

# The Effectiveness of Social Media Marketing: The Impact of Facebook Status Updates on a Campus Recreation Event

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Social media marketing, including the use of Facebook, is becoming a prevalent part of the promotional marketing mix by recreation and sport organizations. While use of Facebook as a marketing tool is common, empirical evidence of its use is lacking. This study examined the effectiveness of social media marketing on college students in a campus recreation setting. Specifically, the effectiveness of Facebook status messages were assessed via a  $2 \times 2$  repeated factorial within-subjects design to determine their influence on awareness of, interest in, and intention to participate in a campus recreation special event. Participants were assigned to experimental ( $n = 26$ ) or control ( $n = 29$ ) groups. ANCOVAs revealed significant differences in awareness based on the treatment, but not in interest or intention. Findings suggest that social media marketing was effective in increasing awareness, and the study served as an empirical foundation for future research.

**Keywords:** advertising effectiveness, experimental design

The popularity of social media sites, such as Facebook and Twitter, has impacted the sport and recreation field (Newman, Peck, Harris, & Wilhide, 2013). Organizations often use social media to reach and engage consumers, or potential consumers, as a form of social media marketing. Similar to traditional marketing, the interaction with consumers via social media can be a promotional tool to generate awareness, create interest, or activate consumption (Newman et al., 2013). Campus recreation staff members frequently use social media marketing to appeal to their target market of college students.

A common challenge among campus recreation directors is obtaining, maintaining, and increasing student participation (Kwan Green, Hill, & Hunt, 2013). To that point, Weese and Sutton (1987) used the term “here today—gone tomorrow” as a way of describing the changing pace of a college student’s interest in activities. One third of students who were active in high school become deficient in their physical activity habits within three weeks of starting college (Scott, Rhodes, & Symons Downs, 2009). Students may be overwhelmed with their diverse options for entertainment, extracurricular, and social activities on a college campus or they

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may simply be unaware of the recreation department offerings (Reed, 2001). Thus, campus recreation marketing plans often aim to inform students through promotions in an effort to keep students aware of and engaged in the offered programs and events (Kaltenbaugh, Molnar, Bonadio, Divito, & Roeder, 2011). Finding marketing efforts that are effective is a desired goal (Kaltenbaugh, Molnar, Bonadio et al., 2011). However, many recreation centers have limited marketing staff and/or budgets, which can reduce a marketing plan's effectiveness (Kaltenbaugh, Molnar, Bonadio et al., 2011). This challenge makes it increasingly important for departments to be fiscally responsible and be aware of the return on their investment (ROI).

Traditional print-based marketing efforts of college recreation programs (e.g., flyers, newspaper or magazine advertisements, brochures, restroom advertising) can be costly, environmentally wasteful, and vary in effectiveness (Kaltenbaugh, Molnar, Bonadio, & Dorsey, 2011; Kwan Green et al., 2013). Thus, many organizations also turn to inexpensive methods, such as reliance on word of mouth or e-mail blasts (Franklin, 2013; Kwan Green et al., 2013). Social media marketing is increasingly popular because it is a combination of these tactics. It generates electronic word of mouth, serves as an outlet for information dissemination, is easy to use, environmentally friendly, and cost efficient. For example, Facebook pages may serve as an advertising tool to engage with consumers and promote upcoming events/programs, through status updates that explain relevant information (e.g., location, time, registration). Scholl, Leen, Alexander, Pike, and Johansen (2012) suggested that campus recreation centers use Facebook to market personal training services, and it is assumed it would be helpful in promoting other recreation services. However, the effectiveness of this marketing strategy is unknown. Practitioners and researchers need to understand the effectiveness and ROI of this platform.

In an attempt to measure effectiveness through impressions and interactions, many turn to online analytics (Newman et al., 2013). Facebook's Insights is a common metric to determine fan demographics and how they are interacting with a page (Facebook, 2013). Similarly, Klout is an online social media metric, which creates Klout scores that determine how influential a particular Facebook fan or Twitter follower is when interacting with a social media form (Klout, 2013; Newman et al., 2013). Insights and Klout reflect the need for quantifying the effectiveness of social media marketing. Therefore, while Facebook status updates are popular, empirical evidence in a controlled test environment is needed to examine its effectiveness.

