

COLLEGE STUDENT SOCIAL MEDIA USE AND ITS RELATION TO HEALTH
BEHAVIORS

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Background and Problem Statement

The overall health and fitness of people throughout America has been questionable in recent years. Obesity is a growing problem in the United States, and children and adults both are affected by chronic diseases, diabetes, and other poor health outcomes associated with this trend. There are programs in effect to try to combat this issue, but the numbers continue to rise. Obesity has become an epidemic plaguing the US, with over two thirds of all adults now considered overweight.

This obesity epidemic affects all age groups, including college students. Despite the fact that 96.3% of young adults between the ages of 18 and 24 years report being in excellent, good, or very good health, the most recent data from the National Health and Nutrition Examination Survey (NHANES) states that 68% of Americans aged 20 years or older are considered overweight or obese (body mass index (BMI) greater than or equal to 25 kg/m²).^{1,2} According to 2005 data from the Behavior Risk Factor Surveillance System (BRFSS), more than one in four young adults between the ages of 18 and 24 years is considered overweight or obese, a stark contradiction to the belief held by these very students.³

This is not a new issue, as college student health has been subpar for decades. A 30-year study conducted between 1966 and 1995 concerning student perceptions of their own health demonstrated that student confidence in physical health and body image when compared to other individuals of the same age has

been declining for a number of years.⁴ Contrary to student reports stating they believe they are in good health, they still claim to be less healthy than their peers. This low self-confidence can extend into other aspects of a student's life, leading to compounded health issues as he or she ages.

There is much evidence to support that dietary and activity patterns of college students predispose them to further health problems. Weight gain, lack of regular exercise, and unhealthy eating patterns are common among students in their first two years of college, and this trend is often carried over into life after college.⁵ This comes as little surprise given the dramatic lifestyle changes most college students experience while transitioning from adolescence to adulthood. As young adults acquire new privileges that are associated with growing older, they lose support from institutions and safety net programs created to serve adolescents. Many are successful during this time of transition, but others who rely heavily on these support programs are at risk for poor health outcomes.¹

An ongoing initiative of *Healthy People 2020* is to “create social and physical environments that promote good health for all.”⁶ This includes increasing the number of adults who are at a healthy weight and decreasing the number of those considered obese. The expert members of the U.S. 2010 Dietary Guidelines Advisory Committee (DGAC) focused on two overarching recommendations to help Americans reach this goal through a healthy diet: to “maintain calorie balance over time to achieve and sustain a healthy weight” and to “focus on consuming nutrient-dense foods and beverages.”⁷ Americans as a whole do not follow these recommendations very well. They consume more calories than they expend through

physical activity, and have trouble limiting sodium, fat, sugars, and refined grains in their everyday diets.

Additionally, for adults aged 18 to 64 years, the USDA suggests at least 2 hours and 30 minutes each week of aerobic physical activity at a moderate level or 1 hour and 15 minutes each week of aerobic physical activity at a vigorous level in order to maintain adequate health.⁸ Strength exercises such as push-ups, sit-ups, and lifting weights are also advocated. Currently, only 3.5% of all adults between the ages of 20 and 59 years attain sufficient physical activity to meet these public health recommendations.⁹ This is only one of the many factors that have led to the increased number of adults and children being affected by obesity in the United States.

Individuals in the college student population also have unhealthy dietary habits, such as low fruit and vegetable intake and low physical activity levels, with as many as 78.4% of students in one study not consuming at least the minimum recommended serving of 5 fruits and vegetables per day.¹⁰ Due to this, the obesity rate among college students is also increasing. The prevalence of students not meeting dietary and physical activity standards demonstrates a need for increased education and intervention in this group. Though little research has been done in this area, college is a prime setting to implement lifestyle interventions, as these young adults are already forming new habits and developing a sense of health beliefs, lifestyle choices, and behaviors that they will likely maintain for the rest of their lives.¹¹

Currently, college students get much of their health information from outside sources such as health center medical staff, health educators, faculty members or coursework, and their parents. Though this information is available to students, only 3.1% of students receive information about all 11 primary health behavior areas outlined in *Healthy People 2010*.¹² *Healthy Campus 2010* targets increasing these numbers in order to raise overall health awareness among college students.

This complementary initiative to *Healthy People 2010* included objectives to bring the overarching goals of increasing quality and years of healthy life and eliminating health disparities to college campuses across the United States. However, the *Healthy Campus 2010 Midcourse Review* conducted by Burwell, et al highlighted lack of success in this endeavor.¹² All of the nutrition and overweight objectives of *Healthy Campus 2010* moved away from their targets. Though physical activity moved toward the target values in some cases, this result was not universal. Health awareness evaluations vary from topic to topic, but on average, these values, too, moved away from their targets. With millions of students using the Internet as a resource today, there is great potential to develop this awareness through access to online information.

