service specifications, (c) service specifications versus service delivery, (d) service delivery versus external communication, (e) the discrepancy between customer expectations and their perceptions of the service delivered, (f) the discrepancy between customer expectations and employee perceptions, and (g) the discrepancy between employee's perceptions and management perceptions.

Another important study in service quality was conducted in 1991 by Crompton, MacKay and Fessenmaier. Their conclusions suggest that four dimensions instead of five are more appropriate for use in SERVQUAL studies in the recreation industry. The four dimensions are: (a) tangibles, (b) reliability, (c) responsiveness, and (d) assurance. The empathy dimension was found to be not significant and therefore Crompton and his colleagues suggested its removal in the study of SERVQUAL in the recreation industry.

Table 4 shows the industry in which a study was implemented, the population size and the rank of the type of population vs. the dimension being studied. Table 4 also shows the research that has been published in the area of services quality in recreational settings.

Table 4

Studies Conducted in Service Quality (SQ) and Customer Service in Leisure and Recreation Settings

Date and author	Location and Industry	Sample	Constructs	Findings
(1987) Chelladura, Scott and Haywood-Farmer	Fitness Centers in a Canadian Metropolitan area	(N= 436)	Development of Scale of Attributes of Fitness Services (SAFS).	Primary facilitating goods was most important to participants (facilities and equipment). Participants rated secondary consumer services and secondary facilitating goods as least important (bar and restaurant).
(1989) Crompton & MacKay	Halifax, Nova Scotia, Canada	(N= 248) Fitness (n= 82) Painting (n= 56) Hockey (n= 86) Senior Trips (n= 24)	Relative Importance of SQ	All groups considered staff reliability most important. Hockey players ranked tangible second most important while painting participants ranked tangibles least important. Most groups except for painting class ranked empathy as the least important of the dimensions
(1991) Hamilton, Crompton & More	Minnesota and Texas Parks	(N= 479)	Identify the (SQ) Dimensions in a Park Context	SQ studies in parks should be park specific. Empathy dimension is not relevant in park settings and the other dimensions ranked in order: tangibles, reliability, responsiveness and assurance
(1992) Wright, Duray & Goodale	Fitness Center users in Fairfax County, Virginia	(N= 2063)	Testing of SERVQUAL for use in a recreational setting	Respondents indicated that user expected facilities that were clean, equipment that worked, and when things broke, repairs were made quickly. Respondents also indicated that they expected staff who were interested in solving patron's problems, lifeguards who were attentive, and employees who were receptive to taking and implementing user's suggestions

(table continues)

Date and author	Location and Industry	Sample	Constructs	Findings
(1994) Baker & Fessenmaier	Central Illinois Amusement/ Theme Park	(N= 420) Visitors (n= 254) Managers (n= 11) Employees (n= 155)	SQ and the Triadic Service Encounter Model	All three groups ranked assurance and responsiveness highest. SQ differences are highest in front line staff and visitors. SQ differences also exist between management and visitors but there is no difference between management and front line staff
(1995) Backman & Veldkamp	Southern US YMCA Aquaitcs	(N= 89)	Relationship between SQ and User Loyalty	High loyalty and low loyalty users see gaps in SQ differently. Low loyalty users reported largest gap in assurance and responsiveness. High SQ relates to high user loyalty
(1995) Kim & Kim	Sports Centers South Korea	(N = 271)	Development of QUESC	Men and women desire the same services in sport centers; Ages 20-60 don't care about staff recognition of their progress, while 60+ year olds do; Public and private sport center users desire the same services; Korean sport centers failed in performance on 23 of 33 measures; Most important were cleanliness, security, convenient schedules, convenient access, emergency preparedness and safety education; Least important were pleasant interior, availability of a snack bar, employee recognition of progress, exclusive membership, location near shopping
(1995) McDonald, Sutton & Milne	US National Basketball Team	(N= 1611)	Development of TEAMQUAL	Female respondents were more satisfied with a number of SQ items then males. Respondents ranked SQ dimensions: tangibles, reliability, responsiveness, empathy and assurance

(table continues)

Date and author	Location and Industry	Sample	Constructs	Findings
(1996) Triado, Aparico & Rimbau	Barcelona, Spain Municipal Sports Centers	(N= 698)	Satisfaction	Respondents indicate that facilities, human resources, communication and monetary matters influence customer satisfaction. Findings indicate that age is a factor in satisfaction but gender is not
(1999) Howat, Murray & Crilley	Australia Public Sports and Leisure Centers	(N= 5283)	Relationship between SQ problems, satisfaction, behavioral & intentions	Customers with no SQ problems recorded higher ratings for satisfaction, SQ and recommendations to others then did those who have had problems resolved satisfactorily. Customers who had SQ problems resolved successfully recorded higher ratings of satisfaction, SQ and recommendations to others then those who did not have their SQ problems solved satisfactorily
(2000) Papadimitriou & Karterolioti s	Patras, Greece Private Sport & Fitness Centers	(N= 487)	SQ and Factor Structure	Finding show the QUESC developed for Korean sports centers is not applicable to Greek sports centers. Respondents ranked in order of importance, the dimensions of: instructor quality, facility attraction and operation, program availability and delivery and other services
(2001) Alexandris, Dimitriadis , and Kasiara	Thessaloniki, Greece Private Fitness Centers	(N= 300)	SERVQUAL and Behavioral Intentions	Findings indicate that tangibles lead to positive word of mouth as well as future purchase intentions. The assurance and reliability dimensions followed tangibles in predicting word of mouth and purchase intentions

(table continues)

Date and author	Location and Industry	Sample	Constructs	Findings
(2005) Afthinos, Theodorakis and Nassis	Greek Fitness Centers	(N= 346)	Use of QUESC in Greece	Findings indicate differences in service quality expectations between genders and between users of public and private fitness centers. Respondents found facilities and employee attitude most important. Secondary was cost, programming and scheduling.
(2005) Lam, Zhang & Jensen	Major Southern US Metropolitan Area	(N= 1202)	Developed of Service Quality Assessment Scale for Fitness Clubs	Findings indicate difference between genders and the acceptability of a six factor scale including: (a) staff; (b) program; (c) locker rooms; (d) physical facility; (e) workout facility; and (f) child care
(2006) Burns & Graefe	Pacific NW US Forests	(N= 2005)	SQ use in US Forests	Respondents ranked SQ items in order: sanitation and cleanliness, safety and security, condition of facilities, responsiveness of staff, natural environment and information services
(2006) Chung	Florida State University Recreational Sports Program	(N= 228)	SSQRS, Encounter and Global SQ and Citizenship Behavior	Range of program had a relationship with service quality, employee interaction had a relationship with global service quality but inter-client interaction did not, valance and sociability were related to global service quality while physical change was not, ambient condition of equipment was related to global service quality whereas design related to facility layout was not
(2006) Dhurup, Singh and Surujal	Fitness Club users in Gauteng, South Africa	(N= 251)	Development of HAFSQ (Health and Fitness Service Quality scale)	Respondents rated personnel, programming and medical as well as convenience and information dissemination most important. Respondents also indicated that safety and support as well as facility attraction were least important of the dimensions

(table continues)

Date and author	Location and Industry	Sample	Constructs	Findings
(2006) Osman, Cole & Vessell	US Midwest Recreational Sports Programs	(N= 249)	SQ, User Satisfaction & Behavior Intentions	Facility ambiance, operations quality and staff competency influence user satisfaction. Facility ambiance and operations quality influence re-use while staff competency did not. Satisfaction did not contribute to re- use but is related to recommending the facility to friends
(2007) Lagrosen & Lagrosen	Swedish Health Clubs	staff (n= 55) customers (n= 71)	Development of a Qualitative Service Quality Measure	Three dimensions of service quality were found to be important in Swedish fitness clubs including: (a) physical change; (b) mental change; and (c) pleasure. In addition, two direct factors were indicated: (a) technical competence; and (b) relational competence as well as six indirect factors including: (a) facilities; (b) training; (c) evaluation; (d) empowerment; (e) climate; and (f) leadership
(2007) Ko & Pastore	US Midwest Recreational Sports Programs	(N= 241)	Development of SSQRS	Respondents were satisfied with the program. They ranked sub-dimensions in order (high): valence, physical change and range in program and (low): ambient condition, design, equipment and sociability
(2010) Shonk, Carr & DeMichelle	US Middle Atlantic Recreational Sports Programs	(N= 4302)	SQ, Satisfaction, Social Identity Theory	High users and low users have very different priorities. High identity users want self directed programming centered on outcome quality (physical change and social interaction with friends) and the low identity user is centered on program quality (interaction with staff, equipment use instruction, knowledge of program offerings, tips on becoming an educated consumer)
(2012) Demir & Cimen	Users of Fitness Centers in Ankara, Turkey	(N = 304)	SSQRS use in Turkish Recreation Programs	10 of the 11 SSQRS sub dimensions were appropriate for use in Turkey. Facility Ambiance was found to not be usable in Turkish recreation programs
(2012) Soleymani, Zarei, Tojari and Ghafouri	Islamic Azad University in Iran	(N = 800)	SSQRS, Satisfaction, Social Identification Theory	Identity is a moderator between: quality of provided services; quality of result; and quality of interaction but not with satisfaction and quality of environment

Note. SQ = service quality; QUESC = quality excellence of sport centers; SSQRS = scale of service quality in recreational sports;

As Table 4 indicates, Service Quality in recreational settings is well documented. Service Quality in recreational sports settings however is emerging. Table 4 documents the importance of further study particularly in the areas of program type, gender and national origin.

Chelladurai et al. (1987) studied users of fitness clubs in a Canadian metropolitan area. Their first study included users (n = 178) in five fitness clubs. The second study included members (n = 436) from 11 fitness centers. The intent of the study was to investigate the development of the Scale of Attributes of Fitness Services (SAFS). They identified six dimensions including: "(a) primary core professional; (b) primary core consumer; (c) primary peripheral; (d) primary facilitating goods; (e) secondary consumer; and (f) secondary facilitating goods" (Chelladurai et al., 1987). Cronbach's alpha test indicated high levels of reliability of .74 to .91 for the dimensions. Results also indicated that primary facilitating goods was most important to participants (facilities and equipment). Participants rated secondary consumer services and secondary facilitating goods as least important (bar and restaurant). Results from demographic investigations indicated that both married and single females rated primary core professional and primary facilitating goods as most important (Chelladurai et al., 1987).

Crompton and MacKay (1989) studied participants (N = 248) in a community based recreation program in Nova Scotia. The participants were participating in four programs: (a) fitness (n = 82), (b) painting class (n = 56), (c) ice hockey (n = 86), and (d) senior trips (n = 24). The intent of the study was to explore the importance of SERVQUAL in selected public recreation programs using Lovelock's 1984 classification

of services (high/ low staff intensity and high/low facility intensity). Respondents in all programs rated reliability as most important. Empathy was rated least important by all groups with only little support shown by painting participants. Hockey participants rated tangibles second most important while painting participants rated tangibles least important. Painting participants rated responsiveness second most important while senior trip participants rated assurance as most important. Crompton and Mackay (1989) suggest that the dimension of empathy is not important in SERVQUAL, when used in recreation setting, and therefore should eliminated from future study in this area.

Hamilton et al. (1991) studied park users (N = 479) in Minnesota and Texas. The intent of the study was to study SERVQUAL measures in the public park setting with individual parks, frequency of use by year and number of years using the parks. Respondents ranked tangibles as most important followed by reliability with empathy being reported as least important. They also found that SERVQUAL is appropriate in a park setting but needs to be used specific to individual parks, avoiding sweeping generalizations about public parks. Similarly to MacKay and Crompton (1989) Hamilton et al. (1991) found that the empathy dimension scored so low in importance that it should not be used in park settings or should be merged with the dimension of responsiveness (Hamilton et al., 1991).

Wright et al. (1992) studied users (N = 2063) of eight recreation centers in Fairfax County, VA. The intent of their study was to investigate the use of SERVQUAL in a municipal recreation setting. Results showed that 63% of respondents indicated “overall quality of services was excellent and 10% indicated that quality of services was less then

adequate." (Wright et al.,1992). Additional results indicated that user expected facilities that were clean, equipment that worked, and when things broke, repairs were made quickly. Respondents did not have high expectations for facilities tours and also did not rate the performance of tours highly. Respondents also indicated that they expected "staff who were interested in solving patron's problems, lifeguards who were attentive, and employees where were receptive to taking and implementing user's suggestions," however respondents rated the performance of staff in these area poorly (Wright et al., 1992). Additionally, respondents indicated "not enough lap lanes in the swimming pool to avoid crowding, insufficient opportunities to use certain facilities, not enough variety of up-to-date exercise equipment available, and too few times when popular classes were offered" (Wright et al., 1992).

Baker and Fesenmaier (1994) studied SERVQUAL measures with amusement park visitors (N = 254), managers (n = 11) and front- line staff (n = 155). The intent of their study was to explore the difference in the three groups with SERVQUAL measures and expectations. They found that visitors, managers and front-line staff scored assurance (staff are trustworthy, enthusiastic, competent, polite and credible) as the most important of the five dimensions followed by responsiveness of staff (staff respond quickly, go beyond expectations, act on suggestions, solve problem quickly and spend time with participants). They did not find significance in SERVQUAL measures and front-line staff and managers. However, they did find significance in SERVQUAL measures with front-line staff and managers when comparing them to the visitors. Results also indicated that management commitment to quality, goal setting, task

standardization and perception of feasibility were important in the differential between management and visitors expectations. Baker and Fesenmaier (1994) state that: "teamwork leads to a better understanding of visitor expectations."

Kim and Kim (1995) studied sport center members (N = 271) in the Republic of Korea. The sport centers where questionnaires were distributed represented both the public and private sectors. The age range was early 20's to late 60's with a gender difference of, females (n = 180) and males (n = 90). Male respondents reported that they desired center staff facilitation of interaction among members. Those respondents in their 60's reported that they desire staff recognition while the other age groups did not. Results also showed that respondents found cleanliness, security of personal goods, convenient access to facility, preparedness for emergency and provision of safety education as most desirable. They also found pleasant interior, availability of snack bar, employee's show interest in customer's progress, exclusive membership, location near a shopping center and employee's personal recognition of customers as least desirable (Kim & Kim, 1995). Kim and Kim (1995) also suggest that providing social opportunities are not as important in a Korean sport center setting as it would be in the West.

McDonald et al. (1995) studied season ticket holders of a National Basketball Association team (N = 1611). The intent of their study was to identify the importance of the five SERVQUAL dimensions to the season ticket holders and to also examine the performance of the organization in the five dimensions of SERVQUAL. Their findings show that season ticket holders ranked the importance of dimensions (in order): (a)

tangibles, (b) reliability, (c) responsiveness, (d) empathy, and (e) assurance. Respondents reported being satisfied with the overall agency and rated the individual performance (in order): (a) tangibles, (b) assurance, (c) responsiveness, (d) reliability, and (e) empathy. Female respondents reported higher satisfaction the dimensions of tangibles and responsiveness (McDonald et al., 1995).

Triado et al. (1996) studied members (N = 698) from 15 different municipal sport centers in Barcelona, Spain. Their intent was to explore and identify factors of customer satisfaction. Finding indicate five dimensions in service quality including: (a) quality of facilities, (b) human resource quality, (c) cost,
(d) communication, (e) importance of the social environment (Triado et al., 1996). Results also indicated that age plays a role in importance of service quality measures, however gender does not. Younger respondents (age 5-25) reported lower scores for human resources and higher scores for facilities while older respondents (age 36-60) reported lower scores for facilities and higher scores for human resources. Respondents also indicated that they were generally satisfied (Triado et al., 1996).

Backman and Veldkamp (1995) studied participants in learn to swim and water aerobic/ exercise programs (N = 89) in a small southern YMCA. The intent of their study was to explore the relationship between SERVQUAL and user loyalty. Their findings showed the largest gap in low loyalty users and the dimension of assurance (staff enthusiasm, trustworthiness, competence, credibility and politeness). Low loyalty respondents reported the second largest gap in the dimension of reliability (quality control, accurate information, programs start on time, delivery of promises, perform

duties consistently). Low loyalty respondents also reported large gaps in the dimension of responsiveness (staff respond quickly, go beyond expectations, act on suggestions, solve problem quickly and spend time with participants). Backman and Veldkamp (1995) state that an link does exist between SERVQUAL and long time loyalty and that staff training is the key to making improvements in these three areas.

Howat et al. (1999) studied members (N = 5283) of 30 Australian sports and leisure centers. The intent of their study was to explore the relationships between service problems, perceptions of service quality, satisfaction and behavioral intentions. The sample included mostly younger responded (87% under 50), mostly English speaking respondents (95.6%) and majority female respondents (67.1%). The respondents indicated participation in a variety of program activity including: (a) lap and recreational swimming (26.7%), (b) swim lessons (11.8%), (c) fitness gym (16.8%), (d) court sports (13.5%), and (e) net sports (11.5%; Howat et al., 1999).

Howat et al. (1999) findings indicate that customers who experience service problem were less satisfied then those who had not experienced service problems. Customers who had services problem that were satisfactorily resolved were more satisfied then those whose service problems were not resolved satisfactorily and less than those customers who had never experienced a problem. Perceptions of service quality were influenced based on a customer's experience problems for personnel and core factors (cleanliness, equipment, facility etc.) but not for peripheral factors such as snack bars and retail operations. In terms of behavioral intentions, those who had no service problems were more likely to recommend others to the program then those that had

problems as well as those that had problems that were resolved satisfactorily. In sum, Howat et al. (1999) state: "Australian sport and leisure-center customers place a high premium on clean facilities…expect competent staff who are friendly, responsive and well presented… and are less influenced by peripheral services such as food and drink facilities, child minding, and the range of activities available" (p. 58).

Papadimitriou and Karteroliotis (2000) studied members (N = 487) of 12 private sport and fitness centers located in Patras, Greece. In this study the population sample had a three to one female to male ratio with an age range of 20-50. The assessment employed was a modified version of the Kim and Kim (1995) Quality Excellence of Sport Centers (QUESC) instrument including the four dimension of: (a) instructor quality; (b) facility attraction and operation; (c) program availability and delivery; and (d) other services. Respondents were asked to rate the importance of their expectations to the 28 item inventory. Findings indicated that the QUESC is not an adequate assessment for use in the private Greek Sport Center industry. Additionally, the findings indicated that instructor quality was the most important expectation, followed by facility attraction, program availability, and lastly, other services (Papadimitrious & Karteroliotis, 2000).

Alexandris et al. (2001) studied members (N = 300) of three private fitness clubs in Thessaloniki, Greece. Respondents participated in fitness classes and users of the fitness and weight rooms. The intent of their study was to investigate Services Quality in Fitness Clubs and behavioral intentions. Cronbach's alpha test indicated acceptable reliability ranging from .77 to .91 for the five SERQUAL dimensions. Results indicate that respondents were overall satisfied with the three fitness clubs. In addition, results

indicated that the tangibles lead to positive word of mouth as well as future purchase intentions. The assurance and reliability dimensions followed tangibles in predicting word of mouth and purchase intentions (Alexandris et al., 2001).

Afthinos et al. (2005) studies service quality in six Greek fitness centers using Kim and Kim's QUESC instrument. A Cronbach's alpha test showed strong reliability of 0.93. Results from users (n = 346) indicate differences in service quality expectations between genders as well as between users of public and private fitness centers. Respondents considered items referring to facilities and employee attitude and interaction with customers "quite important" or "highly important" followed by items concerning safety issues (Afthinos et al., 2005, p. 254). Secondary importance was reported in "cost of participating, programming and scheduling of service delivery" (Afthinos et al., 2005, p. 254). Respondents ranked "ability to bring guests, opportunity to meet people, interaction among members and availability of family and children's programs" least important (Afthinos et al., 2005, p. 254). No differences were found while reporting age, however difference were found between genders. Female respondents reported higher expectations in "employee behavior… possession of professional knowledge… dissemination of clear instructions… convenience of schedule… access to transportation…provision of a variety of sports…availability of play or goal-differentiation programs" (Afthinos et al., 2005, p. 256). Males were more concerned with "provision of membership packages, ability to invite non-members, meeting other people, and provision of snacks" (Afthinos et al., 2005, p. 256).

Lam et al. (2005) developed the Service Quality Assessment Scale specifically for use in health and fitness clubs. The intent of their study was a pilot test, test and complete the development of the scale for future use. Their study included members (n = 1202) from ten health and fitness clubs in a major southern metropolitan area. Results of their study indicated difference between genders and the acceptability of a six factor scale including: (a) staff; (b) program; (c) locker rooms; (d) physical facility; (e) workout facility; and (f) child care (Lam et al., 2005, p. 99).

Burns and Gaeffe (2006) studied user of Pacific Northwest National Forests (N = 2005). The intent of the study was to explore SERVQUAL use in outdoor recreation settings. Using a telephonic survey, respondents were asked to rate 22 quality measures which represented six distinct dimensions. Respondents ranked service quality performance in order: (a) sanitation and cleanliness, (b) safety and security, (c) conditions of facilities, (d) responsiveness of staff, (e) natural environment, and (f) information services (Burns & Gaeffe, 2006). This modified SERVQUAL measure asked two questions related to staff which may have led to responsiveness being rated fourth out of the six dimensions. Like the Hamilton et al. (1991) study, finding may indicate that park users are more interested in self directed leisure pursuits and not necessarily interested in interaction with park staff.

Chung (2006) studied the relationship of perceived service quality, customer satisfaction and customer citizenship behavior among recreation center users (n = 228) at Florida State University using Ko and Pastore (2007) SSQRS. The intent of his study was to explore encounter and global service quality and citizen behavior. Respondents

indicated that “range of program had a relationship with service quality… employee interaction had a relationship with global service quality but inter-client interaction did not… valance and sociability were related to global service quality while physical change was not… ambient condition of equipment was related to global service quality whereas design related to facility layout was not” (Chung, 2006, p. 109-112). Findings also indicated that “high level of the global service quality would enhance the level of customer satisfaction” (Chung, 2006, p. 109-112). Chung (2006) also found “a negative relationship from customer satisfaction to global service quality (p. 113). In addition, he found “…that the high level of the perceived global service quality in a sport center would increase customer citizenship behaviors by enabling customers” (Chung, 2006, p.115). Chung (2006) also found a strong association between customer citizen behavior and customer satisfaction (p. 116). Findings also indicated that global service quality influenced global satisfaction more for low then high users while high users were not influenced more than low users in global customer satisfaction on perceived global service quality (Chung, 2006, p. 117). Finally, Chung (2006) did not find that “a stronger influence of perceived global service quality on customer citizenship behavior for low compared to high involved participants (p. 118).

Dhurup et al. (2006) studied patrons (N = 251) of fitness centres in Gauteng, South Africa. The intent of their study was to explore service quality attributes that are important to fitness club patrons in South Africa and to develop the HAFSQ (Health and Fitness Service Quality scale; Dhurup et al., 2006). Respondents rated personnel, programming and medical as well as convenience and information dissemination most

important. Respondents also indicated that safety and support as well as facility attraction were least important of the dimensions. A Cronbach's alpha test showed strong internal consistency (a= 0.941). Conclusions indicate that personnel are more important than facilities to patrons of Fitness Clubs in South Africa (Dhurup et al., 2006).

Osman et al. (2006) conducted a study of service quality, satisfaction and user intentions at a campus recreation center at a mid-western university. Their study (N = 249) included only students and their gender, age and class level. Results indicated that facility ambiance, operations quality and staff competency positively influenced use's overall satisfaction (Osman et al., 2006). They also found facility ambience and operations quality were significant predictors of member re-use intentions however staff competency and user satisfaction did not have a significant influence on member's future re-use intentions (Osman et al., 2006). In addition, they found that satisfaction had a significant influence on member's intentions to recommend the recreation center to their friends and facility ambience and staff competency were not predictors of the recommendation intention (Osman et al., 2006).

Lagrosen and Lagrosen (2007) used qualitative methods to study service quality in 15 Swedish health clubs. Interviews were conducted with both staff (n = 55) and customers (n = 71). Results indicated that three dimensions of service quality are important in Swedish fitness clubs including: (a) physical change; (b) mental change; and (c) pleasure. In addition, two direct factors were indicated: (a) technical competence; and (b) relational competence as well as six indirect factors including: (a) facilities;

(b) training; (c) evaluation; (d) empowerment; (e) climate; and (f) leadership (Lagrosen & Lagrosen, 2007).

Ko and Pastore (2007) studied students, faculty and staff, family members and others (N = 241) participating in the recreational sports program at a Midwestern university. The study included students 82% (n = 198), females 54% (n = 129), Caucasians 55% (n = 133), African Americans 8% (n = 20), Asian Americans 21% (n = 51). The intent of the study was to develop the Scale of Service Quality in Recreational Sports. They were able to identify four dimensions including: (a) program quality; (b) interaction quality; (c) outcome quality; and (d) physical quality. Their findings also showed these four dimensions supported by 11 sub- dimensions. The original questionnaire included 77 items and was further purified to a total of 49 items. Results showed that respondents were satisfied with services provided by the recreational sports program. Respondents also rated the following sub-dimensions highest (in order): valence; physical change, range of program; client-employee interaction; inter-client interaction; and program information. Respondents rated the following sub- dimensions less favorably (in order of lowest score): ambient condition; design and sociability.

Shonk et al. (2010) used a modified Ko and Pastore (2007) survey (N = 4302) student (n = 3322), faculty and staff (n = 980) at a mid-sized university located in the middle Atlantic region of the United States. The sample was 70.8% female with an average age of 25.42 years. They intended to study if social identification (high users and low user) is a moderator between service quality and customer satisfaction. Results showed that social identification is a moderator between service quality and customer

satisfaction in outcome quality and program quality but it is not a moderator between service quality and customer satisfaction in interaction quality and physical environment quality (Shonk et al., 2010).

Demir and Cimen (2012) studied the reliability and validity of Ko and Pastore (2007) SSQRS for use in Turkish municipal recreational sports settings. Their study included members (N = 304) using 11 municipal sport centers in Ankara, Turkey. Their findings indicate that 10 of 11 sub-dimension of the SSQRS are acceptable for use in Turkish recreational sports settings. The sub-dimension, ambient condition was found to not be usable in the Turkish recreational sports setting. Cronbach's alpha test of the sub dimensions ranged from .72 to .91 (Demir & Cimen, 2012).

Soleymani et al. (2012) studied students attending Islamic Azad University in Iran (N = 800) using a modified version of the Ko and Pastore (2007) SSQRS. The intent of the study was to test the social identification theory with service quality in recreational sports. Results indicated that identity did have a moderating role between satisfaction and the following dimensions: (a) quality of provided services; (b) quality of result; and (c) quality of interaction. Results also indicated that identity is not a moderator between satisfaction and quality of environment (Soleymani et al., 2012). These results are similar to the findings of Shonk et al. (2010) who found that social identification is a moderator between service quality in the two dimensions of outcome quality and program quality while using the SSQRS.

In summary, service quality has been studied for decades in a number of recreation and leisure settings. Original work by Parasuramen et al. (1985) produced five

dimensions of services quality which have been scrutinized in the recreation and leisure setting most notably by Crompton and MacKay (1989) and Hamilton et al. (1991). Continued use of service quality measures in recreation and leisure settings has increased the body of knowledge in service quality. Recently, researchers have specifically targeted recreational sports settings, adding to the body of knowledge in service quality and recreational sports programs. Service quality findings in recreational sports programs indicate differences in participant behavior intentions, gender, national origin, social identity, and program type.

Benefits

Studies in perceived recreational benefits from participation in recreational activities have appeared in the literature since 1991. Multiple researchers have built on the work of Driver. Driver (1990) proposed five general categories for benefits including: personal (psychological), personal (psycho-physiological), environmental, social and cultural and economic (Driver, 1990). These five categories were further supported with 103 distinct attributes. Bryant et al. (1995) conducted the original research in perceived recreational benefits of participation in recreational sports programs.

Table 5 shows studies conducted in recreational sports settings focusing on perceived recreational benefits. Perceived recreational benefits have been studied in numerous ways. Table 5 displays the publication date/ author; location and industry; sample size; constructs; and findings for each of the perceived recreation benefits studies conducted in recreational sports programs settings. Many of these studies explored the

use of the Quality and Importance of Recreation Services as well as other attributes of recreational sports settings, such as: (a) program satisfaction; (b) participation patterns; university recruitment and retention; (c) importance of programs and post graduation intent to participate; (d) gender; (e) ethnicity; (f) position at the institution; and (g) type of institution.