To date, there is little research on the effectiveness of Facebook pages from a social media marketing perspective to understand if those who "like" Facebook fan pages and receive updates are influenced by the advertising message. Following traditional advertising goals, consumer awareness, interest, and intention in the product/service are fundamental outcomes of this advertising, yet its effects remain untested. Therefore, the purpose of this study was to determine the effectiveness of social media marketing (Facebook status updates) on university students' awareness of (cognition), interest in (affect), intention to participate (conative), and participation (behavioral consumption) in a campus recreation special event via an experimental design.

## Social Media Marketing

While the use of social media marketing is common in the sport and recreation industry, research on it is relatively new. Social media has been explored via relationship marketing (e.g., O'Shea & Duarte Alonso, 2011; Pronschinske, Groza & Walker, 2012; Williams & Chinn, 2010), the technology acceptance model (Mahan, 2011), and user motives and constraints (Witkemper, Choong Hoon, & Waldburger, 2012). There is little research on social media's role as an advertising medium for an organization. The current study examines social media marketing from an advertising perspective, specifically, the utilization of Facebook posts as a vehicle for advertising information about an event to Facebook fans.

### Theoretical Framework: Advertising Theory

As a promotional component of the marketing mix, advertising may be used to increase brand awareness, brand equity, sales and image enhancement, as an information tool, and has the ability to increase consumer loyalty (Mullin, Hardy, & Sutton, 2007; Pitts & Stotlar, 2013). Advertising theories often focus on eliciting and understanding consumer responses to advertising (e.g., Lavidge & Steiner, 1961; Vakratsas & Ambler, 1999). Traditional models divide consumer response into separate domains: cognitive (often measured with awareness or knowledge), affective (interest or attitude), conative (motivation or intention to behave), and/or actual behavioral responses to advertising (consumption; 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 domains, to determine the best positioning strategy for the business or product (Vakratsas & Ambler, 1999).

**Cognitive Response.** Awareness is the ability for an individual to comprehend information and absorb the information and make a conscious thought about the material (Crompton, 2004). In campus recreation, special events are not a regular occurrence, suggesting generating awareness is a critical marketing goal. Reed (2001) studied the perceptions of the availability of recreational physical activity facilities on a university campus and found students were not aware of a variety of different offerings that were available to them. It has yet to be determined if social media can generate increased awareness in a controlled environment.

**Affective Response.** One's affective response to an advertisement can be described as the emotional interest in the service or particular product. This attitude creates an image for the consumer of whether the service or product is enjoyable, which may impact behavior (Blanchard et al., 2008; Mitchell & Olson, 1981). Operationalized as interest, marketers are often concerned with reaching consumers in a way that sparks their interest to participate (Pitts & Stotlar, 2013). Facebook messages may influence an individual's interest in a special event, which may eventually influence their participation.

**Conative and Behavioral Response.** Conative response has been operationalized as the intent an individual has to commit a particular behavior (Eagly & Chaiken, 1993). In campus recreation, an individual's participation is the end goal

and considered the highest level of consumption (Kwan Green et al., 2013; NIRSA, 2004). Individuals can be aware of a campus recreation activity and interested in it, but efforts in marketing these areas should result in some form of behavioral consumption. It has not been determined how social media, such as Facebook, influences consumption of a campus recreation event.

## Research Questions

This study investigated four major research questions to understand the effectiveness of social media marketing:

RQ1: Does social media marketing (operationalized as Facebook status updates) influence college students' awareness (cognition) of a recreation event?

RQ2: Does social media marketing (operationalized as Facebook status updates) influence college students' interest in (affect) a recreation event?

RQ3: Does social media marketing (operationalized as Facebook status updates) influence college students' intention (conation) to participate in a recreation event?

