Making health social: Effects of health PSA videos on social media

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Abstract

In the digital age, social networking sites are an essential tool for health educators to promote and spread awareness about health issues that may be plaguing society. Internet communications, such as social media, offer tremendous opportunities for modifying health because it allows people of all demographics to access health information. The present study examined the effectiveness of health public service announcement (PSAs) videos on social media and examined how the heuristics of social media “likes” may play a role in how social media users perceive these health messages. To assess how health messages on social media are perceived, this thesis used an experimental design ($N = 272$). This study could not find statistical support for the hypotheses that subjects were likely to show more favorable attitudes, self-efficacious behaviors, perceived norms, or intentions when exposed to health messages that displayed a high amount of social media “likes.” Results indicated, however, that attitudes ($F(1, 270) = 162.38, p < .001$) perceptions of self-efficacy ($F(1, 270) = 347.69, p < .001$), and perceived social norms ($F(1,270) = 139.25, p < .001$) were related to intentions to exercise, as predicted by the Theory of Planned Behavior. The results of this study indicate that health messages in the context of social media are extremely complex, and deserve future attention in literature.

Keywords: Health communications, social media, public service announcement, exercise, health campaign
Making health social: Effects of health PSA videos on social media

by

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Chapter 1: Introduction

The mass media can have a critical role in human health and behavior (Hornik, 2002). It is often used by health professionals to motivate people to change their health behaviors and removed perceived barriers to health improvement (Antheunis, Tates, & Nieboer, 2013). As such, health professionals and other health-related companies implement mass media campaigns in attempt to change health beliefs, behaviors, and prevent undesirable trends in public health (Wakefield, Loken, & Hornik, 2010). These campaigns outline multifarious types of health topics, including tobacco use and prevention, inactivity, sexual behaviors, poor nutrition, HIV infection, risky driving, and health maintenance (Park, Rodgers, & Stemmle, 2013). Many of these health campaigns proved successful in changing, preventing, or reversing trends in public health, as well as maintaining positive health trends in society (Alstead et al., 1999; Booth-Butterfield, & Smith, 1998; Broome, 1999; Durkin, Brennan, & Wakefield, 2011; Elder et al., 2002; Reger et al., 2000; Siegel, 2002; Sly, Trapido, & Ray, 2002; Thombs & Hamilton, 2002; Thompson, & Rajab, 2004; Zimmerman et al., 2007). Often times, media health campaigns and promotions are deemed effective because of campaign planners’ use of highly targeted messing and highly-strategized educational techniques. These campaigns often involve themes that are used to motivate the desired behavior change (Randolph & Viswanth, 2004).

The implementation of the Internet in the late 1990’s changed the way that health practitioners communicated with their audience because it allowed those behind the message to reach a larger audience (Powell, Darvell, & Gray, 2003). Social networking sites (SNS) are becoming an increasingly important way in which health campaigns function due
to newer types of media. Research indicates a shift in popularity from traditional media to social media (Roy, 2016). Presently, there is a steady decline in the average number of minutes of television consumed by adults in the world, while there is an increase in the number of minutes spent on the Internet by adults in the world (Dunn, 2017). This change from traditional technology to new media has important implications for the field of public health. For example, patients rely on the Internet more frequently than their physicians as a source of health care information because it allows patients to look up symptoms and communicate with those who share similar medical experiences (Vance, Howe, & Dellavalle, 2009). Social media in particular is changing the nature of health care interaction between individuals and health care organizations because it provides the unique opportunity for users to generate, receive, and comment on social health content. These interactions encourage and mobilize discussion through multisensory communication (Tuarob, Tucker, Salathe, & Ram, 2014). As a result, health practitioners and scholars now seek to disseminate important information about health topics to potentially thousands of people in a relatively short amount of time using social media (Chou, Hunt, Beckjord, Moser, & Hesse, 2009; Owen & Humphrey, 2009; Paek, Hove, Jung, & Cole, 2013; Yoo, Kim, & Lee, 2018).

Clearly, social networking is rapidly changing the way that the public is exposed to health messages (Dunlop, Freeman, & Jones, 2015). Health organizations are beginning to take advantage of social media’s popularity by turning to it to increase the spread of health information, while sharing preventative information to gain public support and encourage individuals to engage in behavior changes. Between Facebook, Twitter, and YouTube, companies are promoting their health messages on social media in the form of short public
service announcements (PSAs). Health PSAs are a popular and traditional method for organizations to generate awareness about a cause or health issue (AHRQ, 2018). Social media provides an edge to health promotions over traditional media, however, because it allows health messages to circulate or “go viral” through the website's “share” function (Rayson, 2017). For many health-related companies, posting health promotional videos on social media are not uncommon. A multitude of health-companies partake in the creation and dissemination of these videos, including Healthcare.gov, Planned Parenthood, Johnson & Johnson, Buzzfeed, among several others. Despite an abundance of health promotional videos in circulation, there are a very small quantity of empirical studies that examine how promotional health videos in the context of social media may help or hinder audience understanding of health issues, or mobilize them to perform the desired behavior that the video intends.

As evidence builds that social media are becoming the preferred method of health promotion, it is critical to understand how social media influences health outcomes and perceptions of certain health issues. Previous research outside of the health communications context shows that social networking sites can impact personal decisions, alter our opinions, and influence our choices (Power & Phillips-Wren, 2011), as well as having a significant influence on attitudes, efficacy, and other behaviors (Zhang, Johnson, Seltzer, & Bichard, 2010). Other empirical studies show that social media affects offline behavior because it allows users to stay connected with each other and form relationships in an online setting (Althoff, Jindal, & Leskovec, 2017).

The concept of “likes” on social media in particular deserves attention in literature. While preliminary research has been conducted on social media likes, very little is known
about how likes are related to how users perceive a social media post. However, the concept of likes is still very much important, and deserves attention, because previous studies describe how social media users, companies, and organizations are driven to receive likes on the content that they create. This is because they can serve as a form of social endorsement or affirmation (Baym, 2013). Social media likes are a central part of the current investigation because if social media “likes” have an impact on viewers, it begs the question, how do likes affect individuals’ health behaviors? Despite this question, very few studies have examined social networking’s role in engaging people in health behaviors.

The purpose of this quantitative study was to investigate how the number of social media “likes” on a post may change how audience members perceive a health message. Previous research indicates that social media metrics are significant because they serve as a form of peer validation (Chua & Chang, 2016), yet little studies address how likes may affect persuasive outcomes. This thesis used Chaiken’s (1980) heuristic model of information processing as a theoretical basis to predict how social media metrics are perceived because it explains how individuals exert cognitive effort in order to judge the validity of a message and form opinions about it. The current study investigated how social media likes are perceived by testing Ajzen’s (1991) Theory of Planned Behavior model, which proposes that messages may influence audience attitudes, self-efficacy, and perceived norms, which will ultimately lead to intention to change behavior. This model has been successfully integrated into a number of studies (Armitage & Conner, 1999; Bryan, Fisher, & Fisher, 2002; Gerend & Shepherd, 2012; Lien, Lytle, & Komro, 2002; Norman, Conner, & Bell, 1999) and has been successful in understanding and predicting various health behaviors. Such health behaviors include cancer screenings, influenza vaccinations,
sexual behaviors, and HIV prevention (Butts, 2013, p. 246). Other variables that are included in this study include the concept of perceived importance. Relationships between the aforementioned variables were assessed through the form of an online experiment.

This research is important and timely because there is very little empirical evidence that demonstrates how social media affects health behaviors. Therefore, it seeks to fill in a research gap and further validate a theoretical model regarding health choices. Neiger et al. (2012) provided a starting point by reviewing the effectiveness of health promotions on social media. However, this research did not exclusively investigate the relationship between social media and exposure to specific health information, but rather, focused on health messages as a whole. More closely related to the current study, Park et al. (2013) briefly dipped into how health organizations may use Facebook to manage their brand while promoting health messages. However, this research was simply descriptive and did not address audience responses to those messages. Roberts, Callahan, & O’Leary (2017) also studied public health, as well as health literacy, in the context of social media. While this study found empirical evidence that social media may offer tremendous opportunities for health marketers to engage their audience, it focused exclusively on the tactics used by health marketers did not necessarily explore how social media may affect audience’s persuasive outcomes.