Table 5

Studies Conducted in Perceived Recreational Benefits in Recreational Sports Program Settings

Publication date and author	Location and Industry	Sample	Constructs	Findings
(1995) Bryant, Banta & Bradley	Large R1 Institution Recreational Sports Programs	(N= 591)	Pilot Testing and Development of QIRS	Differences existed in QIRS benefits items between Caucasians, African Americans and Asians. Non-traditional students were less satisfied with programs and services then traditional aged students
(1997) Kovac & Beck	Pacific NW R1 Institution Recreational Sports Programs	(N= 246)	QIRS used for satisfaction and patterns of participation	Males and females reported differences in perceived benefits of participation. Females were more satisfied in participation in rec sports especially in participation providing individual and social benefits. Males reported satisfaction in self. Minorities associated benefits in social and community building areas
(2001) Haines	The Ohio State University Recreational Sports Programs	(N= 374)	QIRS used for Recruitment and Retention, Importance of Rec Sports after Graduation, and Benefits of Rec Sports	Males and females differed in derived benefits from participation in rec sports. Rec sports had a higher influence on males then females in recruitment and retention. 90% of undergrads felt that sports and fitness will be important after graduation
(2005) Forrester & Beggs	A Post Secondary Institution Recreational Sports Program	(N= 718)	QIRS Validation	Suggested sub dimensions of social, fitness and intellectual
(2006) Lindsey & Sessoms	Small SE University Recreational Sports Programs	(N= 244)	QIRS use for recruitment and retention and participation frequency	Juniors and seniors reports rec sports facilities as being important in choice of school to attend. Women reported that they would like to participate in recreational sports activities more times per week then men. Juniors and seniors reported that they were more likely to participate in recreational sports activities more times per week then freshmen and sophomores

(table continues)

Publication date and author	Location and Industry	Sample	Constructs	Findings
(2006) Artinger, Clapham, Hunt, Meigs, Milord, Sampson, and Forrester	Mid- Sized University in the United States	(N= 349)	University integration, personal social benefits, cultural social benefits, and social group bonding	Differences in derived benefits between genders, place of residence, year in school, type of intramural sport played, and number of sports played.
(2011) Lower	Recreational Sports Participants at Baylor University	(N= 1919)	Goal orientation impacts on perceived benefits in recreational sports using the QIRS	Sport club participants reported high overall benefits as well as social benefits, intellectual benefits and fitness benefits. Ego orientation does not influence perceived benefits and task orientation does influence perceived benefits with participation in recreational sports programs.
(2012) Sturts & Ross	Recreational Sports Participants in a large US Midwest Institution	(N= 301)	Social Outcomes of Intramural Participants	Females, on campus students and first year students reported receiving higher benefits from Intramural participation
(2012) Lindsey	US Small SE HBCU Recreational Sports Programs	(N= 158)	Benefits, satisfaction in Rec Sports, males/ females, African Americans using NIRSA QIRS	Males reported higher satisfaction in the benefits of: feeling of physical well being, sport skills, fitness, physical strength, stress reduction, and balance/ coordination. Both groups reported benefitting from recreational sports participation in communication skills, respect for others, sense of accomplishment, leadership skills and self- confidence

Note. QIRS- Quality and Importance Scale developed by the NIRSA research group for use by institutional members; R1 = research based university; HBCU = historical black college and university.

The first study of the Quality and Importance of Recreation Services (QIRS) was conducted by Bryant, Banta and Bradley in 1995. These researchers collaborated with the NIRSA to develop the QIRS assessment tool. Their pilot study included seniors at a comprehensive research institution (N = 591). Upon completion of the pilot test, the assessment tool was revised, then administered to students (N = 2586) at five additional

institutions of varying sizes and institutional missions. The second phase of the pilot test showed that Caucasians rated the importance of the following benefits significantly less than African Americans: (a) respect for others; (b) friendships; and (c) problem- solving skills. Also, they found that Caucasians rated the importance of the following benefits less than Asian Americans in: (a) physical well-being, (b) sense of accomplishment; (c) belonging/ association; (d) time management skills; (e) weight control; (f) sport skills; (g) fitness; (h) physical strength; and (i) stress reduction. Additionally, they found that both African Americans and Asian Americans rated the importance of the following benefits higher than Caucasians: (a) self confidence; (b) sense of adventure; and (c) balance/ coordination (Bryant et al., 1995). Other findings from this study included: (a) minority students indicated that recreational programs and facilities influenced their decision to attended the institution and continue at the institution; (b) minority students indicated that participation encouraged more access to faculty, staff and administrators at the institution; (c) respondents rated the top five activities as intramurals, fitness, drop in, jogging and aquatics; (d) respondents indicated a need for more aerobics, conditioning activities, fitness facilities and classes; (e) respondents at four of the five institutions showed interest in the availability of outdoor adventure programming; and (f) non-traditional students were more dissatisfied with recreational programs and services then traditional aged students (Bryant et al., 1995).

Kovac and Beck, 1997 reported similar findings in their study of undergraduate students (N = 246) at a research institution located in the Pacific Northwest. These reserchers intended to further test the QIRS assessment tool as well as participation

patterns and satisfaction of women and minority students. Respondents indicated that they were generally satisfied with the recreational sports programs and facilities (especially women respondents). Like Bryant et al. (1995) they also found that minority students indicated that availability of recreational sports program and facilities influenced their decision to attend the institution as well as stay at the institution. Respondents also indicated the importance of the following perceived benefits: fitness, feeling of physical well-being, sense of accomplishment, stress reduction and physical strength. Women and minorities rated social and community concerns higher then Caucasian men (Kovac & Beck, 1997).

In a 2001 study of students (N = 374) at The Ohio State University, Haines also reported results that matched earlier studies. His study focused on recruitment and retention, importance of sports and fitness after graduation, and benefits from University recreation. Respondents rated the importance of the following benefits highest among the 22 possible perceived recreational benefits: (a) fitness, (b) feeling of physical well-being, (c) physical strength, (d) stress reduction, (e) sense of accomplishment, (f) balance/ coordination, (g) weight control, and (h) sports skills (Haines, 2001). Haines (2001) also found differences among genders with males gaining more from a feeling of physical well-being and fitness. While females gained more from a sense of accomplishment, respect for others, weight control, physical strength and stress reduction (Haines, 2001). Other findings included: (a) males were more influenced in recruitment to the institution by availability of recreational sports programs; (b) more than 90% of

respondents indicated that sports and fitness will be important after graduation (Haines, 2001).

Forrester and Beggs (2005) studied students (N = 718) participating in club sports, intramurals, strength and conditioning, aquatics, group exercise classes, and informal drop in recreation at a post secondary institution. The intent of the study was to validate the NIRSA QIRS instrument and to investigate single items in the QIRS and the potential for forming dimensions. A Cronbach's alpha test indicated strong reliability for the three dimensions of social (.892), fitness .900 and intellectual skills (.894; Forrester & Beggs, 2005). Forrester and Beggs' (2005) suggest the following dimensions: (a) social-group cooperation skills, respect for others, feeling a sense of belong and leadership skills; (b) fitness- feeling of physical well-being, sense of accomplishment, sense of adventure, sports skills, fitness, physical strength, stress reduction, balance-coordination skills, and self confidence; and (c) intellectual- communication skills, problem solving, study habits, time management skills, understanding written information and ability to handle several tasks at once (Forrester & Beggs, 2005). They also suggest that self confidence can be found in all three areas and is more multi-dimensional then may be appropriate for use in the QIRS instrument (Forrester & Beggs, 2005).

Lindsey and Sessoms, 2006 using a modified version of the QIRS studied undergraduate students (N = 244) at a small university in the southeast. Their study focused on recruitment and retention, number of recreational sport program participations per week, by class standing and gender. Their results indicated that 73% of students all respondents indicated that sports and fitness will be important to them after graduation.

Interestingly, 65% of African Americans indicated that sports and fitness will be important to them after graduation when compared to other groups. Additionally, 35% of African American students indicated that availability of recreational sports programs was important to very important in deciding to continue at the same institution. In addition, juniors and seniors indicated that availability of recreational sports programs and facilities influenced their decision to attend and continue at the institution. Respondents also rated the following perceived recreational benefits highest: (a) feeling of physical well-being; (b) sense of accomplishment; (c) respect for others; (d) improved fitness; (e) stress reduction; and (f) developing friendships (Lindsey & Sessoms, 2006).

Artinger et al. (2006) studied student participants in an intramural program at a mid-sized university (N = 349). The intent of their study was to investigate university integration, personal social benefits, cultural social benefits, and social group bonding. Results indicated that differences in derived benefits between genders, place of residence, year in school, type of intramural sport played, and number of sports played. Female respondents (n = 172) reported significantly higher benefit in: "(a) increase my commitment to my peers, (b) increases my willingness to learn about different cultures, (c) increase my community involvement, (d) improves my ability to work within a team, (e) adds to social bonding and support, (f) improved my ability to socially interact, and (g) allows me to bond with my teammates" (Artinger et al., 2006). Students living on campus reported receiving higher benefits in: "(a) improves my sense of belonging within the university, (b) increases my commitment to my peers, (c) improves my ability to work within a team, (d) increase my tolerance of different cultures, (e) helps me to

manage my time better, and (f) improves my ability to socially interact" (Artinger et al., 2006). First year students reported receiving higher benefits then fourth year students in: "(a) improves my sense of belonging within the university, (b) improves my sense of responsibility to my university, (c) increases my tolerance of different cultures" (Artinger et al., 2006). Students participating in three or more sports reported receiving higher benefits then those participating in one sport including the following benefits: "(a) increase my commitment to my peers, (b) increase my community involvement, (c) adds to social bonding and support, and (d) allows me to bond with my teammates" (Artinger et al., 2006). Female only and co-ed sports participants showed significant differences where men's only participants did not (Artinger et al., 2006).

Lower (2011) studied students (N = 1919) participating in sport clubs, intramural sports and group fitness in a collegiate recreation program. In intent of the study was to investigate how goal orientation impacts on perceived benefits in recreational sports using the NIRSA QIRS instrument. Results indicate that sport club participants reported high overall benefits as well as social benefits, intellectual benefits and fitness benefits. In addition, intramural participants reported benefitting in social and intellectual more than group fitness participants, while group fitness participants reported greater fitness benefit than intramural participants (Lower, 2011, p. 67). In addition, intellectual benefits were reported as least important to all three participant types (sport clubs, intramurals and fitness). Results also indicate that ego orientation does not influence perceived benefits and task orientation does influence perceived benefits with participation in recreational sports programs.

Sturts and Ross (2012) studied university students (N = 301) at a large public institution in the Midwest. The intent of their study was to investigate social outcomes of intramural participants and differences between a number of demographic categories, using a modified version of Artinger et al., (2006) social benefits questionnaire. Results indicated difference in gender with females rating higher in the following outcomes: (a) increases my satisfaction with my university experience; (b) improves my overall happiness; (c) improves my ability to work within a team; (d) increases my community involvement; (e) helps to manage my time better; (f) improves my ability to socially interact; and (g) allows me to bond with my teammates (Sturts & Ross, 2012, p. 33). Results also indicated that "sense of belonging within the university increased with age" (Sturts & Ross, 2012, p. 34). In terms of ethnicity, white students reported benefiting more in the following areas: (a) improves my overall happiness; (b) improves my self confidence; (c) increases willingness to perform at best potential; (d) increases community involvement; (e) manages time better; (f) increase feeling of self-worth; and (g) allows bonding with teammates (Sturts & Ross, 2012, p. 34). Differences were also indicated in type of sport played. Co-recreational intramural participants experienced more powerful social outcomes then men only and women only sports) in the following areas: (a) reduces social alienation; (b) improves ability to work within a team; (c) improves sense of responsibility to the university; (d) increase willingness to perform at best potential; (e) increases community involvement; (f) helps to manage time better; (g) increases feeling of self-worth; (h) improved ability to socially interact; and

(i) allowed students to bond with teammates (Sturts & Ross, 2012, p. 35). In general, higher benefits were reported by females, on campus students and first year students while the larger difference was found in improving ability to work within a team (Sturts & Ross, 2012, p. 36).

Lindsey (2012) studied undergraduate students (N = 158) perceptions of recreational benefits in a small private southeastern historically black college and university. Using the QIRS assessment tool, Lindsey intended to explore perceived benefits from participation in recreational sports programs and satisfaction of recreational sports program services and facilities. Results indicated that 54% of respondents were satisfied with their experience in participating in recreational programs and activities. In this study, males rated physical well-being, sport skill, physical strength, stress reduction, and balance/ coordination significantly higher than females. Less significant results indicated that overall students benefit from communication skills, respect for others, sense of accomplishment, leadership skills and self confidence (Lindsey, 2012).

In summary, recreational sports programs have also been studied in terms of importance and perceived benefits. The initial study in this area was conducted by Bryant et al. (1995). These authors found that access to campus recreation facilities and programs were a determining factor in choosing to attend and stay in school. This was especially true in the African American sample. They also found that African American students reported a benefit of access to campus recreation facilities and programs also gave them more access to faculty and administrators. Minority students also reported higher importance then the Caucasian students in a number of perceived benefit

categories. Other studies have concluded that benefits of recreational sports programs include: (a) feeling of physical well-being; (b) sense of accomplishment; (c) respect of others; (d) improved fitness; (e) physical strength; (f) stress reduction; and (g) balance and coordination. Many studies have also shown differences in perceived recreational benefits based on class rank, gender, and ethnicity.

Summary

The literature pertaining to recreational sports programs, dimensions of service quality, and perceived recreational benefits is extensive and well documented. Studies in the area of leisure programs and services and service quality have been pursued since the early 1990's. For example, Crompton and MacKay (1989) studied service quality in park and recreation agencies in Halifax, Canada and reported that specific dimensions of services quality have different importance based on participant types. For example, hockey players rated the quality of facilities as most important while painting class participants rates reliability of the staff as most important. More recently, researchers have suggested that service quality is central to the success of recreational sports programs. Key elements in linking dimensions of service quality to recreational sports programs include: (a) program quality; (b) interaction quality; (c) outcome quality; and (d) physical quality (Ko & Pastore, 2007).

To date, no studies have investigated the relationship between service quality and perceived benefits in recreational sports programs. This is the focus of this study and the design involves viewing different types of educational institutions, type of recreational program, participant types, national origin, gender, and ethnicity. As previously

indicated, the literature does reflect research studies that have linked service quality and several of the fore mentioned variables and other variables including: (a) customer expectations (Hamilton et al., 1991; Papadimitriou & Karteroliotis, 2000); (b) loyalty (Backman & Veldkamp, 1995); (c) behavioral intentions (Howat et al., 1999, Osman et al., 2006); and (d) social identification (Shonk et al., 2010). In addition, the literature also includes, investigations that have linked perceived benefits to: (a) recruitment and retention (Bryant et al., 1995; Haines, 2001; Kovac & Beck, 1997; Lindsey & Sessoms, 2006), (b) importance after graduation (Haines, 2001; Lindsey & Sessoms, 2006), and (c) increased access to faculty and administrators (Bryant et al., 1995).

CHAPTER 3

METHODS AND PROCEDURES

The purpose of the study was to explore dimensions of service quality and perceived recreational benefits in recreational sports programs. In addition, the study explored how institutional type as reflected in its mission impacts on these factors. Also, the study sought to explore dimensions of service quality and perceptions of recreational benefits when reviewing program areas such as intramurals, aquatics and fitness. The study was also designed to explore dimensions of service quality and the relationship to perceptions of recreational benefits and other variables such as participant types, national origin, gender, and ethnicity.

This chapter discusses the study's population as well as presents the methods used in this study. This chapter is divided into four sections including: (a) selection of the subjects, (b) instrumentation, (c) collection of data, and (d) treatment of data. Selection of participants describes the population of this study who use the intramural, fitness and aquatics programs at the three types of intuitions being studied including: (a) liberal arts college; (b) comprehensive university; and (c) research based university. The instrumentation section describes demographic information, the original NIRSA Benefits study (QIRS) and the original SSQRS. The collection of data section describes how the data was gathered from each of the three institutions and each of the three studied programs (i.e. intramurals, aquatics and fitness). The treatment of data section describes methods for analyzing the data after collection.

Selection of the Subjects

This study examines the perceptions of dimensions of service quality and recreational benefits in recreational sports programs. More specifically it examines these constructs and participants in intramurals, aquatics and fitness programs at the three types of institutions including: (a) liberal arts college (n = 1747); (b) comprehensive university (n = 12, 273); and (c) research based institution (n = 31,498). The mission statement for the liberal arts college is:

> "… is dedicated to challenging and nurturing students for lives of leadership and service as spirited expression of their faith and learning. The institution helps students discover and claim their callings—connecting their learning with faith and values, their understanding of themselves and their gifts, their perspective on life and the future, and the opportunities for participating in church, community, and the larger society in purposeful and meaningful ways."

The mission statement for the comprehensive university is:

> "the university is recognized as having a mission of sufficient scope to enable it to be a distinguished arts and sciences university with an outstanding teacher education program. It provides leadership in the development of programs for the pre- service and in-service preparation of teachers and other educational personnel for schools, colleges, and universities. The institution offers undergraduate and graduate programs and degrees in the liberal and practical arts and sciences, including selected areas of technology. It offers pre- professional programs and conducts research and extension programs to strengthen the educational, social, cultural, and economic development of the state and the larger community. Evolution from a state college to a university entailed a broadening of offerings, development of more specialized undergraduate and graduate programs, and greater emphasis on research and public professional services."

The mission statement for the research based university is:

> "…a threefold mission of teaching, research, and public service. The University seeks to advance scholarly and creative endeavor through leading-edge research and artistic production; to use this research and creativity to enhance undergraduate, graduate, and professional education, health care, and other services provided to the people of the state, the nation, and the world; and to educate students for success and personal fulfillment in an increasingly diverse and global environment."

The participants are identified as those who are current members in the electronic communication databases of the previously mentioned programs during the Spring semester, 2013. The study was limited to the three types of programs (i.e. intramurals, aquatics and fitness) as those are the programs that can be found in the recreational sport programs on all three chosen campuses. All three institutions have membership categories for: (a) students, (b) faculty and staff, (c) alumni and (d) community. Therefore, the category of "participant type" will include all four of these groups (students, faculty and staff, alumni and community). All three institutions enroll international students and have international faculty and staff. Two groups (US citizen and not- US citizen) will make up the "national origin" category. The Integrated Postsecondary Education Data System (IPEDS) definitions for new race and ethnicity categories were employed in this study. They are: (a) Hispanic or Latino; (b) American Indian or Alaska Native; (c) Asian; (d) Black or African American; (e) Native Hawaiian or Other Pacific Islander; and (f) White.

All three intramural programs use IMLeagues software to administer their program. IMLeagues is an online software package that assists intramural administrators with program registration, communication with participants and program delivery. One feature of the IMLeagues software package is the ability to email all participants that are enrolled in the intramural program at each institution. The intramural enrollment at the three institutions is: (a) liberal arts college (n = 325); (b) comprehensive university (n = 2262); and (c) research based university (n = 6417). All three aquatic programs use an electronic email distribution system to communicate with participants. Aquatic

enrollment at the three institutions is: (a) liberal arts college (n = 264); (b) comprehensive university (n = 473); and (c) research based university (n = 99). In addition, all three fitness programs use an electronic email distribution system to communicate with participants. Fitness enrollment at the three institutions is: (a) liberal arts college (n = 154); (b) comprehensive university (n = 1082); and (c) research based university (n = 193).

Instrumentation

The instrument for this study (see Appendix C) is being used to measure the dimensions of service quality and perceived recreational benefits of individuals participating in recreational sports programs. An importance-performance matrix (developed by Martilla & James, 1977) will serve as the survey design. The survey includes questions from the NIRSA QIRS study as well as the Ko and Pastore, 2007 SSQRS study.

The first section of the survey provides an introduction. In addition, the first section records participation frequency as well as the last time the respondent used the recreational sports department's programs.

The second section includes the importance-performance analysis including 64 questions**.** The questions are based on two studies: (a) NIRSA's QIRS; and (b) Ko and Pastore's SSQRS.

The third section of the survey records demographic information such as: (a) type of institution (liberal arts college, comprehensive university or research based university);

(b) program type (intramurals, aquatics or fitness); (c) participant type (student, faculty/ staff, alumni or community); (d) national origin (US Citizen or not US Citizen); (e) gender (male or female); and (f) ethnicity (Hispanic or Latino, American Indian or Alaska Native, Asian, Black or African American, Native Hawaiian or Other Pacific Islander, or White).

The fourth section asks participants to respond to the importance of recreational sports in their decision to attend the institution. In addition, the participants are asked to respond to the importance of recreational sports in their decision to continue at the institution.

The fifth section, asks the participants if they would like to participate in a random drawing. This drawing was implemented as an incentive for participation in the survey as well as an incentive to complete the survey.

The importance-performance analysis technique (I-P) developed by Martilla and James (1977) was originally tested in the automobile sales industry. It has been widely used in a number of industries including recreation and leisure settings: (a) tourism (Crompton & Duray, 1985); (b) recreation management (Havitz, Twynam & DeLorenzo, 1991; Novatorov, 1997; Williams & Neal, 1993); (d) recreation facility management (Bartlett & Einert, 1992; Guadagnolo, 1985; Hollenhorst, Olson & Fortney, 1992; Richardson, 1987); (e) Hospitality (Oh, 2001).

For program service quality dimensions and recreational benefits, the importance rating involved the adoption of a 5-point scale. The terms utilized were as follows: “5” = very important, “4” = important, “3” = neutral, “2” = somewhat important, and

"1" = not at all important. The performance rating 5-point scale was as follows: "5" = very high performance, "4" = high performance, "3" = neutral, "2" = low performance, and "1" = very low performance.

In addition, an attractive feature of the I-P analysis is that it provides an opportunity to graphically display the results on a two-dimensional grid, shown in figure 2. The grid will provide an opportunity for additional interpretation of the results by illustrating the findings in four quadrants. The quadrants of the grid are as follows: (a) concentrate here- this quadrant indicates that service quality dimensions or recreational benefits are important but that performance needs improvement; (b) keep up the good work- this quadrant suggests that service quality dimensions or recreational benefits are important to the organization and performance is not a concern; (c) low priority- this quadrant suggests that service quality dimensions or recreational benefits are not important and, in addition, its performance is not a high priority to organizational success; and (d) possible overkill- this quadrant indicates that service quality dimensions or recreational benefits are important, yet, too much attention is being paid to its performance. Figure 2 shows the four quadrant grid.

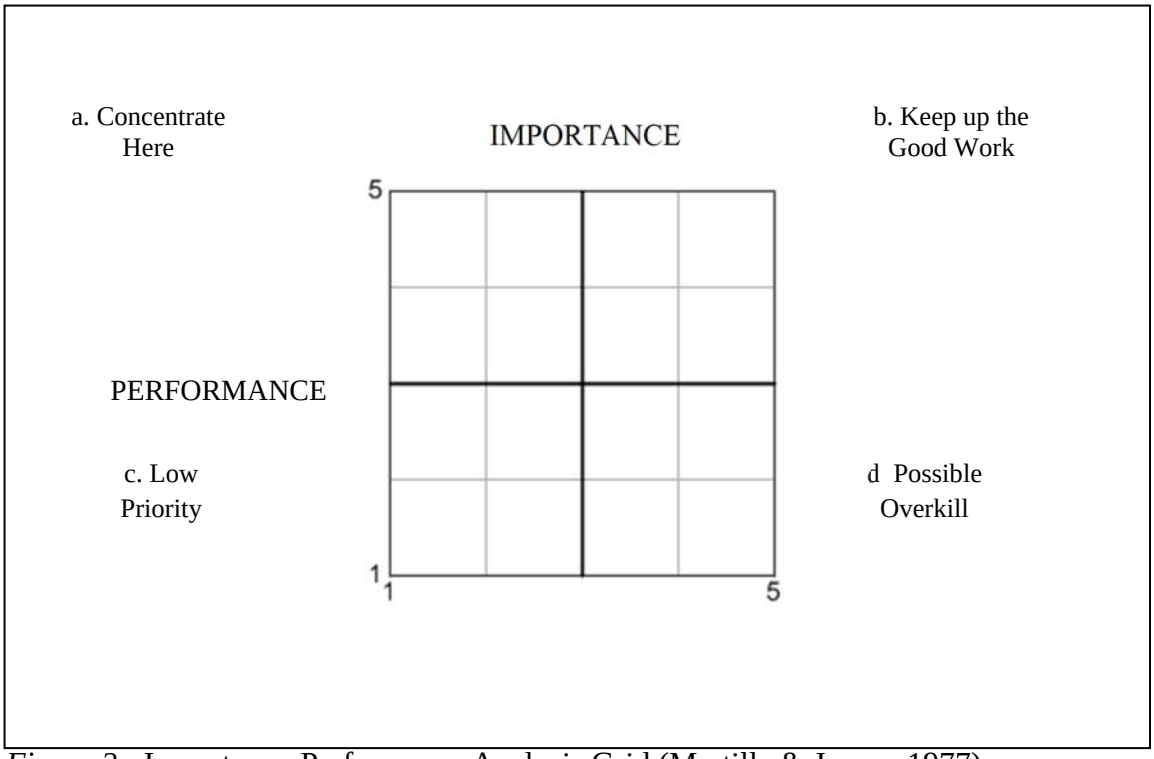

Figure 2: Importance-Performance Analysis Grid (Martilla & James, 1977)

The service quality related questions found on the questionnaire used in this study are based on the Scale of Service Quality in Recreational Sports, developed by Ko and Pastore in 2007. The SSQRS contains four dimensions including: (a) program quality; (b) interaction quality; (c) outcome quality; and (d) physical environment. The program quality dimension is supported by range of programs, operating time, and dissemination of program information. Interaction quality is supported by client-employee interaction and inter-client interaction. Outcome quality is supported by physical change, valence, and sociability. Physical environment is supported by ambient condition, design and equipment. The original SSQRS also included four questions related to satisfaction. The researcher does not intend to use the satisfaction construct in this current study as the

importance-performance analysis will more broadly show participants perceptions of recreational benefits received and perceptions of the dimensions in service quality.

Table 6 presents the Cronbach alpha reliability testing for the 11 sub dimensions found in the SSQRS. Overall, the scale was shown to be very reliable with an alpha score range of .73 to .94. According to Urdan, an alpha score above .70 shows an acceptable reliability (Urdan, 2010, p. 178). The 11 sub dimensions include: (a) range of programs; (b) operating time; (c) information; (d) client-employee interaction; (e) inter-client interaction; (f) physical change; (g) valence; (h) sociability; (i) ambient condition; (j) design; and (k) equipment.

Table 6

Reliability Measures of the Scale of Service Quality in Recreational Sports

Subdimension	Ko and Pastore Factor (a)
Range of programs	.86
Operating time	.81
Information	.83
Client-employee interaction	.94
Inter- client interaction	.86
Physical change	.92
Valence	.92
Sociability	.88
Ambient condition	.91
Design	.93
Equipment	.73

Note. Ko and Pastore (2007)

The recreational benefits related questions found in the importance-performance analysis are based on the 1991 QIRS instrument. The QIRS was a project commissioned by the NIRSA and developed by the Center for Assessment Research and Development at the University of Tennessee. The QIRS was pilot tested at the University of Tennessee (N = 591), then revisions were made. Soon after, a second pilot test (N = 2586) was conducted at five other institutions of varying sizes and institutional missions (Bryant et al., 1995). Further QIRS studies have been conducted by recreational sport programs on numerous occasions including: Haines, 2001; Lindsey and Sessoms, 2006; and Lindsey,

2012. Haines, 2001 notes that the QIRS has been used further at numerous institutions without results being published (p. 31). Table 7 shows the benefits used in the original QIRS study.

Table 7

Quality and Importance of Recreational Services

Factors
Self-confidence
Feeling of physical well-being
Sense of accomplishment
Sense of adventure
Group cooperation skills
Respect for others
Communication skills
Belonging/ association
Leadership skills
Defining problems
Problem-solving skills
Study habits
Weight control
Sports skills
Fitness
Physical strength
Stress reduction
Balance/ coordination
Time-management skills
Developing friendships
Understanding written information
Handling several tasks at once

Note. NIRSA QIRS benefit factors.

The two scales, NIRSA's QIRS and Ko and Pastore's, SSQRS have been modified to reflect the variables being investigated in this study. For example, questions that overlapped between the two scales were removed, reducing the total number of questions and eliminating duplicate questions. In all cases, overlap questions were taken from Ko and Pastore's, SSQRS as this scale was developed more recently. In addition, neither scale requests participants to respond to fun and personal enjoyment questions. The researcher believes that fun and enjoyment are a benefit sought by college students while participating in recreational sports programs. Therefore, fun has been added to this questionnaire.

Collection of Data

Permission to proceed with surveying the participants at each institution was granted by senior administrative staff. The researcher contacted the Director of the Sports and Wellness Center at the liberal arts college, the Director of University Health Services/ Wellness and Recreation Services at the comprehensive university and the Senior Associate Director of Recreational Services at the research based university. Verbal permission to conduct research in the individual programs was granted by these individuals, followed by a written request (see Appendix A). Participants in the study were sent an email either through IMLeaugues or via departmental email distribution lists with a description of the study, request for participation and a link to the survey. This request for participation included a statement about the importance of the research and an informed consent statement (see Appendix B). Follow up emails were sent to participants at two week and four week intervals. The Institutional Review Board (IRB)

application was completed prior to collection of data. Also, the researcher completed the Human Subjects Protections Training in September of 2007 at their host institution.

