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### Effectiveness of Social Media Marketing: An Experimental Inquiry on College Students' Awareness of, Interest in, and Intention to Participate in a Campus Recreation Special Event

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This thesis, THE EFFECTIVENESS OF SOCIAL MEDIA MARKETING: AN EXPERIMENTAL INQUIRY ON COLLEGE STUDENTS' AWARENESS OF, INTEREST IN, AND INTENTION TO PARTICIPATE IN A CAMPUS RECREATION SPECIAL EVENT, by KENDRA BAYNE, was prepared under the direction of the candidate's Thesis Advisory Committee. It is accepted by the committee members in partial fulfillment of the requirements for the degree Master of Sports Administration in the Department of Kinesiology and Health in the College of Education, Georgia State University.

The Thesis Advisory Committee and the student's Department Chair, as representatives of the faculty, certify that this thesis has met all standards of excellence and scholarship as determined by the faculty. The Dean of the College of Education concurs.

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## ABSTRACT

### THE EFFECTIVENESS OF SOCIAL MEDIA MARKETING: AN EXPERIMENTAL INQUIRY ON COLLEGE STUDENTS' AWARENESS OF, INTEREST IN, AND INTENTION TO PARTICIPATE IN A CAMPUS RECREATION SPECIAL EVENT

by  
KENDRA BAYNE

This study examined the effectiveness of social media marketing on college students attending a recreation special event. Facebook and Twitter were assessed via an experimental design. To measure the effectiveness of these applications (through updating statuses) on a college student's awareness, interest, and intent of attending a special event, three groups were employed (Facebook, Twitter, and Control). A total of 134 participants were recruited via six undergraduate courses and were assigned into three groups based on their social media consumption. Subjects responded to a pre-survey, joined their respective treatment group, and completed a post-survey. Descriptive statistics revealed that awareness increased for those who received Facebook status updates and tweets. The interest level of the treatment groups decreased from the pre to the post-test and the intention of participants to participate increased slightly for the Facebook treatment group, but the intent level of participants in the Twitter and Control groups decreased.

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KENDRA BAYNE

A Thesis

Submitted in Partial Fulfillment of the Requirements for the

Degree of Master of Sports Administration in the

Department of Kinesiology and Health in the

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Atlanta, GA

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## TABLE OF CONTENTS

CHAPTER	TITLE	PAGE
1	Introduction	1
	Campus Recreation	3
	Significance of Study	8
	Purpose	9
	Objectives	9
	Definition of Terms	9
2	Review of Literature	12
	Advertising Theory	14
	Social Media	23
	Social Media and Campus Recreation	25
	Summary	28
	Hypotheses	29
	Figures	30
3	Methodology	32
	Participants	33
	Experimental Design	33
	Procedures	35
	Instruments	37
	Data analysis	39
	Figures	41
4	Results	42
	Background Information	43
	Social Media Involvement	44
	Recreational Services Involvement	44
	Pre and Post-Test Descriptive Statistics for Awareness, Interest, and Intention	45
	Advertising Types	47
	Tables	49
5	Discussion	57
	Limitations	62
	Future Research	63
	References	64
	Appendices	76



CHAPTER 1  
INTRODUCTION

Recreation centers are commonplace on college campuses, as participation in exercise, recreational sports, club sports, and outdoor recreation have become popular activities for students. A major challenge among campus recreation directors is continually increasing the number of participants who use their facility. Each semester new students enroll in colleges or universities, providing the campus recreation centers with possible new clientele. For many students, campus recreation centers are a selling point in which college or university they decide to attend. In a study conducted by the Art and Science Group (2000), 54% of high school seniors indicated that the intramural sports program was a factor in determining which college they would attend (Kampf, 2010). Additionally, it was found that over 50% of these respondents thought recreational sports activities were also important to determining their college of choice (Kampf, 2010).

Even though many college students are intrigued with the idea of a superb recreation facility, research indicates that one third of students who were once active in high school become deficient in their physical activity habits within three weeks of stepping onto their respective campuses (Scott, Rhodes, & Downs, 2009). One rationale for these findings may be that students are overwhelmed with their diverse options for entertainment, extracurricular, and social activities on a college campus that were not present in high school. Another explanation is that often new students lack awareness of the offerings that their recreation department provides. It is imperative that campus recreation marketers understand their competition with other leisure activities and entertainment options (Funk, Filo, Beaton, & Pritchard, 2009) and constantly focus on ensuring that both new and old students are aware of the campus recreation department's offerings and activities in an effort to consistently increase participation amongst students.

### *Campus Recreation*

The National Intramural-Recreational Sports Association (NIRSA) serves as the governing body of campus recreation programs across America. Developed in 1950 by Dr. William N. Wasson, the first meeting of the National Intramural Association (NIA) occurred with 22 African-American men and women intramural directors from 11 Historically Black Colleges at the organization's first Intramural Conference at Dillard University in New Orleans. The organization was formed in order to "provide for the education and development of professional and student members and to foster quality recreational programs, facilities and services for diverse populations. NIRSA demonstrates its commitment to excellence by utilizing resources that promote ethical and healthy lifestyle choices" (NIRSA, 2010).

Campus recreation has experienced tremendous growth since its inception on college campuses. NIRSA is represented on 700 college and university campuses and universities as well as U.S. military installations, public park and recreation departments, correctional facilities, not-for-profit organizations and private enterprises which collectively have 4,000 members. The number of individuals participating in campus recreation and the new facilities being built are also exponentially growing. Campus recreation centers on 174 college and universities that are being (or have been) newly constructed, expanded, or renovated for the years 2008-2013 are expected to spend \$3.96 billion (NIRSA, 2008). The average project price tag for these 174 campus recreation centers is \$20.7 million, a cost that has increased 6% since 2006 (NIRSA, 2008). Kerr and Downs indicates that more than 50% of the colleges surveyed have either built or renovated a new recreation facility since 2005 (Downs, 2003). These new construction and renovation projects are a result of the increased awareness that these facilities are a major factor in students needing to be involved in various wellness activities, the ability for the facilities to

serve as a recruitment tool at institutions, and the force that indicates these facilities have the utter ability to increase retention of their student body by providing first-class fitness facilities (Kampf, 2010). The demand to increase recruitment and retention has put a damper on the budgets of small colleges and universities who have been forced to keep their facilities fresh and new in order to stay competitive in the world of higher education (Turman, Morrison, & Gonsoulin, 2004).

These facilities are currently being utilized by over 11 million college students annually. Recreational sports consist of club sports, intramural sports, recreation and workout facilities, Approximately 2 million students are currently participating in collegiate club sports (NIRSA, 2010). The Intramurals portion of campus recreation is also becoming a more integral part of student life, creating more demand for Intramural contests has allotted campus recreation departments to host over 1.1 million Intramural contests annually (NIRSA, 2010).

It is important that college students understand the benefits of using their campus recreation centers. Research has shown a positive correlation between campus recreation use and retention of students. It is possible that many issues that face college students, such as poor grades, or an inadequate fit in the social scene of campus, can be eliminated with something as simple as continued use of their campus' recreation facility (Watson, Ayers, Zizzi, & Naoi, 2006). Campus recreation usage improves physical fitness and overall quality of life for college students, making it vital for college students to use their campus recreation centers that are at their disposal daily. The Department of Health and Human Services has released the 2010 Physical Activity Guidelines for Americans. The recommendations for all Americans indicate that 150 minutes of moderate activity or 75 minutes of vigorous aerobic activity should be completed weekly in order to maintain the health benefits of physical activity (U.S. Department

of Health and Human Services, 2010). Additionally, muscle strengthening exercises that strengthen all major muscle groups should be completed at least twice a week (U.S. Department of Health and Human Services, 2010). Research indicates that approximately 40% to 50% of college students are not meeting these minimum exercise guidelines (Weinstock, 2010).

According to the U.S. Surgeon's General Report on Physical Activity and Health, inactive individuals are nearly twice as likely to develop heart disease as those who are more active, this being just one reason why it is crucial for college students to partake in aerobic activity weekly. With this aerobic activity weekly, research indicates that these consistent habits can improve a student's mental health and psychological well being (Steir, 2000). Physical fitness can reduce the chances of one obtaining numerous chronic diseases. Additionally, exercise can improve a student's mental health and psychological well being. With more research indicating the use of a student recreation center having a positive impact on psychological development in addition to physical and psychological well being (Watson et al., 2006), it is becoming increasingly important that university leaders and recreation directors recognize the potential of campus recreation programs, services, and facilities toward this advancement in society and that recreation directors find ways to market these amenities.

In addition to the everyday offerings that allow participants to experience physical fitness opportunities, in areas such as the weight room, pool, track, or on the basketball courts, campus recreation centers have various program offerings throughout the academic year, both one-time events and ongoing.

With the high numbers of programs, students' awareness of the programs is important. At some institutions, recreation centers have implemented incentive programs to increase participation numbers at their facilities. In a study of 236 NIRSA campus recreation centers, 32%

of the centers offered prizes and 6% offered other prizes such as name recognition, awards, and gift certificates (Crow, Gonsoulin, & Phillips, 2010). This reward system was most advertised by the distribution of flyers (29.3% of respondents) and word of mouth (24.6% of respondents).

It is important that recreational facilities are able to promote their programs as effectively and efficiently as possible to keep students aware of and engaged in the programs and events that are being offered. Weese and Sutton (1987) used the term “here today—gone tomorrow” as a way of describing at which speed a college student’s interest in activities changes. With marketing budgets of campus recreation centers averaging just over \$11,000 annually (Value of Recreational Sports in Higher Education, 2003), it is crucial that departments are being fiscally responsible with the money they do have, in order to successfully yield the participation results they would like from college students who have ever changing interests. Traditional marketing efforts of a collegiate recreational sports program include print methods such as flyers, advertisements in the campus’ newspaper, alumni magazine, and other on-campus publications, in addition to print materials that can be picked up around campus to attempt to increase awareness of program offerings. Using new electronic media efforts to reach college students such as Facebook, Twitter, and other mobile web platforms to effectively market programs is a recent trend with recreational sports programs. Although a recent shift has been made to marketing electronically, it is crucial that marketing individuals in campus recreation understand and measure if these methods are increasing awareness of programs and facilities, and ultimately patron usage.

The shift to social media marketing is a result of the college student demographics’ reliance on electronic media. The amount of college-aged students who are consistently using their mobile phone is larger, faster, and more significant than ever before. Hanley (2010)

indicates that 99.7% of students have a mobile communications device. Additionally, Hanley (2010) found that emailing and instant messaging are now obsolete in comparison to text-messaging on cellular devices. The study of 4,907 college students also indicated that approximately 94% of students send and receive text messages (Hanley, 2010). Because of the increase in cell phone usage amongst college students, it is important that recreation center marketing directors recognize this and focus their marketing efforts on utilizing these devices to their advantage in order to reach students (Becker, 2006). Social media platforms can be accessed on mobile-web enabled platforms, or via specialized applications for social media on smart phones. These users have the constant ability to obtain information, versus in prior years when being on the web was only popular via a computer. Marketers utilize these tendencies by advertising via internet and social media.

Recent research based on preferences of 2,242 individuals aged 18-80 years old released by Knowledge Networks and Media Post Communications (2010) unveiled that consumers are 15% more likely to purchase brands they have seen on social media websites. The study also indicated that 25% of those surveyed indicated they were more likely to learn about brands that advertise on social media websites. In the realm of professional sports, a 2010 survey conducted by Catalyst Public Relations in conjunction with *Street and Smith's SportsBusiness Journal* showed the phenomenon that individuals admit they are more avid fans of their favorite professional sporting leagues than they were before the creation of social media websites (Broughton, 2010). In fact, 61% of MLB fans and 55% of NFL fans indicate they are more intrigued with their teams than before the onset of social media websites such as Facebook and Twitter (Broughton, 2010). One research study conducted on the content professional athletes post on Twitter indicates that of the athletes participating in the big four leagues (NBA, NFL,

NHL, and MLB), 46.39% of tweets involved personal communication with fans, and another 15.81% of tweets provided information about their personal lives (Pegorano, 2010). Twitter in itself, amongst all other social media websites may be the number one contributor for this shift in fan identification with athletes. Twitter, and other social networks have created a shift in the sports communication paradigm (Hambrick, Simmons, Greenhalgh, & Greenwell, 2010) and this creates the need to understand the potential marketing efforts of social media websites to its fullest ability in all capacities.

With the current research that exists based on Facebook and Twitter in the world of professional sports, there is a need to understand and determine what options work best for recreation centers. Recreation centers have a diverse programming scheme, thus their audience is very widespread. Campus recreation marketers have the need to make their diverse clientele more aware, and understand and capitalize on the influence of technology and marketing efforts.

#### Significance of Study

Although there are numerous studies that indicate usage of social media and other new technological advances in technology to reach consumers, little research has been completed on the actual outcomes of marketing in these capacities. The few studies that have been completed indicate that marketing and mobile marketing can be effective in increasing a consumer's awareness and response to marketing campaigns and brand awareness and the ability for a consumer to establish a strong bond with a brand, enabling a loyalty with the product or service (Becker, 2006).

Many campus recreation centers utilize social media to reach their target market. Although it is always important to determine what an effective marketing plan is, it is very critical when marketing to college students. The ability to make students aware of healthy fitness



programs and services that their recreation center offers could prove to change a student's life around and allow them to become a healthier college student. This alone is one factor that makes it important to determine if social media is effective.

### Purpose

The purpose of this study was to determine the effectiveness of social media on university students' awareness of, interest in, intention to participate, and participation in a campus recreation special event. Specifically, two forms of social media, Facebook and Twitter, will be assessed via an experimental design.

### Objectives

The objectives of the study are:

1. To understand the effectiveness of Facebook as a promotional tool in campus recreation center settings on cognition, affective, and conative response.
2. To understand the effectiveness of Twitter as a promotional tool in campus recreation center settings on cognition, affective, and conative domain response.