RQ4: Does social media marketing (operationalized as Facebook status updates) influence college students' participation (behavior) in a recreation event?

## Methods

### Participants

To assess the effectiveness of social media marketing on college students, a total of 98 participants were recruited via undergraduate courses at a large urban university. Undergraduate students were the target market for the university's campus recreation center. A total of 55 participants completed all phases of the experimental design (26 experimental, 29 control). Participants were predominantly female (61%), White/Non-Hispanic (44%) or African-American (37%), and averaged 22.5 years of age. They represented six majors and 83.6% lived off-campus (Table 1). This population was reflective of the demographics of the institution.

### Experimental Design

This study used a 2 × 2 repeated factorial within-subjects design to measure students' awareness, interest, and intention to participate in a campus recreation event (a first-time special event- an adventure race). The recreation center's Facebook page was used as the social media marketing medium. The study included five stages: 1) pretest survey, 2) treatment group assignment, 3) treatments, 4) the campus recreation event, and 5) posttest survey (Table 2).

**Pretest.** Participants were voluntarily recruited through a class announcement and surveyed in undergraduate exercise science courses. The true purpose was not revealed initially to avoid contamination. A pretest survey was conducted (O1;

**Table 1 Descriptive Statistics by Group**

Background variable	Category	Experimental: Facebook (n = 26)		Control (n = 29)		Total (N = 55)	
		n	%	n	%	N	%
Gender	Male	10	38.5	11	37.9	21	38.2
	Female	15	57.7	18	62.1	33	61.1
Age	18–19	2	8.0	2	6.9	4	7.3
	20–21	12	48.0	13	44.8	25	45.5
	22–23	7	28.0	7	24.1	14	25.5
	24 or older	4	16.0	7	24.0	11	20.0
School year	Freshman	1	3.8	0	0.0	1	1.8
	Sophomore	2	7.7	4	13.8	6	10.9
	Junior	16	61.5	11	37.9	27	49.1
	Senior	5	19.2	13	44.8	18	32.7
	Post Baccalaureate	2	7.7	1	3.4	3	5.5
Ethnicity	African-American	7	28.0	13	44.8	20	37.0
	White/Non-Hispanic	13	52.0	11	37.9	24	44.4
	White/Hispanic	2	8.0	1	3.4	3	5.6
	Asian	1	4.0	1	3.4	2	3.7
	Hawaiian/Pacific Islander	0	0.0	1	3.4	1	1.8
	Other	2	8.0	2	6.9	4	7.4
Major	Biology	3	11.5	4	13.8	7	12.7
	Chemistry	1	3.8	0	0.0	1	1.8
	CLS	0	0.0	1	3.4	1	1.8
	Exercise Science	17	65.4	21	72.4	38	69.1
	Nursing	2	7.7	2	6.9	4	7.4
	Physical Education	3	11.5	1	3.4	4	7.4
Living	On campus	7	26.9	2	6.9	9	16.4
	Off campus	19	73.1	27	93.1	46	83.6

**Table 2 Research Design**

Experimental group	Observations	Treatment	Event	Observations
Group 1 (Facebook)	O1	Facebook status updates	Adventure race	O2
Group 2 (Control)	O1	None	Adventure race	O2

items detailed below). Part of this survey requested the participants' e-mail address and they were informed that they may receive an e-mail with further instructions.

**Group Assignment.** After the pretest, participants were assigned via stratified sampling into a group: Facebook or control group. A random number generator was used to place individuals in the Facebook or control group. The only exceptions were if the student did not have a Facebook account (assigned to control group) or if the student was already a fan of the recreation center's Facebook page (experimental). The experimental group members were emailed an invitation to become a fan of the recreation center's Facebook fan page within 24 hours of the initial presurvey. The control group members received no e-mail.