Treatment of Data

Multiple methods were used to treat the data after collection. First, demographic information was analyzed using descriptive statistics. Second, a Chi-square or "goodness of fit" test was used to determine sample distributions. Third, a factor analysis was computed and a rotating component matrix was used to identify two sub dimensions of benefits: (a) social benefits; and (b) personal/physical benefits. Fourth, a Pearson's Correlation Coefficient test was used to test hypothesis 1 which states: there is no statistically significant relationship between the respondent's perceived dimensions of service quality and recreational benefits. Fifth, a One-Way Analysis of Variance test (ANOVA) was used to measure the following hypotheses 2-6. These hypothesis' are stated as: (2) There is no statistically significant difference between the respondent's institution and their perceptions of dimensions of service quality and perceived recreational benefits; (3) There is no statistically significant difference between the respondent's perceptions of dimensions service quality and program areas such as intramurals, aquatics and fitness; (4) There is no statistically significant difference between the respondent's perceived recreational benefits and program areas such as intramurals, aquatics and fitness; (5) There is no statistically significant difference between the respondent's perceptions regarding dimensions of service quality and one's position within their institution (participant type), national origin, gender, and ethnicity; (6) There is no statistically significant difference between the respondent's perceived

recreational benefits and one's position within their institution (participant type), national origin, gender, and ethnicity. Seventh, descriptive were used to analyze the importance of recreational sports in recruitment and retention. Lastly, individual attributes (questions) and the overall factors were plotted on I-P matrixes.

CHAPTER 4

RESULTS

The purpose of the study was to explore dimensions of service quality and perceived recreational benefits in recreational sports programs. In addition, the study explored how institutional type as reflected in its mission impacts on these factors. Also, the study sought to explore dimensions of service quality and perceptions of recreational benefits when reviewing program areas such as intramurals, aquatics and fitness. The study was also designed to explore dimensions of service quality and perceptions of recreational benefits and other important variables such as participant types, national origin, gender and ethnicity.

A number of statistical methods were used to analyze the data based on these questions. This chapter will include an analysis of demographic information, derived from a chi square "goodness of fit" analysis. In addition, a correlation analysis will be presented for demographic variables as well as non demographics variables using a Pearson's Correlation Coefficients test. An analysis of variables using One-Way Analysis of Variance (ANOVA) is presented. T tests were used to for association testing in gender. Descriptive statistics were used to present results of recruitment and retention questions. Lastly, I-P matrixes are used to present the importance and performance of the individual attributes and overall factors.

This chapter includes one major section (reporting the results). In addition, this chapter will include nine sub sections including: (a) demographic information; (b) factor analysis (c) reliability testing; (d) service quality and benefit relationship;

(e) institutional differences; (f) program type differences; (g) participant types; (h) gender differences; (i) ethnicity differences; (j) recruitment and retention; and (k) importance-performance.

Reporting of Results

An analysis of the total population (N = 11,301) revealed an overall response rate of 9.7%. After purging incomplete surveys, 750 of the 1094 surveys were usable for the purposes of this study. The three programs populations included: (a) Intramurals (n = 9,036) 2% response, (b) Aquatics (n = 836) 12.9% response, and (c) Fitness (n = 1429) 23% response rate.

An analysis of demographic variables was completed using a frequencies test and is shown in Table 8. Second, a factor analysis was computed to identify two benefit factors from the 15 individual benefit attributes. Third, a Cronbach's alpha test was computed to determine the reliability of the 11 factors for service quality and the two benefits factors. Table 9 shows the alpha scores as well as the mean scores and standard deviations for each of the service quality and benefit questions. Fourth, a Pearson's Correlation Coefficient test was computed to determine correlations between the 11 service quality factors and two benefits factors. These results can be found in Table 10. Fifth, a One-Way Analysis of Variance (ANOVA) was computed to determine the difference in dimensions of service quality and perceived recreational benefits factors by type of institution (liberal arts college, comprehensive university and research based university). These results can be found on Table 11. Sixth, a One-Way Analysis of Variance (ANOVA) test was computed to determine the difference in dimensions of

service quality and perceived recreational benefits factors by type of program (intramurals, aquatics and fitness). These results can be found on Table 12. Seventh, a One-Way Analysis of Variance was computed to determine the difference in dimensions of service quality and perceived recreational benefits factors by participant type (student, faculty/staff, alumni and community). These results can be found in Table 13. Eight, a t test was computed to determine the difference in dimensions of service quality and perceived recreational benefits factors by gender. These results can be found in Table 14. Ninth, a t test was computed to determine the difference in dimensions of service quality and perceived recreational benefits factors by ethnicity. The results from this test indicated no difference between minorities and Caucasians in their perceptions of importance or performance of dimensions of service quality and perceived recreational benefit factors. Therefore, no table was needed to report these findings. Tenth, frequencies were computed for recruitment and retention. Lastly, I-P matrixes were plotted for individual attributes as well as overall factors.

Demographic Information

Gender responses in this study included males (n = 220) and females (n = 404). The liberal arts college (N = 1747) had a gender mix of 53% females and 47% males in 2012. In this study 77% of the respondents from the liberal arts college were female while 33% were male. The comprehensive university (N = 12,273) had a gender mix of 58% female and 42% males in 2012 while 72% of the respondents of this study were female and 28% were male. The research based university (N = 31,498) had a 2012 gender mix of 51% females and 49% males while the respondents to this study included

51% females and 49% males. This study also included faculty/ staff, alumni and community.

The program type designation in this study included intramurals, aquatics and fitness programs. The intramural programs at all three institutions include only students. The liberal arts program had an intramural population (n = 317) with a response of 19 (9%). The comprehensive university had an intramural population (n = 2302) with a response of 65 (2.8%). The research based university had an intramural population (n = 6417) with a response of 101 (1.5%). The liberal arts college aquatics program had a population (n = 264) with a response of 15 (5.6%). The comprehensive university aquatic program had a population (n = 473) and a response of 84 (17%). The research based university had an aquatics population (n = 99) with a response rate of nine (9%). The liberal arts college fitness program had a population (n = 154) with a response of 27 (17.5%). The comprehensive university had a fitness program population (n = 1082) with a response of 174 (16%). The research based university had a fitness population (n = 193) with a response of 130 (67%).

One of the secondary questions of this study was related to national origin. The purpose of this question was to determine if international students, faculty and staff perceived dimensions of service quality and perceived recreational benefits differently than their American collegiate peers. As stated in Chapter 2, there are clear differences found in perceptions of service quality between a number of different countries around the world. This study did not include enough non US citizens in either the students or faculty/ staff category to complete a statistical analysis of responses.

The participant type category of this study included students, faculty/ staff, alumni and community users. The liberal arts college had a 2012 student enrollment (n = 1747) with a response of 24 (1.3%). The comprehensive university had a 2012 student enrollment (n = 12, 273) with a response of 172 (1.4%). The research based university had a 2012 student enrollment (n = 31,498) with a response of 170 (.5%). Accurate population numbers for faculty/ staff, alumni and community users was not available for any of the three types of institutions. Table 8 shows the responses for these categories.

The Liberal Arts College in the study reports a minority and international student population of 18.8% while this study included two minority responses accounting for 3% of the responding population of this institution. The liberal arts college does not report IPED minority categories and only reports minority statistics with international student statistics. The comprehensive university reported a 2012 minority student enrollment of 9% while 17 minorities responded to this study accounting for 5% of the responding population from this institution. The research based university reported a 2012 minority student enrollment of 13% while 29 minorities responded to this study accounting for 12% of the responding population of this institution. All three institutions combined accounted for a combined total of 48 minority responses. The low response in the ethnicity category dictated collapsing the into two categories:
(a) minority and (b) Caucasian.

Year in school categories were designated in the survey as: (a) freshman; (b) sophomore; (c) junior; (d) senior; and (e) graduate. A low response dictated collapsing the five categories into under-classman, upper-classman and graduate students. The collapsing of these categories yielded responses of under-classman (n = 67), upper-classman (n = 233) and graduate students (n = 65).

Table 8 shows the number of usable surveys for each of the demographic variables including: (a) gender, (b) program type (intramurals, aquatics and fitness), (c) national origin (US citizen, not US citizen), (d) participant type (student, faculty/ staff, alumni and community), (e) ethnicity (minority and Caucasian), (f) year in school (under-classman, upper-classman and graduate student).

Table 8

Demographic Characteristics by Institution

Variable		LAC (N = 61)	%	Comp (N = 323)	%	R1 (N = 240)	%	Total
Gender (n = 624)	Male	14	23%	89	28%	117	48.7%	220
	Female	47	77%	234	72%	123	51.2%	404
Program Type (n= 624)	Intramurals	19	31%	65	20%	101	42%	185
	Aquatics	15	25%	84	26%	9	3.7%	108
	Fitness	27	44%	174	54%	130	54.1%	331
National Origin (n = 618)	US Citizen	60	98%	314	97%	234	97.5%	608
	Not US Citizen	0	0.0%	6	1.8%	4	1.6%	10
Participant Type (n = 620)	Student	24	39%	172	53.2%	170	70.8%	366
	Faculty/ Staff	3	5%	99	30.6%	55	22.9%	157
	Alumni	0	0.0%	37	11.4%	9	3.7%	46
	Community	32	52.4%	15	4.6%	4	1.6%	51
Ethnicity (n = 615)	Minority	2	.3%	17	5.2%	29	12.1%	48
	Caucasian	58	95%	302	93.4%	207	86.2%	567
Year in School (n = 365)	Under-class	6	9%	33	10.2%	28	11.6%	67
	Upper-class	18	29%	116	35.9%	99	41.2%	233
	Graduate	0	0.0%	21	6.5%	44	18.3%	65

Note. LAC = Liberal Arts College; Comp = Comprehensive University; R1 = Research Based University; some categories may not equal 100% as a result of incomplete surveys; year in school category only includes students.

Factor Analysis

This study includes 14 attributes found in the NIRSA QIRS questionnaire. In addition, fun was added as an attribute in this study. A Rotated Component Matrix was used to determine the two factors from these 15 attributes. The Principal Component Analysis and Varimax with Kaiser Normalization method were employed. Results indicated that the social benefit factor includes: (a) communication;

(b) leadership; (c) problem solving; (d) group cooperation; (e) respect for others; (f) friendships; (g) adventure; and (h) time management. The personal/ physical benefit factors includes: (a) physical strength; (b) stress reduction; (c) weight control; (d) balance and coordination; (e) accomplishment; (f) self confidence; and (g) fun.

Reliability Testing

Reliability tests were used to measure Cronbach's alpha scores, mean scores and standard deviations for both importance and performance measures by each individual question found on the survey. Urdan (2010) in discussing the use of Cronbach's alpha test for reliability states "A common rule of thumb is that when a set of items has an alpha level of .70 or higher, it is considered acceptably reliable" (p. 178). In this study two single items (class times are convenient and classes are offered several times) showed alpha scores < .70. All other individual questions showed an alpha score above .70. For the Importance factor, class times are convenient had an alpha score of (a = .554) and classes are offered several times had an alpha score of (a = .567). For the performance factor, class times are convenient had an alpha score of (a = .564) and classes are offered several times had an alpha score of (a = .613). Both of these questions are found in the Operating Times factor which had an overall alpha score of (a = .712) for importance and (a = .739) for performance. Therefore the overall factor of Operating Times met the acceptability standards of the Cronbach's alpha test even though not all individual questions did.

In addition, Cronbach's alpha scores were computed for the 11 service quality factors as well as the two benefits factors. Internal consistency was found in the

individual questions with a range of (a = .554) Class Times are Convenient to (a = .945) Friendship Development Benefit. Moderate to strong internal consistency was also found in performance factors ranging from (a = .564) Classes are Convenient to (a = .934) Time Management Skills Benefit. The reliability scores for factors in importance show a strong internal consistency with a range of (a = .712) Operating Times to (a = .946) Social Benefits. The reliability scores for factors in performance also show a strong internal consistency range of (a = .739) Operating Times to (a = 9.37) Social Benefits.

Table 9 illustrates these alpha scores for each question as well as for the questions as they are found in factors. These findings are consistent with Ko and Pastore (2007) reliability scores for factors showing a range of (a =.73) Equipment to (a = .93) Design (p. 36-38).

Table 9

Factors, Attributes, Alpha Scores. Mean Scores and Standard Deviations for Importance and Performance

Factor	Attribute	a (I)	m (I)	sd (I)	a (P)	m (P)	sd (P)
Range of Program (n = 750) I (n = 734) P		.837			.847		
	Offers various programs	.760	4.06	1.034	.798	3.87	.897
	Offers a wide range of classes	.762	4.12	.989	.772	3.85	.884
	Offers popular classes	.830	3.88	1.072	.807	3.92	.906
	Classes are attractive to me	.820	4.11	1.037	.843	3.83	.991
Operating Times (n = 737) I (n = 735) P		.712			.739		
	Operating hours are convenient	.720	4.59	.800	.774	3.87	1.077
	Class times are convenient	.554	4.38	.941	.564	3.54	1.033
	Classes are offered several times	.567	4.30	.886	.613	3.61	1.007
Information (n = 709) I (n = 683) P		.787			.817		
	Personnel easy to contact by e-mail	.741	3.62	1.258	.814	3.75	1.082
	Easy to contact through website	.729	3.89	1.063	.759	3.70	1.043
	Up-to- date information available	.747	4.34	.866	.771	3.84	1.034
	Information is easy to obtain	.745	4.36	.809	.772	3.91	.973
	Easy to contact by phone	.773	3.82	1.161	.789	3.90	1.023
Client-Employee (n = 677) I (n = 656) P		.904			.910		
	Staff knowledge	.896	4.30	.830	.897	3.85	.946
	Staff friendliness	.893	4.36	.799	.902	3.96	.960
	Staff are willing to help	.883	4.39	.820	.893	4.00	.905
	Staff take action when problems occur	.891	4.40	.820	.895	3.92	.929
	Staff are competent	.890	4.46	.766	.892	3.95	.925
	Staff handle problems promptly	.883	4.37	.787	.892	3.88	.916
	Staff deal with special needs of patrons	.896	4.23	.909	.902	3.82	.946

(table continues)

Factor	Attribute	a (I)	m (I)	sd (I)	a (P)	m (P)	sd (P)
Inter-Client (n = 674) I (n = 666) P		.850			.853		
	Other customers have a positive impact on me	.798	3.71	1.067	.809	3.76	.912
	I'm impressed with other patrons	.794	3.60	1.063	.803	3.70	.958
	Customers follow rules and regulations	.855	4.09	.890	.846	3.85	.918
	Customers leave me with a good impression	.781	3.95	.994	.792	3.89	.918
Physical Change (n = 644) I (n = 641) P		.934			.929		
	My physical ability level has increased	.930	4.31	.911	.914	4.04	.926
	Programs have improved my physical ability	.914	4.23	.943	.912	3.99	.920
	I have increased my physical fitness level	.912	4.26	.911	.916	4.00	.925
	I have increased my skill level	.920	4.17	.926	.909	3.93	.930
	I have improved my skill performance	.915	4.16	.921	.914	3.94	.954
Valence (n = 653) I (n = 647) P		.882			.893		
	I feel good about what I get from	.857	4.41	.802	.861	4.09	.889
	I always get what I wanted	.837	4.33	.785	.868	3.94	.911
	I have a good feeling when I leave	.839	4.37	.778	.857	4.16	.841
	I would evaluate the program favorably	.859	4.35	.821	.862	4.19	.835
Sociability (n = 630) I (n = 625) P		.923			.908		
	Opportunities for social interaction	.905	3.45	1.191	.891	3.64	1.071
	I feel a sense of family among customers	.913	3.12	1.258	.886	3.19	1.165
	I made friends through participation	.888	3.27	1.239	.876	3.26	1.227
	I have enjoyed my social interaction	.894	3.49	1.216	.869	3.55	1.158

(table continues)

Factor	Attribute	a (I)	m (I)	sd (I)	a (P)	m (P)	sd (P)
Ambient Condition (n = 627) I (n = 625) P		.887			.895		
	The ambience is excellent	.857	4.01	.954	.868	3.92	.908
	The ambience is what I'm looking for	.854	3.90	1.001	.871	3.93	.922
	The facility is clean and well maintained	.893	4.47	.750	.907	4.12	.932
	I'm impressed with the atmosphere	.847	4.10	.887	.853	3.98	.921
	I really enjoy the atmosphere	.855	4.16	.863	.858	4.07	.902
Design (n = 610) I (n = 605) P		.895			.899		
	The facility is well designed	.862	4.11	.931	.864	4.00	.935
	The facility layout serves my purposes	.867	4.18	.878	.872	4.05	.916
	I'm impressed with facility design	.864	3.97	.989	.864	3.91	1.008
	The facility is aesthetically attractive	.873	3.90	1.034	.880	4.11	.897
	The facility is safe and comfortable	.892	4.41	.826	.902	4.32	.821
Equipment (n = 621) I (n = 611) P		.883			.882		
	The provided equipment is up-to-date	.833	4.44	.771	.823	4.17	.901
	A variety of up-to-date equipment is available	.814	4.39	.758	.830	4.18	.867
	The equipment is in good usable condition	.852	4.56	.683	.844	4.30	.824
Social Benefit (n = 542) I (n = 533) P		.946			.937		
	Sense of adventure	.944	3.44	1.193	.933	3.51	1.101
	Group cooperation skills	.935	3.28	1.237	.924	3.52	1.092
	Respect for others	.937	3.46	1.212	.928	3.58	1.083
	Communication skills	.934	3.24	1.265	.923	3.41	1.128
	Leadership skills	.933	3.19	1.303	.925	3.32	1.176
	Problem solving skills	.935	3.10	1.341	.926	3.26	1.144
	Time management skills	.943	3.33	1.242	.934	3.50	1.127
	Friendship development	.945	3.30	1.271	.931	3.53	1.103

(table continues)

Factor	Attribute	a (I)	m (I)	sd (I)	a (P)	m (P)	sd (P)
Personal/ Physical Benefits (n = 545) I (n = 538) P		.883			.902		
	Self confidence	.869	3.81	1.075	.887	3.90	.945
	Sense of accomplishment	.861	4.07	.973	.887	4.04	.940
	Weight control	.865	4.03	1.091	.889	3.86	.975
	Physical strength	.858	4.16	.993	.885	4.03	.935
	Stress reduction	.861	4.22	.990	.883	4.09	.930
	Balance and coordination	.857	4.00	1.025	.886	3.90	.936
	Fun	.891	4.29	.873	.893	4.15	.904

Note. Questions listed in this table have been modified for fit. Complete questions can be found in Appendix C; a (I) = Cronbach's alpha score for Importance; m (I) = mean score for Importance; sd (I) = standard deviation for Importance; a (P) = Cronbach's alpha score for Performance; m (P) = mean score for Performance; sd (P) = standard deviation for Performance.

Service Quality and Benefit Relationship

Hypothesis #1 stated that there is no statistically significant relationship between the respondent's perceived dimensions of service quality and recreational benefits.

A Pearson correlation coefficient was calculated for the relationship between multiple variables important to this study. Cronk (2012) reports correlation significance as "Generally, correlations with an absolute value greater than 0.7 are considered strong. Correlations with an absolute value less than 0.3 are considered weak. Correlations with an absolute value between 0.3 and 0.7 are considered moderate" (p. 46).

Strong correlations were not found in any of the correlations when analyzed for dimensions of service quality and perceived recreational benefits. Moderate correlations were found between all variables except six. Weak correlations were found in range of program and social benefits importance ($r = .215$, $p < .01$, $n = 539$), operating times and

social benefits importance ($r = .127$, $p < .01$, $n = 532$), physical change and social benefits importance ($r = .297$, $p < .01$, $n = 534$), equipment and social benefits importance ($r = .312$, $p < .01$, $n = 539$). In addition, weak relationships were found between operating times and social benefits performance ($r = .322$, $p < .01$, $n = 525$), and equipment and social benefits performance ($r = .323$, $p < .01$, $n = 525$).

Table 10 shows the correlations between the 11 service quality factors measured for their relationship to social benefits importance and performance as well as personal/ physical benefits importance and performance.

Table 10

Service Quality Factor Correlations by Social Benefits and Personal/Physical Benefits Importance and Performance

Factor	Social Benefits Importance	Social Benefits Performance	Personal/ Physical Benefits Importance	Personal/ Physical Benefits Performance
Range of Program	.215	.385	.424	.507
Operating Times	.127	.322	.423	.379
Information	.394	.402	.470	.444
Client-Employee Interaction	.389	.487	.592	.532
Inter- Client Interaction	.567	.577	.458	.540
Physical Change	.297	.435	.628	.688
Valance	.375	.518	.643	.696
Sociability	.625	.639	.421	.523
Ambient Condition	.457	.478	.567	.539
Design	.427	.418	.534	.533
Equipment	.312	.323	.520	.416

Note. Pearson's Correlation Coefficient test; all correlations are significant at the .01 level.

Institutional Differences

A One-Way Analysis of Variance (ANOVA) was computed to determine service quality and benefits factors with institutional type (liberal arts college, comprehensive university and research based university). Significant difference were found between the

three institutions in multiple areas including Client-Employee Interaction Importance ($F(2,601) = 6.745$, $p < .05$); Physical Change Importance ($F(2, 589) = 5.803$, $p < .05$); Valence Importance ($F(2, 599) = 3.219$, $p < .05$); Personal/ Physical Benefits Importance ($F(2, 540) = 3.293$, $p < .05$); Range of Program Performance ($F(2, 603) = 3.602$, $p< .05$); and Client-Employee Interaction Performance ($F(2, 582) = 4.229$, $p < .05$).

A Scheffe Post Hoc Test was computed to determine the nature of the differences between the three institutions (liberal arts college, comprehensive university and research based university) related to importance. In the case of the Client-Employee Interaction Importance factor, the comprehensive university ($m = 4.41$, $sd = .63$) differed from the research based institution ($m = 4.21$, $sd = .69$). The liberal arts college ($m = 4.42$, $sd = .63$) was not significantly different from the other two institutions. The Physical Change Importance factor also showed differences between the comprehensive university ($m = 4.33$, $sd = .74$) and the research based institution ($m = 4.09$, $sd = .87$). The liberal arts college ($m = 4.10$, $sd = .99$) was not significantly different from the other two institutions. The Valence Importance factor also showed difference between the comprehensive university ($m = 4.43$, $sd = .63$) and the research based university ($m = 4.28$, $sd = .72$). The liberal arts college ($m = 4.40$, $sd = .62$) was not significantly different then the other two institutions. The Personal/ Physical Benefits Importance factor also showed difference between the comprehensive university ($m = 4.14$, $sd = .67$) and the research based institution ($m = 3.97$, $sd = .86$). The liberal arts college ($m = 4.15$, $sd = .80$) was not significantly different then the other two institutions.

A Scheffe Post Hoc Test was also used to determine the nature of the differences between the three institutions (liberal arts college, comprehensive university and research based university) related to performance. The Range of Program Performance factor showed difference between the comprehensive university (m = 3.94, sd = .72) and the liberal arts college (m = 3.65, sd = .79). The research based institution (m = 3.87, sd = .78) was not significantly different from the other two institutions. Lastly, the Client-Employee Interaction Performance factor showed differences between the comprehensive university (m = 3.98, sd = .74) and the research based institution (m = 3.80, sd = .75). The liberal arts college (m = 3.77. sd = .74) was not significantly different from the other institutions.

Table 11 shows the factors that indicated significant difference. Table 11 includes population size, mean scores and standard deviations for all three institutions (liberal arts college, comprehensive university and research based university). In addition, Table 11 shows the F- value, degrees of freedom and significance level for each of the factors that indicated significant differences by type of institution.

Table 11

One- Way ANOVA Test for Service Quality and Benefits by Institution

Factor	n	Lib m	Lib sd	Comp M	Comp sd	R1 m	R1 sd	F	df	sig
Client-Employee Interaction Importance	604	4.42	.63	4.41	.63	4.21	.69	6.74	2	.001
Physical Change Importance	592	4.10	.99	4.33	.74	4.09	.87	5.80	2	.003
Valence Importance	602	4.40	.62	4.43	.63	4.28	.72	3.21	2	.041
Personal/ Physical Benefits Importance	543	4.15	.80	4.14	.67	3.97	.86	3.29	2	.038
Range of Program Performance	606	3.65	.79	3.94	.72	3.87	.78	3.60	2	.028
Client-Employee Interaction Performance	585	3.77	.74	3.98	.74	3.80	.75	4.22	2	.015

Note. Lib = Liberal Arts College, Comp = Comprehensive University, R1= Research Based University; Scale Importance: 1 = Not at all Important; 2 = Somewhat Important; 3 = Neutral; 4 = Important; 5 = Very Important; Scale Performance: 1 = Very Low Performance; 2 = Low Performance; 3 = Neutral; 4 = High Performance; 5 = Very High Performance; m = mean score; sd = standard deviation; f = f- value; df = degrees of freedom; sig = significance level.

Program Type Differences

A One-Way ANOVA was computed to determine the difference between the dimensions of service quality and perceived recreational benefit factors with program type (intramurals, aquatics and fitness). Significant difference were found between the three program types in multiple areas including Range of Program Importance ($F(2, 615) = 11.60$, $p < .05$); Operating Time Importance ($F(2, 608) = 16.06$, $p < .05$); Information ($F(2, 605) = 6.60$, $p < .05$); Client-Employee Interaction Importance ($F(2, 601) = 9.93$, $p < .05$); Physical Change Importance ($F(2, 589) = 19.98$, $p < .05$); Valence Importance ($F(2, 599) = 11.48$, $p < .05$); Sociability Importance ($F(2, 580) = 7.93$, $p < .05$); Equipment Importance ($F(2, 586) = 4.73$, $p < .05$); Social Benefit Importance ($F(2, 537) = 4.66$, $p < .05$); Personal/ Physical Benefits Importance ($F(2, 540) = 14.31$, $p < .05$); Range of Program Performance ($F(2, 603) = 5.20$, $p < .05$); Client- Employee Interaction Performance ($F(2, 582) = 3.24$, $p < .05$); Physical Change Performance ($F(2, 585) = 12.22$, $p < .05$); Sociability Performance ($F(2, 573) = 6.45$, $p < .05$); Social Benefit Performance ($F(2, 528) = 8.32$, $p < .05$); and Personal/ Physical Benefit Performance ($F(2, 533) = 3.74$, $p < .05$).

A Scheffe Post Hoc Test was used to determine the nature of the differences between the three types of programs (intramurals, aquatics and fitness) related to importance. In the case of Range of Program Importance, Intramurals ($m = 3.81$, $sd = .95$) differs from aquatics ($m = 4.06$, $sd = .79$) and fitness

(m = 4.18, sd = .77) however aquatics and fitness did not show a significant difference. The Operating Times Importance factor showed significant difference between intramurals (m = 4.20, sd = .79) and aquatics (m = 4.55, sd = .56) and fitness (m = 4.52, sd = .59) but did not show significant difference between and aquatics and fitness. The Information Importance factor showed significant difference between aquatics (m = 4.23, sd = .64) and intramurals (m = .388, sd = .88) and fitness (m = 3.97, sd = .75) but did not show significant difference between intramurals and fitness. The Client-Employee Interaction Importance factor showed significant difference between intramurals (m = 4.18, sd = .81) and aquatics (m = 4.53, sd = .54) and fitness (m = 4.36, sd = .59) but did not show significant difference between aquatics and fitness. The Physical Change Importance Factor showed significant difference between intramurals (m = 3.90, sd = .97) and aquatics (m = 4.21, sd = .85) and fitness (m = 4.38, sd = .67) but did not show significant difference between aquatics and fitness. The Valence Importance factor showed significant difference between intramurals (m = 4.16. sd = .81) and aquatics (m = 4.43, sd = .62) and fitness (m = 4.45, sd = 4.45) but did not show significant difference between aquatics and fitness. The Sociability Importance factor showed significant difference between intramurals (m = 3.62, sd = .93) and aquatics (m = 3.16, sd = 1.09) and fitness (m = 3.24, sd = 1.16) but did not show significant difference between aquatics and fitness. The Equipment Importance factor showed significant differences between intramurals (m = 4.36, sd = .69) and fitness

(m = 4.53, sd = .61) however aquatics (m = 4.38, sd = .73) did not show a significant difference with either intramurals or fitness. The Social Benefits Importance factor showed significant differences between intramurals (m = 3.50, sd =.99) and fitness (m = 3.18, sd = 1.14) however aquatics (m = 3.26, sd =.90) did not show a significant difference with either intramurals or fitness. The Personal/ Physical Benefits Importance factor showed significant differences in intramurals (m = 3.83, sd = .88) and fitness (m = 4.23, sd = .68) however aquatics (m = 4.02, sd = .72) did not show significant difference between either intramurals or fitness.