The current study is also significant because social media provides numerous benefits for healthcare communications, such as highly tailored information and increased accessibility to that information. This study is also notable because it could expose the limitations of social media in healthcare communication and help health professionals and organizations to manage their expectations of social media within healthcare contexts. By
understanding social media's role in the public understanding of health topics, it will provide a pathway for health companies to further manage their image, promote health agendas, while taking advantage of the tools that social media provides in order to effectively advertise and market in a viral setting.

In the next chapter, this research will explain the underlying theoretical background and propose theoretical linkages for the hypotheses of this study. This research will review extensive studies relating to health behaviors heuristic model of information processing and the Theory of Planned Behavior. By synthesizing findings from past studies, this research will show how these models may be integrated into new media contexts while proposing new variables that may be added to the model. The methodology section will follow in chapter three.
Chapter 2: Literature Review

Before discussing the methodology of the current study, it is critical to review existing literature that is applicable to the focus of this study. The current section will consider seven concepts that are central to the investigation; these include public health PSAs, post popularity, health intentions, attitudes in the context of media health promotion, perceived self-efficacy, subjective health norms, and perceived importance. Each section will contribute to the current investigation by evaluating how each study can contribute to the current research, as well as present a coherent argument in order to develop each hypothesis of this study. The following sections will provide thorough explications and address key literature, along with past studies relating to each concept in the context of the media and health promotions. Moreover, the current review of literature will see to gaps in these studies and provide an explanation as to how this study may fit or find an opening to fill in these gaps.

Traditional and Digital Health Campaigns

A media health campaign is a common intervention tool used to impact health attitudes and behaviors surrounding an abundance of health issues that may be plaguing the general public (Noar, 2006). Rogers and Storey (1987) identified four important points of a media health campaign as follows: A campaign 1) intends to generate specific outcomes 2) in a relatively large amount of audience members, 3) usually within a specific time period, 4) and is organized through a specific set of communication activities. Media health campaigns, health promotions, and health public service announcements (PSAs) are regarded by scholars and health practitioners as a well-founded and compelling method for
communicators to transmit important health messages to their target audiences (World Health Organization, 2009).

The current body literature is beginning to amass overwhelming evidence that well-executed mass media campaigns can have effects on health knowledge, beliefs, and attitudes. Campaign persuasiveness has the potential to translate directly into a major public health impact, given the reach of the mass media (Noar, 2006). The “Truth” campaign funded by the American Legacy Foundation is a prime example of an effective counter-marketing health campaign (Randolph & Viswanth, 2004). This campaign used paid TV and print advertising to convey messages of the dangers of smoking to youth while simultaneously exposing the tobacco industries’ persuasive marketing tactics. Evaluations of the campaign indicated that the “Truth” resulted in the development of antismoking attitudes among youth (Farrelly et al., 2002). Another classic example of a successful media campaign includes West Virginia’s “1% Or Less” campaign. This campaign used a series of paid advertising and community interventions to encourage the public to switch milk consumption from high-fat to low-fat. Reger et al. (1998) report that following the campaign, low-fat milk sales increased from an 18% to a 41% overall market share. In addition, a post-campaign survey indicated that 38.2% of respondents who reported drinking high-fat milk preceding the campaign made the switch to low-fat milk (Reger et al., 1998). While not an exhaustive list, the aforementioned collection of campaigns provide evidence that media health promotions are an effective tool to prevent diseases or encourage the adoption of healthy behaviors.

While health promotions within the media may be short term or long term (Backer, Rogers, & Sopory, 1992), literature indicates that many types of health campaigns can be an
effective tool to change health behaviors. Major principles that contribute to the effectiveness of a campaign include the use of theory as a conceptual foundation and formative research within the target audience to clearly understand the nature of the behavior (Agha, 2003). Successful campaigns are also more likely when campaign designers conduct process evaluation (Thombs & Hamilton, 2002), and strategically select channels that are widely viewed by the target audience (Farrelly et al., 2002).

Other analyses show that media health campaigns are effective of interventions and changing behavior. For example, Snyder and Hamilton (2002) conducted a meta-analysis on health campaign effects on behavior in the United States. This analysis shows that campaign efforts are capable of changing health behaviors, if execution is well thought-out. In an expansion of this review, Snyder et al. (2004) analyzed health campaigns and found that they were more successful when they centered around adopting a new behavior, such as wearing a seat belt or increasing fruit and vegetable consumption. Hornik (2002) maintained a similar argument, while also emphasizing the importance of campaigns that encourage discussion around a health topic in order to facilitate behavior change. These reviews are particularly useful when studying health promotions on the Internet because social media allows users to share and collaborate with one another and to mobilize and promote discussion surrounding health topics, as opposed to traditional one-way communication methods (Kaplan & Haenlein, 2010; Thackeray, Neiger, Smith, & Van Wagenen, 2012).

Health promotions in the context of social media, however, are relatively less understood. As such, scholars are beginning to explore the role that the Internet may play in reference to how individuals process and perceive health information. For example, in a
meta-analysis of studies that outlined the use of the Internet to promote health behavior change, Cugelman, Thelwall, & Dawes (2011) found that Internet campaigns that used intervention techniques were able to change individuals' health-related behaviors, which is similar to traditional media campaigns. Internet-based resources, however, are more complex because they are considered a hybrid channel for health communication and belong to both categories of mass communication and interpersonal communication (Michael & Cheuvront, 1998). Michael & Cheuvront’s (1998) review suggests that social influences of messages are higher on the Internet because they provide continuous feedback, therefore affecting persuasion (Backer et al., 1992; Michael & Cheuvront, 1998).

A number of other scholars also attempted to profile social media’s role in the promotion of public health. First, Neiger et al. (2012) argued that the use of social media in health promotion is advantageous compared to traditional media. By way of example, it fosters public engagement and allows marketers to easily measure their insights and disseminate critical information using cost-efficient methods almost instantaneously. This review therefore concluded that key components of the effectiveness of health promotions on social media are dependent on insights, exposure, reach, and post engagement; Specifically, success of health campaigns are enhanced when exposure, reach, and post engagement are also increased (Neiger et al., 2012). Heldman, Schindelar, & Weaver III (2013) also discussed the importance of post engagement on various levels in public health communications. In this review, the researchers argued that social media increases direct engagement, which ultimately increases post interactivity. Therefore, social media may increase conversations surrounding various health topics within audiences, and between audiences and public health organizations and practitioners (Heldman et al., 2013). The
aforementioned reviews are important to the development of the current study because they raise questions as to how post interactivity affects persuasive health messages.

Given the importance of health promotions within the media, and after a thorough investigation of studies and analyses, there appears to be no further development in the understanding of how Internet health promotions may immediately impact users. Korda & Itani (2015) also recognized that health campaigns within social media need more attention, as there is little evidence and understanding of its potential and implications on public health. In their study, they discussed social media’s potential in the context of health promotion and potential behavior changes. After establishing the effectiveness of media health campaigns, the researchers outlined the significance of the Internet, as it may illicit negative health outcomes in relation to behavioral intentions and changes (Korda & Itani, 2013). Therefore, it is critical to further investigate the relationship between social media and public health.

**Social Media Likes as A Measure of Post Popularity**

In addition to health information circulating on social media, it is also critical to study the various functions of social media. The features that social media offer may or may not shape the way that individuals process the information that is presented to them. While social media activity varies from person to person, the three main functions that an individual engages in relating to organizational communications are: the *like* button, *commenting*, and the *share* feature (Kim & Yang, 2017). De Vriesa, Gensler, & Leeflang (2012) stress that the exact number of likes, comments, and shares are critical in a post. This may be due to perceptions of popularity, which may or may not dictate how
individuals pay attention to a post (Goodrich, 2011; Yoo, 2009). As such, for the purposes of this study, *post popularity* is defined as the number of likes that a post contains (De Vries et al., 2012).