Technology has the ability to impact lifestyle behaviors and inform users in order to help them make decisions regarding various health beliefs and behaviors. One of the most commonly used and continually growing features of the Internet is social media. Over two thirds of online Americans use social media platforms such as Facebook and Twitter to connect with friends and relatives.¹³ As of March 2013, there were over 1 billion Facebook users online monthly, with 618 million of those

users active on the website daily.¹⁴ Both of these numbers have risen by nearly 100 million in the past year, up from 901 million monthly users and 526 million daily users in March of 2012. In recent months, new sites like Instagram and Pinterest have emerged, bringing added depth to the availability of social media for the general public.

While limited data is available regarding the relationship between social media use and health behaviors, there is a strong possibility that sites such as those listed above can be used to establish an educational and supportive system to help college students not only connect with one another and discuss their health issues, but they could also benefit these students by allowing them to work together toward goals for healthy living.

Review of Literature

Students form new lifestyle behaviors, both positive and negative, during the transition from high school to college. This time of great change allows much opportunity to connect with new people and make friends. These friendships greatly impact students, often in more ways than one. Both diet and exercise have been indicated to be habits easily influenced by peers, relatives, and others in one's social circle. This fact exhibits that the people with whom students interact most often will likely have the most influence on their health behaviors.

When making choices regarding health, studies show that social support is a significant predictor of exercise and physical activity in students. In one meta-analysis of 87 studies, the relationship between social influence and exercise behavior was measured. Results from this study showed that the largest effects

were observed for family social support and attitudes about exercise (0.59), important others attitudes about exercise (0.69), and family support and compliance behavior (0.69).¹⁵ This evidence demonstrates the strong relationship between health choices and one's social surroundings.

Diet is similarly affected by social situations, especially among college students. The same forces that influence exercise behavior also could be used to encourage different eating styles among groups of friends. In a recent qualitative study, audio journals were kept by college freshmen to track their activities, their reasons for their actions, and their feelings about their health-related behaviors.¹⁶ Food and beverage consumption with peers and social interactions on and off campus were found to be determinants of unhealthy eating behaviors. These unhealthy activities led to a cycle of health problems, both physically and emotionally. This study showed that social eating was a major reason students participate in eating events.

Other research, too, suggests that lifestyle behaviors are influenced by society. Academics at Harvard Medical School recently published an article stating that a person's chance of becoming obese increased by 57% if he or she had a friend who became obese in a given interval of time.¹⁷ Similar statistics were seen among siblings and between spouses. The researchers concluded that people are embedded in social networks and are influenced by the appearance and behaviors of those around them, which in turn affects their beliefs, perceptions, and actions regarding weight and other health issues. Based on these results, the authors of the study suggest that obesity spreads through social networks.

It has been demonstrated that society has a major impact on a person's health. Friends, family members, and others in a person's life affect their day-to-day choices regarding their lifestyle behaviors. Because people are interacting through social networking sites more often as time progresses, it is very possible for them to be influenced similarly by those with whom they have an online relationship, as the main reason for social networking sites is to foster social interaction via communication in a virtual environment.¹⁸

In one study, 91% of college students reported using Facebook.¹⁹ In another, those who did use Facebook used it on average for 30 minutes each day.¹⁸ Most common uses for Facebook included keeping in touch with friends and helping to form a personal identity on the web. Twitter is another social media site that has been quickly growing in popularity among college students. Twitter boasts that since its launch in 2006, millions of users have been using the site to connect in real-time to stories, ideas, and opinions that users find interesting.²⁰ Also, the site emphasizes that a person need not "tweet" to use Twitter; he or she can simply follow others' tweets to get news and discover information that interests him/her. A portion of the Twitter website is even dedicated to stories of people "using Twitter to help make the world a better place in unexpected ways" by showing support for programs and initiatives in their communities.

People on social media sites tend to interact with their friends, family members, and those who are similar to them. Reasons that friends are similar to one another include the existence of social homophily (the tendency for like to attract like) and the likelihood that friends become similar over time due to peer influence

and diffusion of ideas.²¹ Most college students from one study listed previously stated that they did not establish Facebook friendships online, but simply kept in contact with people with whom they were already acquainted.¹⁹

Other sites, such as Twitter, allow users to follow celebrities, news, business, health initiatives, and more from a distance. This allows them to gain various types of relevant information quickly and easily from one place. While the potential to disseminate health information is certainly there, most research shows that social media is currently used by students to stay in touch with others and what's going on in the world around them. More often than not, the information discussed in social media interactions does not deal with health-related issues on any large scale.