A Scheffe Post Hoc Test was also used to determine the nature of the differences between the three types of programs (intramurals, aquatics and fitness) related to performance. The Range of Program Performance factor showed significant differences between intramurals (m = 3.73, sd = .84) and aquatics (m = 3.98, sd = .64) and fitness (m = 3.93, sd = .72). The Client-Employee Interaction Performance factor showed significant difference between intramurals (m = 3.81, sd = .81) and aquatics (m = 4.05, sd = .67) but did not show significant difference between fitness (m = 3.88, sd = .73) and either intramurals or aquatics. The Physical Change Performance factor showed significant difference between intramurals (m = 3.72, sd = .83) and aquatics (m = 4.03, sd = .87) and fitness (m = 4.09, sd = .76) however aquatics and fitness did not show a significant difference. The Sociability Performance factor showed significant difference between intramurals (m = 3.65, sd = .93) and fitness (m = 3.31, sd = 1.05) however aquatics

(m = 3.40, sd = 1.02) did not show significant differences between either intramurals or fitness. The Social Benefit Performance factor showed a significant difference between intramurals (m = 3.68, sd = .81) and fitness (m = 3.31, sd = .99) however aquatics (m = 3.48, sd = .99) did not show a significant difference between either intramurals or fitness. The Personal/ Physical Benefit Performance factor showed significant differences between intramurals (m = 3.88, sd = .77) and fitness (m = 4.07, sd = .71) however aquatics (m = 3.91, sd = .76) did not show a significant difference between either intramurals of fitness.

Table 12 shows the population, mean scores and standard deviation scores for all three program areas (intramurals, aquatics and fitness). In addition, Tables 12 shows the F- value, degrees of freedom and significance level for each factor that showed a significant difference by program type (intramurals, aquatics and fitness).

Table 12

One-Way ANOVA Test for Service Quality and Benefits by Program Type

Factor	n	Intra m	Intra sd	Aqua m	Aqua sd	Fit m	Fit sd	f	df	sig
Range of Program Importance	618	3.81	.95	4.06	.79	4.18	.77	11.60	2	.000
Operating Times Importance	611	4.20	.79	4.55	.56	4.52	.59	16.06	2	.000
Information Importance	608	3.88	.88	4.23	.64	3.97	.75	6.60	2	.001
Client- Employee Interaction Performance	604	4.18	.81	4.53	.54	4.36	.59	9.93	2	.000
Physical Change Importance	592	3.90	.97	4.21	.85	4.38	.67	19.98	2	.000
Valence Importance	602	4.16	.81	4.43	.62	4.45	.58	11.48	2	.000
Social Interaction Importance	583	3.62	.93	3.16	1.09	3.24	1.16	7.93	2	.000
Equipment Importance	589	4.36	.69	4.38	.73	4.53	.61	4.73	2	.009
Social Benefits Importance	540	3.50	.99	3.26	.90	3.18	1.14	4.66	2	.010
Personal/ Physical Benefits Importance	543	3.83	.88	4.02	.72	4.23	.68	14.31	2	.000
Range of Program Performance	606	3.73	.84	3.98	.64	3.93	.72	5.20	2	.006
Client- Employee Interaction Performance	585	3.81	.81	4.05	.67	3.88	.73	3.24	2	.040
Physical Change Performance	588	3.72	.83	4.03	.87	4.09	.76	12.22	2	.000
Sociability Performance	576	3.65	.93	3.40	1.02	3.31	1.05	6.45	2	.002

(table continues)

Factor	n	Intra m	Intra sd	Aqua m	Aqua sd	Fit m	Fit sd	f	df	sig
Social Benefit Performance	531	3.68	.81	3.48	.83	3.31	.99	8.32	2	.000
Personal/ Physical Benefit Performance	536	3.88	.77	3.91	.76	4.07	.71	3.74	2	.024

Note. Intra = Intramurals, Aqua = Aquatics, Fit = Fitness; Scale Importance: 1 = Not at all Important; 2 = Somewhat Important; 3 = Neutral; 4 = Important; 5 = Very Important; Scale Performance: 1 = Very Low Performance; 2 = Low Performance; 3 = Neutral; 4 = High Performance; 5 = Very High Performance; m = mean score; sd = standard deviation; f = f- value; df = degrees of freedom; sig = significance level.

Participant Type Differences

A One-Way ANOVA was computed to determine the difference between the dimensions of service quality and perceived recreational benefits with participant type (student, faculty/staff, alumni and community). Significant differences were found between the four participant types in multiple importance factors including Operating Times ($F(3, 603), = 2.270, p < .05$), Information ($F(3, 601), = 3.830, p < .05$), Inter-Client Interaction ($F(3, 600), = 3.497, p < .05$), Social Benefits ($F(3, 536), = 6.700, p < .05$).

A Scheffe Post Hoc Test was also used to determine the nature of the differences between the four participant types (student, faculty/ staff, alumni, community) related to importance. The Operating Times importance factor showed a difference between students (m = 4.35, sd .73) and faculty/ staff (m = 4.53, sd .56) as well as the community members (m = 4.64, sd .47). Alumni (m = 4.55, sd .44) were not significantly different from the three participant types. The Information importance factor showed a difference between community (m = 4.07, sd .72) and student (m = 3.90, sd .82). Additionally,

students (m = 3.90, sd .82) were different than faculty and staff (m = 4.12, sd .73). Alumni (m = 4.17, sd .57) were not significantly different from any of the other three participant types. The Inter-Client Interaction importance factor showed a difference between students (m = 3.90, sd .833) and faculty/ staff (m = 3.66, sd . 87). Alumni (m = 3.79, sd .76) and community (m = 3.98, sd .71) were not significantly different then the other two participant types. The Social Benefits importance factor showed a differences between students (m = 3.42, sd 1.07) and faculty/ staff (m = 2.95, sd 1.07). Alumni (m = 3.42, sd .89) and Community (m = 3.25, sd .93) were not significantly different then the other two participant types.

Significant differences were also found between the four participant types and multiple performance factors including Physical Change ($F(3, 582) = 5.179$, $p < .05$), Ambient Condition ($F(3, 582) = 4.479$, $p < .05$), Equipment ($F(3, 572) = 3.593$, $p < .05$), and Social Benefit ($F(3, 527) = 6.390$, $p < .05$).

A Scheffe Post Hoc Test was also used to determine the nature of the differences between the four participant types (student, faculty/ staff, alumni, community) related to importance. The Physical Change performance factor showed a difference between students (m = 3.88, sd .82) and faculty/ staff (m = 4.13, sd .76). Alumni (m = 4.23, sd .80) and Community (m = 4.06, sd .76) were not significantly different then the other two participant types. The Ambient Condition performance factor showed a difference between students (m = 4.06, sd .75) and faculty/ staff (m = 3.82, sd .84). Alumni (m = 4.17, sd .68) and Community (m = 4.13, sd .60) were not significantly

different than the other two participant types. The Equipment performance factor showed a significant difference between students (m = 4.29, sd .74) and faculty/ staff (m = 4.04, sd .90). The alumni (m = 4.26, sd .57) and the community (m = 4.26, sd .66) were not significantly different than the other two participant types. The Social Benefits performance factor showed a difference between students (m = 3.54, sd .92) and faculty/ staff (m = 3.16, sd .95). Additionally, faculty/ staff (m = 3.16, sd .95) were significantly different than alumni (3.73, sd .77). Community was not significantly different than any of the other three participant types.

Table 13 shows the factors which indicated a significant difference with participant type (student, faculty/ staff, alumni and community). In addition, Table 13 shows the F- value, degrees of freedom and significance level for each of the factors that indicated a significant difference by participant type.

Table 13

One-Way ANOVA Test for Service Quality and Benefits by Participant Type

Factor	N	Stud m	Stud sd	F/S m	F/S sd	Alum m	Alum sd	Com m	Com sd	F	df	sig
Op Times Imp	607	4.35	.73	4.53	.56	4.55	.44	4.64	.47	5.19	3	.002
Info Imp	605	3.90	.82	4.12	.73	4.17	.57	4.07	.72	3.83	3	.010
Inter-Client Inter Imp	604	3.90	.83	3.66	.87	3.79	.76	3.98	.71	3.49	3	.015
Social Bene Imp	540	3.42	1.07	2.95	1.07	3.42	.89	3.25	.93	6.70	3	.000
Phys Change Imp	586	3.88	.82	4.13	.76	4.23	.80	4.06	.76	5.17	3	.002
Amb Cond Perf	586	4.06	.75	3.82	.84	4.17	.68	4.13	.60	4.79	3	.004
Equip Perf	576	4.29	.74	4.04	.90	4.26	.57	4.26	.66	3.59	3	.014
Social Bene Perf	531	3.54	.92	3.16	.95	3.73	.77	3.44	.83	6.39	3	.000

Note. m = mean score; sd = standard deviation; F = f value; df = degrees of freedom; sig = significance; stud = student; f/s = faculty/staff; alum = alumni; com = community; imp = importance; perf = performance; op = operating times; info = information; inter-client inter = inter-client interaction; social bene = social benefit; phys change = physical change; amb = ambient condition; equip = equipment

Gender Differences

An independent t test was performed to compare the dimensions of service quality and perceived recreational benefit differences by gender. Significant difference were found between genders in multiple areas including: (a) range of program importance;

(b) operating times importance; (c) information importance; (d) client-employee interaction importance; (e) physical change importance; (f) valence importance; (g) ambient condition importance; (h) design importance; and (i) personal/physical benefits importance. In addition, gender differences were found in four performance factors including: (a) physical change performance; (b) sociability performance; (c) social benefit performance; and (d) personal/ physical benefit performance.

An analysis of the Range of Program Importance factor produced a significant t value ($t(616) = -6.442$, $p < .000$). An examination of the means revealed that females ($M = 4.21$) find range of program more important than males ($M = 3.76$). An analysis of the Operating Times Importance factor produced a significant t value ($t(609) = -7.816$, $p < .000$). An examination of the means revealed that females ($M = 4.58$) find operating times more important than males ($M = 4.15$). An analysis of the Information Importance factor produced a significant t value ($t(606) = -3.746$, $p < .000$). An examination of the means revealed that females ($M = 4.08$) find information more important than males ($M = 3.83$). An analysis of the Client-Employee Interaction factor produced a significant t value ($t(602) = -4.630$, $p < .000$). An examination of the means revealed that females ($M = 4.43$) find client- employee interaction more important than males ($M = 4.17$). An analysis of the Physical Change Importance factor produced a significant t value ($t(590) = -4.956$, $p< .000$). An examination of the means revealed that females ($M = 4.34$) find physical change more important than males ($M = 3.99$). An analysis of the Valence Importance factor produced a significant t value ($t(600) = -5041$, $p< .000$).

An examination of the means revealed that females (M = 4.46) find valence more important than males (M = 4.18). An analysis of the Ambient Condition Importance factor produced a significant t value (t(589) = -2.244, p < .025). An examination of the means revealed that females (M = 4.17) find ambient condition more important than males (M = 4.03). An analysis of the Design Importance factor produced a significant t value (t(575) = -2.753, p < .006). An examination of the means revealed that females (M = 4.18) find design more important than males (M = 3.99). An analysis of the Personal/ Physical Benefits Importance factor produced a significant t value (t(541) = -6.054, p < .000). An examination of the means revealed that females (M = 4.22) find Personal/ Physical Benefits more important than males (M = 3.81).

An analysis of the Physical Change Performance factor produced a significant t value (t(586) = -2.521, p < .012). An examination of the means revealed that females (M = 4.04) rate personal/ physical benefits performance higher than males (M = 3.86). An analysis of the Sociability Performance factor produced a significant t value (t(574) = 2.216, p < .027). An examination of the means revealed that males (M = 3.55) rate sociability performance higher than females (M = 3.36). An analysis of the Social Benefits Performance factor produced a significant t value (t(529) = 2.484, p < .013). An examination of the means revealed that males (M = 3.58) rate social benefits performance higher than females (M = 3.37). An analysis of the Personal/ Physical Benefits Performance factor produced a significant t value (t(534) = -2.197, p < .028). An examination of the means revealed that females (M = 4.04) rate personal/ physical benefits higher than males (M = 3.89).

Table 14 shows significant differences in service quality and benefits factors between genders. Table 14 also shows the factor, mean score for male and female respondents, population size, t value, degrees of freedom and significance level.

Table 14

Service Quality and Benefit Differences by Gender

Factor		*m*	*n*	*t*	*df*	*Significance Level*
Range of Program Importance				-6.442	616	.000
	Male	3.76	218			
	Female	4.21	400			
Operating Times Importance				-7.816	609	.000
	Male	4.15	213			
	Female	4.58	398			
Information Importance				-3.746	606	.001
	Male	3.83	214			
	Female	4.08	394			
Client- Employee Importance				-4.630	602	.000
	Male	4.17	215			
	Female	4.43	389			
Physical Change Importance				-4.956	590	.000
	Male	3.99	205			
	Female	4.34	387			
Valence Importance				-5.041	600	.000
	Male	4.18	206			
	Female	4.46	396			
Ambient Condition Importance				-2.244	589	.032
	Male	4.03	204			
	Female	4.17	387			
Design Importance				-2.753	575	.033
	Male	3.99	198			
	Female	4.18	379			
Personal/ Physical Benefits Importance				-6.054	541	.000
	Male					
	Female	3.81	191			
		4.22	352			
Physical Change Performance				-2.521	586	.020
	Male	3.86	204			
	Female	4.04	384			
Sociability Performance				2.216	574	.022
	Male	3.55	201			
	Female	3.36	375			

(table continues)

Factor		*m*	*n*	*t*	*df*	*Significance Level*
Social Benefit Performance				2.484	529	.015
	Male	3.58	188			
	Female	3.37	343			
Personal/ Physical Benefit Performance				-2.197	534	.022
	Male	3.89	188			
	Female	4.04	348			

Note. m = mean score; n = population size; t = t- value; df = degrees of freedom; sig = significance.

Figure 3 shows which gender indicated higher means scores for the dimensions of service quality and perceived recreational benefits factors. Importance and performance factors have been separated in this figure for ease in reading.

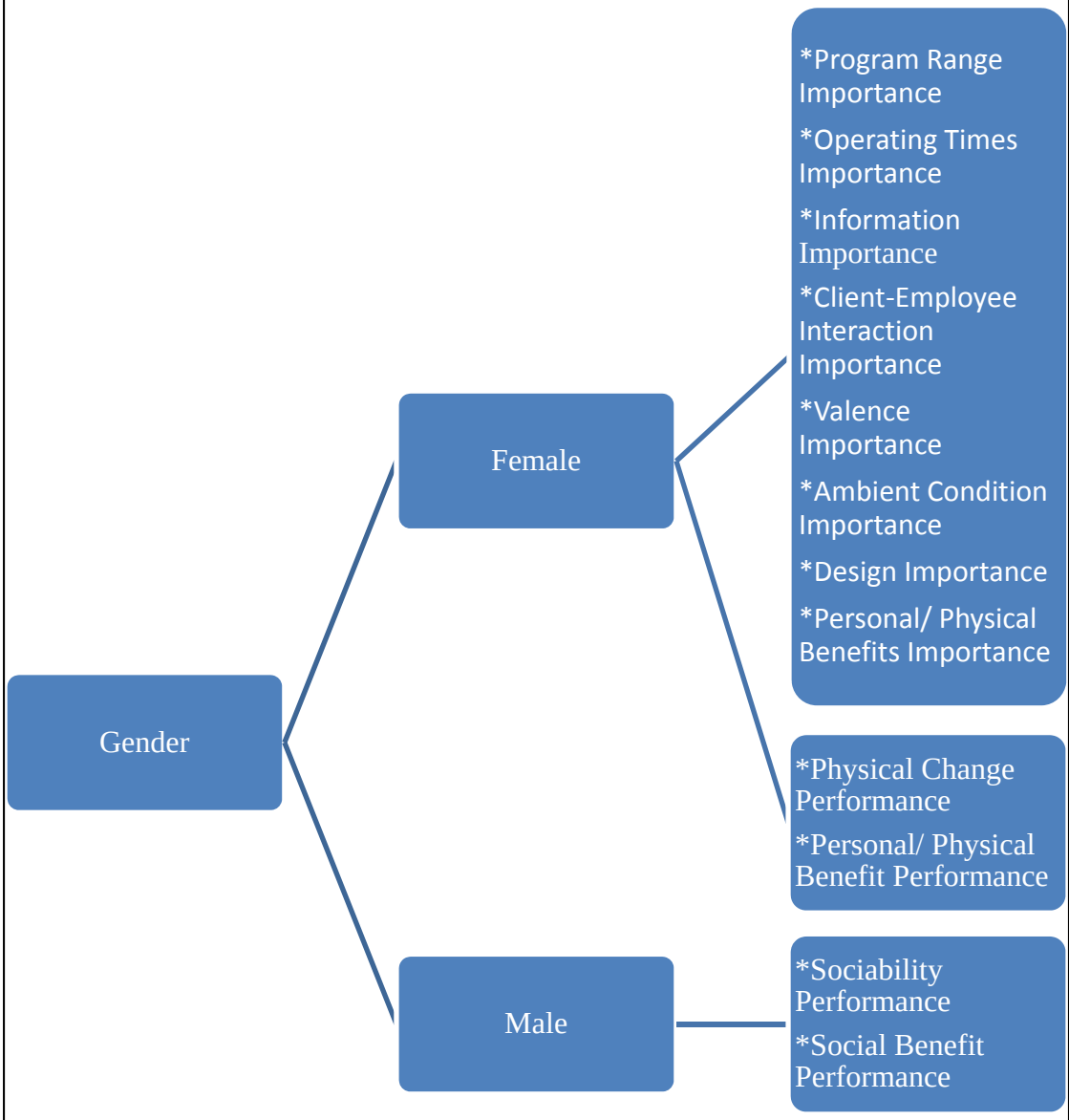

Figure 3. Service Quality and Benefit Differences by Gender

Ethnicity Differences

A One-Way Analysis of Variance (ANOVA) was computed to determine the difference between the service quality and benefits factors with ethnicity (minority or Caucasian). No significant differences were found in any of the dimensions of service quality or perceived recreational benefit factors based on the respondent's ethnicity.

Recruitment and Retention Differences

Descriptive statistics were used to analyze frequencies of recruitment and retention. The respondents were asked to respond to one of the following: (a) not at all important; (b) somewhat important; (c) neutral; (d) important; or (e) very important. Results indicate that 57.7% of respondents reported that recreational sports was either important or very important in their choosing which institution to attend. Additionally, 54.2 % of respondents reported that recreational sports was either important or very important in their decision to continue at their current institution. The frequency and percent of population is shown in Table 15.

Table 15

Recruitment and Retention Frequency

Attribute	Recruitment (n)	Recruitment %	Retention (n)	Retention %
Not at all Important	45	12.3	43	11.7
Somewhat Important	52	14.2	52	14.2
Neutral	58	15.8	73	19.9
Important	140	38.1	129	35.1
Very Important	72	19.6	70	19.1
Total	367	100	367	100

Descriptive statistics were used to analyze the importance of recreational sports in the recruitment and retention of students to their institution. A chi-square test was calculated comparing the year in school (under-classman, upper-classman and graduate) and recruitment. No significant association was found ($x^2(8) = 13.083$, $p > .05$). A chi-square test was also calculated comparing type of program (intramurals, aquatics and fitness) and recruitment. No significant association was found ($x^2(8) = 4.457$, $p > .05$). Additionally, a chi-square test was calculated comparing ethnicity (minority and white) and recruitment. No significant association was found ($x^2(4) = 3.513$, $p > .05$). These results indicate that there is no significant association between recruitment and year in school, type of program or ethnicity. Table 15 shows the results for recruitment with frequencies and percent within recruitment.

Table 16

Recruitment Frequency and Percentage by Year in School, Type of Program and Ethnicity

Variable	Not at all Imp	%	Some-what Imp	%	Neutral	%	Imp	%	Very Imp	%	Total (n)
Year in School											364
Under	2	4.7	5	9.8	14	24.1	31	22.1	15	20.8	67
Upper	29	67.4	35	68.6	34	58.6	88	62.9	46	63.9	232
Graduate	12	27.9	11	21.6	10	17.2	21	15	11	15.3	65
Type of Program											367
Intramurals	19	42.2	22	42.3	26	44.8	62	44.3	32	44.4	161
Aquatics	2	4.4	2	3.8	4	6.9	2	1.4	2	2.8	12
Fitness	24	53.3	28	53.8	28	48.3	76	54.3	38	52.8	194
Ethnicity											364
Minority	6	13.3	5	9.8	9	15.8	11	7.9	6	8.3	37
Caucasian	39	86.7	46	90.2	48	84.2	128	92.1	66	91.7	327

Note. Scale importance: 1 = not at all important; 2 = somewhat important; 3 = neutral; 4 = important; 5 = very important; imp = important; under = under-classman; upper = upper-classman.

Descriptive statistics were also used to analyze the importance of recreational sports in retention of students. A chi-square test was calculated comparing year in school (under-classman, upper-classman and graduate) and retention. No significant association was found ($x^2(8) = 12.970$, $p > .05$). A chi-square test was also calculated comparing program type (intramurals, aquatics and fitness) and retention. No significant association was found ($x^2(8) = 1.298$, $p > .05$). Additionally, a chi-square test was calculated comparing ethnicity (minority and white) and retention. No significant association was found ($x^2(4) = 2.100$, $p > .05$). These results indicate that there is no significant

association between retention and year in school, type of program or ethnicity. Table 16 shows the results for retention with frequencies and percent within retention.

Table 17

Retention Frequency and Percentage by Year in School, Type of Program and Ethnicity

Variable	Not at all Imp	%	Some-what Imp	%	Neutral	%	Imp	%	Very Imp	%	Total (n)
Year in School											364
Under	2	4.8	7	13.7	18	24.7	28	21.7	12	17.1	67
Upper	27	64.3	35	68.6	43	58.9	83	64.3	45	64.3	233
Graduate	13	31	9	17.6	12	16.4	18	14	13	18.6	65
Type of Program											367
Intramurals	18	41.9	20	38.5	34	46.6	59	45.7	30	42.9	161
Aquatics	1	2.3	2	3.8	2	2.7	4	3.1	2	2.9	11
Fitness	24	55.8	30	57.7	37	50.7	66	51.2	38	54.3	195
Ethnicity											364
Minority	5	11.6	5	9.6	10	14.1	12	9.4	5	7.1	37
Caucasian	38	88.4	47	90.4	61	85.9	116	90.6	65	92.9	327

Note. Scale importance: 1 = not at all important; 2 = somewhat important; 3 = neutral; 4 = important; 5 = very important; imp = important; under = under-classman; upper = upper-classman

Importance- Performance Matrixes

A Martilla and James (1977) Importance-Performance Matrix (I-P) was used to create graphs for each of the 11 dimensions of service quality and the two perceived recreational benefits factors. An I-P matrix was also created for the 11 overall factors. Mean scores for each dimension/ factor were used to plot the grid axis point. Mean scores of individual attributes were used to plot the attributes within each of the

dimensions/ factors. Median scores were also plotted on I-P matrixes for the 11 dimensions of service quality and the two perceived recreational benefit factors. These matrixes can be found in Appendix D. The importance- performance matrix has four quadrants including: (a) concentrate here; (b) keep up the good work; (c) low priority; and (d) possible overkill. Figures 4-17 show the I-P matrixes.

The Range of Programs factor includes four attributes including (a) recreation services offers various programs; (b) Recreation Services' offers a wide range of classes; (c) Recreation Services offers popular classes; and (d) the classes offered by Recreation Services are attractive to me. Figure 4 shows the vertical and horizontal axis for the Range of Program matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. Three of the four attributes plotted on the axis of the matrix indicating that recreational sports program administrators do not need to focus additional attention on these attributes. One attribute (Recreation Services' offers popular classes) plotted in the Possible Overkill indicating that recreational sports administrators are allocating more resources on this attribute then participants expect.

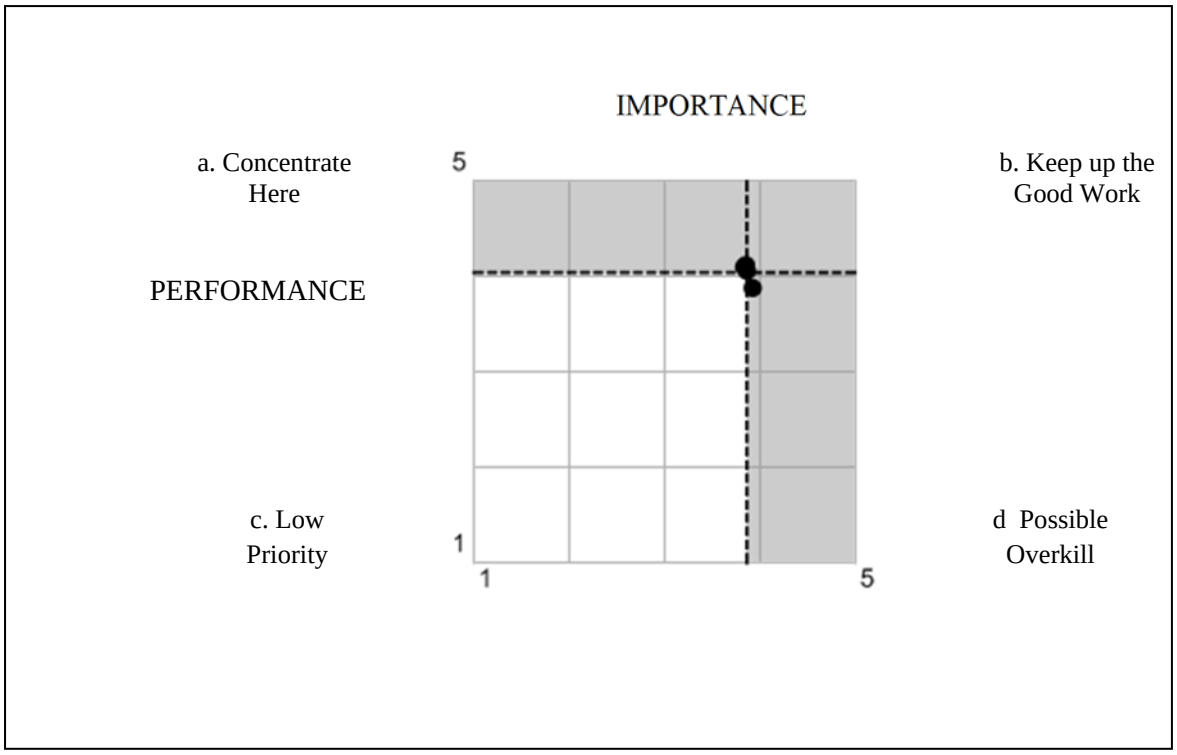

Figure 4. Range of Program

The Operating Times factor includes three attributes including: (a) the operating hours of Recreation Services are convenient; (b) class/ programs times are convenient; and (c) Recreation Services offers classes/ programs at several times. Figure 5 shows the vertical and horizontal axis for the Operating Times matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. All three of the attributes plotted in the Concentrate Here quadrant of the matrix indicating that recreational sports administrators need to focus on this area.

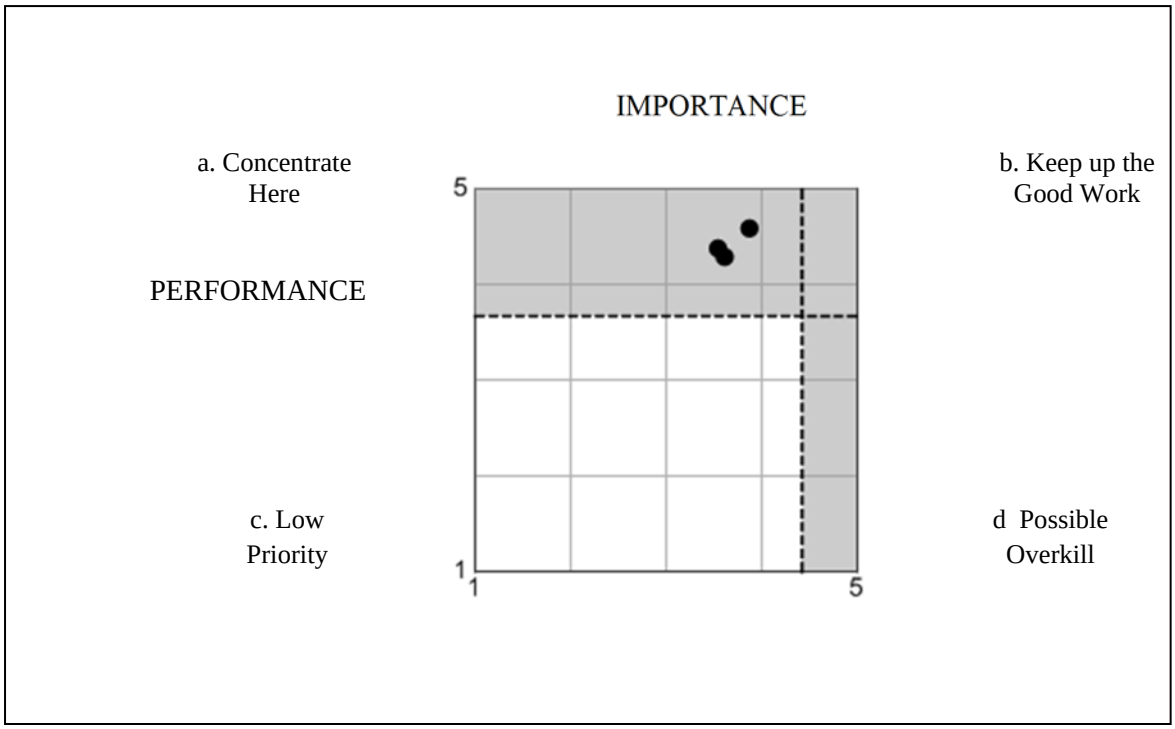

Figure 5. Operating Times

The Information factor includes five attributes including: (a) Recreation Services' employees are easy to contact by e-mail; (b) Recreation Services is easy to contact through a website; (c) up-to-date information available regarding Recreation Services' activities and events; (d) overall, information about Recreation Services is easy to obtain; and (e) Recreation Services is easy to contact by phone. Figure 6 shows the vertical and horizontal axis for the Information matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. Two of the attributes (Recreation Services' employees are easy to contact by e-mail) and (Recreation Services is easy to contact through a website) plotted in the Low Priority. Two other attributes (up-to-date information available regarding Recreation Services' activities and events) and (overall, information about Recreation

Services is easy to obtain) plotted in the Keep up the Good Work quadrant. The fifth attribute (Recreation Services is easy to contact by phone) was plotted in the Possible Overkill quadrant indicating that recreational sports administrators may be allocating more resources on phone communications then necessary.