### Definition of Terms

*Social Media:* The instinctual needs of humans to communicate with others in a two-way communication process via a form of media with these individuals, and is highly effective tool for customer service, business to business (B2B), and internal communication (Safko & Brako, 2009)

*Twitter:* Social networking micro-blogging service that allows users to send and receive 140 character "tweets," "hashtag" items to create trending topics, and follow other users to receive their updates and additionally "tag" them to make them aware of particular tweets; 95 millions tweets are publish daily by 175 million registered users in six different languages (Twitter, 2011)

*Facebook:* Social media platform with currently over 500 million users that allows users to add other friends who also have a profile, write messages to other members, and join interest groups of choice (Facebook, 2011)

*Hootsuite:* A free service available to social media marketers that allows them to monitor and schedule messages simultaneously for various social media networks such as Facebook and Twitter (Hootsuite, 2011)

*Campus Recreation:* Generally referred to as recreational sports or intramurals, is combination of recreational programs and campus recreation facilities that promote participation in recreational sports, physical activity, and overall physical health (Forrester, Arterberry, & Barcelona, 2006)

*Special event:* Occurs once a year and is generally based on one particular theme or celebration and its programming efforts focus on various activities to form an event in whole (Getz, 1989)

*Advertising:* “Provides direct information about the characteristics of the brand” (Nelson, 1970)

*Awareness:* State of mind in which individuals of the target market recognize and comprehend information; “is a two-way process that depends on the intended recipients being interested sufficiently to interpret and absorb the communication” (Crompton, 2004)

*Intention:* “Assumed to capture the motivational factors that influence a behavior; they are indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior” (Ajzen, 1991)

*Cognitive Response:* Operationally defined in this study as an individual’s awareness of the special event (Lavidge & Steiner, 1961)

*Affective Response:* Operationally defined as an individual’s interest in the special event (Lavidge & Steiner, 1961)

*Conative Response*: Operationally defined as an individual's intent to participate in the special event (Eagly & Chaiken, 1993)

CHAPTER 2

REVIEW OF LITERATURE

Social media has many impacts on society. It is converting the once passive consumers into digital activists, who are ready and willing to learn more information about their favorite brands, companies, and services, in addition to spreading that news as well (Rajapat, 2009). Social media is making it a necessity for businesses to create a social media campaign that intrigues users with engaging content and authenticity (Mothner, 2010). A constant flow of communication is necessary to keep social media enthusiasts involved. The 18-24 year old segment of Facebook users accounts for more than 53.8% of activity on Facebook (Corbett, 2010), and made up the fastest growing segment of users in 2010 with 40.8% of users falling into this category (Corbett, 2010). A company's social media campaign should consider targeting this segment through unique social media efforts.

Sport organizations and campus recreation centers are using social media to reach the college student. Facebook and Twitter are used to provide information and generate excitement amongst various target markets. Campus recreation pages update students on their facility's hours, intramural sport opportunities and registration deadlines, fitness class offerings, outdoor programming trips, special events, and more. Campus recreation centers are now seeking a way to serve these students to their utmost ability based on the advertising theory, theory of planned behavior, and social media research.

College students have many diverse on-campus activities they are able to partake in, making it important that they are aware of the different options they have as a student, including the various programming and offerings of their campus recreation center. Being aware of those offerings is vital, because campus recreation centers have proven the ability to have such a great impact on factors such as predicted probability of first-year retention and predicted probability of 5-year graduation (Huesman, Brown, Lee, Kellogg, & Radcliffe, 2009). Health risks associated

with inactive college students makes it increasingly important for campus recreation managers to market their products and services in an efficient manner to their university students. Marketing of leisure services can be slightly different than marketing a normal product. The marketing of these services is more about the benefit of the services and the experiences that individuals (in this case, students) gain from participating in campus recreation activities. Kotler (1979) described the concept of marketing as a transaction. Kotler defines this as an exchange in which two parties are benefiting in various different ways from the transaction. The value of these transactions are not limited to tangible items such as various products and money, but also are indicated through intangible values such as feelings and energy, and are important factors determining outcome behavior. Advertising methods, such as signage, television commercials, and now social media, are used as part of the promotional mix to influence consumers.

#### Advertising Theory

One of the most frequent theories to explain behavior based on marketing is Lavidge and Steiner's Advertising Theory (1961). This follows the attention, interest, desire, and action (AIDA) theoretical model (Figure 1), which describes the thought process in which a consumer guides his/her way through before committing action (Lavidge & Steiner, 1961). The steps can be described as a consumer 1) becomes aware of the offerings of the product or service 2) likes the product's services or offerings and favors this product or service over existing options 3) desires to purchase or consume the benefits of the product or service 4) determines that actual purchase is seen as the best option (Lavidge & Steiner, 1961).

A common theoretical model divides these behaviors into three separate components or dimensions: cognitive, affective, and conative components (Figure 2). The cognitive component is the intellectual state in which an individual is aware of particular information. The affective

component describes an individual's interest, or emotional and feeling state, determining their emotional feelings elicited by the advertisement or brand. The conative component can be described as an individual's motivation, or intent, to perform a particular response (Lavidge & Steiner, 1961). Marketing mix components, product category, competitive environment, stage of product in the product life style, and target audience should be altered accordingly based on these components to determine the best positioning strategy for the business or product (Vakratsas & Ambler, 1999).

This model relates to outcome behavior (purchase intentions) of a consumer, but advertising has many more purposes that prove to be advantages for businesses. Sales and image enhancement are key goals when companies choose to market events (Stevens, 1984).

Advertising also serves as a purpose to increase brand awareness, brand equity, sales and image enhancement, an information tool, and has the ability to increase consumer loyalty (Mullin, Hardy, & Sutton, 2000; Pitts & Stotlar, 2007). Additionally, advertising online has been proven to have the ability to effectively communicate corporate messages and create a strong brand equity between consumers and companies, with the ability to reach a potential audience for a product or service that has the ability to grow exponentially daily (Bergstorm, 2000). Branding through marketing allows for a business to drive a positive brand image and allows a company to increase their loyalty amongst their consumers and increase the likelihood their consumers will purchase again (Kurtz, 2009).

### *Cognitive Response*

Awareness is the ability for an individual or the intended target market to comprehend information and absorb the information and make a conscious thought about the material (Crompton, 2004). Promoting awareness through advertising is a large part in which drives

consumer behavior and purchase. Advertising via television commercials, print advertisements, signage, and athlete endorsements are some examples of marketing tools used to generate awareness of a brand, product, or event. Advertising and sponsorship in sport has shifted from static (print media, signage) to dynamic, with social media platforms, in an attempt to create more awareness of brands for consumers.

Being aware of information and details is the first step in the formula to stimulate the outcome behavior. A special event is not a regular occurrence for companies and businesses, suggesting it is important for awareness to be prominent. The first Cincinnati Flying Pig Marathon began with 6,600 participants and organizers focused their marketing efforts on brand equity through name awareness, perceived quality, and building strong associations in order to double their participants in just five years (Olberding, 2005). As part of the marketing plan for 2009, race organizers posted nearly 300 creative updates via Twitter such as videos via YouTube, photos, unofficial finish times, via Twitter to engage participants and fans (Schoenstedt & Reau, 2010). This proved to be effective in the stage of awareness as the Flying Pig Marathon became the number one keyword search on Google, in front of Jack Kemp and the Pittsburgh Marathon (Schoenstedt & Reau, 2010). While this research suggested Twitter may have aided in awareness, it is not certain that Twitter effect was isolated. We will attempt to determine if social media can generate this same type of increased awareness and in return, see an increased level of participation, in a controlled environment.

Cianfrone and Zhang (2006) found that all four promotional procedures (television commercials, athlete endorsement, venue signage and the combination of them) studied increased awareness during a televised action sports event. The study, based on 253 participants who were randomly placed into groups to measure unaided recall, aided recall, and recognition,



found that television commercials were the most effective, followed by combined promotion, athlete endorsement, and venue signage (Cianfrone & Zhang, 2006). Bennett, Ferreira, Siders, Tsuji, and Cianfrone (2006) argue that although these types of advertisements promote awareness, the way an individual responds to an advertisement varies based on the type of advertising. Many researchers have explored the effectiveness of events/sport sponsorships on attendees/spectators. Pitts (1998) found that after surveying 182 Gay Games athletes, spectators, and workers to examine the effectiveness of correctly identifying sponsors at the Gay Games, results of correctly identifying sponsors were varied. However, a high recall of sponsors was determined. Participants indicated a strong preference to those sponsors involved in the Gay Games, with approximately 92% indicating they would be more likely to buy the product of a Gay Games sponsor. Stotlar (1993) studied consumer recall and recognition and the level of involvement of various IOC and USOC sponsors during the 1984 Olympic Games in London and found that participants had a low ability to determine the involvement of these sponsors. These studies prove that currently various research indicates that there are varying levels of awareness and recall recognition rates amongst consumers.

Sneath, Finney, and Close (2005) examined the effectiveness that event marketing can have on building awareness. The study used 565 spectators that attended a charitable sporting event that occurred over a six day span in five different cities simultaneously. Of the participants, 29% indicated they became aware of the event from a sports publication article, 27.6% from friends, relatives, or word of mouth, 26.2% from a newspaper article, 21.6% from a website article, and 19.5% from a TV program (Sneath et al., 2005). These numbers indicated a fairly consistent belief that a marketing plan was developed that was very versatile and could be

seen in various media outlets. However, due to the age of this study, it does not include the recent social media outlets as marketing tools.

The most common method used by marketers to examine awareness is through consumers' recall and recognition, a measurement used to determine one's memory of advertisements (Gillund & Shiffrin, 1984). Total brand recall suggests that if individuals recall a certain brand, they are more inclined to purchase it (Wakolbinger, Denk, & Oberecker, 2009). Another common factor used to examine awareness is the traffic seen on a website after a specific marketing push (Crompton, 2004). Following its sponsorship in a NASCAR Winston Cup Race, Thatlook, a referral service for elective surgery, saw its website hits surplus to over 4 million hits (IEG, 2000) in the following three days after the event. The website generally averaged 260,000 in a three day span. This proves to be a significantly favorable attribute of awareness because individuals acted upon seeing sponsorship advertisements, versus simply recalling signage during the race (Crompton, 2004).

Word-of-mouth recommendations are creating awareness for consumers and can be attributed to 20-50% of all purchasing decisions (McKinsey & Company, 2010). These recommendations can create brand equity for consumers and allow them to obtain relevant information in a timely manner about their product or service. Although consistent traffic to a webpage and an increased fan base are a good thing for the exposure of a brand, this traffic is useless if it does not attribute to new sales, or a particular behavior warranted by the company (Gattiker, 2010).

Campus recreation professionals need to understand where their students are obtaining information from, in order to maximize their ability to successfully reach their students. Ineffective campaigns yield wasted advertising dollars (Abraham & Lodish, 1990). Some

marketers at campus recreation centers may not be confident in their various marketing avenues to reach students, a significant reason why marketers need to understand what marketing techniques are effective for campus recreation centers, information that is currently not available due to the lack of research on effective marketing strategies for recent media trends.

Reed (2001) studied the perceptions of the availability of recreational physical activity facilities on a university campus, and found significant numbers that indicated students were not aware of a variety of different offerings that were available to them at their own recreation center on campus. For instance, over 32% of the 467 students surveyed were unaware or did not know that their recreational facility offered aerobic classes in their fitness center. Additionally, the research study revealed that freshman and sophomores at this university located in the Midwest of the United States, engaged in three more exercise periods a week than did juniors and seniors (Reed, 2001). Thus, over time after initially enrolling at an institution, students tend to become disinterested in campus recreation, or are unaware of offerings because of time commitments as they progress through their college career. This inactivity of college students and the rest of society as a whole contributes to over 300,000 deaths annually in the United States alone (US Department of Health and Human Services, 2001).

Technology in today's society allows for various ways for students to stay informed and aware of offerings at campus recreation centers. Students are active on the social media platforms Facebook and Twitter and have the ability to obtain pertinent information about their campus recreation centers, but further investigation needs to be completed to understand if awareness is being affected as a result.

*Affective Response*

One's affective response to an advertisement or sponsorship can be described as their interest in the service or particular product (Lavidge & Steiner, 1961) and this attitude creates an image for the consumer of whether the service or product is enjoyable or unenjoyable (Blanchard et al., 2008). This stage is important for marketers to reach the consumers in a way that sparks the consumer's interest to participate. Marketers seek to increase an individual's interests in order to get them to "act," the last step in the AIDA theory.

Interest can be measured as an attitude one has towards a certain brand or company. One's interest, whether favorable or not, can drive their intention to purchase. Research has shown that the more interested a consumer is, the more likely they are to consume information or make a purchase (Mitchell & Olson, 1981). The Internet is a strong force that can drive interest. One study found 33.0% of college students spend more than ten hours per week on the Internet, and 19.6% spend more than 20 hours per week online (Burst Media, 2007). This same market's Internet usage indicates usage of the Internet is greater than that of television and terrestrial/satellite radio (Burst Media, 2007). Not marketing to these college students on the Internet would be missing out on this niche market.

Oh and Arditi (2000) suggest that the Internet has the ability to create a stream of content that can create a continuous spectrum of endless information for consumers that in which once invented, can instantaneously be satisfied, thus "promoting a labyrinth of consumerism." This continuum of interest provided by continual marketing on the Internet is sought to spark the interest of the consumer and drive action and purchase.

#### *Conative Response and Consumption*

One's conative response is the intent an individual has to commit a particular behavior (Eagly & Chaiken, 1993), and in return, actually commit the behavior as a result of this intention.

In sport, playing, attending, or making a purchase is considered the highest level of consumption (Mullin et al., 2000; Stotlar & Johnson, 1989). In campus recreation, an individual's actual participation in an event or exercise is seen as the highest level of consumption. Participation may be attending the recreation center and exercising, actively doing a special event, or intramurals. The ultimate goal of a campus recreation facility is actual participation by its patrons. Individuals can be aware of a campus recreation activity, interested in it, but efforts in marketing these areas should result in some form of behavioral consumption. It has not been determined how much social media, such as Facebook or Twitter influences consumption of a campus sports event.