Testimonials found in popular newspapers, magazines, blogs, and other modes of communication, however, do claim that social media sites can be used to affect one's health. Though these stories are not based on any scientifically conducted study, they give hope that further investigation of the relationship will demonstrate a significant correlation between social media use and health. In *Psychology Today*, Dr. Martina Cartwright, PhD, suggests that posting weight-loss goals on sites such as Facebook and asking for help from online friends can be very beneficial to the process.²² This article gives thoughtful insight into the ability of social networking sites to provide the means for supportive connections between people who are interested in doing something about their health.

In addition to stories and expert opinions, some researchers have completed studies about the relationship between social media use and lifestyle behaviors concerning one's health. A 2011 study found that 83% of adults between the ages of

18 and 29 years use the Internet to look for health and medical information, and a similar number of Internet users use social networking.²³ Due to these statistics, the researchers investigated the usefulness of creating a Facebook group to help facilitate the teaching of health information to college students. Respondents from the study believed the existence of more groups such as the one created in the study would be useful for students who were interested in enhancing their health knowledge. Based on the results of the study, it was proposed that college student health literacy can be enhanced through social media, and that intervention programs may be able to take advantage of the widespread use of social networking sites such as Facebook and Twitter to help students meet people who can influence their health behaviors.

The Student Wellness Center at The Ohio State University has already begun to make use of social media for dissemination of health information. Though no study has been done to evaluate its impact, it is important to note that a large university is making the effort to have its health services available to students online. The Student Wellness Center maintains both a Facebook page and a Twitter account to post about health tips, events on campus, and answer questions students may have about the services offered by OSU. Additionally, the Wellness Center's Twitter account posts weekly "Healthy Student Spotlights" to showcase students on campus who are actively making choices to help enhance their own health. Other accounts have been created for Financial Coaching, Sexual Wellness, and more. This use of social media is consistent with the Wellness Center's vision "to provide the

preeminent services at The Ohio State University that enhance the wellness of students and their communities.”²⁴

Few researchers have conducted studies regarding the relationship between social media use and lifestyle behaviors, but those that have suggest that a relationship does exist. Some studies have proposed that colleges use social media to disseminate health information to students, as there is evidence demonstrating that supportive relationships can help students overcome the difficulties associated with campus life that may lead to certain health behaviors.¹⁶ Because of the opportunity to connect with people who are not only similar to them, but who may also influence dietary and physical activity habits, these social media sites have a profound ability to have a major impact on college student lifestyles and behaviors. This possibility is consistent with both research studies and other, less scientifically sound data sources that also claim a significant relationship.

Methodology

The current research is limited regarding the use of social media sites to influence health. Therefore, the purpose of this research is to study the relationship of social media with college student lifestyle and behavior choices regarding nutrition, fitness, and overall health and wellbeing in Health and Rehabilitation Sciences students. The information obtained could be used to demonstrate need for additional studies to further investigate this relationship.

Objectives

1. Examine social media use in Health and Rehabilitation Sciences students
2. Assess relationship between social media use and lifestyle behaviors in Health and Rehabilitation Sciences students

Subjects

Approval from the Institutional Review Board (IRB) was obtained to collect data from human subjects. Students from the School of Health and Rehabilitation Sciences (HRS) at The Ohio State University were recruited to complete a questionnaire by sending a one-time invitation via email. Only those above the age of 18 years were asked to complete the survey. Of the 847 students who received the invitation, 288 began the survey, and 268 completed it (31.6% response rate). Data obtained from these students was analyzed in order to investigate the relationship between these Ohio State students' social media use and their health.

As an incentive for survey completion, students had the opportunity to submit their names for entry into a drawing for eight gift cards to local merchants ranging in value from \$25 to \$50. Those who submitted their names were not connected to their data in any way, as they sent a separate email to Dr. Taylor for inclusion in the drawing. Eight students were randomly selected from those who wished to be entered into the drawing, and gift cards were distributed.

Survey Development

A previously developed survey (Health Related Characteristics Among College Students) was modified to address current health issues in the college student population. The Therapeutic Lifestyle Changes (TLC) undergraduate

research group began making changes to this survey in early 2012 under the direction of Dr. Taylor. Emily Hill further developed the survey to include items pertinent to her research project. These items for the questionnaire included student health perception, lifestyle behaviors such as diet and physical activity, and social media use.