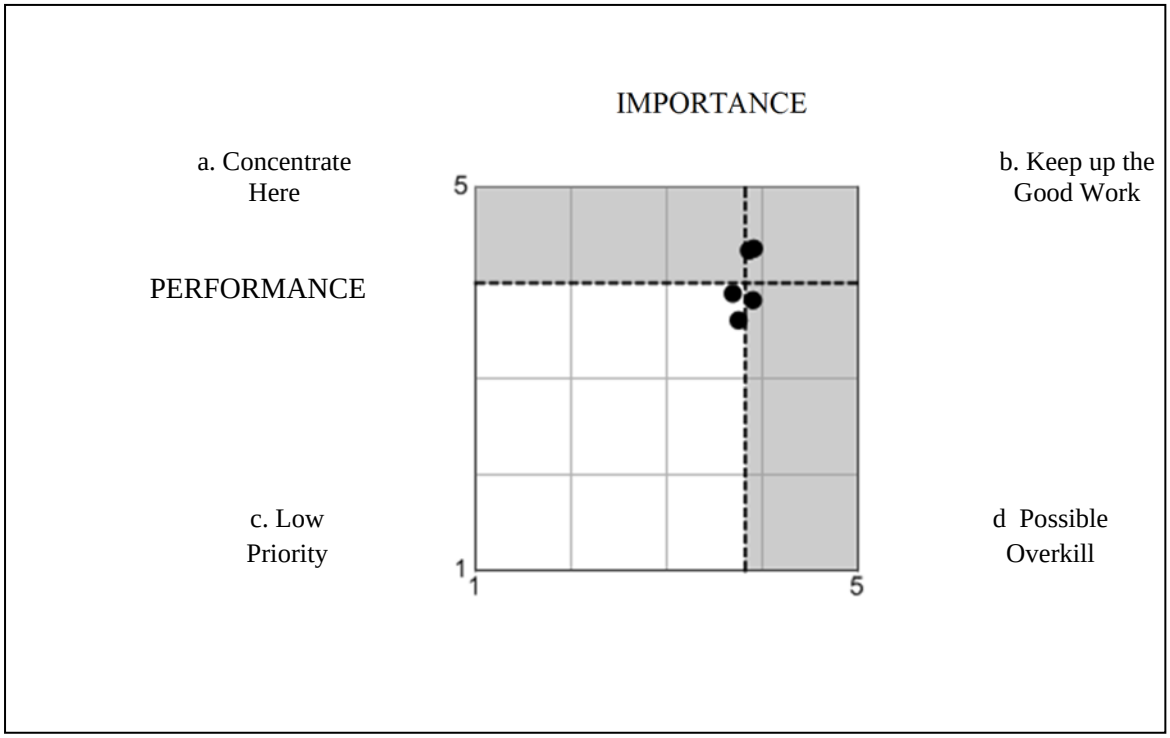

Figure 6. Information

The Client-Employee Interaction factor includes seven attributes including: (a) Recreation Services' employees are knowledgeable about their jobs; (b) you can count on Recreation Services' employees to be friendly; (c) Recreation Services' employees are willing to help participants; (d) Recreation Services' employees take action when problems occur; (e) Recreation Services' employees are competent; (f) Recreation Services' employees handle problems promptly and satisfactorily; and (g) Recreation

Services employees recognize and deal effectively with the special needs of each participant. Figure 7 shows the vertical and horizontal axis for the Client-Employee Interaction matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. All seven of the attributes plotted on the axis of the matrix indicating that recreational sports administrators are meeting the expectations of the clients in terms of their interaction.

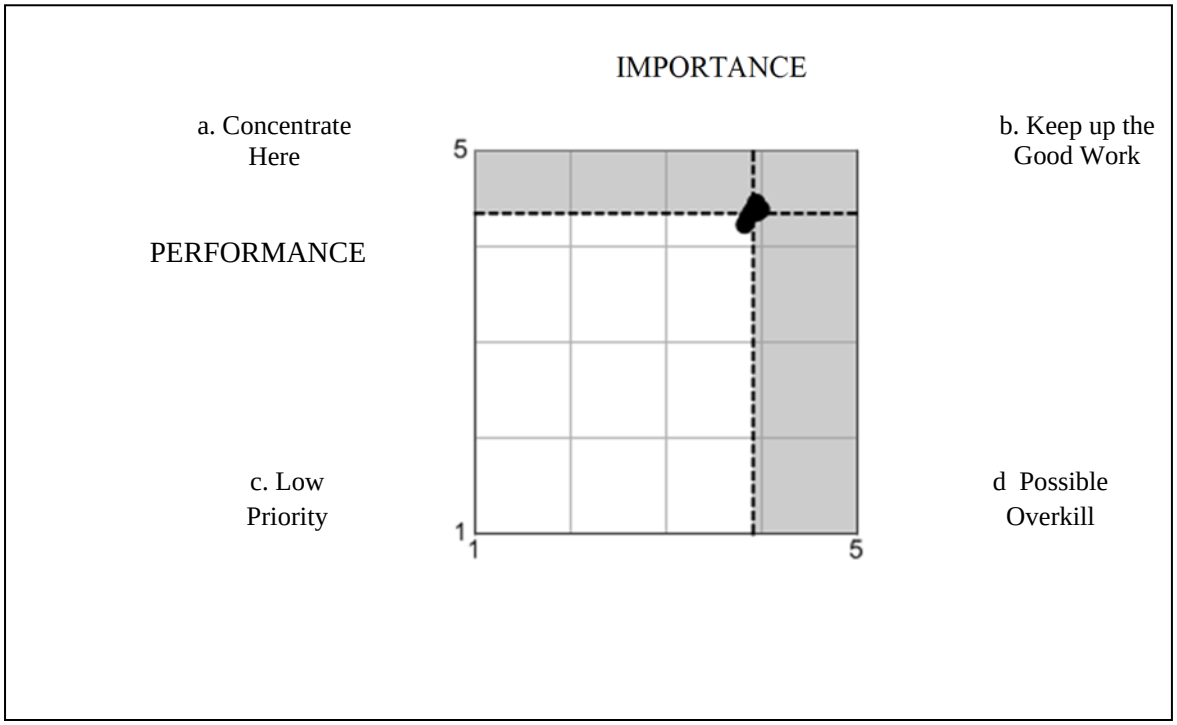

Figure 7. Client-Employee Interaction

The Inter-Client Interaction factor includes four attributes including: (a) Recreation Services' other customers have a positive impact on my perception of Recreation Services; (b) I am generally impressed with the other patrons of Recreation Services; (c) Recreation Services' customers follow the rules and regulations; and (d) I

find that Recreation Services' customers consistently leave me with a good impression of its services. Figure 8 shows the vertical and horizontal axis for the Inter-Client Interaction matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. Two attributes (Recreation Services' customers follow the rules and regulations) and (I find that Recreation Services' customers consistently leave me with a good impression of its services) plotted into the Keep up the Good Work quadrant of the matrix indicating that recreational sports administrators doing a good job with these attributes. The other two attributes (Recreation Services' other customers have a positive impact on my perception of Recreation Services) and (I am generally impressed with the other patrons of Recreation Services) plotted into the Low Priority quadrant indicating that recreational sports administrators do not need to focus on these attributes.

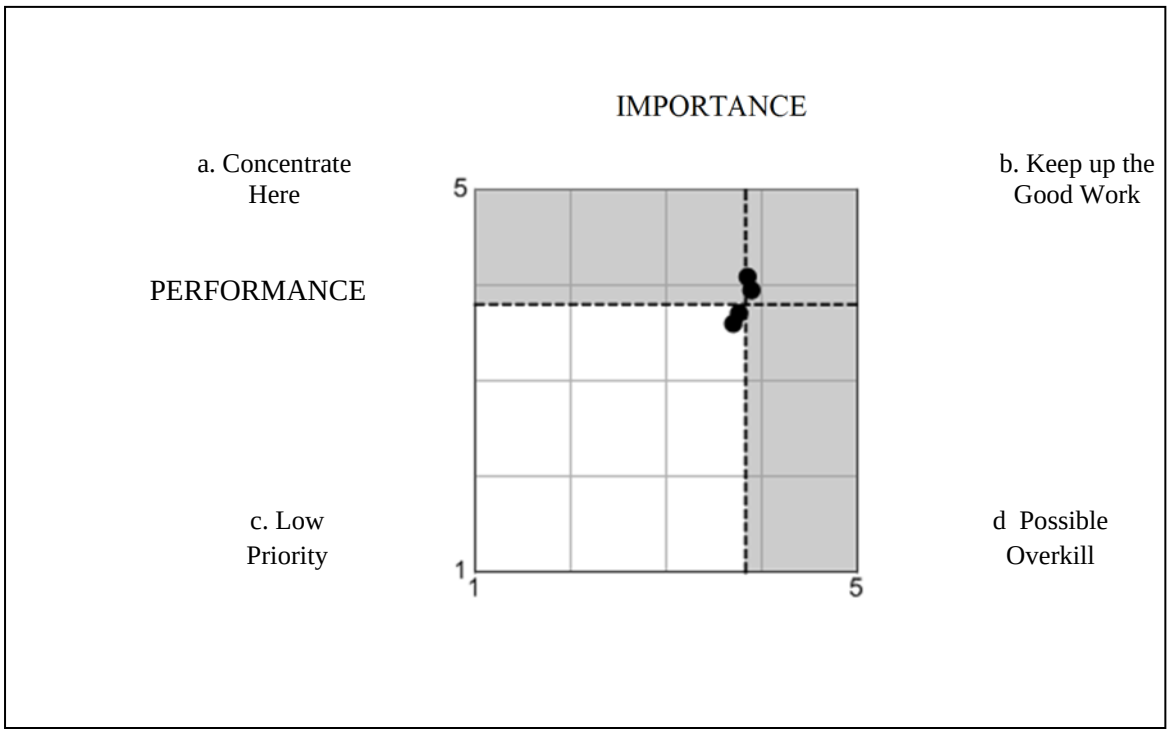

Figure 8. Inter-Client Interaction

The Physical Change factor includes five attributes including: (a) I feel that my physical ability level has increased after having used Recreation Services' programs; (b) Recreation Services' classes/ programs helped me to improve my physical ability; (c) I feel that my physical fitness level has increased after having used Recreation Services classes/ programs; (d) I feel that my skill level has increased after participating in Recreation Services' classes/ programs; and (e) the activities that I have participated in Recreation Services have improved my skill performance. Figure 9 shows the vertical and horizontal axis for the Physical Change matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. All five of the attributes plotted on the axis of the matrix

indicating that recreational sports administrators meeting the expectations of the clients in terms of their interaction.

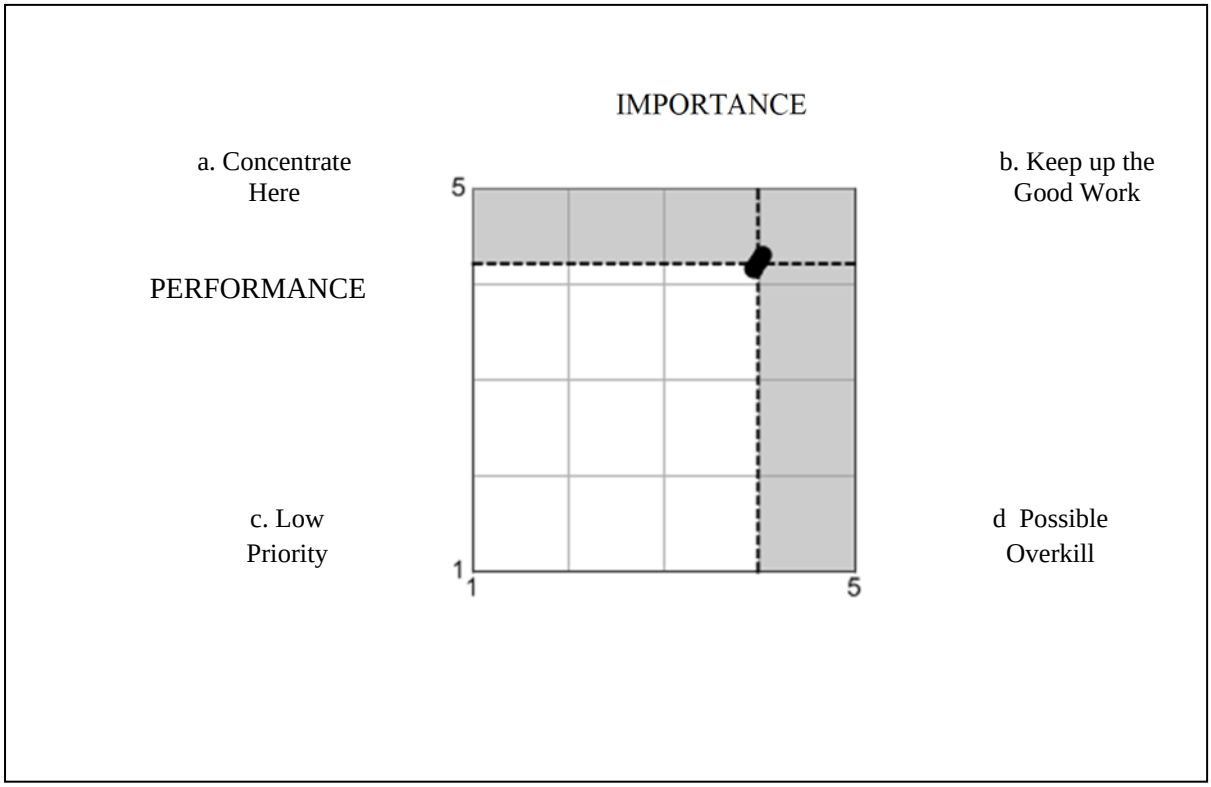

Figure 9. Physical Change

The Valence factor includes four attributes including: (a) I feel good about what I get from Recreation Services' programs; (b) when I leave Recreation Services' I always feel that I got what I wanted; (c) I usually have a good feeling when I leave Recreation Services; and (d) I would evaluate the outcome of Recreation Services' classes/ programs favorably. Figure 10 shows the vertical and horizontal axis for the Valence matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. Three of the four

attributes plotted in the on the axis of the matrix indicating that recreational sports administrators are meeting the expectations of participants. The fourth attribute (when I leave Recreation Services' I always feel that I got what I wanted) plotted in the Low Priority quadrant indicating that it does not dictate changes from the recreational sports administrators.

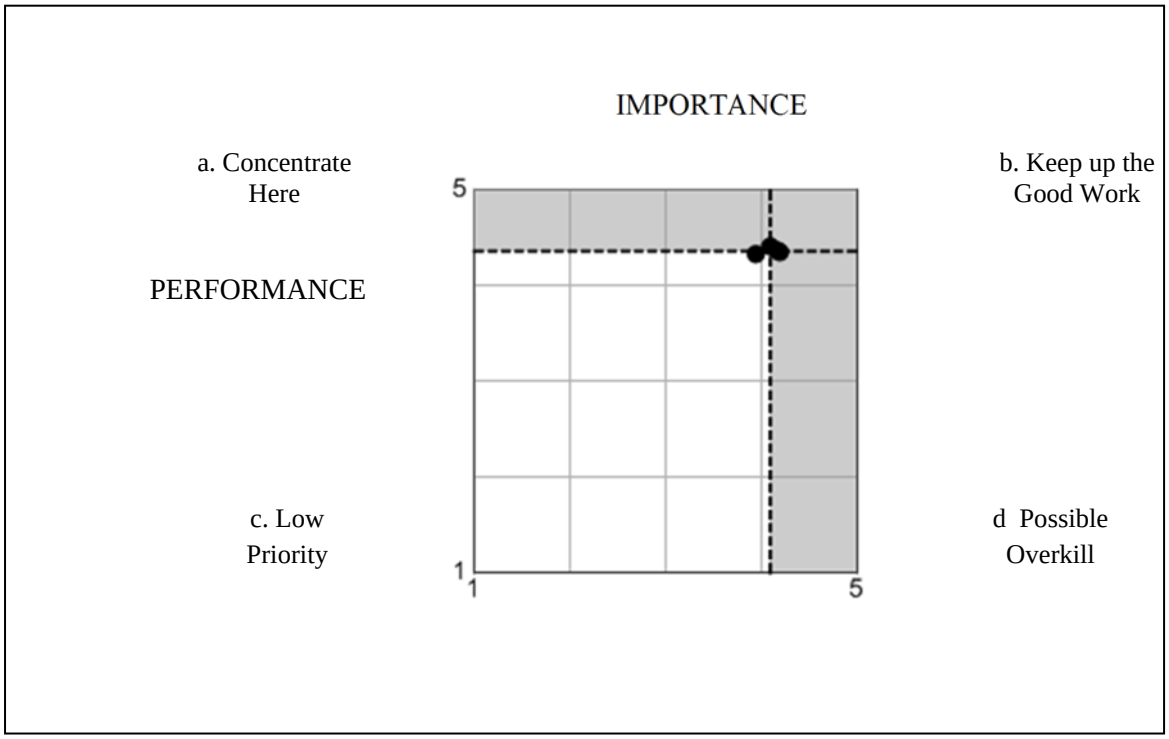

Figure10. Valence

The Sociability factor includes four attributes including: (a) Recreation Services' has provided me many opportunities for social interaction; (b) I feel a sense of family among Recreation Services' customers; (c) I made many friends through participating in Recreation Services' classes/ programs; and (d) I really enjoyed the social interaction in Recreation Services' classes/ programs. Figure 11 shows the vertical and horizontal axis

for the Sociability matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. Two of the attributes (I feel a sense of family among Recreation Services' customers) and (I made many friends through participating in Recreation Services' classes/ programs) plotted in the Low Priority quadrant of the matrix indicating that recreational sports administrators do not need to focus on this area. The other two attributes (Recreation Services' has provided me many opportunities for social interaction) and (I really enjoyed the social interaction in Recreation Services' classes/ programs) plotted into the Keep up the Good Work quadrant also indicating that recreational sports administrators do not need to focus on this area.

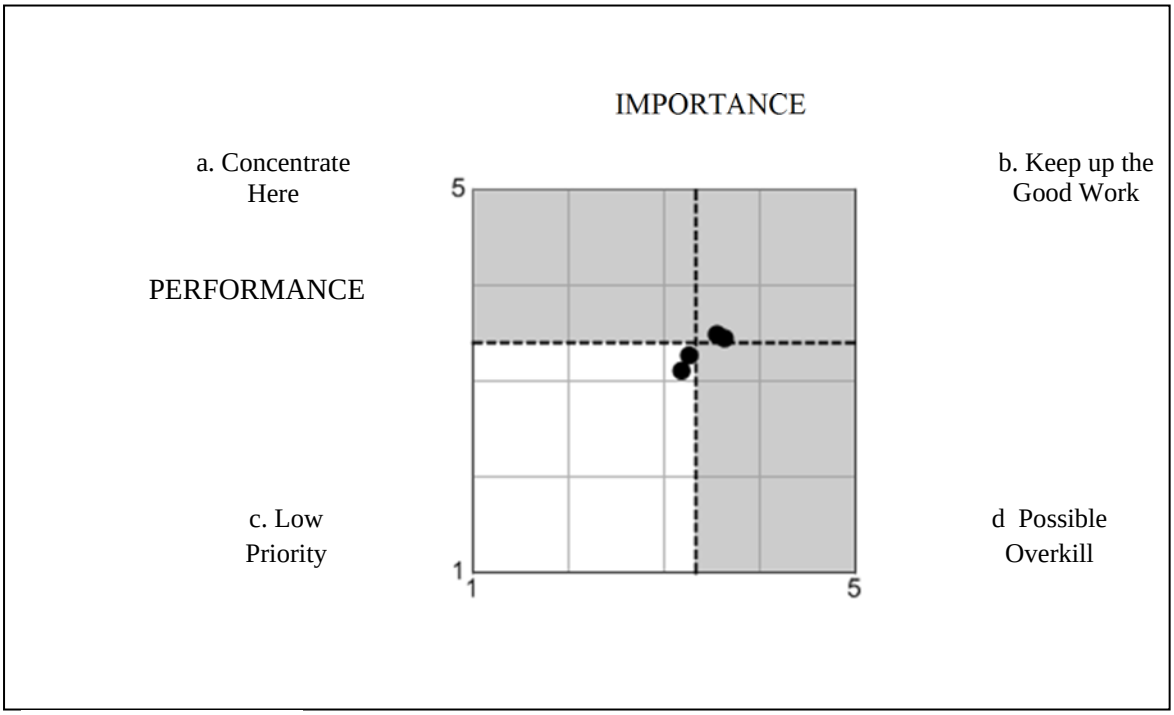

Figure 11. Sociability

The Ambient Condition factor includes five attributes including: (a) Recreation Services' ambience is excellent; (b) Recreation Services' ambience is what I am looking for in a university recreational sport setting; (c) the facilities are clean and well maintained; (d) I am consistently impressed with the facility's atmosphere; and (e) I really enjoy Recreation Services' facility atmosphere. Figure 12 shows the vertical and horizontal axis for the Ambient Condition matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. One of the attributes (the facilities are clean and well maintained) plotted in the Keep up the Good Work quadrant of the matrix. Two of attributes (Recreation Services' ambience is excellent and Recreation Services' ambience is what I am looking for in a university recreational sport setting) plotted in the Low Priority quadrant indicating that recreational sports administrators do not need to focus on these attributes. The last attribute (I really enjoy Recreation Services' facility atmosphere) plotted on the axis of the matrix indicating that recreational sports administrators are meeting client expectations.

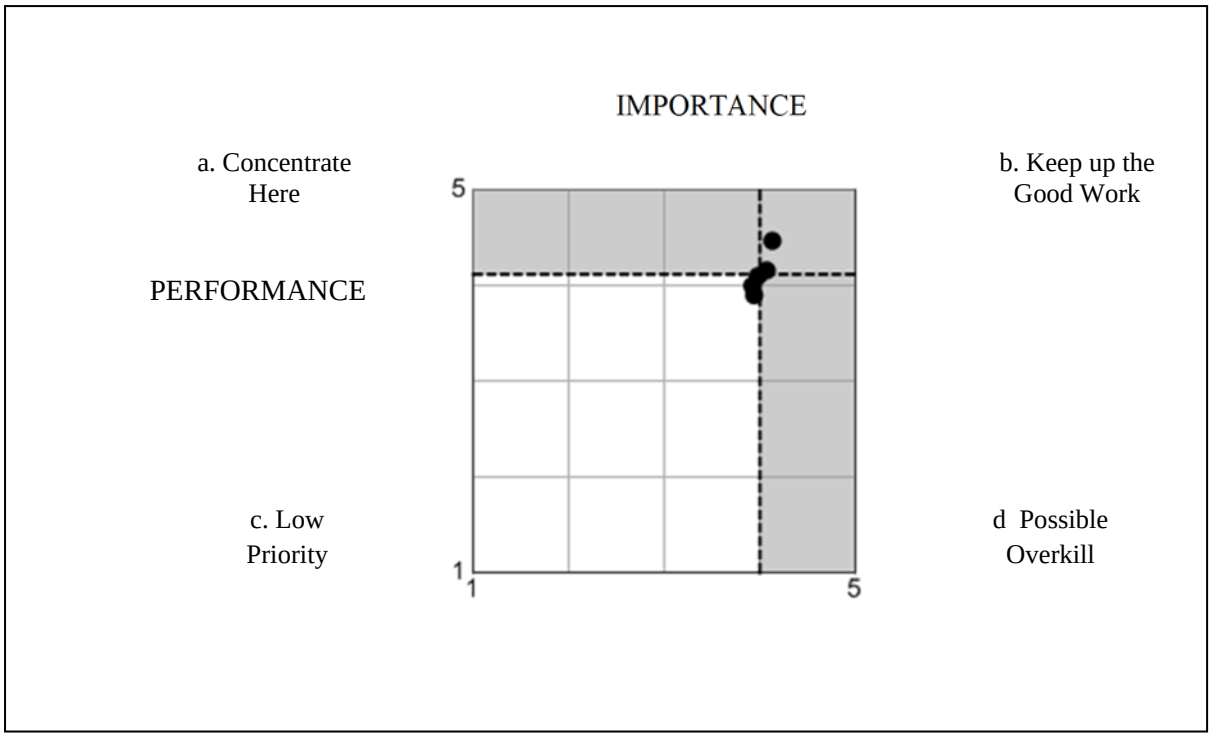

Figure 12. Ambient Condition

The Design factor includes five attributes including: (a) Recreation Services' facilities are well designed; (b) Recreation Services' facility layouts serve my purposes/ needs; (c) I am impressed with the design of Recreation Services' facilities; (d) the facilities are aesthetically attractive; and (e) the facilities are safe and comfortable. Figure 13 shows the vertical and horizontal axis for the Design matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. One of the attributes (the facilities are safe and comfortable) plotted in the Keep up the Good Work quadrant indicating that recreational sports administrators are doing a great job implementing addressing this attribute. One of the attributes (I am impressed with the design of Recreation Services' facilities) plotted in the Low Priority quadrant of the matrix indicating that recreational

sports administrators do not need to focus on this attribute. One attribute (the facilities are aesthetically attractive) plotted in the Possible Overkill quadrant indicating that recreational sports administrators are allocating too many resources on this attribute. The remaining two attributes plotted on the axis indicating that recreational sports administrator are meeting client expectations.

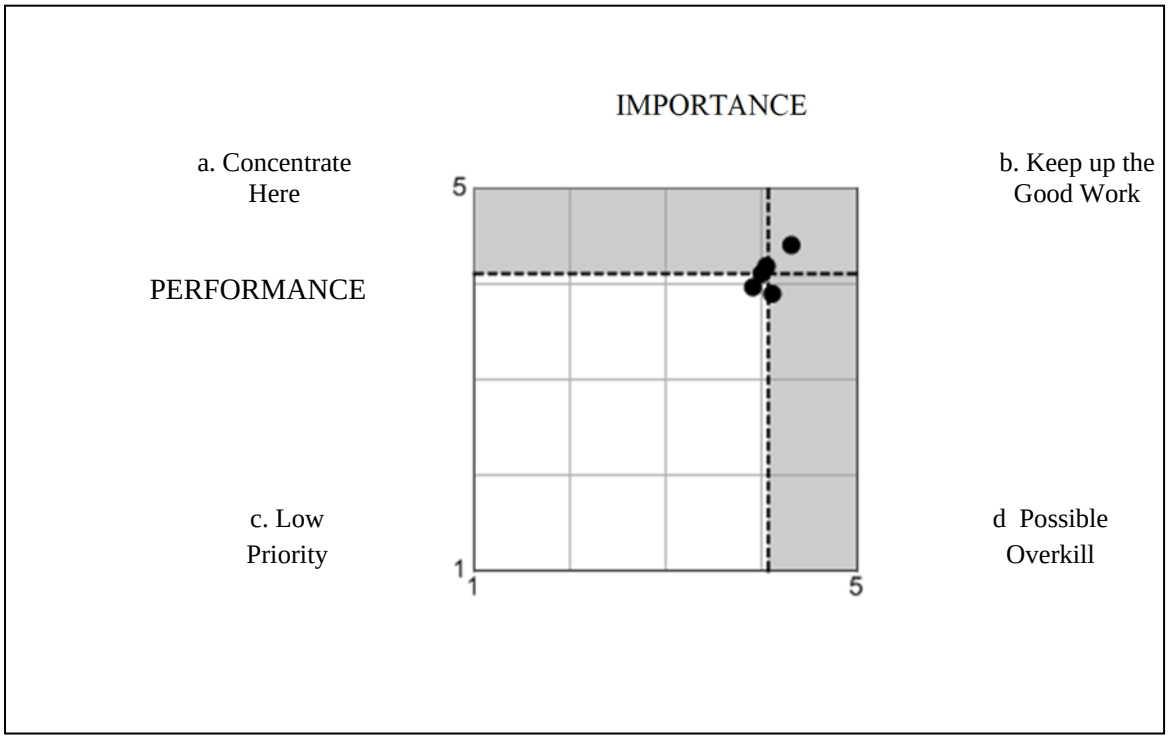

Figure 13. Design

The Equipment factor includes three attributes including: (a) the equipment provided by Recreation Services' is up-to-date; (b) a variety of up-to-date exercise equipment is available at the school; and (c) the equipment provided by Recreation Services' is in good usable condition. Figure 14 shows the vertical and horizontal axis for the Equipment matrix determined by the factor's mean scores in importance and

performance as well as the location of the individual attributes based on their mean scores. All four of the attributes plotted in the Concentrate Here quadrant of the matrix indicating that recreational sports administrators need to focus on this area.