While the full extent to which the implications post popularity are yet to be understood, there is a growing body of literature that begins to establish its importance and ramifications. Much of this literature relates to Facebook audiences, a popular social networking site that is known for the “like” button. Mochon, Johnson, Schwarz, & Ariely (2017) first attempted to establish the importance of numbers in terms of likes, comments, and shares on Facebook after arguing that Facebook effects on customers are relatively unexplored. Through a field experiment, the researchers sought to establish whether or not post popularity had a causal, positive effect on consumer buying behavior. While not entirely in the realm of health communications, the study provided evidence that the number of likes that a company has on Facebook can positively affect offline consumer behavior (Mochon et al., 2017). In another study, Kim (2018) evaluated the outcomes of high versus low Facebook likes through the form of experimental research. In this study, subjects were randomly assigned to a health message about skin cancer on Facebook, which either had a high number of likes, low number of likes, high number of shares, or a low number of shares. In all, subjects who were presented with a high number of likes and shares were more likely to believe that the message had a greater influence on others. The results indicated that a high number of likes and shares, or virality metrics, could affect persuasive outcomes of the targeted message.

Literature also indicates that other scholars seek to fill in the social media-persuasion gap by critically reviewing message campaigns, which is the focus of the current
study. A study conducted by Noort, Antheunis, & Reijmersdal (2012) attempted to demonstrate that social media virality plays an important role in the persuasiveness of social networking campaigns. This study contributed to the understanding of viral campaign messages by providing evidence that a higher number of views on a viral video are associated with more favorable attitudes towards a product in that video. Alhabash, McAlister, Ouillam, Richards, & Lou (2015) also offered similar results in their study about post virality and messages on Facebook. In this study, subjects who were exposed to video messages about the negative consequences of bullying with high post virality (likes, comments, and shares) were more likely to show stronger anti-cyberbullying attitudes.

Regardless of past literature that attempts to address the importance of social media metrics, the aforementioned studies only provide preliminary evidence about social media’s ability to influence audiences. Despite the growing body of literature that emphasize the importance of post virality on message persuasiveness, rationale as to why social media likes can affect persuasive outcomes is still ongoing.

**Heuristic Model of Information Processing**

One explanation for the results of the previously mentioned studies pertaining to social media popularity and persuasive outcomes lies in Chaiken’s (1980) heuristic model of information processing, or HSM. In this work, Chaiken argues that individuals engage in information processing in one of two ways: heuristically or systematically. The heuristic model proclaims that when individuals make judgments or decisions, they often try to minimize their cognitive resources to reduce cognitive load, thus resulting in a quicker intake and processing of the message. HSM is a widely accepted model in the psychological...
sciences and has been used in a number of practical applications to predict outcomes of persuasive messages (Reimer, Mata, & Stoecklin, 2004; Steginga & Occhipinti, 2004; Wathen & Burkell, 2002).

In heuristic processing, individuals are more likely to agree with messages delivered by experts, or messages that are endorsed by others, due to the use of relevant knowledge structures (Eagly & Chaiken, 1993). Individuals who engage in heuristic processing, as opposed to systematic processing, judge message validity by relying on how accessible the information is or other context-cues. Such cues include perceptions of others’ beliefs because these messages are seen as more persuasive than the characteristics of the message itself. The use of heuristic processing highlights the importance of simple cognitive rules in order to be persuaded and accept a message (Chaiken, 1980). HSM contrasts with systematic processing, which places a higher value on the content and reliability of the message. In systematic processing, individuals rely on in-depth judgments of relevant information and respond to the content of the message, while attempting to assess message validity as it relates to the conclusion of the message (Chaiken, 1980). Therefore, two people may be presented with the same information, but process it via different cognitive paths. The model suggests that message receivers are often more influenced by heuristic cues than by the quality of the message itself and are more likely to use heuristic cues when distracted by audio or visual cues. Both of these cues increase cognitive workload (Ferran & Watts, 2008). Ferran & Watts’ (2008) conclusion is relevant to the current study because social media health promotions often contain different sensory cues (Welch, Petkovik, Pardo-Pardo, Rader, & Tugwell, 2016).
In a recent review, Shah & Oppenheimer (2008) proposed that heuristic cues primarily serve to reduce effort associated with a task. In other words, most algorithms require great mental effort, but individuals do not have unlimited processing capacities. As the demands on limited cognitive resources increase, individuals may seek out new methods to reduce their computational efforts. Shah & Oppenheimer proposed that all heuristics relied on one of five methods for reducing effort, including 1) examining fewer cues, 2) reducing the difficulties associated with retrieving and storing cues, 3) simplifying the weighting principles for cues, 4) integrating less information, and 5) examining fewer alternatives. By adding these elements to Chaiken’s (1980) model, the framework allows scholars to understand how heuristics simplify information processing, and why individuals tend to use easy-to-access cues. This effort-reduction framework can help researchers understand how users perceive messages on the Internet when peers have socially supported them.

There are a number of studies and reviews that provide empirical evidence that heuristic processing affects persuasive outcomes. Compliant with HSM, Jacobson et al. (2001) found evidence that smokers might be motivated to protect and defend their smoking habits. In this review, Jacobson and colleagues studied teen smoking, which is now regarded as a public health crisis. To sum, Jacobson and colleagues posit that smokers create a network with other peer smokers. By creating this network, mental representations of other smokers became highly accessible, thus motivating the teens to justify their choices (Jacobson et al., 2001). It is reasonable to apply the conclusions of this review to the current study, as Facebook likes are perceived as a network of individuals who share similar qualities (Blease, 2015).
In the realm of public health, Kim & Paek (2009) studied messages about genetically modified foods in the media. In this study, participants were given messages about genetically modified organisms (GMOs) to critically evaluate their persuasion processes. Those who were motivated by accuracy of messages tended to engage in systematic processing. Subjects who were motivated by message impression, however, were more likely to engage in heuristic processing (Kim & Paek, 2009). This study’s results were also in compliance with HSM literature, which states that heuristic processing occurs when simple and quick judgments are used.

The heuristic model in the current study is used to justify what is happening when individuals’ persuasion processes are altered by impressions of a message. The heuristic model proposes that an individual may rely on mental shortcuts provided to them by various context cues (Chaiken, 1980). Relevant to the current study, such cues may be interpreted as the quantity likes that a post on social media post displays. For example, consumers may perceive online content endorsed by others as socially important because they are social cues (Alhabash et al., 2015). Moreover, information may be perceived as more credible with a large number of endorsements, compared to a low number of endorsements (Lee & Sundar, 2013). The use of the heuristic model of information processing is appropriate because it suggests that an endorsement from others may trigger a cognitive mental shortcut, which in turn, may suggest that social media features, such as likes, can shape attitudes towards a given message. Therefore, it is reasonable to assume that perceptions of a message may be altered depending on the level of social media post popularity. As such, this research attempts to integrate the concept of social media likes into the Theory of Planned Behavior (Ajzen, 1985), which is addressed in the following
sections of the current study, and the heuristic model of information processing. The following hypotheses are proposed:

**H1:** Exposure to health content on social media with a high number of likes will yield (a) more favorable attitudes about, (b) stronger intentions to perform, (c) higher self-efficacy to perform, and (d) higher subjective norms about the health behavior promoted in the message than will exposure to health content on social media with lesser numbers of likes (i.e., medium, low, or none).