Questions to measure lifestyle behaviors included assessments of dietary habits as well as physical activity and inactivity. Food patterns addressed in the Dietary Guidelines for Americans (DGA) 2010, including the intake of foods such as fruit juice, whole fruit, whole grains, and sugar-sweetened beverages, were evaluated using a scale to quantify frequency of consumption. Subjective normative data about perceived healthfulness of the students' diets, levels of physical activity, and overall health status when compared to their peers was assessed using a Likert-type scale. Physical activity data was quantified as the amounts of moderate and vigorous activity, walking, and hours of screen time. The students' body mass indexes (BMIs) were also collected.

The use of the social media sites Facebook, Twitter, Foursquare, Instagram, Pinterest, YouTube, Tumblr, and Blogs/Vlogs were investigated as part of the study. Students were asked to evaluate their use (or lack of use) of each type of social media site for the purpose of finding and disseminating health information regarding lifestyle behaviors, diet, physical activity, and perception of health and weight. They were also asked to evaluate their friends' use of these same media. These sites are among the most commonly used by students today and should give a

good indication of whether or not they are using social media for health-related purposes.

Specific health-related activities within social media were also investigated. A chart was developed to address multiple issues in one way. The chart included questions posed to ask students how often they posted on their various social media accounts about their lifestyle behaviors. Specifically, the questions focused on quantifying how often students were posting online about their weight (be it present weight, goal weight, or general desire to do something about their appearances), their food and physical activity habits, and their fitness goals. A question asking students to evaluate their use of social media to view others' posts regarding these same issues was also included. Additional questions asking students to evaluate their use of social media to seek advice and/or support from others, to look up health information, to make plans for health-related activities, and to post about actions regarding food and/or activities were also included in the chart.

The survey ended with questions regarding health beliefs, asking students to rate how much they agreed with each statement presented using a Likert-type scale. Questions were asked to evaluate whether or not students believed diet and physical activity were important to overall health, as well as how much control students believe they had about their own weight. Students could answer these questions along the spectrum of Strongly Agree to Strongly Disagree.

Once the survey document was completed, a pilot test was conducted with HRS students to assess flow, readability, content, and format. A paper-based version of the survey was distributed in-class to students, and completion was completely

voluntary. Recommended changes from this pilot were incorporated into the final instrument, which was then distributed to students via an online survey through SurveyMonkey in order to gain data for analysis.

Data Collection

An invitation email to take the described survey was sent to all HRS students in late January, and only completed surveys submitted by the first week of February were used in the study, giving students two weeks to participate. The students were made aware that participation in the study was both completely voluntary and completely anonymous. The results were kept confidential; only those conducting the research had access to the data from completed surveys. Those who chose to participate read a consent form outlining the stated purpose of the study and reminding them of their rights to quit the survey at any time without penalty. It also informed students they had to be at least 18 years of age to take the survey. After agreeing to this condition, they then had access to the questionnaire itself. It took students approximately 10 minutes in order answer the questions on the survey. Once students selected their responses, the survey was submitted for analysis. The data was then downloaded for further study.

Data Analysis

Data collected from the completed surveys contained rates of social media use by type, frequency of social media use for the health-related behaviors listed above, frequency of lifestyle behaviors, perceptions of health, diet, and physical activity, and differences in lifestyle behaviors and perceptions of health, diet, and

physical activity between those who used social media for health-related messages compared to those who did not.

Frequency analyses were conducted to describe the rates of media use, lifestyle behaviors, and perceptions. Individuals were stratified by use of social media to share health-related messages. Differences between the social media groups in lifestyle behaviors and perceptions were compared using t-test and chi-square analyses. Significance was established a priori at $P < 0.05$.

Results

	I do not use this media.		I use this media.		Greater than 4 hours per day		3-4 hours per day		2-3 hours per day		1-2 hours per day		Less than 1 hour per day	
	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Facebook	9	3%	259	97%	8	3%	9	3%	32	12%	99	37%	111	41%
Twitter	131	49%	135	51%	5	2%	5	2%	14	5%	32	12%	79	30%
Pinterest	116	44%	148	56%	0	0%	2	1%	7	3%	41	16%	98	37%
Foursquare	243	92%	21	8%	0	0%	0	0%	0	0%	1	0%	20	8%
Instagram	146	55%	119	45%	3	1%	0	0%	3	1%	23	9%	90	34%
YouTube	25	10%	238	90%	0	0%	2	1%	5	2%	16	6%	215	82%
Blog/Vlog	233	89%	29	11%	0	0%	0	0%	0	0%	3	1%	26	10%
Tumblr	238	91%	23	9%	0	0%	0	0%	0	0%	2	1%	21	8%

Table 1: Social Media Use

The number of students using social media was very high (Table 1). Facebook was most commonly used, with 97% of survey respondents reporting using the media. A majority of students used YouTube (90%), Pinterest (56%), and Twitter (51%) as well. Additionally, another 45% used Instagram. Foursquare (8%), Blogs/Vlogs (11%), and Tumblr (9%) were not reported as being commonly used social media sites for this group. Most students who reported activity on one or

more social media sites used the site(s) less than one hour per day. Overall, these numbers suggest a strong presence of social media in the everyday lives of college students.