As campus recreation activity may include physical activity and exercise, it is important to consider the Theory of Planned Behavior (TPB). TPB describes various components that vary intention and are able to describe components which have been found to contribute to physical activity (Scott, Rhodes, & Symons Downs, 2009). The theory of planned behavior, which was formed as an extension of the theory of reasoned action (TRA) by Ajzen and Fishbein (1980), was developed as a theory to predict behavior deemed as deliberate (Ajzen, 1991). The TRA, when previously standing alone, only theorized that behavior was 100% voluntary (Ajzen & Fishbein, 1980).

Similar to the advertising theory, TPB suggests behavior is influenced by intentions, which are influenced by attitudes toward behavior, subjective norm, and perceived control. The TPB components consist of affective attitude, instrumental attitude, subjective norm, and perceived behavior control. These components contribute to intention, and in return, the result of participating in physical activity (Ajzen, 1991). One's affective attitude can be described as one's thought process in whether the activity is enjoyable versus unenjoyable. Instrumental

attitude of an individual pertains to the activity being destructive versus favorable. The next determinant of one's intent to participate in physical activity is defined by their subjective norm, which determines the social pressure one may feel when determining their intent to participate in various forms and levels of physical activity (Blanchard et al., 2008). One's perceived behavior is the last factor that will contribute to their intent to exercise, and can be explained by the level of physical activity on the spectrum of difficulty, whether it be easy enough for an individual or too difficult for that specific moment in which an individual intends to participate in physical activity. Scott, Rhodes, and Symons Down (1999) examined beliefs and motivations associated with regular, moderate, and vigorous-intensity physical activity of college students, finding various intentions for varying levels of physical activity.

In the realm of sports society, numerous studies have attempted to understand what factors determine an individual's intent, for example, to attend something such as a sporting event. Funk et al. (2009) researched this facet based on the idea that there are five facets of motivation: socialization, performance, excitement, esteem, and diversion (SPEED). Upon research, Funk et al. (2009) determined that there is a correlation between SPEED and motivation. Dees, Bennett, and Villega (2008) studied purchase intentions of individuals attending an intercollegiate football game based on the level of attitude toward the sponsor displayed by attendees, and additionally if those attendees who have higher levels of goodwill towards these sponsors will in return have stronger purchase intentions than those attendees with lower levels of goodwill. According to the results of the regression analysis ( $P = .223$ ,  $p < .001$ ), they found that those attendees that viewed the sponsorships in a positive light had a higher purchase intention than those attendees with less positive views (Dees, Bennett, & Villega, 2008). Additionally, they found that those sponsors who highly supported the teams were more

supported by fans and likely to increase their purchase behavior, in comparison to those sponsors who attendees believed were simply fronting money for advertisements and not showcasing any goodwill towards the team (Dees, Bennett, & Villega, 2008). Marketing efforts by companies should ensure that they are meeting these attributes in order to increase the purchase intent of their consumers and satisfy their clients they work with to have the ability to advertise in games.

### Social Media

Consumption of information via traditional methods such as television and newspaper have been losing their strength as we move forward in the 21<sup>st</sup> century. Much of this significant decrease of traditional media methods can be attributed to the formation and growth of the World Wide Web (Dutta-Bergman, 2004) and additionally social media. In the second quarter of 2008 alone, Forrester research predicts that 75% of all Internet surfers used social media by either posting videos to sites such as YouTube, joining social networks on websites such as Facebook, or even posting blogs, showcasing a 19% increase from the year before (Kaplan & Haenlein, 2010). Research recently conducted by the Nielsen Company (2010) indicates that Americans spend virtually 25% of their free time on social networks and blog. Yet, even though the number of individuals that are using social media avenues to connect to others is increasingly growing, many agree that a Facebook fan page or a Twitter account is not a substitute for an integrated marketing plan to reach a target market (“Social Media Isn’t Dead”, 2011).

Various media consumption theories have attempted to understand why individuals are more susceptible to attend to one particular media avenue versus another. Although this study is not to determine which marketing method (new or old) is better, we must understand why individuals obtain information from the sources that they do. It is theorized that if any individual is interested in one particular topic, he or she will consume information on that topic in not only

one medium, but most likely read, watch, or listen to information that is closely related to this topic in various other forms of media (Dutta-Bergman, 2004).

Social media and technology in society have been studied in various different facets and many studies have researched outcomes of social media campaigns, but none specifically assessed with campus recreation and college students. Lipman Hearn (a marketing and communications firm) and the Council for the Advancement and Support of Education (CASE) found in a survey of 212 CASE member institutions that between the fiscal years of 2008 and 2009, of those institutions surveyed, 55 % of the institutions had increase their budget allotted for interactive marketing, and 52 % of the institutions had additionally increased their budgets for social media. It was hypothesized that as a direct result of this increased marketing due to increased marketing dollars, these institutions found that their websites were getting more web traffic, their consumers had more awareness of their offerings, and additionally the rate at which alumni were giving was higher than the years previous to this boost in budget in these areas (More Marketers Use Social Media, 2010). In one social media marketing campaign aimed at reducing binge drinking at a southwestern university campus, results yielded a 29.2% decrease in binge drinking over a three year period that was studied (Glider et al., 2001).

Social media can be measured in various ways, but Turner (2010) believes that quantitative metrics, qualitative metrics, and return-on-investment metrics are the most substantial categories that determine the effectiveness of a social media marketing campaign. Perhaps there are many more factors that determine how a social media presence is fairing. Syncapse, a social media management company released an empirical study showcasing that an average Facebook fan is worth approximately \$136.38 (Syncapse, 2010). This number was derived from the proposal that a Facebook fan has various aspects that contribute to the outcome



of a social media campaign: product spending, loyalty, inclination to contribute to word-of-mouth advertising, brand affinity, media value, and acquisition cost. With the value of a Facebook fan estimated at \$136.38, it is of no surprise that a recent report released by Social Media Examiner that interviewed nearly 1,900 marketers found that 85% of those surveyed believe their social media efforts have generated exposure for their businesses, in addition to improving traffic and building new partnerships (Stelzner, 2010).

Fischer and Reuber (2011) found social interaction via new social media showcased how interactions on Twitter can influence effectual thinking and behavior. They propose the concept that opposite of casual thinking, in which individuals make a plan and have a goal in mind, effectual thinkers have no goal in mind in the beginning. Over time, individuals use a common set of thoughts and beliefs to form their own ideas and behaviors, which were most likely not sought in stone from the beginning (Scheper, 2010). Twitter has the ability to get entrepreneurs to formulate new and fresh ideas from the plethora of information that forces them to interact with others and become more involved in many ways.

### Social Media and Campus Recreation

Although social media has hardly been studied in terms of its presence within the world of campus recreation in the United States, social media is continually growing within this niche, much like the rest of America. Social media seeks to “stoke the fire with fresh, relevant information” (Butler, 2010), and making relevant information accessible to college students via social media avenues is no exception.

#### *Facebook*

Facebook fan pages allow a company or business to create their own “webpage” on Facebook to market to their audience. The average user on Facebook “likes” a fan page twice

every month (Butler, 2010). Various NIRSA institutions have a Facebook fan page and update their pages with information pertaining to their program offerings, club sport offerings, fitness class reminders, and photos with Intramural champions and special events as a focus. Many institutions also have a custom “landing page.” A landing page is a unique image that users will see upon arrival to a fan page, versus the typical fan page wall. A landing page may include images, encourage users to “like” their fan page,” or may even provide images with embedded links to guide fans to their actual webpage.

Research has shown that college students are very avid users of Facebook (Corbett, 2010). There are benefits to using Facebook as a marketing tool. One study by Rice University in 2010 on the effectiveness of Facebook fan page marketing of a café chain, Dessert Gallery (DG), found that those who were fans of DG on Facebook made 36% more visits to DG's stores each month, spent 45 % more of their eating-out dollars at DG, spent 33% more at DG's stores, had 14% higher emotional attachment to the DG brand, and had 41% greater psychological loyalty toward DG (Dholakia & Durham, 2010). Although this study indicates that these are possible correlations to those fans that were fans of DG on Facebook, more research is still needed in order to determine if this was a cause and effect relationship.

Recreation departments across the country, based on the lack of research, are only potentially aware of responses to messages via social media platforms. Many recreational facilities use Google Analytics, a web-analytics system housed on the web, to determine if traffic on their fan page and marketing tactics are proving to be effective. Although this can describe awareness, it cannot track the effectiveness of a fan page unless users are linked to an external link to drive something such as registration for a specific event such as signing up an Intramural

team online. Using this tracking system such as Google Analytics cannot track the human footprint traffic of a facility on a daily basis.

This study seeks to understand if those who “like” Facebook fan pages and receive updates on a regular basis, are actually noticing (awareness) if it influences their interest in the event and acting upon this (behavior). No research specifically related ones intentions and outcome behavior of Facebook and recreational facility usage has been studied, even though many may argue that their presence in this platform is working.

### *Twitter*

With the use of Twitter becoming an increasing trend in society as a whole, recreation facilities are also following this trend to provide information about their program offerings to students. Studies have shown that there can be many benefits for using social media that include making users feel connected socially to a person or company, the endless opportunity to obtain and share information, and increase one’s self esteem (Ellison, Steinfield, & Lampe, 2007; Raacke & Bonds-Raacke, 2008). Social media platforms for companies are also free, although many companies don’t always account for the time and effort it takes for social media specialist to update and maintain such social media platforms.

Campus recreational facilities can use Twitter to get the word out quickly and efficiently to the public about the various offerings that are open to the community that many may not be aware of, as long as these individuals are following. One study found that although 74% of users on Twitter have less than ten followers, only .29% of those same individuals have more than 2,000 followers (Barracuda Laboratories, 2009). As a micro-blogging site with an interface that lacks extensive media-rich capabilities, these bursts and messages to users create one primary focus (Clavio & Kian, 2010). Users may only post 140 character posts, allowing for quick tidbits

of information to be exchanged. Additionally, users have the ability to “hashtag” (by placing # in front of word) a particular word or phrase allows the entire Twitter community to see this trend, thus getting the word out to those who may not be a follower yet. This can assist campus recreational facilities in reaching out beyond their target market. However, it has not been empirically examined.

Twitter has provided companies and business the ability to easily post links to outside sources that could spark the interest of a consumer, and educate them. With a recreation center’s ability to directly speak with followers and the ability to point them to, for instance, an article for easy steps to fight off the “Freshman 15,” this particular platform has an ability to distribute content and information more rapidly and expansively than before in a way that can increase interest of followers and perhaps effectively increase revenue (Sheffer & Schultz, 2010).

Although it has been found that on average 63.5% of campus recreation center’s budget is funded by student fees (Scott, Veltri, & Wallace, 1999), and other funding comes from private donations and state funding, there is still room for revenue opportunities within campus recreation departments. These revenue areas may be generated through membership fees, outdoor programming areas, clinics, space reservation fees, and hosting tournaments. So, effective and creative advertising is critical to their bottom line. Understanding if sending Facebook messages and tweeting about an event increases a user’s awareness and drives participation has not been accessed.

### Summary

Social media has grown tremendously in recent years and is emerging into the marketing plan of businesses worldwide. Originally, social media was used solely for “friendships” with others, now it is being utilized as a form of advertising. The Marketing Executives Networking

Group (MENG) committed research and found that those surveyed believe that the advantages of social media include its ability to develop its customer engagement and communications, the capacity to obtain feedback rapidly, and the ability for companies to cost effectively build a brand (MENG, 2008).

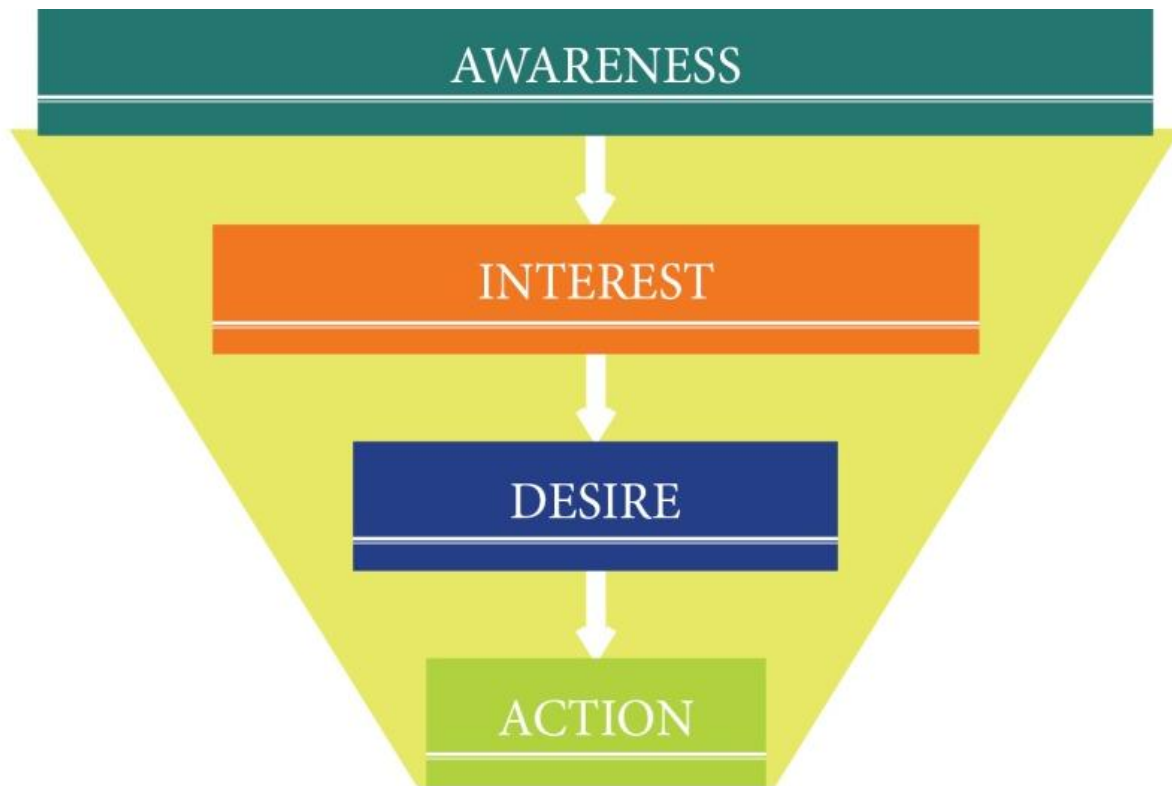
Campus recreation centers are attempting to use social media to their advantage to appeal to their target market. Many marketers in campus recreation have the understanding that Facebook and Twitter social media platforms are thought to be extremely useful in advertising. However, there have not been any controlled experimental studies that assess the true effects of the social media advertising form. Awareness, interest, intention, and behavior are important to study in order to sufficiently determine if Facebook and Twitter are effective cause for outcome behavior in relation to attending an event hosted by the campus recreation department.

