

**COLLEGE STUDENT HEALTH BEHAVIOR AND ITS RELATIONSHIP TO SOCIAL  
MEDIA USE**

**A Thesis Proposal**

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# COLLEGE STUDENT HEALTH BEHAVIOR AND ITS RELATIONSHIP TO SOCIAL MEDIA USE

## **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/m<sup>2</sup>).<sup>(1,2)</sup> 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.<sup>3</sup>

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.<sup>4</sup> 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.<sup>5</sup> 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.<sup>1</sup>

An ongoing initiative of *Healthy People 2020* is to “create social and physical environments that promote good health for all.”<sup>6</sup> 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.”<sup>7</sup> 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.<sup>8</sup> 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.<sup>9</sup> 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.<sup>5</sup> 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.<sup>11</sup>

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*.<sup>12</sup> *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 goals 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<sup>12</sup> highlighted lack of success in this endeavor. 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, Twitter, and Foursquare to connect with friends and relatives.<sup>13</sup> As of March 2012, there were approximately 901 million Facebook users online monthly, with 526 million of those users active on the website daily.<sup>14</sup> 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 effect sizes 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).<sup>15</sup> 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.<sup>16</sup> 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.<sup>17</sup> 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.<sup>18</sup>

In one study, 91% of college students reported using Facebook.<sup>19</sup> In another, those who did use Facebook used it on average for 30 minutes each day.<sup>18</sup> 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.<sup>20</sup> 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.<sup>21</sup> 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.<sup>19</sup>

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.<sup>22</sup> 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.<sup>23</sup> 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.

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.<sup>16</sup> 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 college freshmen. 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) will be obtained to collect data from human subjects. Up to 150 students from an introductory course in the School of Health and Rehabilitation Sciences (HRS 1100) at The Ohio State University will be recruited to complete the questionnaire. Only those above the age of 18 years will be asked to complete the survey. Data obtained from these students will be analyzed in order to investigate the relationship between these Ohio State HRS students' health and social media use.

## **Survey Development**

A previously developed survey (Health Related Characteristics Among College Students) will be modified to address current health issues in the college student population. The new version of this questionnaire is currently being developed by the Therapeutic Lifestyle Changes (TLC) undergraduate research team under the direction of Dr. Taylor. Items for the questionnaire include student health perception, lifestyle behaviors such as diet and physical activity, and social media use.

Questions to measure lifestyle behaviors will include dietary habits and assessments of physical activity and inactivity. Food patterns addressed in the DGA2010, including the intake of foods such as fruit juice, whole fruit, whole grains, and sugar-sweetened beverages, will be 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 will be assessed using a Likert-type scale. Physical activity data will be quantified as the amounts of moderate and vigorous activity, as well as hours of screen time.

The use of the social media sites Facebook, Twitter, Foursquare, Instagram, and Pinterest will be investigated as part of the questionnaire. Students will be 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. 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 will also be investigated. A chart will be developed to address multiple issues in one way. The chart will include questions posed to ask students how often they post on their various social media accounts about their lifestyle behaviors. Specifically, the questions will focus on quantifying how often students are posting online about their weight (be it present weight, goal weight, or general desire to do something about their appearances), what they are eating, what kinds of physical activities they take part in, health concerns, and health opinions. A question asking students to evaluate their use of social media to view others' posts regarding these same issues will also be included.

Once the survey document is completed, a pilot test will be conducted with HRS students to assess flow, readability, content and format. Recommended changes from

this pilot will be incorporated into the final instrument, which will then be distributed to students in order to gain data for analysis.

### **Data Collection**

The formulated paper-based survey will be distributed in-class to HRS students in early Fall 2012 Semester. A time will be scheduled with the instructor to do so. The students will be made aware that participation in the survey is both completely voluntary and completely anonymous. The results will be kept confidential; only those conducting the research will have access to the completed surveys. Those who choose to participate will be given 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. They will also be given the questionnaire itself. It should take 10 to 15 minutes in order for the students to answer the questions on the survey. Once students have filled in their responses, the completed survey will be collected for analysis. The sheets will be scanned in order to obtain data electronically. Only final data received from respondents over the age of 18 years will be used in the study.

### **Data Analysis**

Data collected from the completed surveys will contain 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 use social media for health-related messages compared to those who do not.

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

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