Item	Any Media	Facebook	Twitter	Pinterest	Instagram
I use this to post about my food habits or likes.	158 (59%)	58 (22%)	51 (19%)	103 (38%)	48 (18%)
I use this site to post about my physical activity habits/likes.	146 (54%)	80 (30%)	52 (19%)	75 (28%)	20 (7%)
I use this site to post about my weight.	18 (7%)	8 (3%)	6 (2%)	5 (2%)	0 (0%)
I use this site to post about my fitness goals.	84 (31%)	27 (10%)	21 (8%)	53 (20%)	5 (2%)
My friends use this site to post about their food habits or likes.	225 (84%)	175 (65%)	104 (39%)	131 (49%)	98 (37%)
My friends use this site to post about their physical activity habits/likes.	236 (88%)	191 (71%)	115 (43%)	122 (46%)	69 (26%)
My friends use this site to post about their weight.	114 (43%)	91 (34%)	40 (15%)	45 (17%)	30 (11%)
My friends use this site to post about their fitness goals.	192 (72%)	144 (54%)	78 (29%)	98 (37%)	44 (16%)
I use this site to look up health-related topics or interests.	165 (62%)	26 (10%)	30 (11%)	114 (43%)	7 (3%)
I use this site to seek advice or support from others regarding my health.	80 (30%)	19 (7%)	16 (6%)	44 (16%)	5 (2%)
I use this site to make plans for group activities regarding my health (i.e. going to the gym).	119 (44%)	87 (32%)	22 (8%)	28 (10%)	4 (1%)
I use this site to post about what I do in regard to food or activities (i.e. going out to eat or to the gym).	126 (47%)	86 (32%)	51 (19%)	25 (9%)	26 (10%)

Table 2: Health-Related Social Media Use by Students and Their Peers

In addition to measuring the amount of time students spent on social media, the survey evaluated the reasons behind student use of the various sites presented. The data suggested students' friends, not the students themselves, were most likely to use social media to post about food and physical activity habits, with 84% of friends using the sites to discuss food habits and likes and 88% for discussion of physical activity habits and likes (Table 2). However, it is important to note that the

majority of students surveyed claimed to use social media for these same purposes. Friends were more than twice as likely to post about fitness goals than the students who completed the survey (72% vs. 31%). Survey respondents reportedly used Pinterest more overall to post about their health, while their friends were more likely to use Facebook. A majority of students (62%) stated they used some form of social media to look up health-related information.

Based on the data collected, students were more than four times as likely to post about food habits or likes and nearly twenty times more likely to post about physical activity habits or likes if their friends did so (Table 3). Likewise, students whose friends did not post about their weight were not at all likely to post about their own weight. However, if their friends posted about weight, 16% of students then reported posting about their weight. A similar jump was seen for posting about fitness goals; while only 4% of students posted about their fitness goals if their friends did not, the percentage of students who posted climbed to 42% when their friends did so.

		Friends do not post		Friends post	
		N	%	N	%
I post about my food habits or likes.	Not use	36	84%	74	33%
	Use	7	16%	151	67%
I post about my physical activity habits/likes.	Not use	31	97%	91	39%
	Use	1	3%	145	61%
I post about my weight.	Not use	154	100%	96	84%
	Use	0	0%	18	16%
I post about my fitness goals.	Not use	73	96%	111	58%
	Use	3	4%	81	42%

Table 3: Students' Likelihood to Post Based on Friends' Use of Social Media

The relationship between posting about one's physical activity habits or fitness goals and his or her actual physical activity patterns was also investigated (Tables 4 and 5). The data suggest that students who are posting about these lifestyle factors on social media are doing slightly more vigorous and moderate activity each week, though they spend less time walking than their peers who do not post about physical activity or fitness goals. Total activity also appears to be higher for the social media group. However, total screen time (time spent watching TV, movies, on the computer, playing video games, or on social media) is also higher for this group. Data suggests those posting about their weight seem to do more activity per week than those who are not.