#### Hypotheses

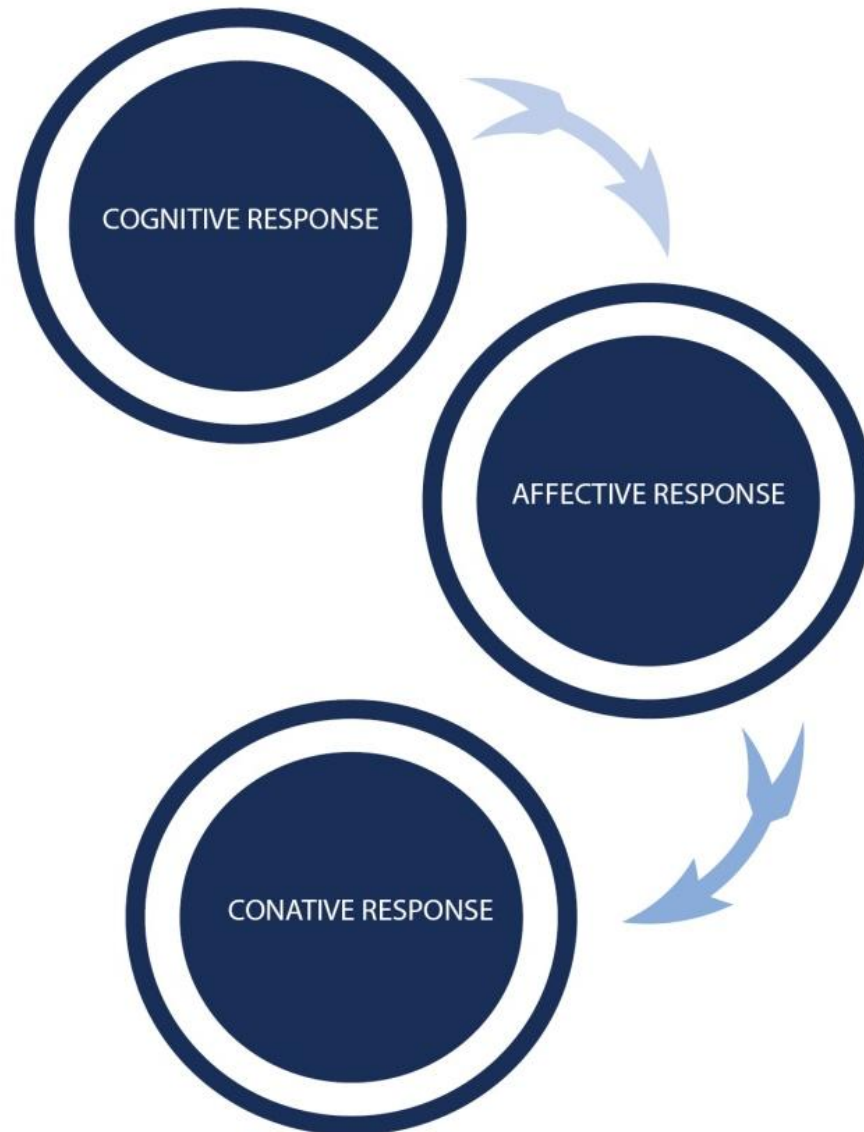
H1: Facebook as a promotional tool will increase cognitive, affective, conative, and behavioral response by college students.

H2: Twitter as a promotional tool will increase cognitive, affective, conative, and behavioral response by college students.

Figure 1. Lavidge and Steiner's Advertising Theory



*Figure 2.* Classical psychological model divides Advertising Theory into three dimensions



CHAPTER 3  
METHODOLOGY



### Participants

To assess the effectiveness of social media marketing on college students, a total of 134 participants were recruited for the study via six undergraduate courses at a large metropolitan university in the Southeast. Participants were recruited from classes that were not taught by the researcher in order to reduce pressure to participate. This experimental study required participants to complete a pre-survey, join their specified treatment group (or take no action and remain in the control group) as instructed by the researchers, receive treatments, campus special event executed, and complete a follow-up survey. After determining the number of participants who fulfilled the complete process of the experimental design, it was determined that a total of 65 participants were usable for the study (49% of original population sample). Males constituted 37.5% of the sample. The mean age of the participants was 22.5 years and participants were primarily undergraduate students (93.8%). In terms of the ethnic composition, the sample population was African-American (42.2%), White/Non-Hispanic (40.6%), White/Hispanic (4.7%), Asian (3.1%), Hawaiian/Pacific Islander (1.6%), and other (7.8%). The sample represented 10 different majors. Additionally, it was established that 84.6% of the sample lived off-campus, and the remaining 15.4% resided in on-campus housing. This population is an accurate sample of the campus demographics of the institution the study was conducted.

### Experimental Design

To measure the effectiveness of social media marketing (Facebook and Twitter messages) on the cognition, affect, conation, and behavior of college students, an experimental design was employed (Figure 3) with three groups (Facebook treatments, Twitter treatments, No treatments). A first time campus special event, an on-campus adventure race, was utilized as the medium of study. After collecting usable data from participants, the Facebook treatment group

was comprised of 26 participants, the Twitter group contained 10 participants, and the control was composed had 29 participants. The participants in each of these three groups submitted usable data for their pre and post-surveys and additionally completed the second step of either becoming a fan of the Recreation Center's Facebook page, followed the Recreation Center on Twitter, or remained in the control group by completing no action as requested by the researchers.

Experimental Group #1 was the treatment group that was selected to become a fan of the Recreation Center's Facebook fan page. These participants were requested to become a fan of the Recreation Center's Facebook fan page via an email by the researchers. Those who were previously a fan of this page were automatically placed in this group. The remaining participants in this group who had indicated they had a Facebook account were placed in this group using a random number generator if they had indicated on their pre-survey that they had a Facebook account, but not a Twitter account.

Experimental Group #2 was the treatment group that was selected to follow the Recreation Center's Twitter account. These participants were requested to follow the Recreation Center's Twitter account via an email by the researchers. All those participants who indicated on their pre-survey that they had a Twitter account were automatically placed into this group because of the small percentage of participants who indicated they had a Twitter account, unless they were already a fan of the Recreation Center's Facebook fan page.

The control group was the group in the experimental study that was not requested by the researchers to become a fan of the Recreation Center's Facebook fan page, or follow the Recreation Center's Twitter account. Those who indicated on their pre-survey no social media involvement (for this study that they neither had a Facebook account or a Twitter account), were

automatically selected for the control group. The remaining individuals were those that were selected via a random number generator (and were not a fan of the Recreation Center's Facebook fan page previously, or were not following the Recreation Center's Twitter account previously).

Facebook statuses on the Recreation Center's fan page and tweets sent by the Recreation Center's Twitter account were identical to one another, and sent simultaneously through Hootsuite. The fan page's status and tweets were updated with statuses regarding the special event five times, beginning five days before the event. Additionally, seven other "dummy" messages regarding various other recreation events were posted within this same time span to remain consistent with this Recreation Center's typical social media presence (Appendix A). Two messages were sent after the special event date before the participants were removed from each of their respective treatment groups.

### Procedures

An announcement in each of the six undergraduate classes was made requesting for students to voluntarily participate and complete the pre-survey during that initial contact (Appendix B). Potential participants were given the informed consent form to read and sign if they were willing to participate in the experimental study (Appendix C). Following the completion of the pre-test, the participants' information was analyzed and based on their prior social media involvement, participants were assigned via stratified sampling into groups- Facebook, Twitter, or Control group. The participants were notified via their university's email account within 24 hours of the pre-survey with information regarding instructions on whether they were to become a fan of the Recreation Center on Facebook (Appendix D), follow the Recreation Center on Twitter (Appendix E), or simply neither (Appendix F).

Treatment messages were then sent for the next six days via Facebook and Twitter, at various times of the day. To mimic typical marketing strategies, messages were approximately sent at times based on research that indicate the most influential times to send updates via social networks are at 11 a.m., 3 p.m., and 8 p.m. (Virtue, 2010). Following the special event, data was collected from the participants who followed through with their indicated email request in the same six undergraduate classes in a post-treatment survey to examine if their awareness, interest, or participation in the event occurred. The collection took place in the classroom again, in a voluntary fashion. Participants were debriefed at the end of the post-survey with information regarding the purpose and procedures of the study.

Participants were informed that the study assessed students' social media and recreational services use (Appendix G). Prior to the research, they were not informed of the event and goal in understanding the advertising, due to the fact that we did not want them to become aware that we were trying to generate awareness and interest in the event via social media networks. The survey asked for their university email address, Facebook name, and Twitter name, if applicable. Participants were made aware that they may receive an email to join a Facebook or Twitter group and that their cooperation in the study would not allow researchers to view their Facebook personal page, or Twitter account. Facebook is not invasive from the viewpoint of organizations. Organizations cannot see information regarding their fans; only the fans can see information about an organization they have become a fan of.

Students were informed to contact the researchers if they would like to be removed as a participant based on the disclosure regarding the purpose and procedures of the experimental study. No participants contacted the researchers regarding this need.

### Instruments

Based on a comprehensive review of literature, a 51-item pre-survey instrument was created (Appendix H). This pre-survey measured social media involvement (12 items), email information (one item), Recreation Center involvement (10 items), information sources (21 items), and the participant's demographics and residence information (seven items). The post-survey (Appendix I) measured social media involvement during the treatment period (2 items), email information (1 item), involvement (6 items), information sources (21 items), and information regarding advertising types (6 items).

Both surveys measured the domains of advertising: cognition, affect, conative, and behavior and covariates of involvement and social media usage. These variables were studied in this experimental design in order to examine the effectiveness of social media as a marketing tool for advertising about a campus recreation special event (that is, does becoming a fan of a Facebook fan page, or following a Twitter account that is posting about the special event daily make a person more aware of the event, more interested in the event and more likely to participate in the event, or does the person not even notice the informational messages).

#### *Sociodemographics*

Demographic questions (seven items) eliciting information about gender, ethnicity, age, standing, major, and residence information were asked. Age, major, and how far from campus an individual lived from campus if he/she lived off-campus, were asked as open-ended questions.

#### *Covariates of Involvement: Social Media Consumption and Recreation Center Usage*

In order to control for the potential effects of factors that may influence the cognitive, affective, and conative responses, several covariates were studied. The covariates determined included recreation center involvement and current social media usage. These were important to

examine because people tend to favor things that they are familiar with (those who are more avid users of the recreation center may favor consuming message more than non-users) and with repeated exposure if they visit the recreation center, they are more likely to see advertisements in the facility, than those who never frequent the recreation facility (Sawyer, 1981). Research on involvement and interaction by Pham (1992) indicated a positive correlation that supports Sawyer's research that indicates repeated exposure has the ability to determine one's level of involvement.

The participant's involvement with the Recreation Center was determined by seven questions : whether or not the participant worked at the Recreation Center, had they ever used the Recreation Center's amenities, if they had ever used the facility (and if so, how many times in the past month), and questions regarding involvement in various programming areas. The post-survey asked questions that determined their involvement level at the Recreation Center since the pre-survey was given.

Social media involvement was also determined as a covariate in the study. In the pre-survey, 12 questions were asked to determine the social media involvement of the participant. To determine one's Facebook involvement sample questions allowed us to obtain information about how many friends the participant had on Facebook, how many minutes a day they spent on Facebook, and how they checked their Facebook account (cell phone, computer, or other). For those that indicated they had a twitter account, we were able to determine their involvement based on how many people the participant followed on Twitter, how many minutes a day they spent checking their Twitter feed, and additionally how they checked their Twitter account (cell phone, computer, or other). To account for social media usage during the time of the study and

compare it to the information provided on the pre-survey, two items were asked regarding their social media involvement on the post-survey.

#### *Awareness, Interest, and Intention*

Further, the pre-survey was used to determine the level of awareness about the special event already established by the individual and was measured via recall and recognition and three items on a Likert scale of 1-7. The participant's interest in the special event was measured via three questions. The participant's intention to participate was measured based on three items. The actual behavior of participating in the special event was measured by three items.

The post-survey questions elicited the same information as the pre-survey and was used to determine if there was an increase in the level of awareness, interest, intention, and/or behavior in attending the special event, but disregarded information that had already been obtained in the pre-survey such as social media background information, and demographics. Additionally, six items were asked regarding to determine whether or not Facebook status updates, tweets, and bulletin boards were noticed and/or whether or not because of these messages interest in the special event improved.

#### *Data Analysis*

PAWS/SPSS for Windows version 18.0 was used for all data analysis for this experimental study. Descriptive statistics were calculated for demographics, involvement, social media consumption, awareness, interest, and intention for the special campus recreation event variables by group and in total.