**Theory of Planned Behavior**

Past studies claimed and showed evidence of the effectiveness of media health campaigns (Meyerowitz & Chaiken, 1987; Farr, Witte, Jarato, & Menard, 2005; Foerster et al., 1995; McVey & Stapleton, 2000; Reger et al., 1998; Zimmerman et al., 2007). Over the years, social psychology theories gained in popularity and are commonly used to explain, predict, and understand social behavior in a number of different contexts (Godin & Kok, 1996). Among the many theories that attempt to understand human behavior include Ajzen’s (1991) Theory of Planned Behavior, which has attracted the attention of several researchers (Eagly & Chaiken, 1993). The Theory of Planned Behavior, or TPB, proposes that human behavior is guided by three kinds of considerations. These considerations include attitude towards behavior, subjective norms, and perceived behavioral control. In combination, the aforesaid variables may lead to intention to change behavior, which is ultimately thought to lead to behavior changes (Ajzen, 1991). TPB contends that the more favorable an attitude is towards both behavior and subjective norm, and the greater the
perceived behavioral control, the stronger the individual’s intention to perform the behavior in question will be. When intention to perform the behavior is regarded as strong enough, actual behavior change should arise (Ajzen, 2002).

The current study justifies the use of the Theory of Planned Behavior as a model due to its strengths and usefulness of measuring behaviors and intentions of specific health behaviors. In addition to the current study, a number of past studies used TPB to verify the efficiency of the theory and evaluate its effectiveness in predicting changes in health behaviors (Godin & Kok, 1996). However, applications of the Theory of Planned Behavior are scarce in predicting how health messages are perceived and carried out on social media. As such, the current investigation attempts to use the Theory of Planned Behavior as a basis in predicting how the public responds to health information on social networking sites by integrating it into the concept of social media “likes,” or virality metrics. In the sections that follow, a brief review of the Theory of Planned Behavior’s key variables are outlined and explain how they are relevant to the current investigation.

The Role of the Media in TPB: A Brief Review of Concepts

To reiterate, the Theory of Planned Behavior attempts to explain human behavior by proposing that favorable attitudes towards the behavior, subjective norms, and perceived behavioral control will account for considerable variance in intentions to actually perform the behavior (Ajzen, 1991). Collectively, attitudes, subjective norms, and perceived behavioral control represent people’s actual intentions to execute a particular behavior. If the individual has all of the desired resources and opportunities, they are more likely to intend to perform the behavior, and therefore be more likely in succeeding. The Theory of
Planned Behavior is relevant to the current research, as it will test the model in a viral, social setting.

**Media & Attitudes**

First, the current investigation examines the role that health messages on social media have on audience attitudes. Eagly & Chaiken (1993, p. 1) defined an attitude as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor.” A number of past studies were successful in finding support that favorable attitudes were associated with high intentions to change behavior (Donohew, Hoyle, & Stephenson, 2001; Laroche, Riffoli, Zhang, & Pons, 2001; Palmgreen, Vaughan, Rogers, Singhal, & Swalehe, 2000). The idea of the media changing attitudes, however, is often more difficult to explain and measure (Hornik, 2002). Derzon & Lipsey (2002) first attempted a meta-analysis of mass media campaigns to find evidence of behavior and attitude change in youth. The results indicated that the selected sample of campaigns generated moderate favorable attitude changes in those who were exposed to mass media health messages about drug use and abuse. Friend & Levy (2002) were also able to find support for the idea that media campaigns can change attitudes. Results of this review provided evidence that a well-funded media health campaign can be successful in reducing youth favorable attitudes towards tobacco use and smoking.

**Media & Self-Efficacy**

The current investigation proposes that self-efficacy can be integrated into Ajzen’s model in lieu of the traditional TPB variable, perceived behavioral control. Self-efficacy can
be defined as the perceived ability to exert personal control (Bandura, 1977). This definition is relatively similar to the definition of perceived behavioral control, which is defined as “The person’s belief as to how easy or difficult performance the behavior is likely to be” (Ajzen & Madden, 1986, p. 457). Both definitions essentially propose that if an individual possesses high self-efficacy or perceived behavioral control, he or she will believe that well-executed efforts will lead to successful outcomes. Contrary, if the individual possesses low self-efficacy or perceived behavioral control, then they will be more likely to believe that they will fail and cease their efforts (Stajkovic & Luthans, 1998).

It can be argued that self-efficacy can add to the concept of perceived behavioral control. Self-efficacy was proposed by Bandura (1977), which came from the social cognitive theory. According to Bandura, expectations such as motivation, performance, and feelings of frustration that are related with feelings of failure will determine behavioral reactions. Possessing high self-efficacy is a predictor that one can successfully execute the desired behavior in order to produce the desired outcomes. Bandura also proposes that self-efficacy is the single most important predictor to behavior change because it determines the establishment of coping behavior.

Previous investigations successfully show that the self-efficacy theory contributes to explaining the relationships between beliefs, attitudes, and intentions, all of which are key variables in the Theory of Planned Behavior. For example, Gyurcsik & Brawley (2006) tested Bandura’s self-efficacy theory on healthy adults enrolled in an exercise program. As expected, and in line with the Theory of Planned Behavior, analyses showed that the participants who were more positive in their thinking were more likely to exhibit higher self-efficacy. Therefore, they were more likely to follow through with their exercise goals.
In a separate study, Rogers & Brawley (1996) used self-efficacy to predict behavioral intentions of college students who were weight training for exercise. Consistent with both the concepts of self-efficacy and perceived behavioral control, results indicated that disparities between self-efficacy determined the strength of the participants’ intentions to exercise. As demonstrated by the aforementioned study, it is clear that the concept of self-efficacy can contribute to the Theory of Planned Behavior. As such, self-efficacy has been a widely-applied concept to health-related fields when inquiring about human behavior (Ajzen, 2001).

To continue, there is an accumulating body of literature that proposes that media campaign efforts have a positive impact on self-efficacy. Maibach, Flora, & Nass (2009) studied the effects of a year-long community health campaign. This study's results indicated that the campaign increased people’s perceptions of control over their overall health. In a separate study, similar results were collected (Wong & McMurray, 2002). This study examined media messages that urged the cessation of smoking among college students. The study found that the media messages that were positively framed were successful in boosting participants’ self-efficacy.

**Media & Subjective Norms**

The next variable of interest in the current investigation is subjective norms, which is the third key concept in the Theory of Planned Behavior. Subjective norms refer to the *perceived social pressure to perform or not perform the behavior* (Ajzen, 1991). These perceptions may be influenced by the judgment of significant others, such as parents, spouses, friends, or teachers.
Given an individual's behavior, such as decisions to smoke, drink, or use condoms, research shows that they may be dependent on the social networks and organizations that the individual is associated with. Subjective norms are a particular interest to the current study because they are thought to be in the roots of social influence. Human beings often have a high need to belong, as many social behaviors are driven by the need to be involved with others (Pelling & White, 2009). This results in social influence, which occurs when people compare themselves with others in order to determine if their own behavior is appropriate.

Social norms primarily occur through social interaction (Yanovitzky & Stryker, 2001). This provides an avenue for social media or other types of media to contribute to perceptions of social norms. For example, heightened media attention to various social consequences is likely to increase public concern about a risky behavior. As public concern increases, the overall public sentiment will shift towards a strong disapproval about this behavior. Individuals are likely to experience social pressure from others when a clear social norm for or against a behavior emerges (Hornik, 1991).

How this is relevant to the current study is clear- the social norm-reinforcement approach suggests that the mass media can make a significant contribution to social efforts to curb or encourage health behaviors by reinforcing social norms. Representations within social media can contribute to this process by influencing people's perceptions of social expectations, either directly or indirectly. To date, this has not been empirically tested in the context of social media. However, a number of previous studies attempt to establish that the mass media promotes social norms. For example, norm-reinforcement strategies that are used by the media have been studied in terms of campaigns about smoking
cessation (Distefan, Gilpin, Choi, & Pierce, 1998), unprotected sex (Baker et al., 1999), and alcohol use and abuse (Barnett, Far, Mauss, & Miller, 1996). All of these campaigns contained the key similarity that they used strategies in convincing people that the desired behavior was already the norm (Barokas, 1995). In the current investigation, post popularity is thought to send messages about what is important and valued in society, and what is not (Nesi & Prinstein, 2015). In addition to the message of the campaign itself, it is reasonable to assume that social media “likes” can also serve to set the agenda about the normative standards of behavior and what the expected dominant behavior in society should be.