	I post about my physical activity habits/likes.				I post about my fitness goals.			
	Not use (n=120)		Use (n=145)		Not use (n=182)		Use (n=84)	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Vigorous activity (min/week)	142.77	207.07	158.62	162.53	146.91	193.00	161.39	162.64
Moderate activity (min/week)	101.36	150.37	120.59	189.98	101.84	148.34	133.92	217.29
Walking (min/week)	382.31	598.28	368.92	401.86	385.69	539.49	350.93	396.78
Total Activity (min/week)	242.95	253.23	279.21	282.76	247.94	247.66	295.30	312.42
Total screentime (min/day)	418.35	584.53	370.68	379.38	388.39	500.51	400.76	442.60
Sit and watch TV or movies (min/day)	92.82	86.04	94.50	123.74	92.85	111.18	95.67	101.43
Use a computer or other electronic devices (min/day)	224.99	316.63	174.49	158.44	198.54	266.37	194.73	185.88
Play video games (min/day)	10.98	25.81	20.80	94.68	13.37	43.44	22.91	112.21
Spend time on social media (min/day)	88.12	238.91	87.41	115.15	80.87	195.98	102.94	143.38

Table 4: Actual Physical Activity Compared to Likelihood to Post about Physical Activity and Fitness Goals

	I post about my weight.			
	Not use (n=247)		Use (n=18)	
	Mean	SD	Mean	SD
Body Mass Index	23.23	4.70	22.94	3.96
Vigorous Activity (min/week)	144.50	174.08	246.67	275.83
Moderate Activity (min/week)	108.83	169.38	153.33	218.98
Walking (min/week)	362.02	486.59	551.44	640.24
Total Activity (min/week)	252.75	252.44	400.00	433.28
Total screentime (min/day)	391.56	490.75	400.94	365.54
Sit and watch TV or movies (min/day)	94.52	110.88	82.89	56.60
Use a computer or other electronic devices (min/day)	198.01	248.77	188.39	169.30
Play video games (min/day)	16.85	74.56	9.61	21.13
Spend time on social media (min/day)	85.36	181.52	120.06	180.19

Table 5: Student Activity Level and BMI Compared to Likelihood to Post about Weight

Students' perceptions of their overall health and physical activity varied slightly depending on their likelihood to post about physical activity and fitness goals on social media sites, though significant differences were not observed (Table 6). While 48% of those who posted about fitness goals on social media felt more active than their peers, fewer members from this group described their current health as "excellent" than those who were not posting about fitness goals. Overall, students' perceptions of health seemed to be nearly the same regardless of whether or not they were posting about it on social media.

		I post about my physical activity habits/likes.				I post about my fitness goals.			
		Not use		Use		Not use		Use	
		N	%	N	%	N	%	N	%
Compared with most men/women your age, would you say that you are:	More active	51	43%	64	44%	75	41%	40	48%
	Less active	22	18%	21	14%	33	18%	10	12%
	About the same	47	39%	61	42%	75	41%	33	40%
How would you describe your current health?	Excellent	17	14%	21	14%	28	15%	10	12%
	Very good	56	46%	66	46%	79	43%	43	51%
	Good	44	36%	50	34%	68	37%	26	31%
	Fair	4	3%	8	6%	7	4%	5	6%
	Poor	0	0%	0	0%	0	0%	0	0%
Physical activity plays an important role in my overall health.	Strongly Agree	77	63%	94	65%	113	62%	58	69%
	Agree	35	29%	35	24%	48	26%	22	26%
	Somewhat Agree	7	6%	10	7%	15	8%	2	2%
	Somewhat Disagree	3	2%	5	3%	7	4%	1	1%
	Disagree	0	0%	1	1%	0	0%	1	1%
	Strongly Disagree	0	0%	0	0%	0	0%	0	0%

Table 6: Student Perception of Health and Physical Activity Compared to Own Use of Social Media to Post about Physical Activity and Fitness Goals

		My friends post about their physical activity habits/likes.				My friends post about their fitness goals.			
		Not use		Use		Not use		Use	
		N	%	N	%	N	%	n	%
Compared with most men/women your age, would you say that you are:	More active	16	52%	99	42%	34	45%	81	42%
	Less active	6	19%	37	16%	15	20%	28	15%
	About the same	9	29%	99	42%	26	35%	82	43%
How would you describe your current health?	Excellent	2	6%	36	15%	12	16%	26	14%
	Very good	20	63%	102	44%	33	43%	89	47%
	Good	10	31%	84	36%	28	37%	66	35%
	Fair	0	0%	12	5%	3	4%	9	5%
	Poor	0	0%	0	0%	0	0%	0	0%
Physical activity plays an important role in my overall health.	Strongly Agree	23	72%	148	63%	43	57%	128	67%
	Agree	6	19%	64	27%	23	30%	47	25%
	Somewhat Agree	3	9%	14	6%	6	8%	11	6%
	Somewhat Disagree	0	0%	8	3%	4	5%	4	2%
	Disagree	0	0%	1	0%	0	0%	1	1%
	Strongly Disagree	0	0%	0	0%	0	0%	0	0%

Table 7: Student Perception of Health and Physical Activity Compared to Friends' Use of Social Media to Post about Physical Activity and Fitness Goals

Though students' perception of health seemed independent of their likelihood to post about their own physical activity habits and goals, there did seem to be a slight difference in health perception if the students' friends were posting about their lifestyle behaviors related to physical activity (Table 7). More students (52%) reported feeling more active than their peers if their friends did not use social media to post about physical activity habits and likes than if they did (42%). Also, 69% of students whose friends were not using social media to post about their physical activity habits felt their own health was excellent or very good, compared to only 59% of those whose friends were posting on social media.