Chi square analyses (cross tabulations) were used to determine variability among the treatment groups for demographic variables. Awareness, interest, and intention were each measured with three items on the pre-test and post-test surveys. Alpha reliability measured the

reliability of the items. Paired t-tests were conducted to see differences in pre- and post- test by group in social media, involvement, and advertising effectiveness measures. Actual special event behavior was measured by obtaining the list of participants who participated from the Recreational staff member who organized the special event. Descriptive statistics were calculated.



*Figure 3. Method and Design of Study*

<b>Experimental Group</b>	<b>Observations</b>	<b>Treatment</b>	<b>Observations</b>
Group 1 (Facebook)	O1 (survey 1)	Facebook fan (status updates)	O1 (survey 2)
Group 2 (Twitter)	O1 (survey 1)	Twitter follower (Tweets)	O1 (survey 2)
Group 3 (Control)	O1 (survey 1)	Nothing	O1 (survey 2)

## CHAPTER 4

### RESULTS

### *Background Information*

In order to analyze personal background variables for the participants involved in this study, descriptive statistics were used (Table 1) and Chi square cross tabs showed little variance in demographics by group.

When examining the background variable of gender, findings indicate that 57.7% of those in the Facebook group were female; 70% of participants in the Twitter group were female, and 62.1% of participants in the Control group were female.

The category of age that was found to have the highest percentage of participants was that of 20-21 years old and this was consistent across all three groups. This accounted for 48% of participants in the Facebook group, 60% of the participants in the Twitter group, and 44.8% of participants in the control group. The age range of participants amongst all three groups was 18-41 years old. The average participant overall in the study was approximately 22 years old.

Only one freshman level student participated in the study (Facebook group). Six sophomores (two in the Facebook group, one in the Control group), 32 juniors (16 in the Facebook group, five in the Twitter group, 11 in the Control group), 22 seniors (5 in the Facebook group, four in the Twitter group, 13 in the Control group), and four post-baccalaureate students (two in the Facebook group, one in the Twitter group, one in the Control group) participated in the study. Exercise Science majors represented 67.7% of the sample population, with the next most popular major being that of Biology (9.2%).

The majority of participants in the Facebook experimental group were White/Non-Hispanic (52.0%), but the majority of participants in the Twitter experimental group and control group were African-American (70.0% and 44.8% respectively).

Additionally, participants in the study were asked if they lived on or off-campus. A very high percentage of those surveyed indicated that they lived off-campus: 73.1% of participants in

the Facebook group, 90% of participants in the Twitter group, and 93.1% of the participants in the Control group. Overall, 84.6% of those surveyed indicated they did not live on-campus.

### *Social Media Involvement*

The level of social media involvement by the participants was measured by determining how many friends a participant had on Facebook, how many people they were following on Twitter, and how much time they spent on each of these social media networks (Table 2).

The average participant had approximately 534 friends on Facebook ( $SD = 478.61$ ) and indicated that they spent approximately 28 minutes ( $SD = 33.52$ ) on Facebook daily. When looking strictly at the users who had a Twitter account, Twitter users indicated they followed approximately 170 people ( $SD = 28.28$ ) and spent approximately 45 minutes on Twitter daily ( $SD = 21.21$ ).

### *Recreational Services Involvement*

The level of recreational services involvement by participants was measured by nine separate items (Table 3). It was found that only three participants of the entire sample population currently worked at the Recreation Center. Although three of the 65 participants stated they had never visited the Recreation Center, eight participants indicated they had never utilized the Recreation Center's amenities. These two questions combined accounted for those participants who had potentially been in the Recreation Center for a campus tour or for another particular reason, but had actually never utilized the Recreation Center's amenities themselves.

The overall involvement level of those participants utilizing the facility should be noted. A total of 28.3% of participants indicated that on average, they utilize the facility 0-2 times/month, 25.% of participants use the facility 3-8 times/month, 13.4% 9-14 times/month, and 33.3% 15+ times/month. Participants were also asked about what activities they generally

partake in when visiting the Recreation Center (cardio workout, lifting/weights, fitness classes, game room, playing sports, rock climbing, swimming). The two highest activities indicate that 60% of participants who use the facility complete some type of cardio workout during their visit, while 56.9% partake in lifting/weights. Only 6.2% indicated they use the Rock Climbing Wall, and 16.9% indicated they swim when visiting to the facility.

Although the involvement level of those participants using the recreation facility and its amenities was notable, the involvement participants had within other programming areas the recreation center offers was low. Only 13.4% of all participants had played at least one semester of Intramurals. Additionally, only 7.7% of participants had previously taken a trip with the Recreation Center's outdoor program. When examining the participants and their involvement with the Recreation Center and special events, 18.5% had formerly participated in a special event with the Recreation Center, but 27% of participants indicated they knew about events that the Recreation Center had hosted in the past.

#### *Pre and Post-Test Descriptive Statistics for Awareness, Interest, and Intention*

Descriptive statistics were conducted to determine awareness, interest, and intention by condition (Table 4; Figures 4, 5, 6). Statistics were not conducted on outcome behavior due to the fact that only one participant out of the 65 who participated in the study actually attended the special event being marketed. Reliability was measured on the awareness, interest, and intention items. Cronbach's alpha coefficient level was set at 1 and all questions regarding awareness, interest, and intention by condition on both the pre-survey and post-survey were usable based on their internal consistency reliability. Nunnally and Bernstein (1994) indicate that an alpha level of .80 or above constitutes a high reliable set of questions, and all questions exceeded this level

except for the set of questions asked to the Control group on awareness ( $\alpha = .61$ ) and the questions measuring Twitter group's interest in the event ( $\alpha = .62$ ).

After analyzing pre-awareness (pre-test) and post-awareness (post-test) of the special event, which were measured based on three items, awareness levels increased for the Facebook and Twitter group participants, and remained statistically the same for the Control group. The Facebook group pre-test awareness indicated a mean of 2.28 ( $SD = 2.00$ ), and a post-test awareness level of 3.33 ( $SD = 2.07$ ). The Twitter group indicated a pre-test mean of 2.75 ( $SD = 2.09$ ) and a mean of 3.10 ( $SD = 3.10$ ) on the post-test. The Control group indicated a mean awareness of 2.02 ( $SD = 1.72$ ) on the pre-test and a mean awareness of 1.97 ( $SD = 1.27$ ) on the post-test.

Interest levels of each of the treatment groups decreased from the pre-test to the post-test. The Facebook group had an initial mean interest of 3.54 ( $SD = 1.65$ ) and a post-interest mean of 3.34 ( $SD = 1.61$ ). The Twitter group's interest prior to treatment indicated a mean of 2.77 ( $SD = 1.77$ ) and a post-survey interest level mean of 2.57 ( $SD = .85$ ). The Control group's initial interest was determined to have a mean of 3.08 ( $SD = 1.69$ ) and a post-survey awareness level mean of 2.52 ( $SD = 1.57$ ).

The intention of participants to participate in the special event increased slightly for those who were in the Facebook group, but the intent level of participants in both the Twitter and Control groups decreased. The initial intent mean indicated by the Facebook group was 2.34 ( $SD = 1.24$ ) and after receiving the marketing messages, a post-intent mean of 2.41 ( $SD = 1.91$ ) was recorded. The Twitter group's intent prior to treatment indicated a mean of 1.83 ( $SD = 1.42$ ) and a post-survey intent level mean of 1.67 ( $SD = .59$ ). The Control group's initial intent was

determined to have a mean of 2.31 ( $SD = 1.39$ ) and a post-survey awareness level mean of 2.03 ( $SD = 1.53$ ).

### *Advertising Types*

In order to measure awareness and interest as stand alone variables with no comparison to the pre-survey, questions were asked to determine awareness of advertising types (3 items) and interest regarding advertising types (Table 5).

The Facebook group indicated that they were essentially neutral on whether or not they noticed status updates about the special event from the Recreation Center ( $M = 3.58$ ;  $SD = 2.28$ ). The Twitter group indicated the same belief when referring to if they noticed tweets from the Recreation Center about the special event ( $M = 4.00$ ;  $SD = 1.83$ ). The Control group showed very little notice of the bulletin boards in the Recreation Center about the special event ( $M = 2.36$ ;  $SD = 2.02$ ).

When examining the interest of these various advertising types, the Facebook group disagreed that because of the Facebook statuses their interest in the special event improved ( $M = 3.08$ ;  $SD = 1.87$ ). The Twitter group disagreed somewhat that because of the tweets from the Recreation Center their interest in the special event improved ( $M = 3.25$ ;  $SD = 1.99$ ). Additionally, the Control group disagreed that because of the bulletin boards in the Recreation Center, their interest in the special event improved ( $M = 1.89$ ;  $SD = 1.76$ ).

Participants were asked on their pre and post if they frequently notice Facebook status updates or tweets posted by GSU Recreational Services and whether or not they actually read those Facebook status updates or tweets. The Facebook group indicated a large change in noticing Facebook status updates then when they were not fans of the page (Pre:  $M = 2.12$ ,  $SD = 1.63$ ; Post:  $M = 4.03$ ,  $SD = 2.11$ ). The Twitter group saw this same change after following the

Recreation Center's Twitter account (Pre:  $M = 1.30$ ,  $SD = .483$ ; Post:  $M = 4.03$ ,  $SD = 2.57$ ).

Both of these changes amongst Facebook and Twitter groups were statistically significant based on the paired t-tests ( $p < .05$ ).



Table 1  
*Descriptive Statistics for the Personal Background Variables for the Treatment Groups*

Background Variable	Category	Experimental: Facebook (n = 26)		Experimental: Twitter (n = 10)		Control (n = 29)		Total (N = 65)	
		N	%	N	%	N	%	N	%
Gender	Male	10	40.0	3	30.0	11	37.9	24	37.5
	Female	15	60.0	7	70.0	18	62.1	40	62.5
Age	18-19	2	8.0	0	0.0	2	6.9	4	6.3
	20-21	12	48.0	6	60.0	13	44.8	31	48.4
	22-23	7	28.0	2	20.0	7	24.1	16	25
	24 or older	4	16.0	2	20.0	7	24.0	13	20.3
School Year	Freshman	1	3.8	0	0.0	0	0.0	1	1.5
	Sophomore	2	7.7	0	0.0	4	13.8	6	9.2
	Junior	16	61.5	5	50.0	11	37.9	32	49.2
	Senior	5	19.2	4	40.0	13	44.8	22	33.8
	Post Baccalaureate	2	7.7	1	10.0	1	3.4	4	6.2
Ethnicity	African-American	7	28.0	7	70.0	13	44.8	27	42.2
	White/Non-Hispanic	13	52.0	2	20.0	11	37.9	26	40.6
	White/Hispanic	2	8.0	0	0.0	1	3.4	3	4.7
	Asian	1	4.0	0	0.0	1	3.4	2	3.1
	Hawaiian/Pacific Islander	0	0.0	0	0.0	1	3.4	1	1.6
	Other	2	8.0	1	10.0	2	6.9	5	7.8
Major	Biology	2	7.7	0	0.0	4	13.8	6	9.2
	Biology-Pre Med	1	3.8	0	0.0	0	0.0	1	1.5
	Chemistry	1	3.8	0	0.0	0	0.0	1	1.5
	CLS	0	0.0	0	0.0	1	3.4	1	1.5
	Exercise Science	17	65.4	7	70.0	20	69.0	44	67.7
	Kinesiology & Health	0	0.0	0	0.0	1	3.4	1	1.5
	Nursing	2	7.7	0	0.0	1	3.4	3	4.6
	Physical Education	3	11.5	1	10.0	1	3.4	5	7.7
	Pre-Nursing	0	0.0	0	0.0	1	3.4	1	1.5
	Criminal Justice	0	0.0	1	10.0	0	0.0	1	1.5
Living arrangements	On-campus	7	26.9	1	10.0	2	6.9	10	15.4
	Off-campus	19	73.1	9	90.0	27	93.1	55	84.6

Table 2  
*Social Media Involvement Levels by Treatment Group*

	Facebook Group (n = 26)		Twitter Group (n = 10)		Control Group (n = 29)		Total (N = 65)	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Approximately how many friends do you have on Facebook?	491.0	344.49	620.0	462.51	554.8	626.27	534.58	478.61
How many minutes a day would you estimate you spend on Facebook?	37.0	36.39	36.4	36.96	29.1	30.17	28.78	33.52
Approximately how many people are you following on Twitter?	170.0	28.28	205.8	281.36	0.00	00.00	33.72	124.94
How many minutes a day would you estimate you spend on Twitter?	45.0	21.21	91.9	117.32	0.00	00.00	15.52	55.51

Table 3  
*Recreational Services Involvement Levels*

Item	Category	N	Cumulative %
Do you work at the Student Recreation Center?	No	62	95.4
	Yes	3	100.0
Have you ever visited the Student Recreation Center?	No	3	4.6
	Yes	62	100.0
Have you ever used the Student Recreation Center amenities?	No	8	12.5
	Yes	56	100.0
On average, how many times do you use the Student Recreation Center in a month?	0-2 times	17	28.3
	3-8 times	15	53.3
	9-14 times	8	66.7
	15+ times	20	100.0
How many semesters have you played Intramural Sports at GSU?	0	56	86.6
	1-2	7	96.9
	3-4	2	100.0
How many trips have you taken with Touch the Earth?	0	60	92.3
	1-2	3	96.9
	3+	2	100.0
How many Recreational Services special events have you participated in?	0	53	81.5
	1-2	10	96.9
	3+	2	100.0
Sometimes the Recreation Center/Recreational Services hosts special events. Do you know about any of these events?	No	46	73.0
	Yes	17	100.0
Item	Category	N	%
When visiting the Recreation Center, what activities do you generally partake in?	Cardio workout	39	60.0
	Lifting/Weights	37	56.9
	Fitness classes	12	18.5
	Game Room	10	15.4
	Playing sports	20	30.8
	Rock climbing	4	6.2
	Swimming	11	16.9

Table 4

*Pre and Post-Test Descriptive Statistics for Awareness, Interest, and Intention of the Adventure Race by Treatment Group*