**Media & Intentions**

The final key variable in Ajzen’s (1991) Theory of Planned Behavior is *intentions*. Intention is referred to as “a behavioral plan that enable(s) the attainment of a behavioral goal” (Ajzen, 1996, p. 311). To reiterate, TPB assumes that favorable attitudes, perceived behavioral norms, and perceived behavioral control lead to stronger intentions to perform a behavior change (Ajzen, 1985).

Literature provides evidence that the mass media play a role in the health intentions of individuals. For example, one study examined company-sponsored tobacco commercials, and found that those who viewed the commercials showed higher intentions to smoke (Wakefield et al., 2006). In another study, the researchers found that exposure to a media campaign promoting the use of the female condom in Tanzania was associated with higher intentions to use the female condom in the future, as well as a higher willingness to discuss the female condom with their partner (Agha & Van Rossen, 2002). The previously
mentioned studies are relevant to the current study because they are clear in demonstrating that the media has the capability to persuade individuals to perform a desired behavior.

**TPB Model Summary & Hypotheses**

The previous collection of studies demonstrate that the media has the capability to alter attitudes, increase self-efficacy, and reinforce perceived norms, which will ultimately lead to intentions to change behavior. Previous literature, however, does not address how the Theory of Planned Behavior can be integrated into a viral social setting, such as social networking sites. The current study will fill in a research gap to show that health campaigns on social media can be successful in increasing individuals' intentions to improve their health, regardless of how users perceive how others social endorse the desired behavior. Therefore, it is reasonable to propose the following hypotheses:

**H2:** Viewing promotional health messages on social media will yield (a) more favorable attitudes, (b) stronger intentions to perform, (c) higher self-efficacy to perform, and (d) higher subjective norms about the health behavior promoted in the message than will no exposure to health content on social media.

In addition, the current investigation will also measure the validity of the Theory of Planned Behavior model in a social setting and predicts that attitudes, self-efficacy, and perceived behavioral control are predictors of intentions to perform a specific health behavior. Therefore, this research poses the following hypotheses:
**H3:** (a) Favorable attitudes, (b) high perceptions of self-efficacy, and (c) greater perceived norms about health messages are associated with stronger intentions to perform the behavior of the health message.

**Perceptions of Importance**

The current study also reviews the concept of perceived importance (PI). Perceived importance was first explored by Robin, Reidenbach, and Forrest (1996) and was defined as *the perception of the degree of importance*. Through this study, the researchers found empirical support that perceptions of importance have a significant influence on behavior intentions. In an expansion of this study, Leonard, Cronan, & Kreie (2004) also investigated the concept of perceived importance, specifically its relationship to consumer behavior intentions. Through a survey questionnaire, 423 respondents were asked various questions about their intentions to behave either ethically or unethically in a number of different scenarios. A key finding of this study exhibited that when an ethical issue was perceived as more important, survey respondents were more likely to not behave unethically. However, when an ethical issue was perceived as unimportant, the majority of survey respondents said that they were more likely to behave unethically. Thus, the researchers were able to demonstrate that perceptions of importance have a significant impact on behavior intentions (Leonard et al., 2004).

After a thorough investigation of perceptions of importance, there appears to be no attempts made to further develop the concept. While the aforementioned studies attempted to define PI and empirically demonstrated that it may alter or shape the way
that individuals behave (Robin et al., 1996; Leonard et al., 2004), its relationship with other concepts, such as post popularity, have yet to be explored. Regardless, these studies nonetheless provide a solid starting point for the current study, which is interested in how heuristic cues, such as social media likes, may affect perceptions of importance of a message. Due to the lack of studies and attempts to explain how PI may relate to other variables, specifically related to health communications, the current study will also attempt to fill in a research gap in order to further develop a theoretical model regarding the association between health behaviors, post popularity, and perceptions of importance. Therefore, this study asks:

*RQ1: To what extent will exposure to health content on social media with a high number of likes be associated with higher perceptions of message importance compared to viewing promotional health messages with lesser numbers of likes (i.e. medium, low, or none)?*

The aforementioned collection of literature provides evidence that the mass media has the capability to shape health attitudes (Derzon & Lipsey, 2002), self-efficacy (Maibach et al., 2009), health norms (Distefan et al., 1998), and intentions (Wakefield et al., 2006). Literature also suggests that perceptions of importance can influence persuasive outcomes (Robin et al., 1996). The following chapter will review these concepts and explain their operationalization, as well as provide a thorough explanation of the current study’s methodological procedures.
Chapter 3: Method

Before outlining the current study’s results, it is key to discuss the methodological tools used to collect the data. Due to the current study’s volume of literature, concepts, and complex design, the methodology is a critical part of this investigation. As such, the current chapter will outline the study’s procedures in detail. It will also discuss how each variable is operationalized and provide a detailed explanation of the items that were used to answer the study’s hypotheses and research questions. The current chapter will also justify several methodological decisions, including decisions about the investigation’s stimulus materials. Finally, it will provide a comprehensive report of the study’s subjects, and their demographic information.

Pretest Procedures

Video Selection

An effective campaign has a clearly defined goal, contains a targeted audience, and contains a fixed message with statistics (Nance, 2014). In addition, Watson and James (1991) identify a successful health campaign to promote behavior change, advance knowledge, and stimulate attitude change. The selected video was determined to fit this criterion.

For the purposes of this study, the stimulus was a health PSA video that pertained to the promotion of physical activity. Physical activity is deemed as an acceptable stimuli topic because it is considered something that most individuals are able to carry out. According to the World Health Organization (2018), forms of physical activity include walking, cycling, jogging, sports,
or simply reducing sedentary leisure time. Because physical activity is viewed as a positive health behavior for almost everyone, including the elderly (National Institute on Aging, n.d.), this study deems physical activity promotion as an effective and inclusive topic.

To select the final stimulus video, three videos were narrowed down according to the aforesaid criteria and were chosen from a popular social media website, Facebook. To select the final video, 75 respondents were recruited through Amazon MTurk and were compensated $1.00 for their participation ($N = 75$). Data was collected on the 28th of October, 2018, within a timespan of four hours. Respondents were instructed to survey all three health promotion videos. Each participant responded to the same twelve items on a 5-point scale following each video. Respondents were told to rate each video’s level of persuasiveness, overall production quality, and likelihood of remembering the video message (See Appendix A).

To analyze results, items were divided and categorized into a perceived persuasion, importance, or purpose variable. To measure purpose, participants were posed three items on a 5-point scale and were asked to indicate their level of agreement with statements such as “The goal of this video is to evoke behavior change in others.” Video purpose generated good reliability ($\alpha = .823$). To measure perceived persuasion, participants were also posed three items on a 5-point scale and were asked to respond to statements such as “The message of the video is persuasive.” Video perceived persuasion also proved to be reliable ($\alpha = .884$). To measure video importance, participants were posed two items on a 5-point scale. They were asked to indicate their level of agreement to statements such as “The video topic is of important concern.” Video importance also generated good reliability ($\alpha = .845$). In addition, each video's properties, such as video and audio quality, were measured and
categorized into a single composite variable. To measure video properties, participants were posed four items on a 5-point scale. These items included statements such as “The audio of the video is of good quality” and “The images in the video are of good quality.” Video properties generated good reliability ($\alpha = .867$). (See Table 1)

To compare differences in variables, a paired samples T-test was performed. It was determined that there were no significant differences between any of the variables ($p > .05$). Therefore, the final video was selected at the researcher’s discretion, which was a 53-second exercise promotion video taken from Facebook entitled “8 amazing benefits of regular physical activity.” A company called Exercise is Medicine originally posted the video, which contains 196 likes with 5 comments to date.