**Treatment.** Facebook status updates on the recreation center's fan page were sent to participants through Hootsuite, a social media management dashboard. There were five status updates about the race, beginning five days before the event (e.g., "Think you know campus? Use your smarts to compete in the Adventure Race, Thurs. on 4/7 from 4:30–5:30pm . . . register at . . ."). In addition, seven other "dummy" messages regarding other recreational offerings and highlights were posted within this same time span to remain consistent with the recreation center's typical social media presence and to simulate a real social media page (e.g., "Hope everyone had a good weekend . . ."). Two messages were sent after the special event occurred, but before the participants were removed from the group. To mimic typical marketing strategies, status updates were approximately sent at influential times—11:00 a.m., 3:00 p.m., and 8:00 p.m. (Virtue, 2010).

**Event.** The campus adventure race was executed by the campus recreation staff, who recorded the names of the participants. The event was selected because it was free and of minimal physical activity, suggesting any student would be the target market.

**Posttest.** Following the event, an in-class posttreatment survey (O2) examined advertising effectiveness. Participants were then debriefed with information regarding the true purpose and procedures of the study.

## Instrument

Based on a review of literature, pre- and posttest instruments were developed. For descriptive purposes, social media involvement (e.g., amount of time spent on Facebook and number of Facebook friends), recreation center involvement (10 items), and demographics (7 items) were also included. Awareness (3 items; e.g., "I have heard of the Adventure Race"), interest (3 items; e.g., "I am interested in the Adventure Race"), and intention (3 items; "I intend to participate in the Adventure Race") were measured on a 1–7 scale (Strongly Disagree to Strongly Agree). The pre- and posttest surveys included the same awareness, interest, and intention items. These items showed acceptable reliability (Table 3;  $\alpha > .80$ ; Nunnally & Bernstein, 1994). Pitts and Slattery (2004) recommended the usage of dummy sponsors in marketing research, so the survey also included items about awareness, interest, and intention of other campus recreation events. Additional items regarding general recreational events were included to disguise the true purpose of the study.

**Table 3 Pre- and Posttest Descriptive Statistics for Awareness, Interest, and Intention of the Adventure Race for Groups**

Variable and condition	<i>n</i>	Pretest <i>M</i> ( <i>SD</i> )	$\alpha$	Posttest <i>M</i> ( <i>SD</i> )	$\alpha$
Awareness of the adventure race			.93		.86
Facebook Group	26	2.28 (2.00)		3.33 (2.07)	
Control Group	29	2.02 (1.72)		1.97 (1.27)	
Total	55	2.15 (1.84)		2.61 (1.81)	
Interest in the adventure race			.86		.91
Facebook Group	26	3.54 (1.65)		3.35 (1.61)	
Control Group	29	3.08 (1.69)		2.52 (1.57)	
Total	55	3.30 (1.67)		2.91(1.63)	
Intent to participate in the adventure race			.81		.90
Facebook Group	26	2.34 (1.24)		2.41 (1.91)	
Control Group	29	2.45 (1.50)		1.82 (1.32)	
Total	55	2.40 (1.38)		2.09 (1.64)	

## Data Analysis

PAWS/SPSS for Windows version 18.0 was used for data analyses. 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 were used to determine variability among the treatment groups for demographic variables. T-tests were conducted to see differences by group in social media and recreation center involvement. The effectiveness of advertising (treatment) via awareness, interest, and intention was measured via an Analysis of Covariance (ANCOVAs) with pretest as the covariate. Actual special event behavior was measured by obtaining the list of participants from the recreational staff.

## Results

To analyze personal background variables for the participants involved in this study, descriptive statistics were used (Table 1) and chi-square analyses showed no significant differences ( $p > .05$ ) in demographics by group, indicating it was appropriate to conduct further analyses. 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. In regards to recreation center involvement, all but three had been to the recreation center, suggesting this was the appropriate target market for the adventure race. About 66% used the recreation center in the prior month and 30.8% indicated in the past month they had used the recreational facility to play sports. However, 81% had never attended or participated

in a campus recreation special event. T-tests revealed no significant differences ( $p > .05$ ) between the Facebook and control group based on social media or recreational center involvement.