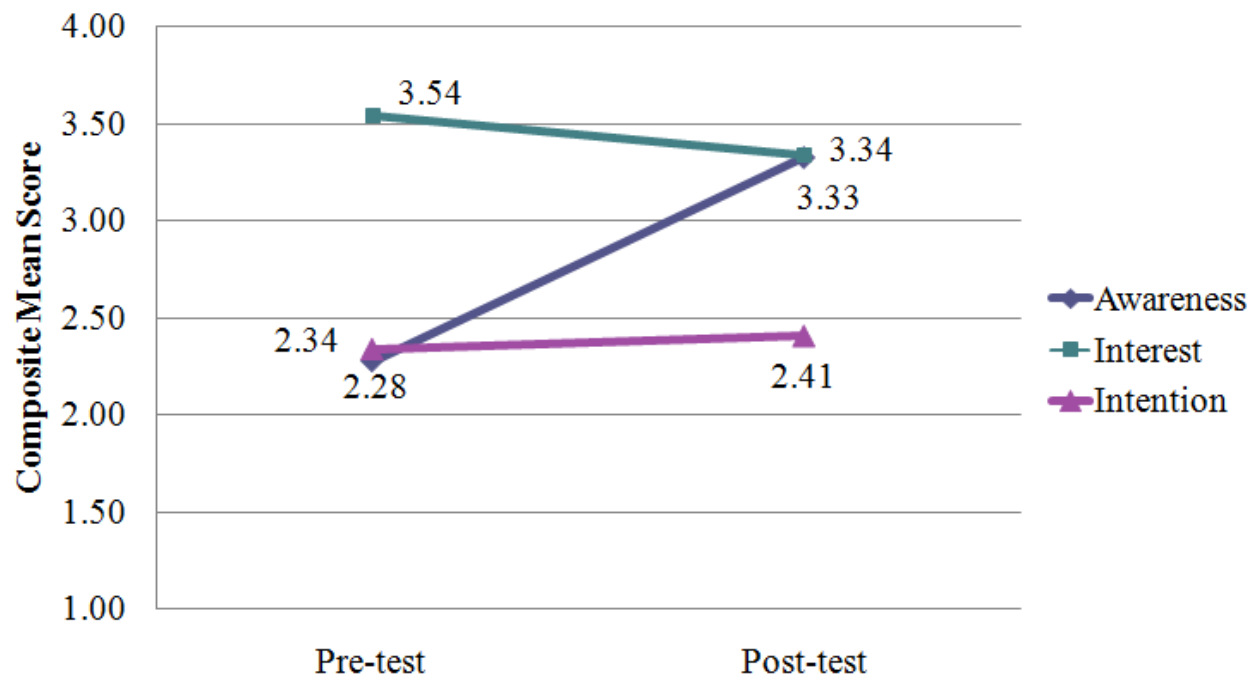
Variable and Condition	<i>N</i>	Pre-Test <i>M (SD)</i>	$\alpha$	Post-Test <i>M (SD)</i>	$\alpha$
<i>Awareness of the Adventure Race</i>					
Facebook Group	26	2.28 (2.00)	.886	3.33 (2.07)*	.929
Twitter Group	10	2.75 (2.09)	.937	3.10 (1.47)	.806
Control Group	29	2.02 (1.72)	.987	1.97 (1.27)	.607
Total	65	2.24 (1.88)	.937	2.69 (1.76)	.781
<i>Interest in the Adventure Race</i>					
Facebook Group	26	3.54 (1.65)	.845	3.34 (1.61)	.871
Twitter Group	10	2.77 (1.77)	.942	2.57 (.85)	.620
Control Group	29	3.08 (1.69)	.873	2.52 (1.57)	.925
Total	65	3.22 (1.68)	.887	2.86 (1.53)*	.805
<i>Intent to Participate in the Adventure Race</i>					
Facebook Group	26	2.34 (1.24)	.842	2.41 (1.91)	.921
Twitter Group	10	1.83 (1.42)	.988	1.67 (.59)	.846
Control Group	29	2.45 (1.50)	.790	1.82 (1.32)*	.845
Total	65	2.31 (1.39)	.873	2.03 (1.53)	.871

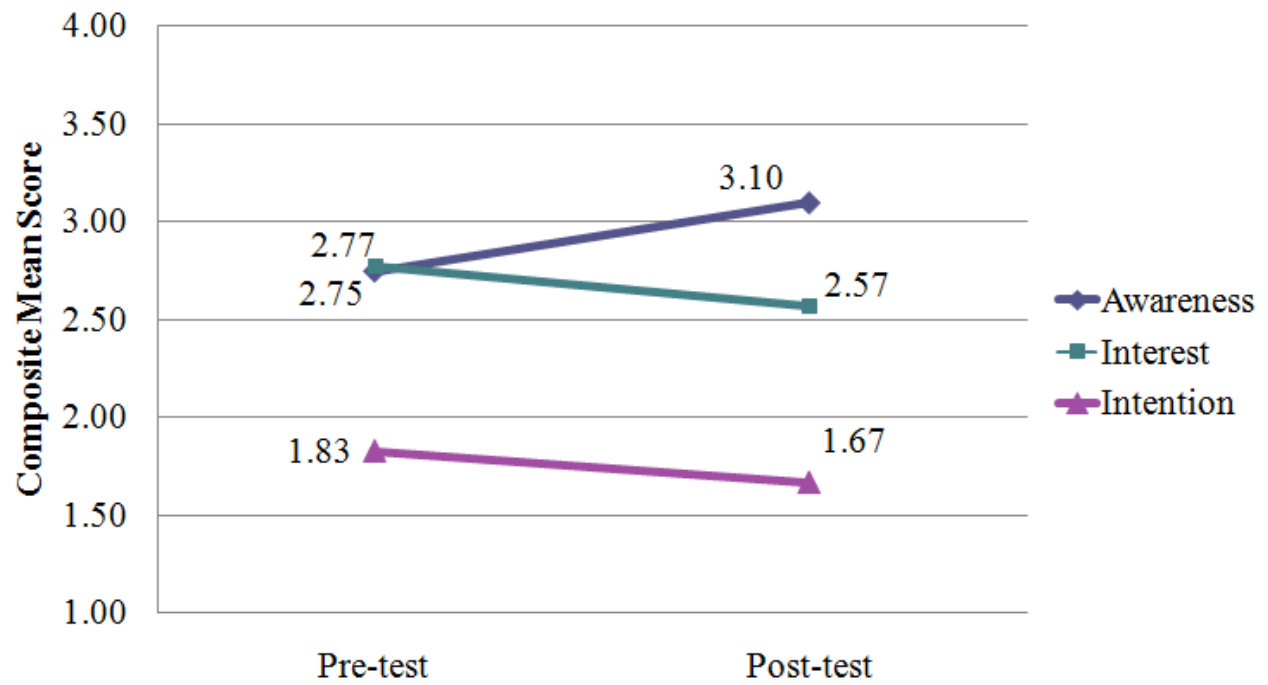
\* =  $p < .05$  in paired sample t-test

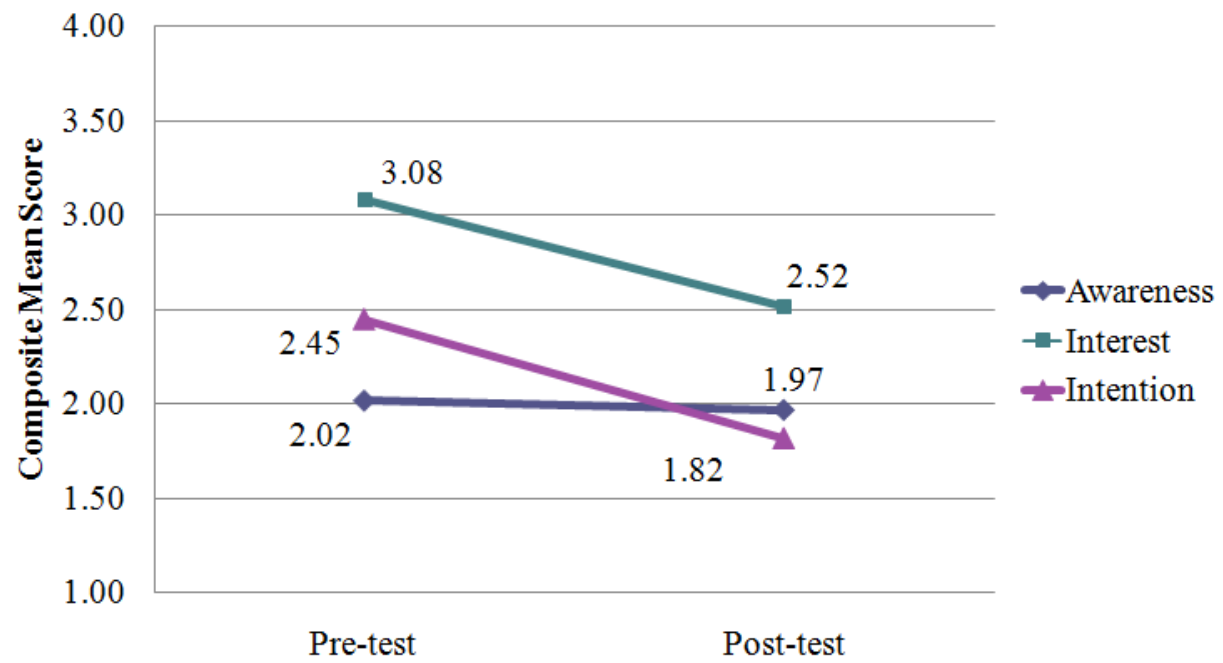
**Responses on a 1-7 Likert Scale**

Table 5  
*Descriptive Statistics for Advertising Types by Treatment Group*

Variable	Facebook <i>M (SD)</i>	Twitter <i>M (SD)</i>	Control <i>M (SD)</i>			
<i>Awareness of Adventure Race Advertising</i>						
1. I noticed Facebook status updates from GSU Recreational Services about the GSU Adventure Race-The Concrete Campus.	3.58 (2.28)	2.13 (1.45)	1.86 (1.48)			
2. I noticed tweets from GSU Recreational Services about the GSU Adventure Race-The Concrete Campus.	2.24 (2.14)	4.00 (1.83)	1.93 (1.89)			
3. I noticed the bulletin boards in the GSU Student Recreation Center about the GSU Adventure Race-The Concrete Campus.	2.46 (1.96)	3.50 (1.49)	2.36 (2.02)			
<i>Interest in Adventure Race Due to Advertising</i>						
1. Because of the Facebook status updates, my interest in the GSU Adventure Race-The Concrete Campus improved.	3.08 (1.87)	2.50 (1.83)	1.57 (1.15)			
2. Because of the tweets from GSU Recreational Services, my interest in the GSU Adventure Race-The Concrete Campus improved.	2.42 (2.06)	3.25 (1.99)	1.89 (1.76)			
3. Because of the bulletin boards in the GSU Student Recreation Center, my interest in the GSU Adventure Race-The Concrete Campus improved.	2.72 (1.91)	2.75 (1.31)	2.38 (1.69)			
	Facebook	Twitter	Control			
	Pre <i>M (SD)</i>	Post <i>M (SD)</i>	Pre <i>M (SD)</i>	Post <i>M (SD)</i>	Pre <i>M (SD)</i>	Post <i>M (SD)</i>
<i>Awareness of General Recreational Services Advertising</i>						
1. I frequently notice Facebook status updates by GSU Recreational Services.	2.12 (1.63)	4.03 (2.11)*	1.20 (.421)	2.00 (1.70)	1.42 (1.05)	1.93 (1.77)
2. I frequently read Facebook status updates by GSU Recreational Services.	1.85 (1.54)	3.53 (1.98)*	1.20 (.421)	2.00 (1.89)	1.62 (1.47)	1.76 (1.66)
3. I frequently notice tweets sent by GSU Recreational Services.	1.23 (.587)	1.96 (1.68)*	1.30 (.483)	4.80 (2.57)*	1.42 (1.32)	1.42 (1.32)
4. I frequently read tweets sent by GSU Recreational Services.	1.23 (.587)	1.96 (1.68)	1.30 (.483)	4.80 (2.70)*	1.41 (1.32)	1.52 (1.61)
* = $p < .05$ in paired sample t-test						

*Figure 4. Facebook Group Effectiveness*

*Figure 5. Twitter Group Effectiveness*

*Figure 6. Control Group Effectiveness*



CHAPTER 5  
DISCUSSION

It is crucial that campus recreation marketers reach their target market in order to effectively reach their audience. Campus recreation centers have the ability to provide students with unforeseen resources to build a healthier lifestyle. Campus recreation centers are utilizing social media efforts in various capacities at their institutions, but very little research had been conducted in a controlled capacity of whether or not one's cognitive, affective, and conative response is affected.

The results of this study confirmed that college students are extremely active on Facebook, specifically more active than other age groups. Participants indicated they had approximately 534 friends on Facebook ( $SD = 478.61$ ) and spent approximately 28 minutes per day on this social media network ( $SD = 33.52$ ). Recent research indicates the average person in society has approximately 124 friends on Facebook, whereas 18-29 average approximately 213 friends (UMR Research, 2011). Participants in this study were also more active in the world of Twitter. The average participant in the Twitter group indicated they were following approximately 185 people on Twitter and spending approximately 16 minutes a day on Twitter ( $SD = 55.51$ ). Research shows that 60% of those on Twitter follow less than 10 people (Barracuda Laboratories, 2010).