Table 1

<table>
<thead>
<tr>
<th>Variable</th>
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<tr>
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<td>5.00</td>
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<td>.71</td>
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<td>5.00</td>
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<td>Valid N (listwise)</td>
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</table>
Final Stimulus Video

Since the final three videos indicated in the video selection study indicated no significant differences in terms of perceived persuasion, importance, purpose, and video properties, the final video was selected at the discretion of the researcher. The video, titled “8 amazing benefits of physical activity,” was a 53-second long video that contained only upbeat music, still photos, and short b-roll footage of individuals participating in walking and jogging. The video also presented facts about the benefits of physical activity, which were displayed in text-form. Such facts included “[physical activity can] lower the risk of colon cancer by over 60%,” “[physical activity can] lower the risk of stroke by 27%” and “[physical activity can] decrease depression as effectively as medication or behavioral therapy” (See Appendix B).

To reiterate, the final stimulus video was taken from Facebook, a popular social media website. The original poster of the video is a company called Exercise is Medicine, which is a small, non-profit organization with the mission to make physical activity a standard part of disease prevention programs in the United States (Exercise is Medicine, 2019). To date, this company has about 27,000 likes on Facebook and roughly 28,000 followers. As a comparison, larger health companies such as Planned Parenthood Action have over one million likes and followers (Planned Parenthood Action, 2019). In addition, the original video taken from Exercise is medicine has only 196 likes and 5 comments to date (Exercise is Medicine, 2019). To compare, a typical Planned Parenthood video receives up to 1,000 likes and 100 comments (Planned Parenthood Action, 2019). The current study justifies the use of a relatively unpopular video from a smaller organization because it is the goal of the research to minimize the chances that the study’s subjects have already seen
the stimulus material. Prior exposure to the study's content would undoubtedly create problems, such as desensitization, where repeated exposures to health messages can cause the public to become apathetic to the message (Cho & Salmon, 2007; Downs, 1972). Therefore, the study's principal investigator chose a health PSA from social media to replicate what a typical user would find in a social and virtual setting, while minimizing the chances that subjects have had prior exposure to the stimulus.

**Manipulation Check**

The same 75 participants that were asked to rate each video for its level of persuasiveness, importance, and purpose were also invited to perform the manipulation check in the same study, with the goal of determining which amount of “likes” could be considered low, medium, or high. In this section of the study, participants viewed a series of 16 screenshots of sample social media posts with a different amount of likes on each post. They were asked to indicate if they thought the post contained a low, medium, or high amount of likes (See Appendix C).

In order to determine what participants thought was a low, medium, or high amount of likes, a one-sample T-test was performed in SPSS. The results of this test indicated that participants considered a low amount of likes to be between 2 and 8, a medium amount of likes to be between 431 and 598, and a high amount of likes to be above 1024. Therefore, for the purposes of this study, the video with low likes contained 4 likes, the video with a medium amount of likes contained 431 likes, and the video with a high amount of likes contained 1048 likes (See Table 2).
Table 2

Pre and Post Perceived Importance

<table>
<thead>
<tr>
<th>Number of likes</th>
<th>t</th>
<th>df</th>
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<th>Upper*</th>
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<td>99</td>
<td>22.44</td>
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</table>

*95% confidence interval of the difference

Main Study Overview

The method of the main study was a cross sectional experiment, which applied a pretest, posttest control group design with four experimental groups and one control group. The study used both a within-groups and between-groups design, due to the nature of the
current hypotheses and research questions. Subjects were recruited through Amazon MTurk and were given a link to complete the experiment through Qualtrics.

For the purposes of this study, a simulated social media blog was created to determine subjects’ attitudes, intentions, subjective norms, perceived self-efficacy, and perceptions of importance relating to exercise, within the context of social media. Subjects were asked to complete a pretest questionnaire. Succeeding the pretest, subjects were instructed to navigate through the simulated social media blog, where they were exposed to the stimulus video. Following exposure to the stimulus, subjects were directed to complete a posttest questionnaire to measure differences in attitudes, self-efficacy, intentions, post importance, and subjective norms from the pretest.

**Main Study Pretest**

Preceding the exposure to the blog, subjects were asked to complete a pretest questionnaire (See Appendix D). Questions on the pretest included questions about the subjects’ personalities, which were used as distractor items. Among the aforementioned questions were also items that measured attitudes, perceptions of self-efficacy, intention, subjective norms, and perceived importance relating to the topic of the video, which was exercise promotion.

**Main Study Stimulus Material**

Following the completion of the pretest, subjects were directed to navigate through the simulated blog to take note of its quality, online presence, and their overall understanding of the website mission (See Appendix E). Subjects were asked to view
several posts on the simulated website, including two separate blog entries about traveling to Greece and baking cookies. The health PSA was also presented among these entries, except for the control group, who viewed a video about kittens instead. In order to ensure that subjects viewed their respective video, the page in Qualtrics did not permit subjects to advance to the next page unless they viewed the page for a specific period of time, which was set at exactly one minute and five seconds. The timer in Qualtrics was set twelve seconds longer than the 53-second video because it allowed subjects to carefully read the directions.

The study contained five groups. While each experimental group viewed the same promotional health video, the differences lied in the popularity of the study’s video of concern. The first group saw the PSA video containing a high amount of likes, which was set at exactly 1,048 likes. The second group saw the PSA video containing a medium amount of likes, which was set at 431 likes. The third group also saw the same PSA video, which contained just 4 likes. This group was categorized under the ‘low likes’ condition. The next group was categorized under the ‘no likes’ condition, as they viewed the same PSA video with 0 likes. Finally, the fifth group was determined to be the control group, as they were asked to watch a kitten compilation video.

Main Study Posttest

Succeeding exposure to the stimuli, subjects were instructed to complete a posttest, which contained the same items about attitudes, perceptions of self-efficacy, intention, and perceived importance of the video topic. In addition, distractor questions about the simulated blog were also used, as well as various personality items (See Appendix F). All
questions in both the pretest and posttest were randomized in order to eliminate any possible biases that may arise during the experiment.

**Attention Check Items**

In order to ensure scale validity, many researchers suggest the use of attention check items in surveys and experiments (Berinsky, Margolis, & Sances, 2014; Curran, 2016). Attention check questions are typically presented among regular survey items, which include several wrong responses and one correct response (Kung, Kwok, & Brown, 2018). Since some literature suggests that at least 5% of respondents respond to items at random (Johnson, 2005), attention check items are a way to ensure that the respondent pays attention when reading the item and allows the researcher to easily eliminate participants who are careless in their responses.

Following the advice of the current literature, the current investigation used attention check items in order to ensure that subjects were paying attention and to screen out random clicking (See Appendix G). Subjects in the experimental group were posed 6 attention check items, each with three obviously incorrect answers and one correct answer. Participants were posed these items after each page of the blog they were asked to view and read. It is important to note that participants were posed attention check items after viewing every page of the blog in order to ensure that they did not find out the true purpose of the study. Such items included “What was the video on the previous page about?” and “Approximately how many likes did the previous video have?” The control group only received 3 attention check items due to them not having received the health PSA video as a
stimulus, and therefore, questions about how many “likes” the previous video contained was not valid or necessary.

To that end, subjects who clearly demonstrated that they did not pay attention throughout the tasks were promptly eliminated from the study. Subjects in the current investigation’s experimental groups who answered two or more items incorrectly were not included in further analyses. This equates to a 70% rounded passing percentage, which is considered a passing grade in most American colleges and high schools (NAEP, 2011). To be considered for analyses in the control group, subjects were required to respond to all items correctly. In total, 28 ($N = 28$) subjects were eliminated from analyses, all of who were from the experimental groups.