		I post about my food habits or likes.					
		Not use		Use		Total	
		N	%	N	%	N	%
100% Fruit Juices	Rarely/Never	52	48%	71	45%	123	46%
	Weekly	44	41%	77	49%	121	46%
	Daily	12	11%	9	6%	21	8%
Milk & Dairy Products	Rarely/Never	7	6%	9	6%	16	6%
	Weekly	53	49%	85	54%	138	52%
	Daily	49	45%	63	40%	112	42%
Regular Soda	Rarely/Never	74	68%	117	75%	191	72%
	Weekly	29	27%	36	23%	65	24%
	Daily	6	6%	4	3%	10	4%
Diet Soda	Rarely/Never	85	78%	113	72%	198	74%
	Weekly	23	21%	36	23%	59	22%
	Daily	1	1%	8	5%	9	3%
Coffee and Tea	Rarely/Never	44	40%	32	20%	76	28%
	Weekly	38	35%	73	46%	111	42%
	Daily	27	25%	53	34%	80	30%
Energy or Sports Drinks	Rarely/Never	86	78%	123	78%	209	78%
	Weekly	21	19%	31	20%	52	19%
	Daily	3	3%	3	2%	6	2%
Whole Fruit	Rarely/Never	6	6%	7	4%	13	5%
	Weekly	53	49%	72	46%	125	47%
	Daily	50	46%	79	50%	129	48%
Vegetables	Rarely/Never	1	1%	4	3%	5	2%
	Weekly	50	45%	72	46%	122	46%
	Daily	59	54%	82	52%	141	53%
Red Meat	Rarely/Never	37	34%	45	28%	82	31%
	Weekly	68	62%	105	66%	173	65%
	Daily	5	5%	8	5%	13	5%
Fish	Rarely/Never	59	54%	76	48%	135	51%
	Weekly	48	44%	78	49%	126	47%
	Daily	2	2%	4	3%	6	2%
Salty snack foods and chips	Rarely/Never	15	14%	16	10%	31	12%
	Weekly	81	74%	112	71%	193	72%
	Daily	14	13%	29	18%	43	16%
Cakes, Cookies, Ice Cream, Candy, etc.	Rarely/Never	19	17%	21	13%	40	15%
	Weekly	83	75%	119	76%	202	76%
	Daily	8	7%	17	11%	25	9%
Fast Food	Rarely/Never	47	43%	85	54%	132	49%
	Weekly	61	55%	69	44%	130	49%
	Daily	2	2%	4	3%	6	2%

Table 8: Student Dietary Patterns Compared to Use of Social Media to Post about Food Habits and Likes

		I post about my food habits or likes.					
		Not use		Use		Total	
		N	%	N	%	N	%
Diet plays an important role in my overall health.	Strongly Agree	58	53%	89	57%	147	55%
	Agree	33	30%	51	33%	84	32%
	Somewhat Agree	14	13%	10	6%	24	9%
	Somewhat Disagree	3	3%	3	2%	6	2%
	Disagree	2	2%	3	2%	5	2%
	Strongly Disagree	0	0%	0	0%	0	0%
In general, how healthy do you consider your overall diet?	Excellent	6	5%	6	4%	12	4%
	Very good	32	29%	55	35%	87	32%
	Good	53	48%	69	44%	122	46%
	Fair	16	15%	26	16%	42	16%
	Poor	3	3%	2	1%	5	2%
Compared with most men/women your age, would you say that you eat:	More healthy	65	59%	81	51%	146	54%
	Less healthy	4	4%	10	6%	14	5%
	About the same	41	37%	67	42%	108	40%

Table 9: Student Perception of Diet Compared to Own Use of Social Media to Post about Food Habits or Likes