Descriptive statistics were conducted on awareness, interest, and intention measures by group (Figure 1; Table 3). The event had 11 total participants, with one from the study. Box's Test of Equality reflected that the homoscedasticity of variables was appropriate for ANCOVAs. ANCOVAs using pretest scores as a covariate revealed that there were significant differences in awareness between groups after treatment [ $F(1, 55) = 6.217, p = .016$ ; Figure 2]. There were not significant differences in interest [ $F(1, 55) = 2.822; p = .099$ ] or intention [ $F(1, 55) = 1.496; p = .227$ ; Table 4]. The final grand means were  $M = 2.64$  for awareness,  $M = 2.92$  for interest, and  $M = 2.11$  for intention.

## Discussion

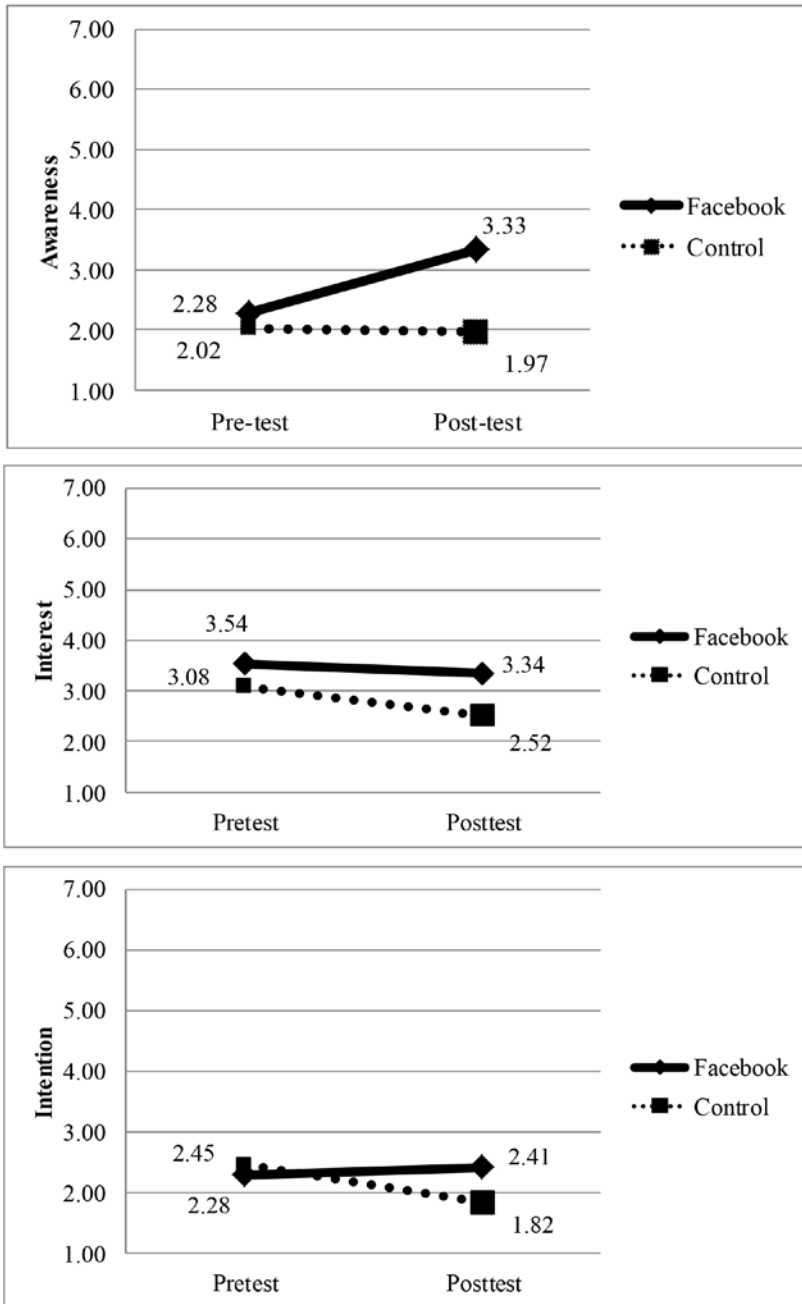
Social media marketing is a common approach to reach consumers in sport and recreation. Recreation centers use Facebook pages to market their programs and provide updated information to their Facebook fans (Frye & Gonzalez, 2013). The effectiveness of this form of social media marketing in creating awareness, interest, or behavioral intention was quantitatively measured. This study reached new ground in regards to conducting social media research on a controlled group of participants in an effort to isolate the effects of the social media advertising.