**Variables in the Main Study**

**Attitudes**

Exercise attitudes were measured using five items on a 5-point scale. Items were adapted from Saklofske, Austin, Rohr, & Andrew's (2007) exercise attitudes scale. Items were also constructed using the advice of Likert’s guide of constructing an attitude scale (1974). Subjects were posed items such as “There are many benefits of regular exercise” and “It is important to exercise to maintain my general health.” Items measuring exercise attitudes were found to be acceptable in the pretest ($\alpha = .77$, $M = 4.05$, $SD = .66$). As mentioned previously, the same items were used to measure exercise attitudes in the posttest. These items generated good reliability in the posttest ($\alpha = .82$, $M = 4.11$, $SD = .66$) (See Table 3).
Intentions

Intentions to exercise were also measured using five items on a 5-point scale. These items were adopted from a number of different studies. Items that were adopted from the studies of Courneya & McAuley (1993) and Courneya (1994) included “I intend to exercise at least a few times per week within the next month.” Items that were adopted from Norman & Conner’s (2005) study included “I intend to take regular physical activity in the future.” Items that measured intention in the present study were also taken at the advice of Ajzen & Fishbein’s (1980) study about predicting behavior. Items measuring intention in the pretest generated good reliability ($\alpha = .88, M = 3.81, SD = .85$). To reiterate, these same items were also posed to subjects in the posttest and generated excellent reliability ($\alpha = .90, M = 3.87, SD = .84$) (See Table 4).

Perceived Self-Efficacy

Perceived self-efficacy towards exercise was measured using five items on a 10-point scale. These items were chosen using Bandura’s (2006) guide for constructing a self-efficacy scale. Items measuring self-efficacy were adopted from Marcus, Selby, Niaura, & Rossi’s (1992) study. Subjects were posed items such as “I am confident I can participate in regular exercise when I am in a bad mood” (Marcus et al., 1992). Other items were taken from Luszczynska, Scholz, & Schwarzer’s (2005) General Self-Efficacy Scale. Items adopted from this scale included “I am certain that I can exercise regularly, even if my exercise partner returns to a sedentary lifestyle” and “I can manage to carry out my exercise intentions, even when I have worries and problems.” Items measuring perceived self-efficacy in the pretest generated excellent reliability ($\alpha = .93, M = 5.81, SD = 1.50$). The same items
measuring self-efficacy in the pretest were also used in the posttest. These items were also found to be highly reliable ($\alpha = .90, M = 3.87, SD = .84$) (See Table 5).

**Subjective Exercise Norms**

The present study also measured subjective norms relating to exercise. To do so, subjects were posed five items on a 5-point scale. These items were adopted from Ajzen’s (2006) guide for constructing a theory of planned behavior questionnaire. Items that measured subjective exercise norms included “Most people in my social network think I should exercise” and “It is expected of me that I am active each day in the forthcoming month.” The aforesaid items generated an acceptable level of reliability in the pretest ($\alpha = .72, M = 3.74, SD = .64$). The same items also yielded acceptable reliability in the posttest ($\alpha = .77, M = 3.89, SD = .67$) (See Table 6).

**Perceived Importance**

Perceived importance was measured using 5 items on a 5-point scale. These items were adopted from Robin et al.’s (1996) study. Subjects were instructed to respond to items such as “Getting regular exercise is...” and “Getting physically fit is...” [fundamental, trivial; important, unimportant]. Analyses of the pretest indicated that the generated reliability was acceptable ($\alpha = .75, M = 3.24, SD = .78$) after recoding three of the items. The same items were also posed in the posttest, and also generated an acceptable level of reliability (.714, $M = 4.08, SD = .76$) (See Table 7).

**Central Route Measures**
According to Petty and Cacioppo (1984), the Elaboration Likelihood Model posits that individuals process information using either the central route (systematic processing), or the peripheral route (heuristic processing). According to the model, those who are processing information using the central route are more likely to thoughtfully consider a message, as opposed to the peripheral route where individuals are more likely to exert minimal cognitive resources. Under ELM, when an individual uses the central route, they have the *motivation* to process the message, as well as the *ability* to process the message. Therefore, the current study also measured the extent to which subjects engaged in central route processing when judging the message of the PSA video.

Motivation is commonly measured using the concept of involvement (Celsi & Olsen, 1988). To measure involvement, subjects were posed three items on a 5-point scale using Zaichowsky’s (1985) Personal Involvement Inventory scale. Items included “*I am interested in the adoption of physical activity*” and “*I would be interested in reading about physical activity.*”

To reiterate, the second component of a central route measure is the *ability* to process the message. To measure *ability*, subjects were posed two items on a 5-point scale. These items were adopted from Batra & Ray’s (1986) study, and Lutz, Mackenzie, & Belch’s (1983) study. The two items included “*I consider myself to be knowledgeable about the benefits of physical activity*” and “*I am familiar with ways to stay activity and healthy.*”

Both *involvement* and *ability* did not reach an acceptable level of reliability in the present study. *Involvement* yielded a questionable level of reliability in the pretest (α = .67), but yielded an acceptable level of reliability in the posttest (α = .78). Items measuring *ability* yielded a questionable level of reliability in the pretest (α = .66), and a poor level of
reliability in the posttest ($\alpha = .53$). After attempting to drop unreliable items to yield an acceptable level of reliability for both measures, reliability still proved to be questionable. Therefore, both involvement and ability were promptly dropped from the study and from further analyses. Due to the dropping of both variables, the current investigation could not determine whether subjects engaged in the central route when processing the message of the PSA video in the current study.

**The Big Five Personality Factors**

In addition to the survey instrument, numerous distractor items were used. Distractor items are used to divert the respondent’s attention away from the core purpose of the study (Schwarz & Sudman, 2012). They are normally omitted from further data analysis in the interest of time and expenses. For the purposes of this study, distractor items were associated with the “Big 5” personality factors for the pretest only. The “Big 5” personality factors are “the best accepted and most commonly used model of personality in social psychology” (Goldberg, 1992). Within the duration of the pretest, subjects were asked to respond to twenty distractor items using a 5-point scale adopted from Goldberg (1992). This research justifies the use of the “Big 5” personality traits as an effective distractor due to the variety of variables being presented to the participants. Thus, subjects will be unable to identify the true purpose of the experiment. Items from Goldberg’s (1992) study included “I am the life of the party” and “I have a soft heart.” In the posttest, multiple personality items were also used as distractors. These items were taken from the BFI-10 study (Rammstedt & Oliver, 2007). As such, subjects were posed ten items on a 5-point
scale. These items included statements such as “I see myself as someone who is reserved” and “I see myself as someone who is generally trusting.”

Table 3

*Means and standard deviations of individual items for exercise attitudes*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pretest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are many benefits of regular exercise.</td>
<td>4.22</td>
<td>.86</td>
</tr>
<tr>
<td>Regular physical activity can promote good health and combat various health conditions and diseases.</td>
<td>4.07</td>
<td>1.00</td>
</tr>
<tr>
<td>It is important to exercise to maintain my general health.</td>
<td>4.04</td>
<td>.85</td>
</tr>
<tr>
<td>Doing physical exercise makes me feel more positive and optimistic.</td>
<td>4.01</td>
<td>.90</td>
</tr>
<tr>
<td>Lack of exercise would put my health at risk.</td>
<td>3.93</td>
<td>.91</td>
</tr>
<tr>
<td><strong>Posttest</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>There are many benefits of regular exercise.</td>
<td>4.25</td>
<td>.81</td>
</tr>
<tr>
<td>Regular physical activity can promote good health and combat various health conditions and diseases.</td>
<td>4.14</td>
<td>.83</td>
</tr>
<tr>
<td>It is important to exercise to maintain my general health.</td>
<td>4.13</td>
<td>.91</td>
</tr>
<tr>
<td>Doing physical exercise makes me feel more positive and optimistic.</td>
<td>4.03</td>
<td>.97</td>
</tr>
<tr>
<td>Lack of exercise would put my health at risk.</td>
<td>4.10</td>
<td>.94</td>
</tr>
</tbody>
</table>

*Note. The means are based on a 5-point Likert scale.*

Table 4

*Means and standard deviations of individual items for exercise intentions*

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to exercise at least a few times per week within the next month.</td>
<td>3.86</td>
<td>1.07</td>
</tr>
</tbody>
</table>
I will try to exercise at least thirty minutes, three days per week within the next month.  