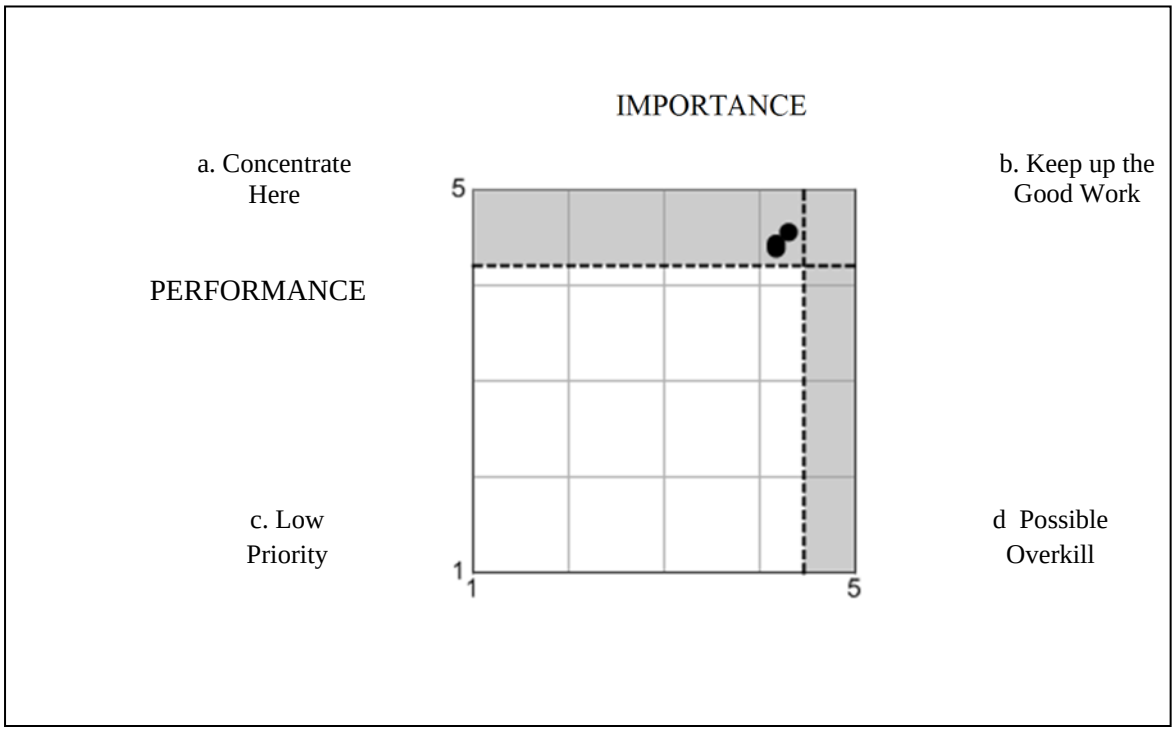

Figure 14. Equipment

The Social Benefit factor includes eight attributes including: (a) participating in Recreation Services' classes/ programs provides me a sense of adventure; (b) participating in Recreation Services' classes/ programs improves my group cooperating skills; (c) participating in Recreation Services' classes/ programs helps me respect others; (d) participating in Recreation Services' classes/ programs improves my communication skills; (e) participating in Recreation Services' classes/ programs improves my leadership skills; (f) participating in Recreation Services' classes/ programs improves my problem

solving skills; (g) participating in Recreation Services' classes/ programs improves my time management skills; (h) participating in Recreation Services' classes/ programs helps me develop friendships. Figure 15 shows the vertical and horizontal axis for the Social Benefit matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. Six of the eight attributes plotted in the Possible Overkill quadrant indicating that recreational sports administrators are allocating more resources to this dimension then participants expect. The attribute (participating in Recreation Services' classes/ programs helps me respect others) plotted in the Keep up the Good Work quadrant. The attribute (participating in Recreation Services' classes/ programs improves my problem solving skills) plotted in the Low Priority quadrant.

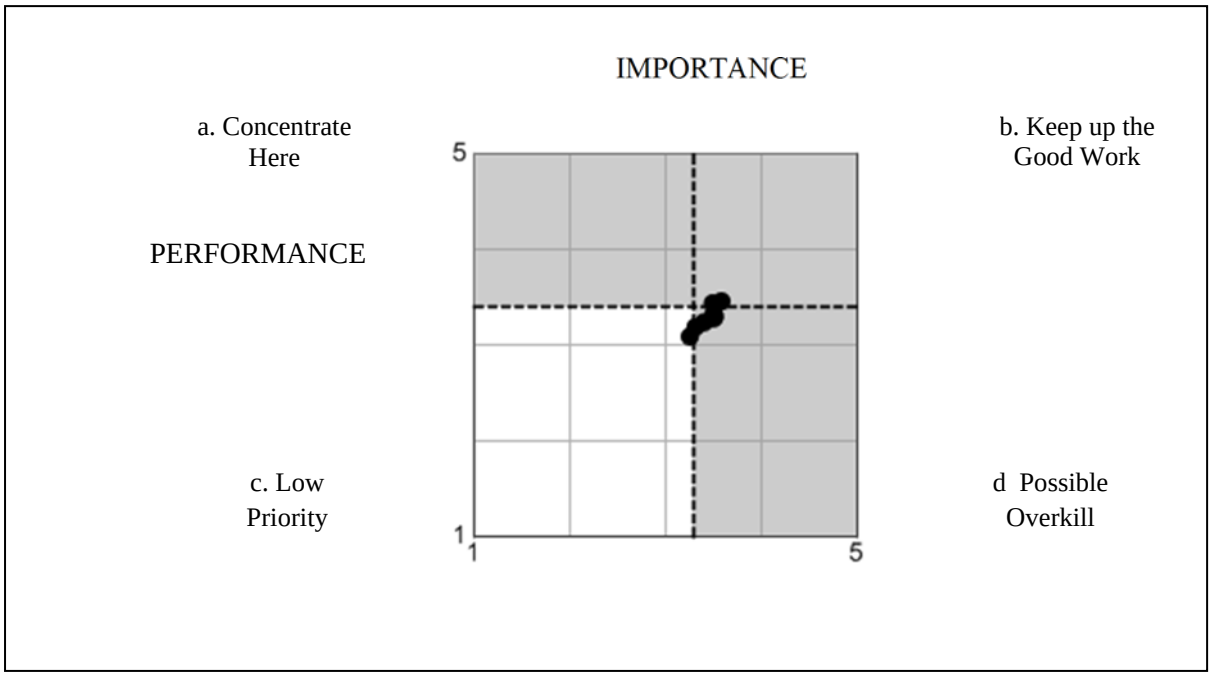

Figure 15. Social Benefit

The Personal/ Physical Benefit factor includes seven attributes including: (a) participating in Recreation Services' classes/ programs improves my self confidence; (b) participating in Recreation Services' classes/ programs provides me a sense of accomplishment; (c) participating in Recreation Services' classes/ programs helps me control my weight; (d) participating in Recreation Services' classes/ programs improves my physical strength; (e) participating in Recreation Services' classes/ programs reduces my stress; (f) participating in Recreation Services' classes/ programs improves my balance/ coordination; (g) participating in Recreation Services' classes/ programs is fun. Figure 16 shows the vertical and horizontal axis for the Personal/ Physical Benefit matrix determined by the factor's mean scores in importance and performance as well as the location of the individual attributes based on their mean scores. Five of the seven attributes plotted on or near the axis of the matrix indicating that recreational sports administrators do not need to focus on this area. One of the attributes (participating in Recreation Services' classes/ programs improves my self confidence) plotted in the Low Priority quadrant. The last attribute (participating in Recreation Services' classes/ programs is fun) plotted in the Keep up the Good Work quadrant indicating that recreational sports administrators are doing a good job of addressing participant enjoyment.

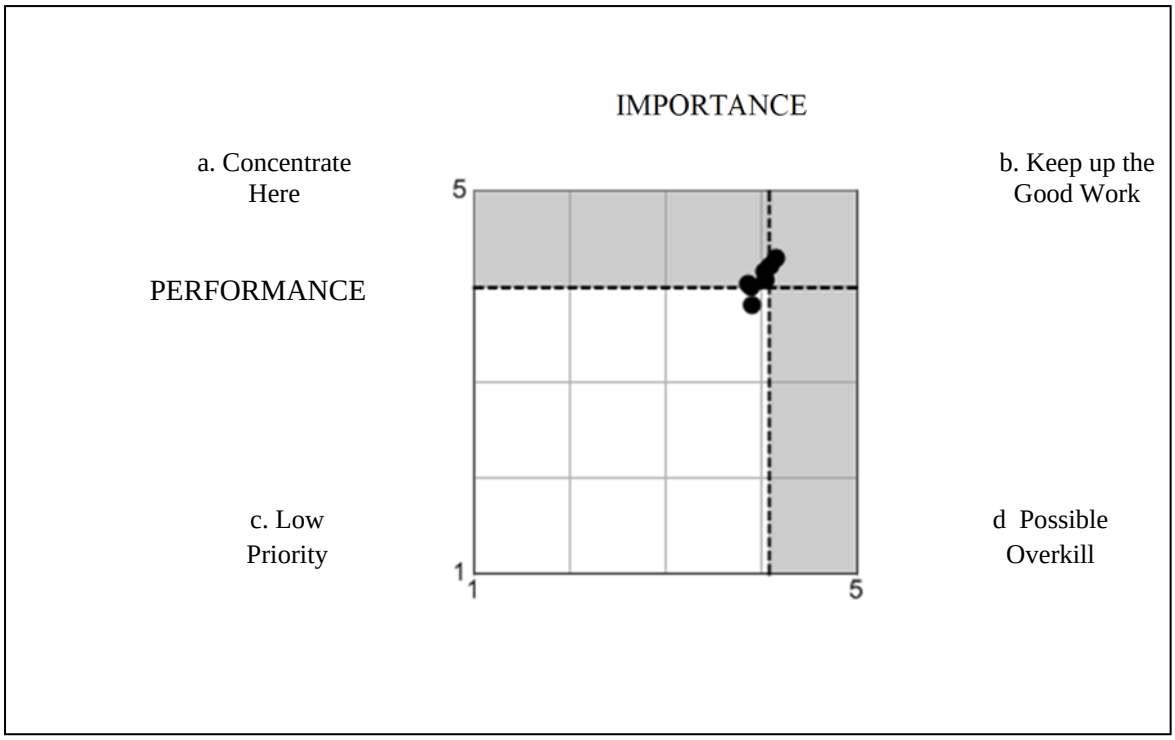

Figure 16. Personal-Physical Benefit

Figure 17 shows the Importance-Performance matrix for the overall service quality and recreational benefits factors. The axis line was set by calculating the mean score for all importance and performance factors. The importance mean was set at (M = 4.04) and the performance mean was set at (M = 3.86). None of the factors plotted in the Possible Overkill quadrant. The Range of Program factor plotted on the axis line indicating that recreational sports administrators are meeting client expectations. The Operating Times factor was the only factor to plot in the Concentrate Here quadrant indicating that recreational sports administrators should consider addressing this attribute. Seven of the factors (Client-Employee Interaction, Physical Change, Valence, Ambient Condition, Design, Equipment and Personal/ Physical Benefit) plotted in the Keep up the

Good Work quadrant indicating that recreational sports administrators are doing a good job of meeting expectations of clients. Four of the factors (Information, Inter-Client Interaction, Sociability and Social Benefits) plotted in the Low Priority quadrant indicating that recreational sports administrators do not need to focus on these attributes.

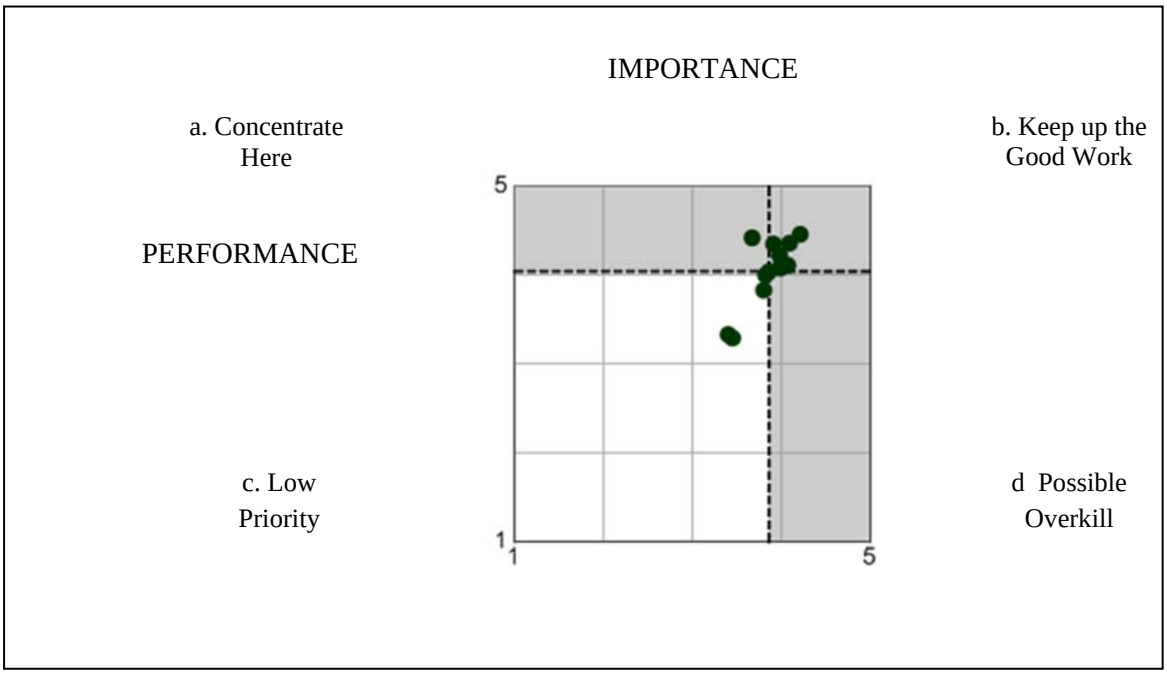

Figure 17. Factor I-P Matrix

In summary, many of the individual attributes plotted in the low priority quadrant indicating that participants do not feel these attributes are important and that recreational sports performance on the attribute is not a high priority. Many individual attributes also plotted on or near the access indicating that recreational sports administrators are meeting participant expectations.

Three of the 64 attributes plotted in the Concentrate Here quadrant. These findings indicate that participants feel that these attributes are important and that recreational sports administrators need to make improvements implementing these attributes. The three attributes are all attributes from the Equipment service quality dimension including: (a) the equipment provided by Recreation Services' is up-to-date; (b) a variety of up-to-date exercise equipment is available at the school; and (c) the equipment provided by Recreation Services' is in good usable condition.

Ten of 64 attributes plotted in the Keep up the Good Work quadrant. These results indicate participants feel these attributes are important and that recreational sports administrators are implementing these attributes well. The 10 attributes are from multiple service quality dimensions including (a) Information- up-to-date information available regarding Recreation Services' activities and events; and overall, information about Recreation Services is easy to obtain; (b) Inter-Client Interaction- Recreation Services' customers follow the rules and regulations; and I find that Recreation Services' customers consistently leave me with a good impression of its services; (c) Sociability- Recreation Services' has provided me many opportunities for social interaction; and I really enjoyed the social interaction in Recreation Services' classes/ programs; (d) Ambient Condition- the facilities are clean and well maintained; (e) Design- the facilities are safe and comfortable; (e) Social Benefit- participating in Recreation Services' classes/ programs helps me respect others; and (f) Personal/Physical Benefit- participating in Recreation Services' classes/ programs is fun.

Eleven of 64 attributes plotted in the Possible Overkill quadrant. These results indicate that participants feel items are important however recreational sports administrators are allocating too many resources toward implementing these attributes. The 11 attributes are from multiple service quality dimensions including:
(a) Operating Times- the operating hours of Recreation Services are convenient; class/ programs times are convenient; Recreation Services offers classes/ programs at several times; (b) Information- Recreation Services is easy to contact by phone; (c) Design- the facilities are aesthetically attractive; and (d) Social Benefit- participating in Recreation Services' classes/ programs provides me a sense of adventure; participating in Recreation Services' classes/ programs improves my group cooperating skills; participating in Recreation Services' classes/ programs improves my communication skills; participating in Recreation Services' classes/ programs improves my leadership skills; participating in Recreation Services' classes/ programs improves my time management skills; participating in Recreation Services' classes/ programs helps me develop friendships.

CHAPTER 5

SUMMARY, GENERALIZATIONS, AND CONCLUSIONS

This chapter is organized to summarize, make generalizations about the findings and present conclusions based on the findings. This chapter has six sections including: (a) summary of the problems and procedures; (b) summary of the findings; (c) generalizations of the data by institution, program type, participant type and gender; (d) implications from professional practice; (e) recommendations; and (f) conclusions.

Summary of Problems and Procedures

The purpose of the study was to explore dimensions of service quality and perceived recreational benefits in recreational sports programs. In addition, the study explored how institutional type as reflected in its mission impacts on these factors. Also, the study sought to explore dimensions of service quality and perceptions of recreational benefits when reviewing program areas such as intramurals, aquatics and fitness. The study was also designed to explore dimensions of service quality and perceptions of recreational benefits and other important variables such as participant types, national origin, gender and ethnicity. Lastly, the study was designed to explore recruitment and retention as they relate to program type, participant type and ethnicity.

Recreational sports participants in intramurals, aquatics and fitness programs at three institutions (liberal arts college, comprehensive university and research based university) were contacted and asked to complete an electronic survey. The survey included questions related to dimensions of service quality, perceived recreational benefits, and recruitment and retention. The design of the questionnaire included an

importance/ performance matrix for each question allowing the researcher to analyze how participants rated the importance of each question as well as how each participant rated the performance of the recreational sports programs at each institution and how well they implemented the services. These surveys were collected via Survey Monkey and then were analyzed using multiple statistics methods in SPSS.

Summary of the Findings

Analysis of the data confirmed correlations between dimensions of service quality and perceived recreational benefits. In addition, significant differences were found when analyzing type of institution (liberal arts college, comprehensive university and research based university), program type (intramurals, aquatics and fitness), participant type (students, faculty/ staff, alumni and community) and gender. No significant differences were found when analyzing dimensions of service quality and perceived recreational benefits with ethnicity. Lastly, No significant association was found in participant type, program type or ethnicity with recruitment or retention.

Hypothesis 1

Hypothesis 1 states: "There is no statistically significant relationship between the respondent's perceived dimensions of service quality and recreational benefits. " Table 10 shows the factor correlations between dimensions of service quality and perceived recreational benefits using a Pearson's Correlation Coefficient test. The findings indicate that all 11 service quality factors relate to the two recreational benefit factors. Six of the factors had a weak correlation with the remaining factors showing a moderate level of correlation. None of the factors showed a strong correlation above .70.

Service quality has been studied in recreational sports setting with a number of factors including: (a) behavioral intentions (Osman et al., 2006); (b) scale development (Ko & Pastore, 2007); (c) self identification (Shonk et al., 2010); (d) encounter and citizen behavior (Chung, 2006); and (e) social identification (Soleymani et al., 2012). Recreational Benefits has also been studied in recreational sports settings a number of times using the NIRSA QIRS scale including: Bryant et al. (1995); Kovac and Beck (1997); Haines (2001); Lindsay and Sessoms (2006); and Lindsay (2012). To date few if any studies have analyzed the relationship between dimensions of service quality and perceived recreational benefits in collegiate recreational sports programs. This study indicates that there is a relationship between dimensions of services quality and perceived recreational benefits.

Hypothesis 2

Hypothesis 2 states: "There is no statistically significant difference between the respondent's institution and the impact on their perceptions of dimensions of service quality and perceived recreation benefits."

A One-Way Analysis of Variance (ANOVA) was computed to explore the difference between one's institution and the perceptions of dimension of services quality and perceived recreational benefits (shown in Table 11). Differences were found in importance of client-employee interaction, physical change, valence, and personal/physical benefits. In addition, differences were found in the performance of institutions recreational sports programs in providing range of program and client-employee interaction. To date, few if any studies have explored perceptions of

dimensions of services quality and perceived recreational benefits as they related to one's institution. Bryant et al. (1995) developed the NIRSA QIRS instrument and used multiple institutions of varied sizes in their pilot study. Bryant et al. (1995) did not report institutional differences in perceived recreational benefits. This study indicates that differences do exist between types of institutions (liberal arts college, comprehensive university and research based university) in multiple service quality and benefit factors.

Hypothesis 3

Hypothesis 3 states: "There is no statistically significant difference between the respondent's perceptions of dimensions service quality and program areas such as intramurals, aquatics and fitness."

A One-Way Analysis of Variance (ANOVA) was computed to explore the difference between types of programs and the perceptions of services quality and perceived recreational benefits. Table 12 shows the differences that were found in importance of range of program, operating time, information, client-employee interaction, physical change, valence, sociability, and equipment. In addition, differences were found in the performance of the programs in range of program, client-employee interaction, physical change, and sociability. To date, few if any studies have explored perceptions of dimensions of service quality as related to individual programs (intramurals, aquatics and fitness). The previously mentioned service quality studies were conducted using multiple methodologies. None of the studies: (a) Osman et al. (2006); Ko and Pastore (2007); Shonk et al. (2010); and Soleymani et al. (2012) reported surveying participants from individual programs. This study did survey participants from

three types of programs (intramurals, aquatics and fitness) showing differences in perceptions of dimensions of service quality and type of program.

Hypothesis 4

Hypothesis 4 states: "There is no statistically significant difference between the respondent's perceived recreational benefits and program areas such as intramurals, aquatics and fitness."

A One-Way Analysis of Variance (ANOVA) was computed to explore the difference between types of programs (intramurals, aquatics and fitness) and perceived recreational benefits. Table 12 shows the differences that were found in importance of social benefits, and personal/ physical benefits and type of program (intramurals, aquatics and fitness). In addition, differences were found in the performance of the programs in social benefit, and personal/ physical benefit. To date, few if any studies have explored perceptions of services quality and perceived recreational sports as they related to individual programs (intramurals, aquatics and fitness). Of the previously mentioned studies (Bryant et al., 1995; Kovac & Beck, 1997; Haines, 2001; Lindsay & Sessoms, 2006; Lindsay, 2012) the participants were surveyed in a classroom setting and the researchers did not report differences between any specific programs. This study did survey participants from three types of programs (intramurals, aquatics and fitness) showing differences in perceived recreational benefits and type of program.

Hypothesis 5

Hypothesis 5 states: "There is no statistically significant relationship between the respondent's perceptions regarding dimensions of service quality and one's position within their institution (participant type), national origin, gender and ethnicity."

A One-Way Analysis of Variance (ANOVA) was computed to explore the difference between participant types (students, faculty/ staff, alumni and community) and dimensions of service quality. Table 13 shows the service quality factors related to participant type. Differences were found in multiple importance factors including: (a) operating times; (b) information; (c) inter-client interaction; (d) social benefits. In addition, differences were found in multiple performance factors including: (a) physical change; (b) ambient condition; (c) equipment; and (d) social benefits. A review of mean scores indicated that faculty/ staff rated the importance and performance of these factors lower than other participant groups.

A low response to the national origin variable dictated eliminating it from consideration. Many service quality studies have indicated differences in perception of services quality in recreational settings among citizens of different countries including South Korea, Turkey, Greece, Canada, the United States and Iran.

A t test was used to determine the relationship between dimensions of service quality and gender. Table 14 shows the service quality factors related to gender. Females rated the following service quality factors more important than males: (a) range of program; (b) operating times; (c) information; (d) client-employee interaction; (e) valence; (f) ambient condition; and (g) design. Females also rated the

performance of the recreational sports programs higher than males in physical change performance.

A t test was used to determine the relationship between dimensions of service quality and ethnicity. No relationship was found between dimensions of service quality and ethnicity. Previous studies (Ko & Pastore, 2007; Shonk et al., 2010) did include an ethnicity question in their studies, however they did not indicate any significance in dimensions of service quality and ethnicity.

Hypothesis 6

There is no statistically significant relationship between the respondent's perceived recreational benefits and one's position within their institution (participant type), national origin, gender and ethnicity.

A One-Way Analysis of Variance (ANOVA) was computed to explore the difference between participant types (students, faculty/ staff, alumni and community) and perceived recreational benefits. Table 13 shows the benefit factors related to participant type. Students reported that Social Benefits are more important then alumni followed by community then faculty/ staff. Social Benefits performance was rated highest by alumni followed by students then community and faculty/staff.

A low response to the national origin variable dictated eliminating it from consideration. To date, no studies were found indicating differences in perceived recreational benefits among national origin in recreational sports settings.

A t test was used to determine the relationship between perceived recreational benefits and gender. Table 14 shows the benefit factors related to gender. Females rated

personal/ physical change benefit more important than males. Females also reported higher performance of the recreational sports programs in personal/ physical benefit than males. Males reported high performance of the recreational sports programs in social benefit performance. Previously mentioned studies (Kovac & Beck, 1997; Haines, 2001; Lindsay & Sessoms, 2006) all reported differences in perceived recreational benefits by gender while using the NIRSA QIRS instrument.

A t test was used to determine the relationship between perceived recreational benefits and ethnicity. No relationship was found between perceived recreational benefits and ethnicity. Previous studies (Bryant et al., 1995; Kovac & Beck, 1997; Haines, 2001; Lindsay & Sessoms, 2006) all found significance differences in perceived recreational benefits and ethnicity.

A chi-square test was computed to examine the association of recruitment and retention with year in school, type of program and ethnicity. No significant association was found between recruitment or retention with year in school, type of program or ethnicity.

Generalizations from the Data

Type of Institution

An Analysis of Variance (ANOVA) indicated that the comprehensive university participants were significantly different then the liberal arts college and the research based institution in a number of importance factors including: (a) client-employee interaction; (b) physical change; (c) valence; (d) personal/physical benefit. In addition, the comprehensive university participants differed from the liberal arts college

performance of range of program and significantly different then the research based university in performance of client-employee interaction. These findings indicate that the participants at the comprehensive university have higher expectations for service quality then the research based institution. Additionally, the comprehensive university participants rated the performance of range of program higher than the liberal arts college which is not surprising due the size and scope of the comprehensive universities program when compared to the liberal arts college. All three institutions in this study have university recreation centers are less than 16 years old, however the comprehensive university and the research based university has an expanded "menu" of programs and services not offered at the liberal arts college.

Program Type

An analysis of importance of factors by program type (intramurals, aquatics and fitness) indicated that range of program, physical change, valence, equipment and personal/ physical benefit factors are more important to fitness participants followed by aquatics then intramurals. Aquatics participants report a higher level of importance in operating times, information, and client-employee interaction followed by fitness participants and intramural participants. Intramural participants reported sociability most important followed by fitness then aquatics. Intramural participants also reported social benefits most important followed by aquatics then fitness. These findings are consistent with Lower (2011) who found that intramural participants reported benefitting socially more than fitness participants. These results are not surprising as many aquatic programs, by the nature of the activity, limit the social interaction based on a person

being submerged. In addition, intramural participants are registering for the program based on housing affiliation in residence halls or fraternities/ sororities. These findings are also not surprising for the aquatics participants. Aquatic facilities are typically used by multiple exclusive programs (swim teams, dive teams, physical education programs and drop in) which either requires a shared usage of facilities or requires certain programs to have undesirable times assigned to their program.

An analysis of performance of these factors by program type indicated that physical change, and personal/ physical benefits are more important to fitness participants followed by aquatic participants then intramural participants. Range of program and client-employee interaction were more important to aquatics participants then fitness participants then intramural participants. Sociability and social benefits were more important to intramural participants then aquatics then fitness participants.

Participant Type

A One-Way Analysis of Variance (ANOVA) was computed to explore the difference between participant types (students, faculty/ staff, alumni and community) and dimensions of service quality. Table 13 shows the service quality factors related to participant type. Analysis of means scores showed that Operating Times are more important to community then alumni followed by faculty/ staff then students. Information was more important to alumni then faculty/ staff, community then students. Inter-client interaction is more important to community then students followed by alumni then faculty staff. Mean scores also showed that alumni rated the performance of physical change higher then faculty/ staff, community and students. Ambient Condition

performance was rated highest by alumni then community followed by students then faculty/staff. Students rated Equipment performance highest followed by alumni, community then faculty/staff.