While the participants were very connected via social media and had moderate recreation involvement levels, they did not appear to be greatly influenced by Facebook as a marketing tool in all four domains. This study provides a first assessment of social media as a marketing tool via an experimental design and is a valuable foundation for future research.

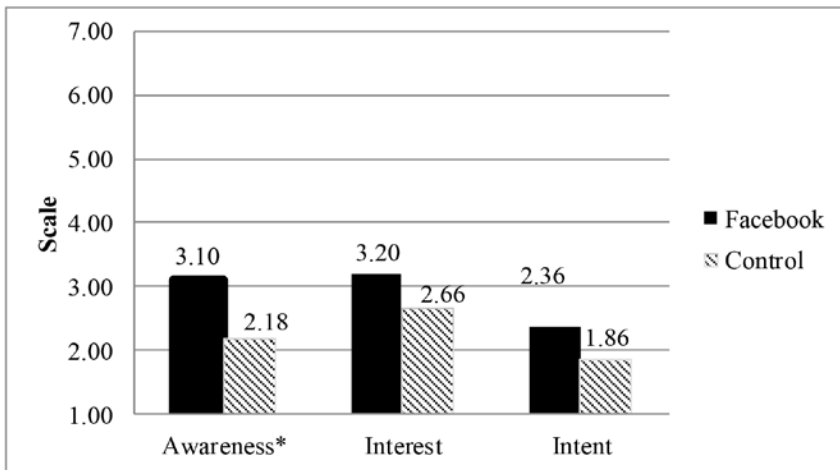
Overall, awareness levels before treatment were generally very low for the first time adventure race ( $M = 2.15; SD = 1.84$ ). Yet, in testing RQ1, the college students' awareness levels of the event were positively affected by the campus recreation center's use of Facebook status updates. The treatment group significantly ( $p = .016$ ) increased in awareness after receiving the messages (Figure 1). This is consistent with previous studies on other forms of electronic advertising, such as television commercials (Cianfrone & Zhang, 2006), virtual advertising (Tsuji, Bennett, & Leigh, 2009), or in-game advertising (Cianfrone, Zhang, Trail, & Lutz, 2008), which showed increases in awareness after exposure. However, while statistically significant, the actual improvement in awareness was small, suggesting more Facebook updates may be necessary to achieve even higher awareness levels. Findings suggest marketers could incorporate Facebook messages into their marketing efforts, if awareness of events is a desired outcome.

The adventure race did not garner much interest from the participants. In RQ2, social media marketing's effect on influencing interest in the special event was not significant. The lack of general interest may have been attributed to the event type itself, and not a reflection of the advertising, given there were only 11 total participants. Affect may be difficult to change in a short period of time; if the messages were more than one week in duration, perhaps more of an impact may be plausible. Attitude toward advertising, or attitude toward advertising types, is an extensive area of research that may be used to explain individual's interest in the





**Figure 1** — Pretest and posttest descriptive statistics for awareness, interest, and intention of the adventure race for groups.



**Figure 2** — Descriptive statistics for awareness, interest, and intention of the adventure race for groups based on effects of treatment. \* Significant at  $p < .05$ .