The college students in this study were moderately involved in campus recreation activities. Of those surveyed, 66% had used the Recreation Center in the prior month, but 28% had used the facility less than three times in the previous month. This is consistent with literature, but the involvement levels in terms of their Intramural sports participation does not fit the current trend of growth in Intramural sports typical recreation departments are witnessing (NIRSA, 2010). Of those surveyed, 86.6% indicated that they had never participated in Intramural sports even though 30.8% of those surveyed indicated in the past month they had used

the recreational facility to play sports. This may be in part, due to the fact that research indicates that those students who attend urban institutions typically spend less time on campus and have lower campus recreation center participation rates (NIRSA, 2009). Of those surveyed, 81% of those students surveyed had never attended or participated in a special event organized by campus recreation. The ability to capture this audience by social media marketers is important in order to keep students involved in campus recreation center activities before leaving campus after completing their studies. In order to increase campus recreation participation at urban institutions, campus recreation departments need to generate more awareness. This study is of particular interest to urban institutions understanding the pure benefit of reaching students beyond the footprint of their urban campus.

While the students were very connected via social media and had moderate recreation involvement levels, they did not appear to be greatly influenced by social media as a marketing tool. This study unveiled that although awareness may be affected by a campus recreation center's social media presence, it may not necessarily change one's interest and intent to actually attend something such as a campus recreation center special event. Prior to the treatments, awareness levels were generally low for the adventure race ( $M = 2.24$  ;  $SD = 1.88$  ), which was a first time event. Each treatment group increased in awareness after receiving the messages. The Facebook group was the only group in this experiment that significantly ( $p < .05$ ) saw a change in awareness from Facebook status updates regarding the special event (Pre:  $M = 2.28$ ,  $SD = 2.00$ ; Post:  $M = 3.33$ ,  $SD = 2.07$ ).

Social media marketing's influence in generating interest in a special event was also found to be low. The overall interest of the special event actually decreased overall across all three groups (Pre:  $M = 3.22$ ,  $SD = 1.68$ ; Post:  $M = 2.86$ ,  $SD = 1.53$ ). This is consistent with

research that indicates there is an equilibrium that individuals sometimes meet and once this is broken they may become overwhelmed and become more un-interested in something because of the marketing messages. This is often known as the inverted-U effect (Pham, 1992). When Cacioppo and Petty (1979) examined the effects of repeating messages of the same nature, an agreement with the message position increased (awareness) and then decreased as exposure frequency increased (interest). Compensatory weighting models indicated a significant difference in purchase intent of participants after being exposed to one message (.323) versus five of the same messages (.236) (Cacioppo & Petty, 1979).

During the five day period of treatments, perhaps the participants did not like the new Facebook or Twitter feeds and messages, which would lead to them not liking the event. Attitude toward advertising, or attitude toward advertising types, is an extensive area of research that may explain the decrease in interest in the event due to advertising. The amount of time (five days) the treatment messages were sent prior to the event may have influenced the results. Research shows that many times Facebook fans become overwhelmed with messages and thus supports a study that shows that 55% of users have “liked” a page and then later decided they did not want to see the company’s posts anymore (Exact Target, 2011). Nearly 41% of Twitter followers experience this same feeling. With only five days of treatment and five messages about the special event, in addition to other “filler” messages, Facebook fans and Twitter followers may have intentionally become uninterested of the posts. Researchers have indicated that repeated messages that are sent over this short of a time period run the risk of alienating their consumers (Belch, 1982). Although this is possible, Crandall, Harrison, and Zajonc (1975) suggest that although there may be preliminary negative effects of repeated messages (affecting interest and intention theoretically) initially, there may be a positive effective that is permanent.

Affect is also difficult to change in a short period of time; if the messages were more than one week in duration, more of an impact may be plausible. Likewise, actual behavior is the highest level of consumption and often difficult to influence. In total, this first time special event only had 11 participants, so it is clear that if more students followed Twitter or Facebook accounts for the recreation center, they may be more aware of the event. Whether this awareness leads to interest or intention remains to be determined.

Because there were other “filler messages” sent out with the time of study, it is important to note that the Facebook and Twitter groups did experience a significant change when examining if they noticed and actually read posts that were posted by the Recreation Center on their Facebook page or Twitter account. The Facebook group indicated they noticed the posts significantly more after following ( $M = 4.03$ ,  $SD = 2.11$ ) than when they were not ( $M = 2.12$ ,  $SD = 1.63$ ). The Twitter group yielded similar results before ( $M = 1.30$ ,  $SD = .483$ ) and after ( $M = 4.80$ ,  $SD = 2.57$ ) following the Recreation Center’s twitter account. Additionally, the Facebook group indicated they read the posts significantly more after following ( $M = 3.53$ ,  $SD = 1.98$ ) than when they were not ( $M = 1.85$ ,  $SD = 1.54$ ). The Twitter group yielded similar results before ( $M = 1.85$ ,  $SD = 1.54$ ) and after ( $M = 3.53$ ,  $SD = 1.98$ ) following the Recreation Center’s twitter account.

This information is important for campus recreation marketers to understand. A well-balanced presence of marketing all programming areas of a campus recreation department on social media networks is necessary in order to see significant change.

The findings of this study suggest that Facebook can increase awareness and campus recreation marketers may want to focus marketing efforts on maintaining and obtaining more Facebook fans to “like” their pages. Providing these fans with new and fresh content may also be

beneficial to prevent annoyance. Facebook has many benefits, including being a free advertising tool and the potential to reach mass quantities of people in a short amount of time and on the individual's own time, often instantaneously. Twitter may also have benefits, however, this sample size was too small to determine significant changes, it appears promising in generating awareness.

Our hypotheses were only correct in that Facebook did increase awareness and cognitive response significantly, but no major change was seen in a participant's affective or conative response in response to Facebook status updates or tweets sent by Campus Recreation. However, this first assessment of social media as a marketing tool via an experimental design is a valuable foundation for future research.

#### Limitations

Various limitations existed with this study. One of the most significant limitations may be considered the size of the population sample. Although the original amount of pre-surveys collected was a significant sample population, the end result after those same participants responded to the second and third phases highly reduced the amount of usable data used for the study due to drop-offs not completing the study. Although the Facebook and Control groups were of ample size, the Twitter group only having 10 participants was a major limitation in this study. The amount of time participants were given to join the group after receiving the email (24 hours) with specific instructions as to what the next phase of the study was for them may have also limited the possible sample size of this population. Many participants attempted to "fan" or "follow" the Recreation Center after treatment messages had already begun, thus the sample population could not be increased. Of the sample used, some students were required to attend the Recreation Center with their classes due to their major. This may have skewed the involvement

levels for the individuals and provided them with more opportunities to see the on-site signage for the event. However, the overall awareness levels were low, so this may not have had much influence.

Another potential limitation in this study is the special event itself. Only 11 participants registered for this event, thus demonstrating very little interest by the campus population as a whole. One of the keys to creating a successful is determining whether or not there is a market for it in the first place (Soloman, 2002). Typical events hosted by this Recreation Center draw anywhere from 50-200 participants, depending on the nature of the special event. With a mean age of 22 for this study, the participants may have been slightly older than the ideal target market for this special event, thus why interest and intent may have not increased.

#### Future Research

Although this study reached new ground in terms of conducting social media research on a controlled group of participants, future researchers may look into examining the background interests of the participants prior to the event. Interest and intent may be increased if the event has the potential to be of interest to the participant.

Future researchers could replicate this study in many ways in terms of examining which types of social media messages are most substantial to increasing one's interest, awareness, and intent of attending a special event.

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## APPENDIX A: FACEBOOK AND TWITTER MESSAGES

Message	Day/time sent	Type of Message
Did you know that our Panthers beat the VCU Rams at GSU earlier this semester by 10 points! Who is ready for some March Madness tonight?!	Day 1/12:26 p.m.	Filler #1
Think you know #GSU? Use your smarts to compete in the ADVENTURE RACE-THE CONCRETE CAMPUS, Thurs. on 4/7 from 4-5:30 p.m...register at SRC	Day 1/6:50 p.m.	Treatment #1
Good luck to all the people playing Intramural softball today out at Panthersville! Perfect weather for a game!	Day 2/12:09 p.m.	Filler #2
Get your team together for the ADVENTURE RACE-THE CONCRETE CAMPUS on April 7th. Free entry & prizes! More info at <a href="http://bit.ly/hwKVka">http://bit.ly/hwKVka</a>	Day 2/9:05 p.m.	Treatment #2
Georgia State University Recreational Services asked: Who does everyone think is winning the championship game tonight?! Gonna be a good one!	Day 3/12:15 a.m.	Filler #3
Hope everyone had a good weekend and is ready to attend to their studies this week. Just four weeks left of school! #GSU	Day 3/8:45 a.m.	Filler #4
Good with figuring out clues and adventuring to solve them? Register for the ADVENTURE RACE-race is Thursday! Info at <a href="http://bit.ly/hwKVka">http://bit.ly/hwKVka</a>	Day 3/3:30 p.m.	Treatment #3
Homework piling up and making you feel stressed? Relieve some stress at our free Kickboxing fitness class at 2 p.m. today!	Day 4/10:50 a.m.	Filler #5
2 days until ADVENTURE RACE-THE CONCRETE CAMPUS, signed up a team yet? Don't miss out on bragging rights! More info @ <a href="http://bit.ly/hwKVka">http://bit.ly/hwKVka</a>	Day 4/7:15 p.m.	Treatment #4
Tomorrow is the ADVENTURE RACE-THE CONCRETE CAMPUS at 4 p.m. If you haven't registered you have until 5 p.m. today!	Day 5/1:09 p.m.	Treatment #5
Always wanted to go to Alaska?! Now is your chance! Head to info meeting 2nite @ 7 p.m. at the SRC. More info at <a href="http://bit.ly/gx4F3D">http://bit.ly/gx4F3D</a>	Day 6/4:37 p.m.	Filler #6
Head to the Buckhead Sports Authority tomorrow to receive a 15% discount on your entire purchase for Georgia State Appreciation Day! Just download the flyer here and make sure to take with you to Sports Authority.	Day 6/1:48 p.m.	Filler #7

## APPENDIX B: PRE-SURVEY SCRIPT

*Good morning/afternoon.*

*We are recruiting participants for a study we are doing on college students' use of social media and recreational services. The study consists of a survey today, a follow-up email within 24 hours which may ask you to become a fan of GSU Recreational Services on Facebook, or follow their Twitter account, and another in-class survey in a week. If you are asked to follow the social media groups, you will be de-friended or dropped as a user after a week. At any point you may withdraw from the study. We are passing out Consent forms, please read through and if you are interested in participating please sign. Please let us know if you have any questions or concerns.*

## APPENDIX C: INFORMED CONSENT FORM FOR PARTICIPANTS

Georgia State University  
Department of Kinesiology and Health  
Informed Consent

Title: Examination of College Students' Social Media Use in regards to Campus Recreation

Principal Investigator: Beth Cianfrone, Ph.D.  
Student Principal Investigator: Kendra Bayne, Masters Candidate

I. Purpose:

You are invited to participate in a research study. The purpose of the study is to investigate college students' use of social media and campus recreation. You are invited to participate because you are a college student. A total of 100 participants will be recruited for this study. Participation will require 10 minutes of your time today for the first survey, and in two weeks for another survey. You may also receive a request to join a Facebook group, Twitter feed, or receive GSU emails, which would take approximately 5 minutes of your time.

II. Procedures:

If you decide to participate, you will complete a questionnaire today in class. As part of the study, in the next 24 hours you may be contacted by the researcher via email, Facebook, or Twitter to join a Campus Recreation Facebook group, follow a Campus Recreation feed on Twitter, or receive GSU emails for a 1 week period. Your account information will not be shared and after the 1 week period will not be used in any manner (SPAM, etc.) and you will be removed from the Facebook and/or Twitter page. A second survey will be collected. We will not tell you everything about the study in advance. When the study is over (at the end of completing the second survey), we will tell you everything. At that time you can choose whether you want to let us use your information or not.

III. Risks:

In this study, you will not have any more risks than you would in a normal day of life.

IV. Benefits:

Participation in this study may not benefit you personally. Overall, we hope to gain information about college students' use of social media and campus recreation.

V. Voluntary Participation and Withdrawal:

Participation in research is voluntary. You do not have to be in this study. If you decide to be in the study and change your mind, you have the right to drop out at any time. You may skip

questions or stop participating at any time. Whatever you decide, you will not lose any benefits to which you are otherwise entitled.

VI. Confidentiality:

We will keep your records private to the extent allowed by law. The researchers, Beth Cianfrone and Kendra Bayne, will have access to the information you provide. Information may also be shared with those who make sure the study is done correctly (GSU Institutional Review Board, the Office for Human Research Protection (OHRP) and/or the Food and Drug Administration (FDA), and the sponsor). We will use a study number rather than your name on study records. The information you provide will be stored in a locked cabinet, and password- and firewall-protected computers. The key (code sheet) will be stored separately from the data to protect privacy and will be destroyed at completion of the data entry. Your name and other facts that might point to you will not appear when we present this study or publish its results. The findings will be summarized and reported in group form. You will not be identified personally.

VII. Contact Persons:

Contact Beth Cianfrone, Ph.D. or Kendra Bayne at 404-413-8362 or bcianfrone@gsu.edu if you have questions about this study. If you have questions or concerns about your rights as a participant in this research study, you may contact Susan Vogtner in the Office of Research Integrity at 404-413-3513 or svogtner1@gsu.edu.

VIII. Copy of Consent Form to Subject:

We will give you a copy of this consent form to keep.

If you are willing to volunteer for this research, please sign below.

\_\_\_\_\_  
Participant

\_\_\_\_\_  
Date

\_\_\_\_\_  
Principal Investigator or Researcher Obtaining Consent

\_\_\_\_\_  
Date

## APPENDIX D: EMAIL TO FACEBOOK GROUP

**Subject:** Volunteer for Social Media and Recreational Services Study

Thank you for participating in the study on Students' Use of Social Media and Recreational Services. As the second part of the study, please follow our Facebook page (Georgia State University Recreational Services). Add us at [www.facebook.com/GSUSUR](http://www.facebook.com/GSUSUR). Please follow us within the next 24 hours to be a part of the second phase of the study. As stated in the Consent, you will be removed from our list of fans after one week.