		Friends post about their food habits or likes.					
		Not use		Use		Total	
		N	%	N	%	N	%
Diet plays an important role in my overall health.	Strongly Agree	28	65%	119	53%	147	55%
	Agree	10	23%	74	33%	84	32%
	Somewhat Agree	4	9%	20	9%	24	9%
	Somewhat Disagree	0	0%	6	3%	6	2%
	Disagree	1	2%	4	2%	5	2%
	Strongly Disagree	0	0%	0	0%	0	0%
In general, how healthy do you consider your overall diet?	Excellent	3	7%	9	4%	12	5%
	Very good	11	26%	76	34%	87	33%
	Good	23	54%	99	44%	122	46%
	Fair	6	14%	36	16%	42	16%
	Poor	0	0%	5	2%	5	2%
Compared with most men/women your age, would you say that you eat:	More healthy	28	65%	118	52%	146	55%
	Less healthy	0	0%	14	6%	14	5%
	About the same	15	35%	93	41%	108	40%

Table 10: Student Perception of Diet Compared to Friends' Use of Social Media to Post about Food Habits or Likes

The data suggests students' dietary choices are not significantly affected by their likelihood to post about their habits and likes on social media sites (Table 8). Users who posted about their food habits or likes had similar dietary patterns when compared with those who did not.

Students who used social media to post about their own food habits or likes had similar perceptions of their health as those who did not (Table 9). Student health perceptions seemed to be somewhat more affected by their friends' likelihood to post about these factors. It was interesting to see that fewer students (53%) strongly believed diet played a significant role in their overall health when their friends posted about food habits and likes than when they didn't (Table 10). Roughly 65% of students whose friends were not posting about food habits and likes strongly believed diet played a significant role in their overall health. Overall, however, student health perception in regard to food and dietary habits was not significantly related to social media use.

Discussion

Students are avidly using social media in their every day lives. The number of students who reported using Facebook in this study (97%) was similar to the number reported by authors of a larger study conducted at several Midwestern universities in 2006 (91%).¹⁹ This result suggests a possible increase in the number of students using social media, which could further indicate its potential to be used in the discussion of health and lifestyle behaviors.

The vast majority of the students surveyed was not only active on social media, but were oftentimes using it for health related purposes, with a majority

discussing lifestyle behaviors and looking up information regarding their health. These results, along with those from a 2011 study which found that 83% of adults between the ages of 18 and 29 years use the Internet to look for health and medical information, point to the increasing popularity of using the Internet to gather information in many areas of health.²³ This demonstrates the potential capabilities for social media to be used as a source of information and support for young adults as they make decisions regarding their health.

There is a strong relationship between lifestyle behaviors and social surroundings.^{15,17} Because social media is often used to foster social networks and relationships between users and their friends, family, and peers, it is possible that it can have a substantial effect on one's behaviors both on and offline. Though this study did not find any significant differences between users and nonusers when investigating their actual health behaviors, the trends in the resulting data seem promising. Further research could reveal significant relationships.

As previously noted, students' likelihood to post about their health and lifestyle behaviors on social media was impacted by their friends' use of social media for these same purposes. This could be due to students feeling pressure to post because they see their friends' posts, or it could be due to the social nature of people to befriend those who seem similar to them.²¹ Though the data from this study shows the differences between students and their peers, it does not investigate why these differences occur. Further study, perhaps incorporating the use of focus groups or anonymous telephone interviews, could help to uncover the underlying factors that impacted these results.

Social media can be used to promote healthy lifestyles, in turn changing a person's perception of his or her own health. Similarly, users of social media can connect with their friends and family online in order to work together toward their goals. Evidence from this study suggests students are already posting about lifestyle behaviors, so it is quite possible they will be able to harness the power of social media to open dialogue with their peers in order to aid them in changing these behaviors for the better. Because social media is not bound by physical location, this could be helpful in creating a healthier student population and curbing the rising rate of obesity on college campuses nationwide.

While the overall sample size for this study was adequate, few students reported using social media for some purposes. For example, only 18 respondents out of the 268 who completed the survey reported posting about their weight on social media. Because of this low number, it is hard to capture all of the variability that may exist in the relationship between posting about weight and lifestyle habits such as diet and physical activity. The study of a larger population may be able to capture these differences and uncover a more significant relationship.

It is also of interest to note that the results of this study could be impacted by the group that was surveyed. Because the students in the School of Health and Rehabilitation Sciences are more likely to be concerned with health and wellness, it is possible they may be more aware of their own lifestyle behaviors and habits. Perhaps further study incorporating a more diverse group of individuals could lead to somewhat different findings.

Though this study did not find significant differences in dietary and activity patterns between users and nonusers of social media, it is possible that these relationships do exist. The small sample size and inherent qualities of the group could be important factors affecting the results. Despite this, the descriptive statistics gathered showed promise for further research into this area, and it is likely that additional examination of the factors studied will highlight more significant relationships.

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