Gender

An analysis of importance of factors by gender indicated that range of program, operating time, information, client-employee interaction, valence, ambient condition design and personal/ physical benefit factors are more important to females then males. Additionally, females rated physical change and personal/ physical benefit performance higher than males. Males rated sociability and social benefit performance higher than females. These findings are contrary to Artinger et al. (2006) findings which indicated that female intramural program participants reported that participation "improves my ability to work within a team," "adds to social bonding and support," and "allows me to bond with my teammates." Additionally, Sturts and Ross (2012) found that females rated the outcomes of "improves my ability to work within a team," "helps to manage my time better," and improves my ability to socially interact" all of which are similar to items in this study's social benefit factor which males rated higher in importance. Findings from this study are also contrary to Lindsay (2012) who found males rating physical strength, stress reduction, and balance/ coordination higher than females. These attributes are all found in the physical/ personal benefits factor which was rated higher in importance by females. These findings are also contrary to the findings of Kovac and Beck (1997) who found that females participate in recreational sport activities for reasons related to community and males participate for reasons related to self. Additionally, these findings

are consistent with many of the findings from Haines (2001) who found higher ratings for sense of accomplishment, weight control, physical strength and stress reduction which are all found in the personal/ physical benefit factor in this study. Haines's (2001) study also found that females rated respect for others higher than males, which is contrary to the findings of this study. The findings from this study also support the findings of Lindsay (2012) who found that males reported leadership development, respect for others and communication skill development as important benefits. On the contrary, Lindsay's (2012) study found that males reported other items found in the personal/ physical benefits factor (used in this study) as important including: (a) self confidence; (b) sense of accomplishment; (c) improved physical strength; (d) stress reduction; and (e) improved balance and coordination. Lindsay (2012) also found that improved communication and leadership skills (social benefit factor) were important to females, which was rated higher by males in this study.

Recruitment and Retention

An analysis of recruitment and retention results indicated no significant association with year in school, type of program or ethnicity. These results are contrary to results found by Bryant et al., (1995); Kovac and Beck (1997); and Lindsay and Sessoms (2006) who all found that minorities reported recreational sports facilities and programs influenced their decision to attend and continue at their institution. Lindsay and Sessoms (2006) also reported that junior and seniors were more influenced than freshman and sophomores in their decision to attend and stay at their institution. None of these results were found in this current study.

Implications for Professional Practice

This section is divided into two sections (management implications and marketing implications). These managerial and marketing implications may assist recreational sports program administrators in future program implementation.

Management Implications

Mean scores for sociability and social benefit were all lower than all other factors indicating that participants are not as interested in social interaction as a reason for participating in recreational sport programs. Intramural participants did report a higher importance in social interaction; however, this was reported lower than other factors. Recreational sports program administrators should consider how financial and human resources are allocated to providing social environments for participants.

Intramural participants indicated lower importance than aquatics and fitness in range of program, operating times, information, client-employee interaction, physical change, valence, equipment and personal/ physical benefits. These findings indicate that aquatics and fitness participants need more direct and indirect support from their recreational sports program administrators than other participants. Intramural participants also indicated a lower rating in performance of the recreational sports programs in range of programs, client-employee interaction, physical change, personal/ physical benefits. These findings also indicate that intramural participants are overall less satisfied with the performance of the recreational sports programs then aquatics and fitness participants. Recreational sports program administrators should consider further

evaluation of the wants and needs of the intramural participants to see if change in program operation is needed.

Marketing Implications

In this study, females indicated a higher importance than males in the information factor. This factor includes: personnel are easy to contact by email, website and phone as well as up-to-date information is available and information is able to obtain. Recreational sports program administrators should consider the means by which they communicate with participants based on their gender and based on their type of program as aquatics participants indicated a higher importance in information then the other two types of programs (intramurals and fitness).

Students rated the importance of operating times and information lower than the other three participant groups. This may indicate that students know when the programs and services are offered and also know how and where to attain information related to programs and services. College and university campuses are quickly adopting social media products to reach and stay connected to the student population. This has potentially led to a more thorough communication system which increases the efficiency of disseminating information. Faculty/ staff, alumni and community users may not have as much access to these types of promotion tools and therefore rated information higher then students.

Recreational sports administrators should also continuously evaluate their methods of marketing and promoting facility operation times. Aquatics participants indicated the importance of operation times, information and client employee interaction.

This indicates that the interaction between lifeguards, coaches, aquatics coordinators and the participants is critical especially in disseminating information related to facility operating times.

Participants indicated that all three equipment related attributes were important but that recreational sport administrators are not meeting the expectation of the users. Since all three institutions have newer facilities and continuously upgrade equipment it seems that participants may not realize that top of line equipment is being provided. Recreational sports administrators may want to consider marketing new equipment purchases.

Recommendations

Several recommendations can be made based on methodology and results of this study. This section is divided into the following nine categories: (a) subject attrition; (b) participation incentive; (c) attributes; (d) demographics; (e) survey design; (f) implementation time; (g) academic calendar; (h) year in school categories; and (i) survey implementation.

Subject Attrition

Huck (2008) defines the cause of subject attrition as "…arises because the procedure or data- collection activities of the investigation are aversive, boring, or costly to the participant. In other cases, forgetfulness, schedule changes, or change in home location explain why certain individuals become dropouts" (p. 117). In the case of this study, it is believed that the length of the study may have been a factor in subject attrition. Subjects dropped out of the survey or did not answer questions as they

continued (see Table 9). For example 1094 individuals answered the first question while 625 individuals answered the 20 first question. In addition, it is possible that the design of the survey may have been complicated for respondents. The subjects were asked to rate the importance of a statement by using a 5 point drop down scale, and then rate the performance of the organization in providing the statement using another 5 point drop down scale.

Participation Incentives

In the case of this study, at the end of the second week of data collection, 327 individuals started the survey. After the second week of data collection, an incentive was added and 800 additional surveys were completed in the final four weeks for data collection. This indicates that an incentive should have been tied to participation in this survey from the beginning. This may have had a dramatic affect on the response rate.

Attributes

The SSQRS was developed in 2006. Since 2006 many social media options have become available. Social media was not addressed in the original SSQRS instrument and was not addressed in this study. Serious consideration should be given to questions related to social media as an item in the information factor.

Demographics

This study was conducted in a geographic region of the United States that is relatively homogeneous. The Liberal Arts College in the study reports a minority and international student enrollment of 18.8% (liberal arts college website). The comprehensive university reported a 2012 minority student enrollment of 9%

(comprehensive university website) and the research based university reported a 2012 minority student enrollment of 13% (research based university website). Future research in this area should be focused on more heterogeneous campuses. Results of this study did not indicate significant differences between minority and Caucasian groups where as previous studies (Bryant et al., 1991; Kovac & Beck, 1997; Haines, 2001; Lindsay & Sessoms, 2006) did report differences between the ethnicity groups. This indicates that more research is needed in the area of ethnicity focusing on more diverse campuses then were used in this study.

In addition, future studies should focus on gender and sociability factors. Results of this study indicated that men place a higher importance on social related reasons for participation in recreational sports programs. These results are contrary to the previous research conducted by Kovac and Beck (1997) who found that females place a higher importance on social and community reasons for participation. These contrary findings indicate the need for future research as there may be a change in male and female reasons for participation in recreational sport programs. Future research should comprehensively study sociability aspects of gender with regard to recreational sports programs.

Survey Design

As previously mentioned the researcher believes that participation incentives should have been provided for this study. In addition, to seeing an increase in survey participation, the researcher also saw an increase in the number of surveys that were completed leading to a reduction in incomplete surveys. In an attempt to encourage full

completion of the survey, the question related to incentive participation was placed at the end of the survey.

Academic Calendar

Serious consideration should be given to implementation the survey during the academic year, not in the summer. Although it was predicted that participants would be able to complete the survey electronically from anywhere in the world, helping response rate, the response rate was lower then what the researcher had hoped. In addition, since the survey was implemented in the summer, those respondents that had just completed their first year of school may have still considered themselves "Freshman" while others may have considered themselves "Sophomores." With regard to faculty and staff, the researcher had predicted that respondents would be able to complete the survey even if they were on sabbatical or on field study. Both of these issues may be addressed in the respondents (n = 649) or 63.6% who reported that they had not used the recreation facilities and programs "since last semester." This result is not surprising as none of the three institutions have summer intramural programming which is where the vast majority of the student respondents were found.

Year in School Categories

Consider collapsing the year in school question to under-classman, upper-classman, and graduate student. In the case of this study, the survey was administered during the summer months. It is possible that seniors who recently graduated may not have checked their university email account after graduation and therefore never saw the survey. This could account for thousands of non-responses. In addition, collapsing the

grades categories would have greatly reduced confusion by the participant in terms of year in school. For example, because the survey was implemented in the summer, a freshman may have considered themselves a freshman while others may have considered themselves sophomores as they had just completed their first year in school.

Survey Implementation

Future research in this area that includes programs that have emeritus and retirees should include a paper survey option. In the case of the comprehensive university, approximately 30 of the aquatic fitness class individuals may have not had access to the technology that would allow them to complete the survey adding to a low response rate.

Future researchers should consider how sampling can be used in on-line surveys. In the case of this study, multiple program coordinators assisted with disseminating the electronic link to the survey. This affected the researcher's ability to conduct sampling of the population. Use of other on-line survey instruments may provide for sampling in the future.

Population

Administering this survey with the professional staff at the three institutions may provide a deeper understanding of how staff and clients feel about programs and services. It is likely that some differences in dimensions of service quality and perceived recreational benefits in the importance and performance will appear. This could lead to additional in-service training opportunities for staff and administrators. As stated early, these types of evaluation activities and innovation in recreational sports programming is critical to the future success of the industry.

Conclusions

Although this study had a low response rate and a homogeneous population, valuable information has been obtained in this study which should add to the body of knowledge in recreational sports. Generalizability of the results of this study in all recreational sports programs is not advised due the previously mentioned issues.

Recreational sports program administrators should continue to re-evaluate their programs and make necessary changes as programs and services evolve and technology improves. An example of this importance lies in gender specific programming. Recreational sports administrators may want to re-evaluate expenditures in gender programming based on male and female student enrollment. Females in this study indicated higher importance in eight services quality factors then males. The larger differences were found in operating times and client-employee interaction indicating that recreational sports administrators should consider spending more time in customer services training with staff. This also indicates that recreational sports administrators should investigate operating times of facilities and programs. This investigation would need to be institution specific as not all program times fit all populations.

As shown in this study, program administrators may also what to re-evaluate expenditures in types of programs. Intramural participants indicated less importance in multiple service quality and benefit factors.

Although social benefit importance and performance factors did correlate with all 11 service quality factors, they were more weakly correlated then personal/ physical benefit importance and performance. In addition, the factors related to social interaction

had low to mid range mean scores indicating that participants find social reasons for participating less important to other factors. Recreational sports administrators may want to reconsider the amount of space that is allocated for social interaction during renovations and new builds. In addition, recreational sports program administrators need to consider budget allocations in the areas of social programming.

In conclusion, this study as well as others have shown the need for future inquiry. The field of recreational sports is evolving on a daily basis with recreational sports administrators not only following trends but creating them as well. The college and university atmosphere usually allows for innovation in the recreational sports field and participants demand up-to-date programming and equipment. Understanding the needs and wants of participants is the most effective way to meet their wants and needs and this study clearly links those wants and needs with how program administrators implement service quality measures.

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APPENDIX A

INFORMAL LETTER OF COOPERATION

Christopher B. Denison, Doctoral Candidate
Leisure, Youth and Human Services
University of Northern Iowa
WRC 203
Cedar Falls, IA 50614-0241

Mr. Denison:

Recreational Services at the University of … is pleased to collaborate with you on your project titled "Perceptions of Dimensions of Service Quality and Recreational Benefits in Collegiate Recreational Sports Programs."

We understand that participating in this research project will include receiving and forwarding an email invitation and link to a web based survey, to be forwarded to our recreational sports participants. We had ample opportunities to discuss the research with you and to ask for clarifications. Furthermore, I and key personnel for this project will maintain confidentiality of all research participants in all phases of this project. According to our agreement, project activities will be carried out as described in the research plan reviewed and approved by the University of … Institutional Review Board.

We look forward to working with you, and please consider this communication as our Letter of Cooperation.

Sincerely,

…. …., Senior Associate Director
Recreational Services

APPENDIX B

UNIVERSITY OF NORTRERN IOWA INFORMED CONSENT

Project Title: Perceptions of Dimensions of Service Quality and Recreational Benefits in Collegiate Recreational Sports Programs

Name of Investigator: Christopher B. Denison

Invitation to Participate: You are invited to participate in a research project conducted through the University of Northern Iowa. The University requires that you give your agreement to participate in this project. The following information is provided to help you make an informed decision about whether or not to participate.

Nature and Purpose: The purpose of the study is to explore service quality and recreational benefits in recreational sports programs. In addition, the study will explore how institutional type as reflected in its mission impacts on these factors when reviewing program areas such as intramurals, aquatics and fitness. The study is also designed to explore service quality and recreational benefits and other important variables such as participant types, national origin, gender and ethnicity.

Explanation of Procedures: Involvement in this study includes a one-time completion of a short questionnaire about your perceptions of service quality and recreational benefits. The questionnaire also includes a section which asks for your institutional type, program type, participant type, national origin, gender and ethnicity. The survey includes 72 questions and should take 10-15 minutes to complete.

Discomfort and Risks: There are minimal risk to participate in this study that do not go beyond those of everyday life.

Benefits and Compensation: Although your participation may be of no direct benefit to you, there may be a benefit to your institution's quality of recreation services.

Confidentiality: Your confidentiality will be maintained to the degree permitted by the technology used, but no guarantee can be made regarding the interception of data sent electronically. The questionnaire is anonymous; you do not need to put your name on the questionnaire. The summarized findings with no identifying information will be a published dissertation and may be published in an academic journal or presented at a scholarly conference.

Right to Refuse or Withdraw: Your participation is completely voluntary. You are free to withdraw from participation at any time or to choose not to participate at all, and by doing so, you will not be penalized or lose benefits to which you are otherwise entitled. You can also skip any question that you do not want to answer.

Questions: If you have questions about the study or desire information in the future regarding your participation in the study generally, you may contact Christopher Denison

at 319-273-7160 or the project investigator's faculty advisor Dr. Sam Lankford or Dr. Chris Edginton at the School of Health, Physical Education, and Leisure Services, University of Northern Iowa 319-273-6840 or 319-273-2840. You can also contact the office of the IRB Administrator, University of Northern Iowa, at 319-273-6148, for answers to questions about rights of research participants and the participant review process.

Agreement: I am fully aware of the nature and extent of my participation in this project as stated above and the possible risks arising from it. I hereby agree to participate in this project. I acknowledge that I have received a copy of this consent statement. I am 18 years of age or older.

APPENDIX C

SURVEY

Perceptions of Dimensions of Service Quality and Recreational Benefits in

UNIVERSITY OF NORTHERN IOWA Informed Consent

Project Title: Perceptions of Dimensions of Service Quality and Recreational Benefits in Collegiate Recreational Sports Programs

Name of Investigator: Christopher B. Denison

Invitation to Participate: You are invited to participate in a research project conducted through the University of Northern Iowa. The University requires that you give your agreement to participate in this project. The following information is provided to help you make an informed decision about whether or not to participate.

Nature and Purpose: The purpose of the study is to explore service quality and recreational benefits in recreational sports programs. In addition, the study will explore how institutional type as reflected in its mission impacts on these factors when reviewing program areas such as intramurals, aquatics and fitness. The study is also designed to explore service quality and recreational benefits and other important variables such as participant types, national origin, gender and ethnicity.

Explanation of Procedures: Involvement in this study includes a one-time completion of a short questionnaire about your perceptions of service quality and recreational benefits. The questionnaire also includes a section which asks for your institutional type, program type, participant type, national origin, gender and ethnicity. The survey includes 72 questions and should take 10-15 minutes to complete.

Discomfort and Risks: There are minimal risk to participate in this study that do not go beyond those of everyday life.

Benefits and Compensation: Although your participation may be of no direct benefit to you, there may be a benefit to your institution's quality of recreation services.

Confidentiality: Your confidentiality will be maintained to the degree permitted by the technology used, but no guarantee can be made regarding the interception of data sent electronically. The questionnaire is anonymous; you do not need to put your name on the questionnaire. The summarized findings with no identifying information will be a published dissertation and may be published in an academic journal or presented at a scholarly conference.

Right to Refuse or Withdraw: Your participation is completely voluntary. You are free to withdraw from participation at any time or to choose not to participate at all, and by doing so, you will not be penalized or lose benefits to which you are otherwise entitled. You can also skip any question that you do not want to answer.

Questions: If you have questions about the study or desire information in the future regarding your participation in the study generally, you may contact Christopher Denison at 319-273-7160 or the project investigator's faculty advisor Dr. Sam Lankford or Dr. Chris Edginton at the School of Health, Physical Education, and Leisure Services, University of Northern Iowa 319-273-6840 or 319-273-2840. You can also contact the office of the IRB Administrator, University of Northern Iowa, at 319-273-6148, for answers to questions about rights of research participants and the participant review process.

Agreement: I am fully aware of the nature and extent of my participation in this project as stated above and the possible risks arising from it. I hereby agree to participate in this project. I acknowledge that I have received a copy of this consent statement. I am 18 years of age or older.

***1. Do you Agree to Participate?**

◯ Yes

◯ No

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Introduction

This survey will ask you to respond to how important recreation service quality items are to you.

In addition, you will be asked to respond to the performance of recreation services at your institution (i.e. Wartburg College, UNI or the University of Iowa). Please answer both importance and performance questions.

Lastly, you will be asked to respond to demographic questions.

Thank you for your participation.

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Participation Frequency

2. When was the last time you used Recreation Services' classes/ programs?

- ◯ Today
- ◯ Yesterday
- ◯ Last Week
- ◯ Last Month
- ◯ Last Semester

3. Approximately how many times per week do you participate in Recreation Services' classes/ programs?

- ◯ None
- ◯ 1-3
- ◯ 4-6
- ◯ 7-9
- ◯ 10 or more

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Range of Recreation Service Programs

Range of programs refers to the variety in program offerings. Please rate both importance and performance for each question.

4. Rate the importance of range in programs to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing a range of programs:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Recreation Services has various classes/ programs.		
Recreation Services offers a wide range of classes/ programs.		
Recreation Services offers popular classes/ programs.		
The classes/ programs offered by Recreation Services are attractive to me.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Operating Times for the Facilities and Programs

Operating times refers to the hours of availability of facilities and classes/ programs. Please rate both importance and performance for each question.

5. Rate the importance of operating times to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing operating times:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
The operating hours of Recreation Services are convenient.		
Classes/ program times are convenient.		
Recreation Services offers classes/ programs at several different times.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Information About Recreation Programs

Information refers to communications, marketing and promotion. Please rate both importance and performance for each question.

6. Rate the importance of information to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing information:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Recreation Services employees are easy to contact by e-mail.		
Recreation Services is easy to contact through a website.		
Up- to- date information is available regarding Recreation Services' activities and events.		
Overall, information about Recreation Services is easy to obtain.		
Recreation Services is easy to contact by phone.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Client - Employee Interaction

Client- Employee interaction refers to interaction with Recreation Services staff. Please rate both importance and performance for each question.

7. Rate the importance of client- employee interaction to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing client- employee interaction:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Recreation Services' employees seem very knowledgeable about their jobs.		
You can count on Recreation Services' employees to be friendly.		
Recreation Services' employees are willing to help participants.		
Recreation Services' employees take action when problems occur.		
Recreation Services' employees are competent.		
Recreation Services' employees handle problems promptly and satisfactorily.		
Recreation Services employees recognize and deal effectively with the special needs of each participant.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Interactions With Other Recreation Participants

Please rate both importance and performance for each question.

8. Rate the importance of interaction with other recreation participants to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing opportunities for interaction with other recreation participants:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Recreation Services' other customers have a positive impact on my perception of Recreation Services.		
I am generally impressed with the other patrons of Recreation Services.		
Recreation Services' customers follow rules and regulations.		
I find that Recreation Services' customers consistently leave me with a good impression of its services.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Physical Change and Benefits I Received

Please rate both importance and performance for each question.

9. Rate the importance of physical change to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing physical change:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
I feel that my physical ability level has increased after having used Recreation Services' programs.		
Recreation Services' classes/ programs helped me to improve my physical abilities.		
I feel that my physical fitness level has increased after having used Recreation Services' classes/programs.		
I feel that my skill level has increased after participating in Recreation Services' classes/programs.		
The activities that I have participated in Recreation Services have improved my skill performance.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Personal Outlook From Participation

Please rate both importance and performance for each question.

10. Rate the importance of personal outlook to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing personal outlook:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
I feel good about what I get from Recreation Services.		
When I leave Recreation Services, I always feel that I got what I wanted.		
I usually have a good feeling when I leave Recreation Services.		
I would evaluate the outcome of Recreation Services' classes/programs favorably.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Social Interactions During Participation

Please rate both importance and performance for each question.

11. Rate the importance of social interaction to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of the Recreation Services in providing social interaction:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Recreation Services has provided me many opportunities for social interaction.		
I feel a sense of family among Recreation Services' customers.		
I made many friends through participating in Recreation Services' classes/ programs.		
I really enjoyed the social interaction in Recreation Services' classes/programs.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Facility Condition

Please rate both importance and performance for each question.

12. Rate the importance of facility condition to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in maintaining facility condition:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Recreation Services' ambiance is excellent.		
Recreation Services' ambiance is what I'm looking for in a university recreational sport setting.		
The facilities are clean and well maintained.		
I am consistently impressed with the facility's atmosphere.		
I really enjoy Recreation Services' facility atmosphere.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Facility Design

Please rate both importance and performance for each question.

13. Rate the importance of facility design to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services facility design:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Recreation Services' facilities are well designed.		
Recreation Services' facility layouts serve my purposes/ needs.		
I am impressed with the design of Recreation Services facilities.		
The facilities are aesthetically attractive.		
The facilities are safe and comfortable.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Equipment

Please rate both importance and performance for each question.

14. Rate the importance of equipment to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing quality equipment:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
The equipment provided by Recreation Services is up- to- date.		
A variety of up- to- date exercise equipment is available at the school.		
The equipment provided by Recreation Services is in good usable condition.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Recreational Benefits

Please rate both importance and performance for each question.

15. Rate the importance of recreational benefits are to you:
(1 = Not at all important, 2 = Somewhat important, 3 = Neutral, 4= Important, 5 = Very Important)

Rate the performance of Recreation Services in providing recreational benefits:
(1 = Very Low performance, 2 = Low performance, 3 = Neutral, 4 = High performance, 5 = Very High performance)

	Importance	Performance
Participating in Recreation Services' classes/ programs improves my self-confidence.		
Participating in Recreation Services' classes/ programs provides me a sense of accomplishment.		
Participating in Recreation Services' classes/ programs provides me a sense of adventure.		
Participating in Recreation Services' classes/ programs improves my group cooperation skills.		
Participating in Recreation Services' classes/ programs helps me respect others.		
Participating in Recreation Services' classes/ programs improves my communication skills.		
Participating in Recreation Services' classes/ programs improves my leadership skills.		
Participating in Recreation Services' classes/ programs improves my problem-solving skills.		
Participating in Recreation Services' classes/ programs helps me control my weight.		
Participating in Recreation Services' classes/ programs improves my physical strength.		
Participating in Recreation Services' classes/ programs reduces my stress.		
Participating in Recreation Services' classes/ programs improves my balance/ coordination.		
Participating in Recreation Services' classes/ programs improves my time- management skills.		
Participating in Recreation Services' classes/ programs helps me develop friendships.		
Participating in Recreation Services' classes/ programs is fun.		

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Demographics

***16. Gender**

- ◯ Male
- ◯ Female

***17. Type of Program- which program do you participate in most often?**

- ◯ Intramurals
- ◯ Aquatics
- ◯ Fitness

***18. Institution**

- ◯ Wartburg College
- ◯ University of Northern Iowa
- ◯ University of Iowa

19. National Origin- which of the following best represents you?

- ◯ US Citizen
- ◯ Not a US Citizen

20. Participant type- which of the following best represents you?

- ◯ Student
- ◯ Faculty/Staff
- ◯ Alumni
- ◯ Community Member

21. Ethnicity- which of the following best represents you?

- ◯ Hispanic or Latino
- ◯ American Indian or Alaska Native
- ◯ Asian
- ◯ Black or African American
- ◯ Native Hawaiian or Other Pacific Islander
- ◯ White

Perceptions of Dimensions of Service Quality and Recreational Benefits in

STUDENTS ONLY! Recruitment and Retention

22. STUDENTS ONLY!

- ◯ Freshman
- ◯ Sophomore
- ◯ Junior
- ◯ Senior
- ◯ Graduate Student

23. STUDENTS ONLY! In deciding to attend this institution, how important was the availability of recreational sports facilities or programs?

- ◯ Not at all Important
- ◯ Somewhat Important
- ◯ Neutral
- ◯ Important
- ◯ Very Important

24. STUDENTS ONLY! In deciding to continue at this institution, how important to you was the availability of recreational sports facilities or programs?

- ◯ Not at all Important
- ◯ Somewhat Important
- ◯ Neutral
- ◯ Important
- ◯ Very Important

Perceptions of Dimensions of Service Quality and Recreational Benefits in

Random Drawing Information

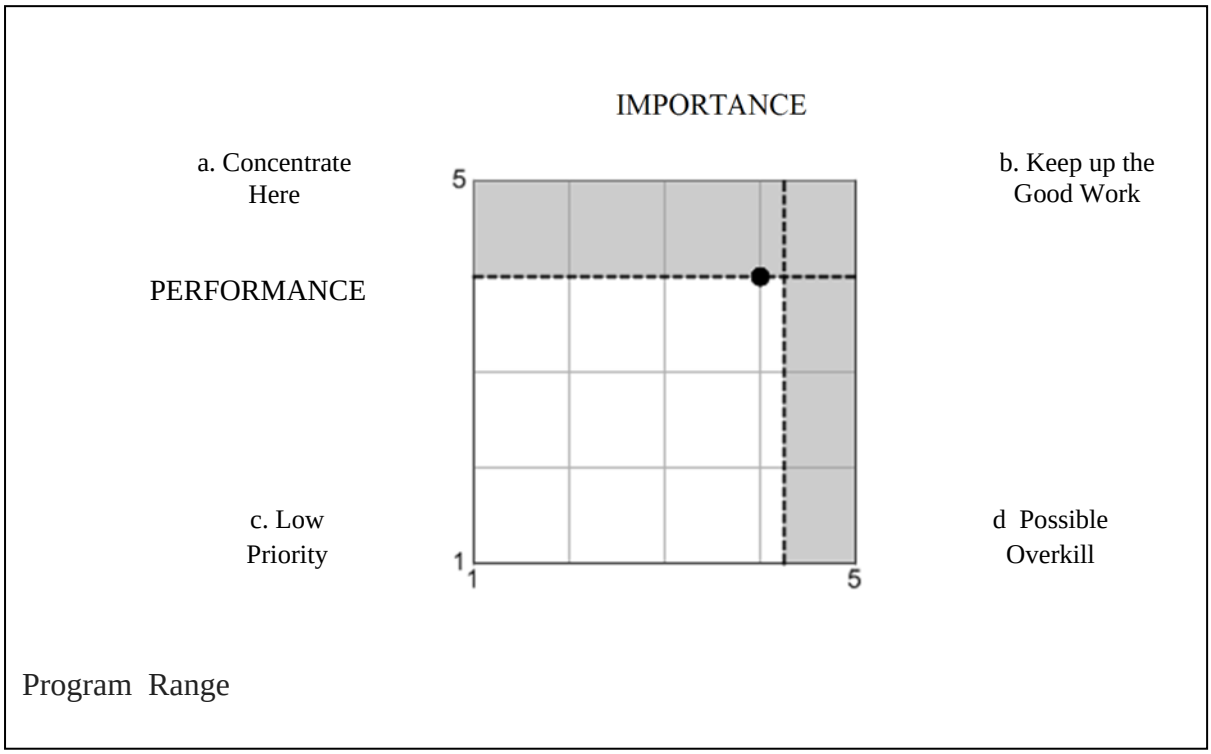
If you would like to be entered into a random drawing for one of three $50.00 Best Buy gift cards, please complete the questions below. UNI students who wish to enter the drawing will need to provide their student ID # because winner names must be reported to the UNI business office for tax purposes. No survey data is shared, however.