Your information is very helpful and crucial to this research study and will aid in understanding social media and campus recreation behavior of students.

Thank you for your assistance in advance,

Kendra Bayne  
Master of Science Candidate 2011  
Sports Administration  
Georgia State University  
[Kbayne1@student.qsu.edu](mailto:Kbayne1@student.qsu.edu)

Beth A. Cianfrone, Ph.D.  
Assistant Professor  
Sports Administration  
Georgia State University  
Atlanta, GA  
404.413.8362  
[bcianfrone@qsu.edu](mailto:bcianfrone@qsu.edu)



## APPENDIX E: EMAIL TO TWITTER GROUP

**Subject:** Volunteer for Social Media and Recreational Services Study

Thank you for participating in the study on Students' Use of Social Media and Recreational Services. As the second part of the study, please follow our Twitter page (@GSURecreation). Add us at [www.twitter.com/qsurecreation](http://www.twitter.com/qsurecreation). Please follow us within the next 24 hours to be a part of the second phase of the study. As stated in the Consent, you will be removed from our list of followers after one week.

Your information is very helpful and crucial to this research study and will aid in understanding social media and campus recreation behavior of students.

Thank you for your assistance in advance,

Kendra Bayne  
Master of Science Candidate 2011  
Sports Administration  
Georgia State University|  
[Kbayne1@student.qsu.edu](mailto:Kbayne1@student.qsu.edu)

Beth A. Cianfrone, Ph.D.  
Assistant Professor  
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APPENDIX F: EMAIL TO CONTROL GROUP

**Subject:** Volunteer for Social Media and Recreational Services Study

Thank you for participating in the study on Students' Use of Social Media and Recreational Services. Please be sure to complete the last phase of this study by coming to your class in two weeks for the post-survey.

Your information is very helpful and crucial to this research study and will aid in understanding social media and campus recreation behavior of students.

Thank you for your assistance in advance,

Kendra Bayne  
Master of Science Candidate 2011  
Sports Administration  
Georgia State University  
[Kbayne1@student.gsu.edu](mailto:Kbayne1@student.gsu.edu)

Beth A. Cianfrone, Ph.D.  
Assistant Professor  
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## APPENDIX G: POST SURVEY SCRIPT

**BEFORE HANDING OUT THE POST-SURVEY:**

*If you filled out the pre-survey two weeks ago, please fill out this post-survey. Without your assistance on all three phases of this study, our research will not be valid. Please be sure to indicate your GSU email, as this is the only way we can link the surveys to one another. WE WILL NOT EMAIL YOU. Please take your time in filling out as honestly as possible as it is important in us obtaining accurate data.*

**AFTER POST-SURVEYS HAVE BEEN COLLECTED:**

*Thank you for participating in the study. We did not tell you everything about the study in advance. Now that the study is over, we can tell you everything. The purpose of the study was to examine the effectiveness of social media in creating awareness, interest, and intent to participate in a special event, GSU's Adventure Race-The Concrete Campus. You were randomly assigned into groups based on your social media behavior—a Facebook group, Twitter group, or control group. The Facebook and Twitter group members received Facebook updates and Twitter members received tweets about the special event. At this time you can choose whether you want to let us use your information or not. Please meet with the researcher and we will accommodate your request.*

## APPENDIX H: SOCIAL MEDIA USE AND CAMPUS RECREATION PRE-SURVEY

We are interested in learning of your social media use and behavior. Please complete this short survey in order to assist us in our efforts.

**Social Media Information.** The following refers to your social media usage. As part of the study, in the next 24 hours you may be asked to join a Campus Recreation Facebook group, or follow GSU Recreational Services' Twitter account. Your account information will not be shared and after the 1 week period, will not be used in any manner (SPAM, etc.). You will be removed as a Facebook fan or Twitter follower following the study.

### Facebook

1. Do you have a Facebook account? a. Yes b. No
2. If yes, what is your Facebook account name? \_\_\_\_\_
3. If yes, are you currently a fan of Georgia State University Recreational Services on Facebook? a. Yes b. No
4. Approximately how many friends do you have on Facebook? \_\_\_\_\_ friends
5. How many minutes a day would you estimate you spend on Facebook? \_\_\_\_\_ minutes
6. How do you check your Facebook account (circle all that apply)? a. Cellphone b. Computer c. Other

### Twitter

1. Do you have a Twitter account? a. Yes b. No
2. If yes, what is your Twitter account name? \_\_\_\_\_
3. Are you following Georgia State University Recreational Services on Twitter? a. Yes b. No
4. Approximately how many people are you following? \_\_\_\_\_ people
5. How many minutes a day would you estimate you spend on Twitter? \_\_\_\_\_ minutes
6. How do you check your Twitter account (circle all that apply)? a. Cellphone b. Computer c. Other \_\_\_\_\_

### Email

1. What is your GSU email? \_\_\_\_\_
2. How often do you check your GSU email? \_\_\_\_\_
3. How many minutes a day would you estimate you spend on GSU email? \_\_\_\_\_ minutes
4. How do you check your GSU email account (circle all that apply)? a. Cellphone b. Computer c. Other \_\_\_\_\_

**Recreational Services History.** The following items refer to the Georgia State University Student Recreation Center.

### Involvement

1. Do you work at the Student Recreation Center? a. Yes b. No
  2. Have you ever visited the Student Recreation Center? a. Yes b. No
  3. Have you ever used the Student Recreation Center amenities? a. Yes b. No
  - 3a. If so, on average, how many times do you use the Student Recreation Center in a month? \_\_\_\_\_ times
  - 3b. When visiting the Student Recreation Center, what activities do you generally partake in?  
(Circle all that apply)
  - a. Cardio workout    b. Lifting/Weights    c. Fitness classes    d. Game Room
  - e. Playing sports    f. Rock climbing    g. Swimming
  4. How many semesters have you played Intramural Sports at GSU? \_\_\_\_\_
  5. How many trips have you taken with Touch the Earth? \_\_\_\_\_
  6. How many Recreational Services' special events have you participated in? \_\_\_\_\_
  7. Sometimes the Recreation Center/Recreational Services hosts special events. Do you know about any of these events? a. Yes b. No
- If so, name the events you recall.

<b>We are interested in how you obtain information about GSU Recreational Services. Please rate the extent to which you STRONGLY DISAGREE (1) or STRONGLY AGREE (7) about each statement by circling the appropriate number in the scale beside each statement. (If you don't follow GSU Recreational Services on Twitter or Facebook indicate N/A).</b>								
	Strongly Disagree			Neutral			Strongly Agree	N/A
<b>Information Sources</b>								
1. I frequently notice the posters in the Student Recreation Center.	1	2	3	4	5	6	7	8
2. I frequently notice Recreational Services' fliers across campus.	1	2	3	4	5	6	7	8
3. I frequently read the Recreation Rap-Up.	1	2	3	4	5	6	7	8
4. I frequently notice the Recreation Rap-Up stands located around campus.	1	2	3	4	5	6	7	8
5. I frequently visit the Student Recreation Center's website: <a href="http://www.gsu.edu/recreation">www.gsu.edu/recreation</a>	1	2	3	4	5	6	7	8
6. I frequently notice Facebook status updates by GSU Recreational Services.	1	2	3	4	5	6	7	8
7. I frequently read Facebook status updates by GSU Recreational Services.	1	2	3	4	5	6	7	8
8. I frequently notice tweets sent by GSU Recreational Services.	1	2	3	4	5	6	7	8
9. I frequently read tweets sent by GSU Recreational Services.	1	2	3	4	5	6	7	8
<b>GSU Recreational Services Information</b>								
1. I am aware that GSU Recreational Services offers trips through Touch the Earth.	1	2	3	4	5	6	7	8
2. I am aware that GSU Recreational Services offers free Intramurals for students.	1	2	3	4	5	6	7	8
3. I am aware that Recreational Services recently held a special event entitled "Polar Bear Plunge."	1	2	3	4	5	6	7	8
4. I have heard of the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
5. I am aware that Recreational Services is sponsoring the GSU <b>Adventure Race-The Concrete Campus.</b>	1	2	3	4	5	6	7	8
6. I know when the GSU Adventure Race-The Concrete Campus is being held.	1	2	3	4	5	6	7	8
7. I am interested in the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
8. The GSU Adventure Race-The Concrete Campus is an event that I would like.	1	2	3	4	5	6	7	8
9. I like the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
10. I have registered to participate in the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
11. I intend to participate in the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
12. I am likely to attend the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8

Demographics
1. Gender: a. Male b. Female
2. Ethnicity: a. African American/Black b. White/Non-Hispanic c. White/Hispanic d. Hispanic/Non-White e. Asian f. American Indian/Alaskan Native g. Hawaiian/Pacific Islander h. Other _____
3. Age: _____
4. Standing in school: a. Freshman b. Sophomore c. Junior d. Senior e. Post Baccalaureate
5. Major: _____
Residence information
1. Do you live in on-campus housing? a. Yes b. No
2. If not, approx. how far from campus do you reside? _____ miles

*Thank you for completing this survey!*

## APPENDIX I: SOCIAL MEDIA USE AND CAMPUS RECREATION POST-SURVEY

We are interested in learning of your social media use and campus recreation behavior. Please complete this survey in order to assist us in our efforts.

**Social Media Information.** The following refers to your social media usage in the time since the first survey.

1. During the past two weeks (since the first survey), my Facebook usage was:  
a. Less than normal   b. More than normal   c. About normal   d. N/A (don't have Facebook)
2. During the past two weeks (since the first survey), my Twitter usage was:  
a. Less than normal   b. More than normal   c. About normal   d. N/A (don't have Twitter)
3. During the past two weeks (since the first survey), my email usage was:  
a. Less than normal   b. More than normal   c. About normal
4. What is your GSU email? \_\_\_\_\_ (you will NOT be emailed)
5. What is your Facebook account name? \_\_\_\_\_ (you will NOT be contacted)

**Recreational Services History.** The following items refer to the Georgia State University Student Recreation Center.

## Involvement

1. Over the past two weeks (since the first survey), how many times did you use the Student Recreation Center?  
\_\_\_\_\_ times
2. If you did use the Student Recreation Center, what activities did you partake in? (Circle all that apply)  
a. Cardio workout    b. Lifting/Weights    c. Fitness classes    d. Game Room  
e. Playing sports    f. Rock climbing    g. Swimming
3. In the past two weeks, did you participate in a Recreational Services special event?    a. Yes    b. No  
If so, which event? \_\_\_\_\_
4. Sometimes the Recreational Center/Recreational Services hosts special events. Do you know about any of these events that occurred recently?  
a. Yes    b. No  
If so, name the events you recall.

If so, how did you hear about the events?

<b>Behavior.</b> We are interested in your behavior over the past two weeks (since the last survey). Please indicate if you agree/disagree with the statements below.	<b>Strongly Disagree</b>			<b>Neutral</b>			<b>Strongly Agree</b>	<b>N/A</b>
1. Over the past two weeks, I frequently noticed posters in the Student Recreation Center.	1	2	3	4	5	6	7	8
2. Over the past two weeks, I frequently noticed Recreational Services' fliers across campus.	1	2	3	4	5	6	7	8
3. Over the past two weeks, I frequently read the Recreation Rap-Up.	1	2	3	4	5	6	7	8
4. Over the past two weeks, I frequently noticed the Recreation Rap-Up stands located around campus.	1	2	3	4	5	6	7	8
5. Over the past two weeks, I frequently visited the Student Recreation Center's website: <a href="http://www.gsu.edu/recreation">www.gsu.edu/recreation</a>	1	2	3	4	5	6	7	8
6. Over the past two weeks, I frequently noticed Facebook status updates by GSU Recreational Services.	1	2	3	4	5	6	7	8
7. Over the past two weeks, I frequently read Facebook status updates by GSU Recreational Services.	1	2	3	4	5	6	7	8
8. Over the past two weeks, I frequently noticed tweets sent by GSU Recreational Services.	1	2	3	4	5	6	7	8
9. Over the past two weeks, I frequently read tweets sent by GSU Recreational Services.	1	2	3	4	5	6	7	8
<b>GSU Recreational Services Information</b>								
1. I am aware that GSU Recreational Services offers free trips through Touch the Earth.	1	2	3	4	5	6	7	8
2. I am aware that GSU Recreational Services offers free Intramurals for students.	1	2	3	4	5	6	7	8
3. I am aware that Recreational Services recently held a special event entitled "Polar Bear Plunge."	1	2	3	4	5	6	7	8
4. I have heard of the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
5. I am aware that GSU Recreational Services is sponsoring the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
6. I know when the Adventure Race-The Concrete Campus is being held.	1	2	3	4	5	6	7	8
7. I am interested in the Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
8. The GSU Adventure Race-The Concrete Campus is an event that I would like.	1	2	3	4	5	6	7	8
9. I like the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
10. I registered to participate in the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
11. I intended to participate in the Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8
12. I am likely to attend the next GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7	8



We are interested in how you obtain information about GSU Recreational Services. Please rate the extent to which you STRONGLY DISAGREE (1) or STRONGLY AGREE (7) about each statement by circling the appropriate number in the scale beside each statement.							
	Strongly Disagree			Neutral			Strongly Agree
1. I noticed Facebook status updates from GSU Recreation about the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7
2. I noticed tweets from GSU Recreation about the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7
3. I noticed the bulletin boards in the GSU Student Recreation Center about the GSU Adventure Race-The Concrete Campus.	1	2	3	4	5	6	7
4. Because of the Facebook status updates, my interest in the GSU Adventure Race-The Concrete Campus improved.	1	2	3	4	5	6	7
5. Because of the bulletin boards in the GSU Student Recreation Center, my interest in the GSU Adventure Race-The Concrete campus improved.	1	2	3	4	5	6	7
6. Because of the tweets from GSU Recreation, my interest in the GSU Adventure Race-The Concrete campus improved.	1	2	3	4	5	6	7

***Thank you participating! Following this survey, you will be debriefed by the researchers.***