**Table 4** ANCOVAs Comparing the Social Media Marketing Variables Between the Experimental and Control Groups

Dependent variable	SS	df	MS	F	p	$\eta^2$	1- $\beta$
Awareness of adventure race	11.102	1	11.102	6.217	.016*	.111	.686
Interest in the adventure race	3.712	1	3.712	2.822	.099	.053	.378
Intent to participate in the adventure race	3.191	1	3.191	1.496	.227	.029	.224

\*  $p < .05$ .

event due to advertising (e.g., Brackett & Carr, 2001), but is unknown for social media marketing. The participants could become uninterested in the updates or have negative feelings toward (i.e., be bothered by) new or repetitive Facebook messages. Researchers have indicated that repeated messages that are sent in a short time period run the risk of alienating their consumers (Belch, 1982; Jeong, Tran, & Zhao, 2012).

The intention to participate in the special event (RQ3) was low ( $M = 2.41$ ) before advertising and not influenced by the treatment of Facebook messages. Finally, RQ4 addressed actual participation. Behavior is the highest level of consumption and often difficult to influence (Lavidge & Steiner, 1961). In total, this first time special event only had 11 participants, one of which was from the study.

Although the event was not highly attended, it was promising that one was from the study and if more students followed the recreation center's Facebook page, they may become more aware of upcoming events.

## Implications

This study provides the first empirical examination of social media marketing effectiveness within the sport and recreation domain. Given the participants' strong Facebook usage numbers, it is recommended that recreation organizations maintain their Facebook pages to stay relevant and aim to obtain Facebook fans. More specifically, the findings suggest that Facebook can increase awareness, so having Facebook fans is important. Providing these fans with new and fresh content would be beneficial in generating awareness and may prevent annoyance, although future studies will be necessary to determine this impact. The cost efficiency and ease of use make Facebook an attractive part of the promotional plan for an organization. In terms of ROI, the amount of staff time, cost, and training associated with implementing a social media presence and using it for promotions may be fruitful in garnering higher levels of awareness (Newman et al., 2013).

As a whole, awareness levels were still quite low suggesting more advertising is necessary. Including social media marketing as part of an overall marketing plan and not the sole source of advertising is a recommended approach (Newman et al., 2013). Nonetheless, if the goal is to generate awareness, this study indicates Facebook is a worthwhile medium. Likewise, although there were no statistically significant changes in a participant's interest or intention to participate in response to Facebook status updates, staff should note Facebook may be helpful in these areas. One of the keys to creating a successful event is determining whether there is a market for it in the first place (Solomon, 2002). Practitioners may use social media to gauge interest in events before hosting them. This would provide campus recreation staff with an idea of student body interest (affect) before investing time and money in preparing for the event. In terms of intention, Facebook polls could be used to see who intends to attend an upcoming event, to allow for better planning. Incentives could be provided to Facebook fans, which may drive consumption (and increase the number of followers; Newman et al., 2013). Further, recreation staff could briefly survey the event attendees to see how they heard of the event, to determine if the Facebook page is producing ROI. This could be measured either at the point of event registration (online or in-person) or by cross-checking attendees with those fans of a Facebook page. Finally, there may be a line between how much promotion and social media updating is too much; however, more research is vital to know the right balance.

## Limitations and Future Research

As with all studies, there are limitations. Although the original amount of presurveys collected was a large sample, the nature of the study led to decay and reduced the amount of usable data due to drop-offs not completing all phases of the study. For example, some participants attempted to "fan" the Facebook page after treatment messages had already begun, and thus could not be included because they would not receive the full effect. Another potential limitation in this study was the special

event itself. Only 11 participants registered for this event, thus demonstrating very little interest by the campus population as a whole; events hosted by this recreation center typically had anywhere from 50–200 participants. The measured interest and consumption levels may have been low due to this fact and not a result of the social media marketing. A final limitation was that the messages were only for one week and not over an extended period of time.

Future researchers could replicate this study by comparing multiple social media types. Similarly, other avenues worth exploring are the effectiveness of different types of social media messages (messages to garner interest versus generating awareness), frequency of messages, or time of day. Finally, another approach may study social media marketing in comparison with traditional advertising.

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