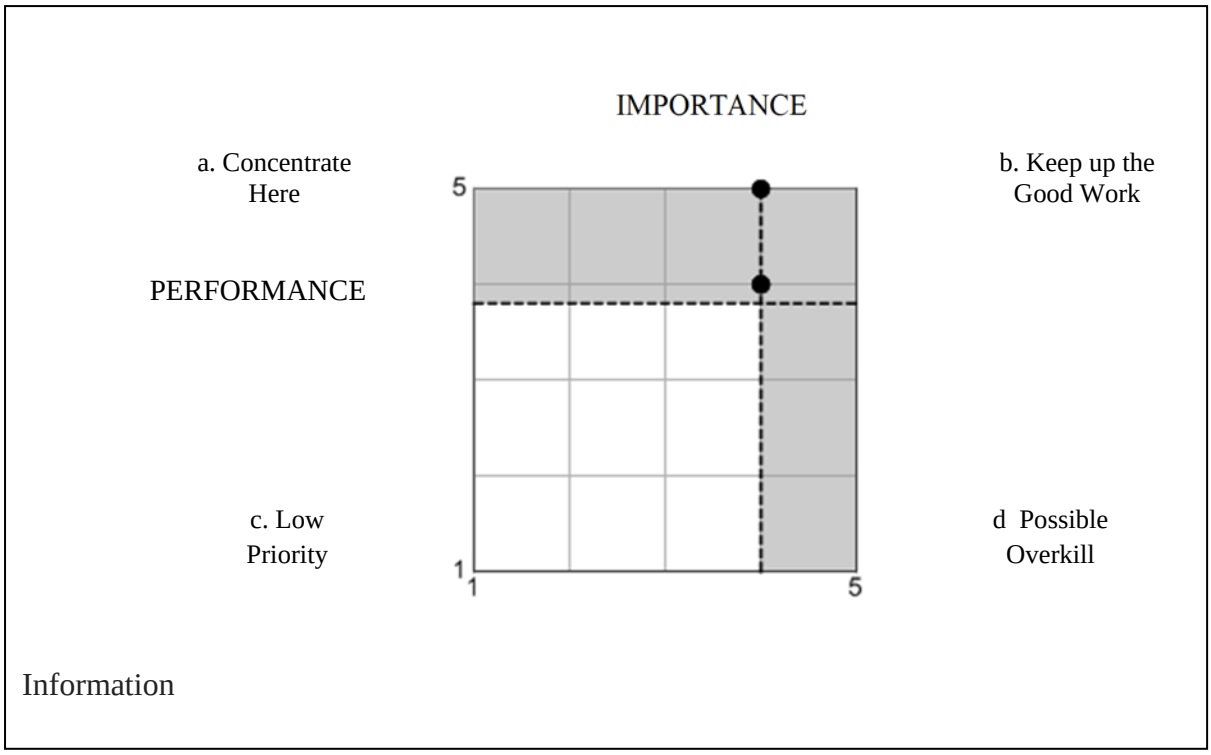
25. Random Drawing Information

Name	
ID# (for UNI Students only)	
email address	

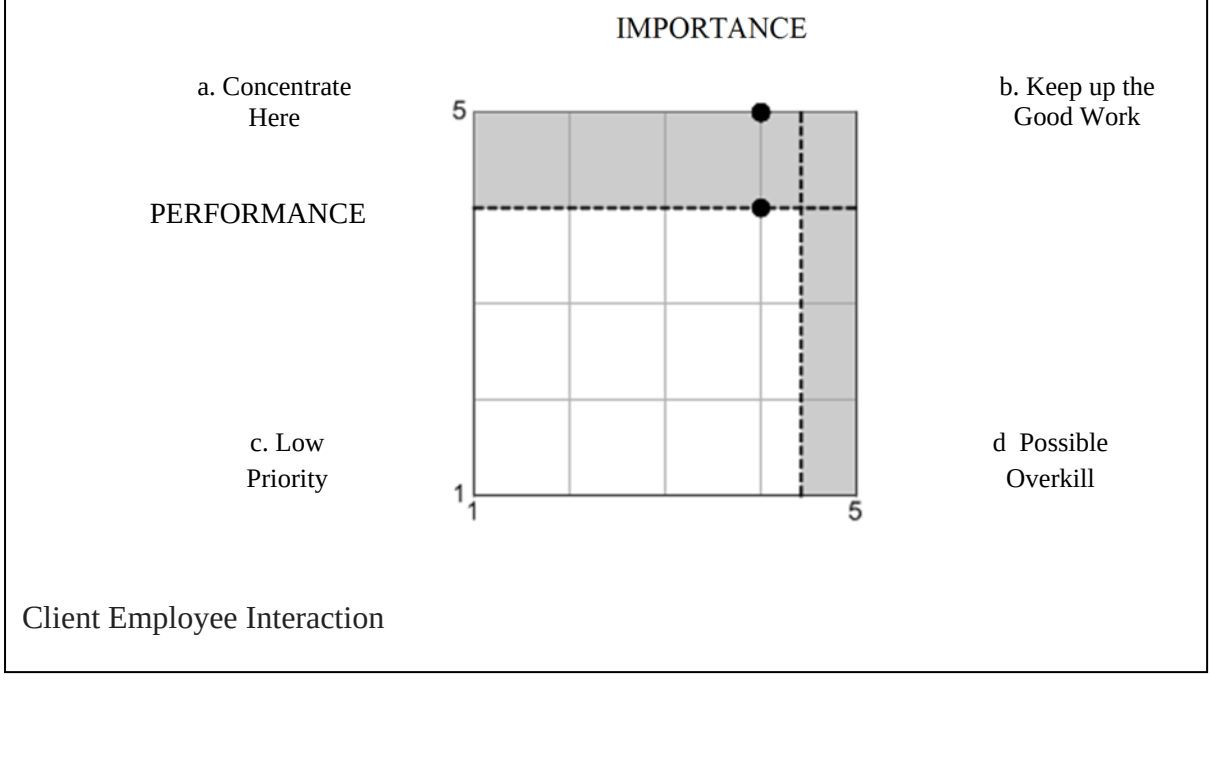
APPENDIX D

IMPORTANCE-PERFORMANCE GRIDS USING MEDIANS

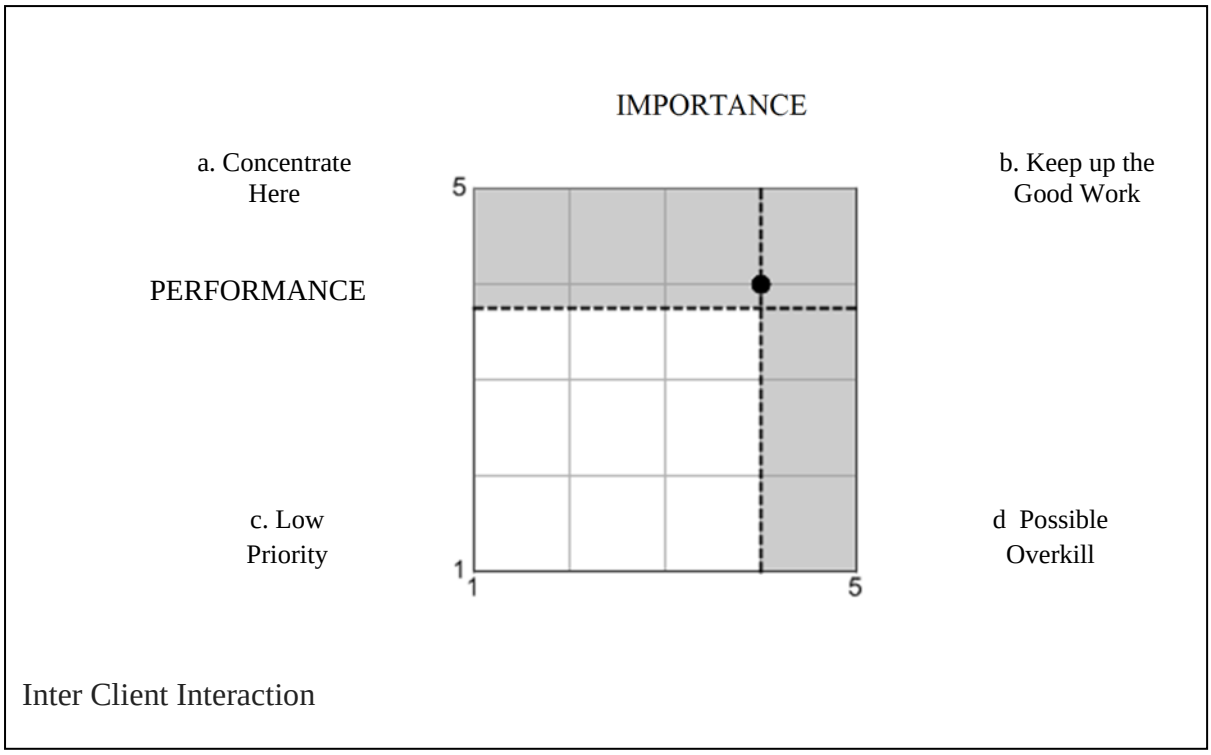




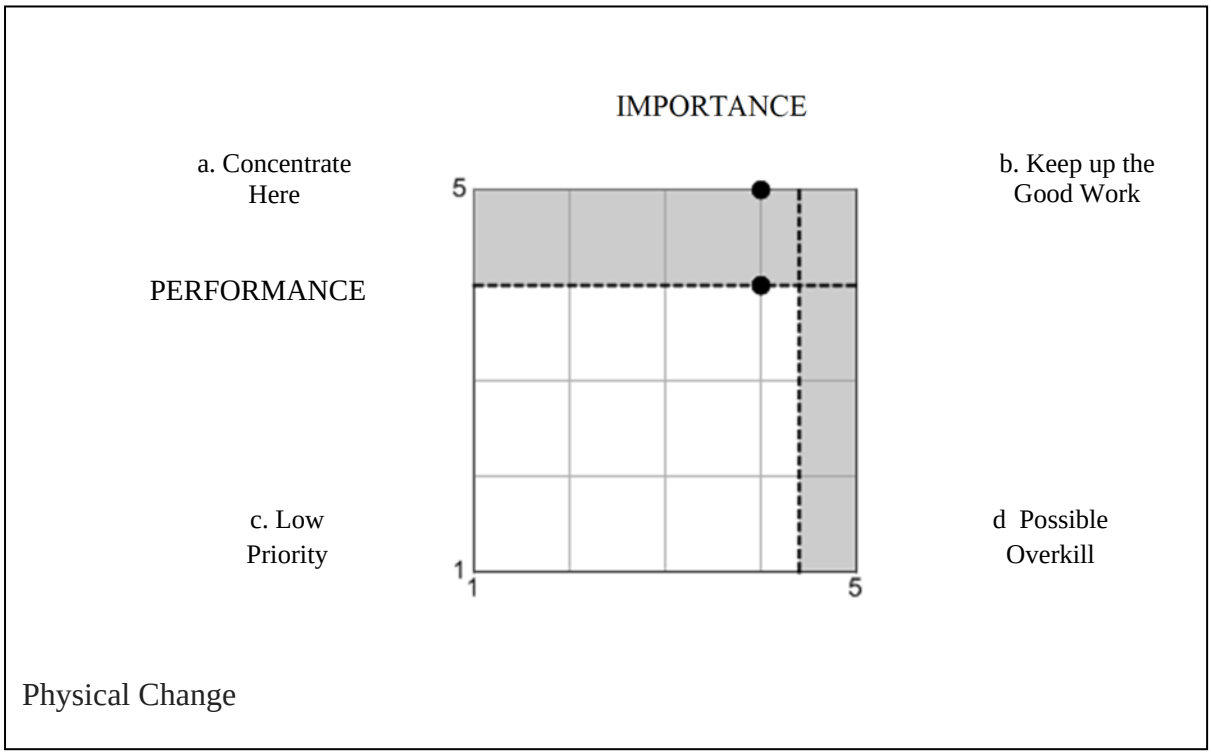
Information



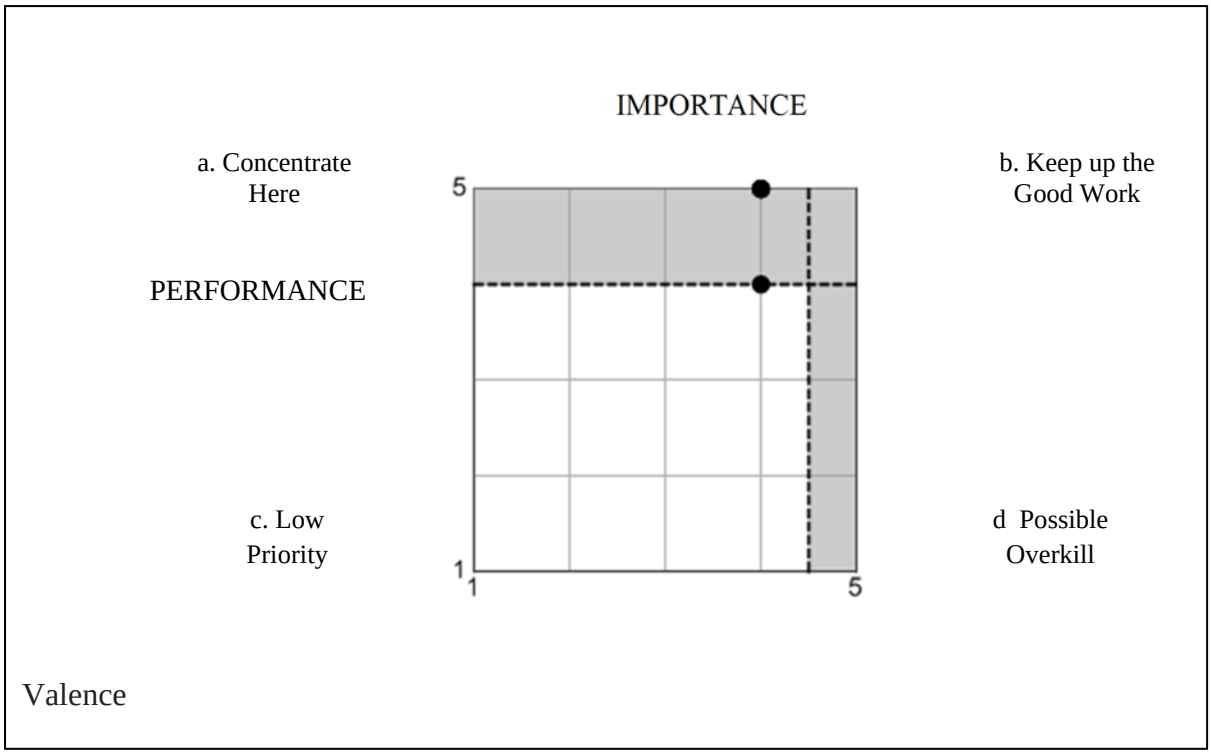
Client Employee Interaction



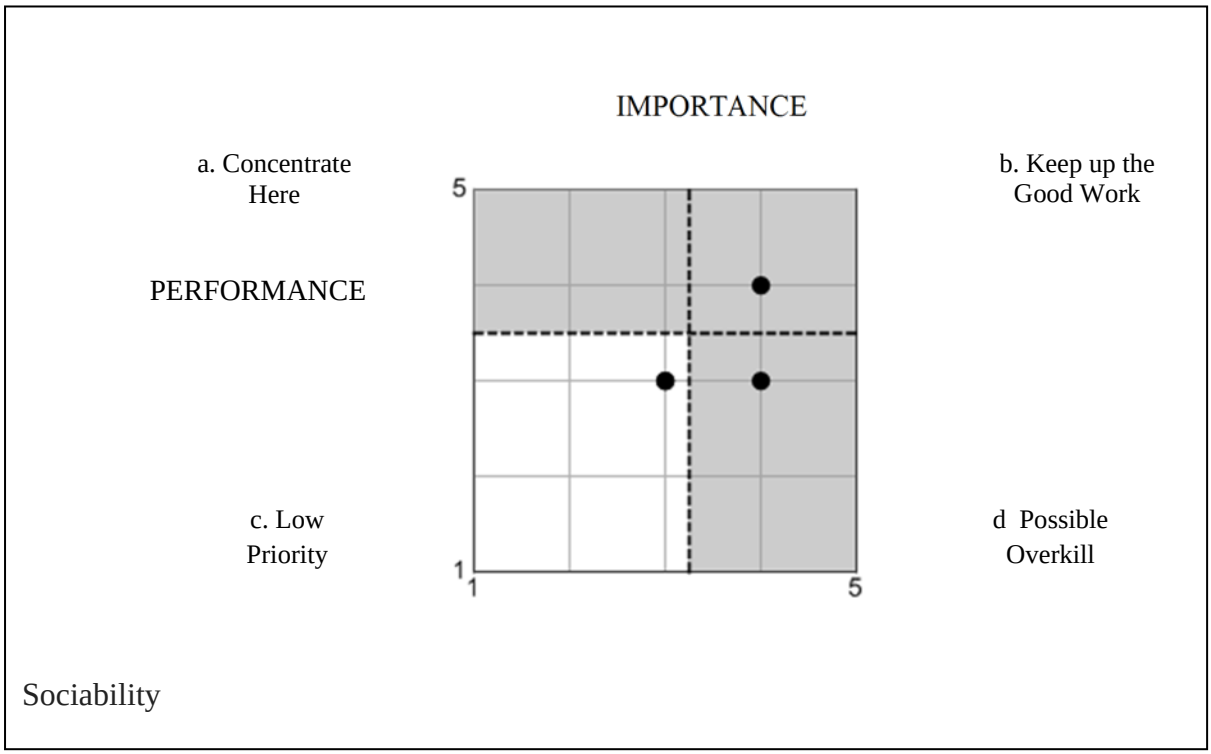
Inter Client Interaction



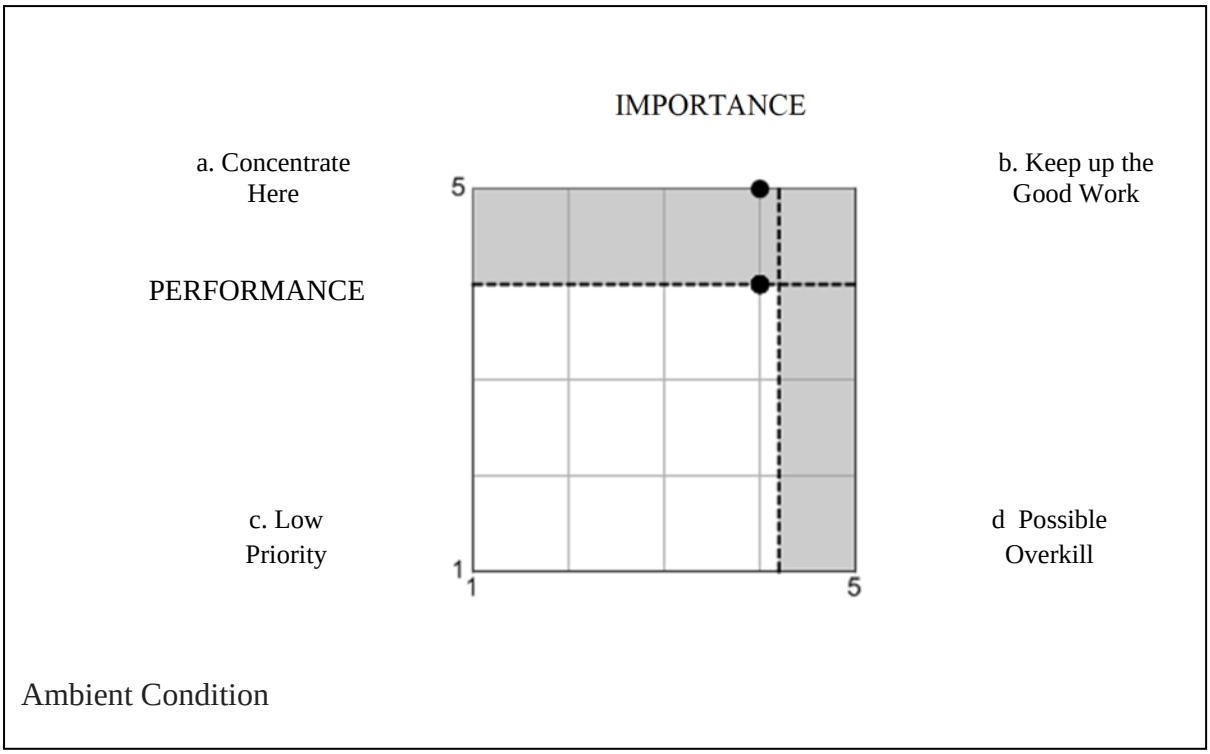
Physical Change



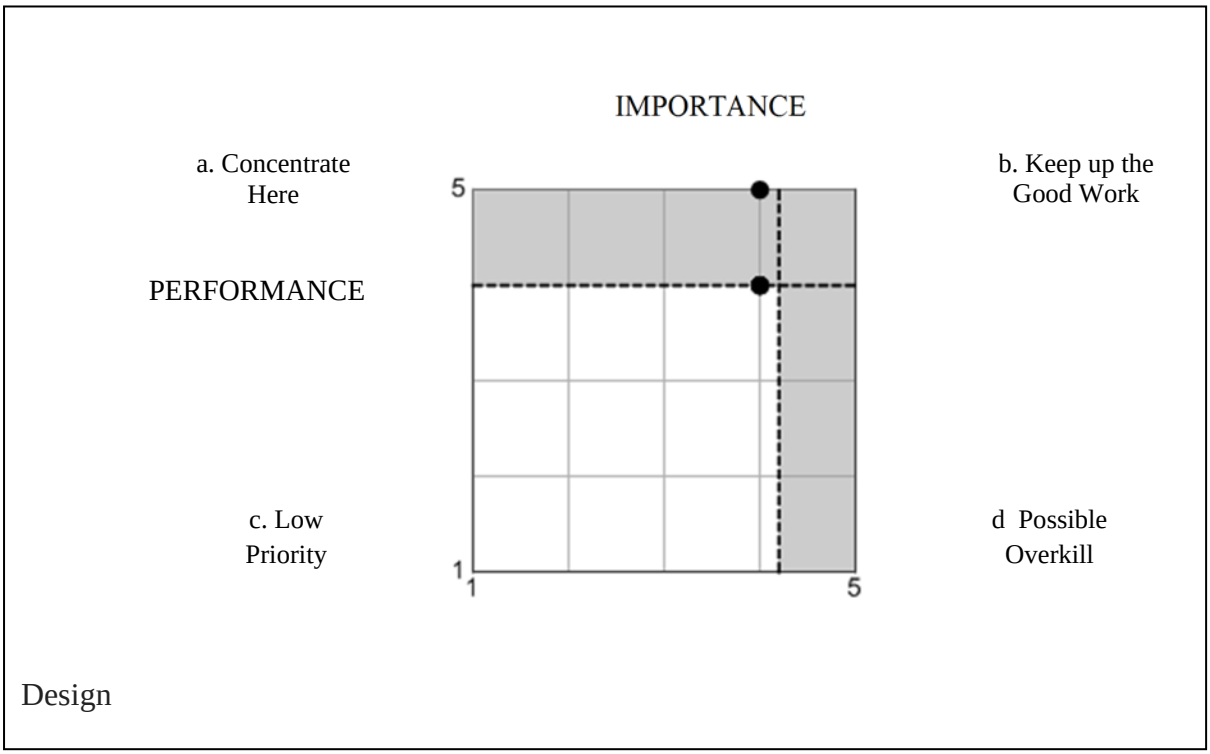
Valence



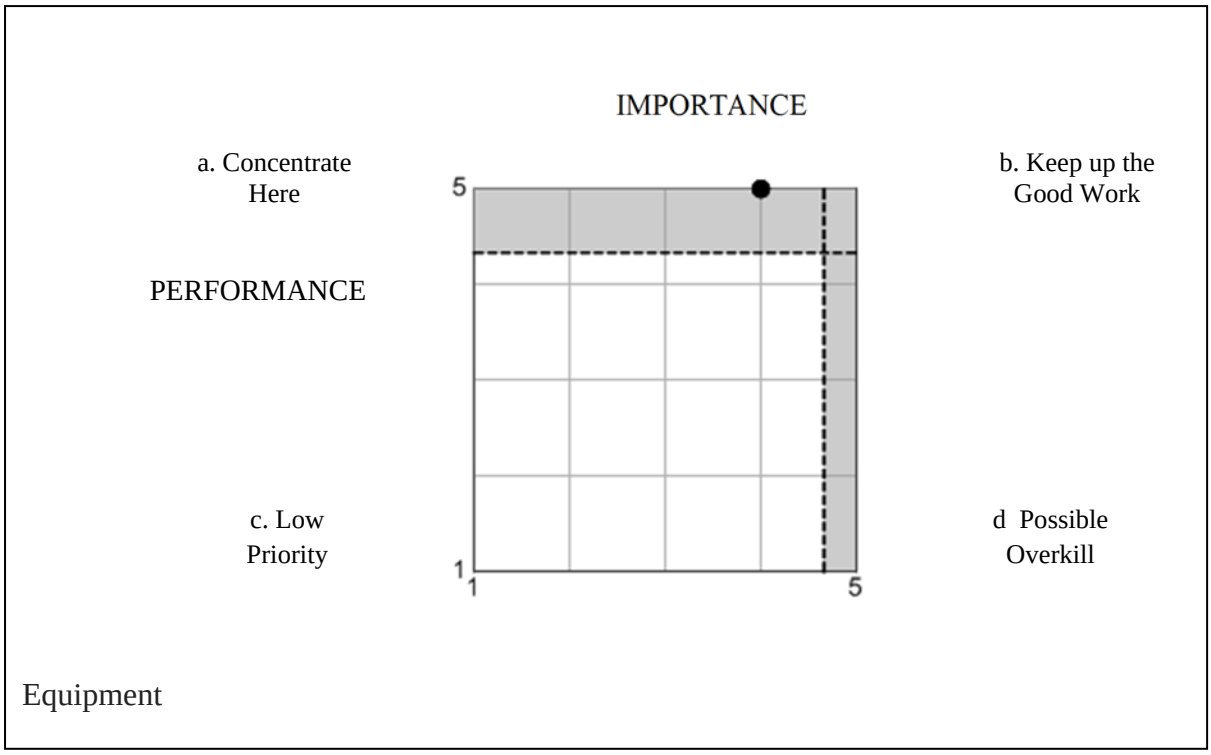
Sociability



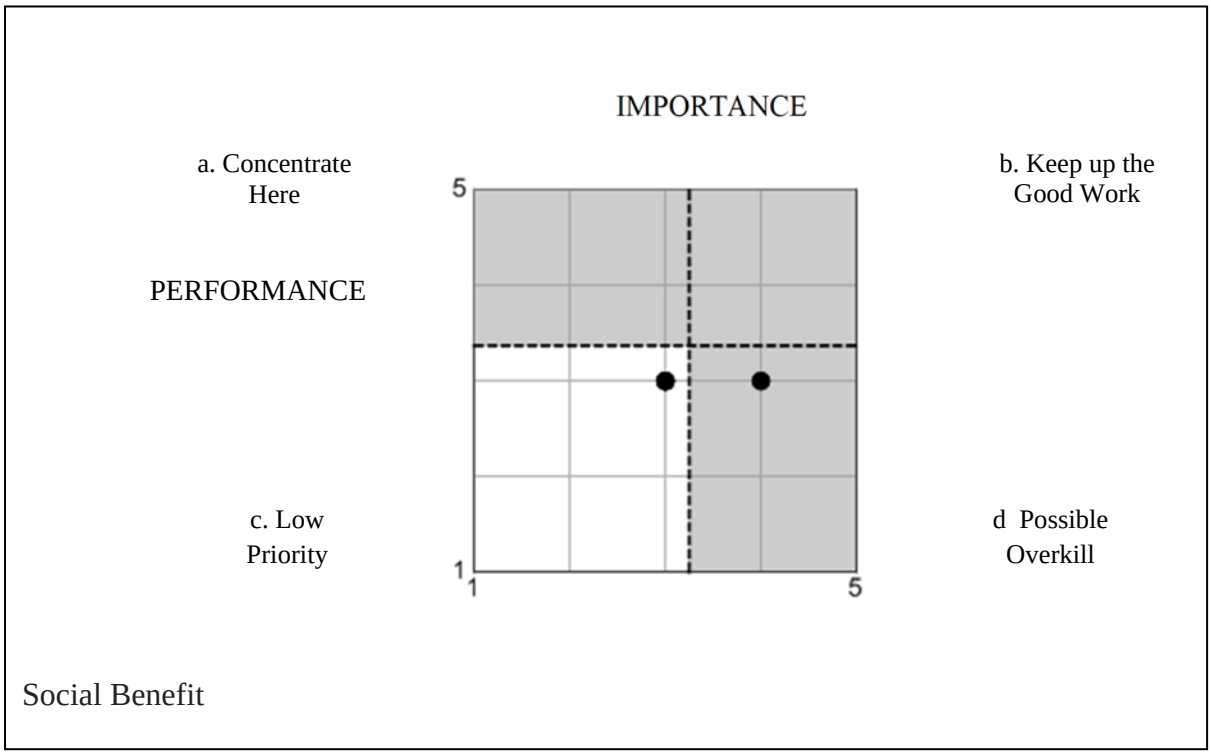
Ambient Condition



Design



Equipment



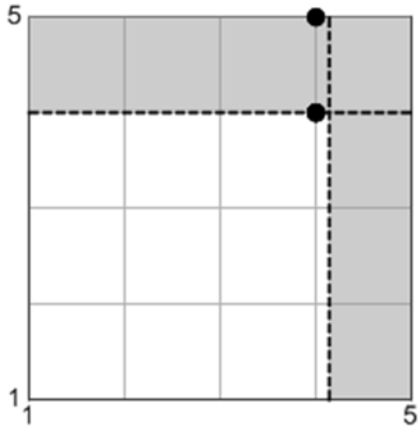
Social Benefit

IMPORTANCE

a. Concentrate Here

b. Keep up the Good Work

PERFORMANCE



c. Low Priority

d Possible Overkill

Personal/Physical Benefit