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am confident I can participate in regular exercise when I am in a bad mood.</td>
<td>7.05</td>
<td>2.45</td>
</tr>
<tr>
<td>I feel I don't have the time.</td>
<td>6.81</td>
<td>2.44</td>
</tr>
<tr>
<td>Post-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to exercise at least a few times per week within the next month.</td>
<td>3.90</td>
<td>.98</td>
</tr>
<tr>
<td>I will try to exercise at least thirty minutes, three days per week within the next month.</td>
<td>3.90</td>
<td>1.02</td>
</tr>
<tr>
<td>I intend to take regular physical activity in the future.</td>
<td>3.95</td>
<td>.95</td>
</tr>
<tr>
<td>Presently, I intend to do active sports or vigorous physical activities a few times per week during my leisure time.</td>
<td>3.71</td>
<td>1.07</td>
</tr>
<tr>
<td>It is likely that I will engage in physical activity in the near future.</td>
<td>3.90</td>
<td>.95</td>
</tr>
</tbody>
</table>

Note. The means are based on a 5-point Likert scale.

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am confident I can participate in regular exercise when I am in a bad mood.</td>
<td>7.05</td>
<td>2.45</td>
</tr>
<tr>
<td>I feel I don't have the time.</td>
<td>6.81</td>
<td>2.44</td>
</tr>
</tbody>
</table>

Table 5

Means and standard deviations of individual items for exercise self-efficacy

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I am confident I can participate in regular exercise when I am in a bad mood.</td>
<td>7.05</td>
<td>2.45</td>
</tr>
<tr>
<td>I feel I don't have the time.</td>
<td>6.81</td>
<td>2.44</td>
</tr>
<tr>
<td>Post-test</td>
<td></td>
<td></td>
</tr>
<tr>
<td>I intend to exercise at least a few times per week within the next month.</td>
<td>3.90</td>
<td>.98</td>
</tr>
<tr>
<td>I will try to exercise at least thirty minutes, three days per week within the next month.</td>
<td>3.90</td>
<td>1.02</td>
</tr>
<tr>
<td>I intend to take regular physical activity in the future.</td>
<td>3.95</td>
<td>.95</td>
</tr>
<tr>
<td>Presently, I intend to do active sports or vigorous physical activities a few times per week during my leisure time.</td>
<td>3.71</td>
<td>1.07</td>
</tr>
<tr>
<td>It is likely that I will engage in physical activity in the near future.</td>
<td>3.90</td>
<td>.95</td>
</tr>
</tbody>
</table>

Note. The means are based on a 5-point Likert scale.
I can manage to carry out my exercise intentions, even when I have worries and problems.  7.01  2.35

I am certain that I can exercise regularly, even if my exercise partner returns to a sedentary lifestyle.  7.24  2.42

I am able to exercise at least three times per week for thirty minutes.  7.43  2.30

Post-test

I am confident I can participate in regular exercise when I am in a bad mood.  7.37  2.38

I am confident I can participate in regular exercise when I feel I don’t have the time.  7.21  2.47

I can manage to carry out my exercise intentions, even when I have worries and problems.  7.23  2.43

I am certain that I can exercise regularly, even if my exercise partner returns to a sedentary lifestyle.  7.42  2.40

I am able to exercise at least three times per week for thirty minutes.  7.54  2.28

Note. The means are based on a 10-point Likert scale.

Table 6

Means and standard deviations of individual items for exercise subjective norms

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Most people in my social network want me to exercise regularly in the next 2 weeks.</td>
<td>3.70</td>
<td>.93</td>
</tr>
<tr>
<td>Most people in my social network would approve if I exercised regularly in the next 2 weeks.</td>
<td>3.92</td>
<td>.83</td>
</tr>
<tr>
<td>Most people in my social network think I should exercise.</td>
<td>3.46</td>
<td>1.13</td>
</tr>
<tr>
<td>The people in my life whose opinions I value would approve of me walking on a treadmill for at least 30 minutes.</td>
<td>3.92</td>
<td>.85</td>
</tr>
</tbody>
</table>
minutes each day in the forthcoming month.

It is expected of me that I am active each day in the forthcoming month. 3.59 1.10

Post-test

Most people in my social network want me to exercise regularly in the next 2 weeks. 3.75 .96

Most people in my social network would approve if I exercised regularly in the next 2 weeks. 3.90 1.02

Most people in my social network think I should exercise. 3.87 .89

The people in my life whose opinions I value would approve of me walking on a treadmill for at least 30 minutes each day in the forthcoming month. 3.97 .92

It is expected of me that I am active each day in the forthcoming month. 3.80 1.03

Note. The means are based on a 5-point Likert scale.

Table 7

Means and standard deviations of individual items for perceived importance of exercise

<table>
<thead>
<tr>
<th>Item</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Pre-test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting regular exercise is...</td>
<td>4.18</td>
<td>.95</td>
</tr>
<tr>
<td>Staying active throughout the day is...</td>
<td>4.08</td>
<td>.91</td>
</tr>
<tr>
<td>Regularly participating in fitness classes, such as biking, swimming, or yoga is...</td>
<td>3.67</td>
<td>1.01</td>
</tr>
<tr>
<td>A regular walking routine is... (reverse coded)</td>
<td>3.90</td>
<td>.97</td>
</tr>
<tr>
<td>Being physically fit is... (reverse coded)</td>
<td>3.92</td>
<td>.86</td>
</tr>
<tr>
<td><strong>Post-test</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Getting regular exercise is...</td>
<td>4.33</td>
<td>.85</td>
</tr>
<tr>
<td>Staying active throughout the day is...</td>
<td>4.22</td>
<td>.87</td>
</tr>
</tbody>
</table>
Regularly participating in fitness classes, such as biking, swimming, or yoga is...

3.65 1.13

A regular walking routine is... (reverse coded)

3.00 1.40

Being physically fit is... (reverse coded)

3.24 1.38

Note. The means are based on a 5-point Likert scale.

Data Analysis

All data was analyzed using SPSS (Statistical Package for the Social Sciences) version 25 for Macintosh (IBM Corp, 2017). To test $H_{1a}, H_{1b}, H_{1c},$ & $H_{1d}$, one-way repeated measures ANOVAs were performed. To reiterate, $H_{1a-d}$ predicted that subjects who viewed the health PSA with a high amount of likes would demonstrate more favorable exercise attitudes ($H_{1a}$), more stronger intentions ($H_{1b}$), higher levels of self-efficacy ($H_{1c}$), and greater perceived norms ($H_{1d}$) than those who viewed the video with a medium or low amount of likes, or none at all. To analyze, a grouping variable was created, where each group received a respective number ($0 =$ no likes, $1 =$ low likes, $2 =$ medium likes, $3 =$ high likes, $4 =$ control). This variable was placed under “factor.” All other variables (attitudes, intentions, self-efficacy, and perceived norms) were placed under the dependent variable.

To test $H_{2a}, H_{2b}, H_{2c},$ & $H_{2d}$, one-way repeated measures ANOVAs were performed. $H_{2a-d}$ predicted that subjects who saw the promotional health video would display more favorable exercise attitudes ($H_{2a}$), greater self-efficacy ($H_{2b}$), higher perceived exercise norms ($H_{2c}$), and higher intentions to exercise ($H_{2d}$). To create the grouping variable, subjects were either coded as having seen the video (“1”) or as not having seen the video (“0”). This variable was placed under “factor.” All other variables (attitudes, intentions, self-efficacy, and perceived norms) were placed as the dependent variable.
$H_{3a-c}$ predicted that favorable exercise attitudes ($H_{3a}$), exercise efficacy ($H_{3b}$), and perceived exercise norms ($H_{3c}$) would be predictors of intentions to exercise. To test $H_{3a-c}$, a linear regression analysis was conducted. To do so, the attitudes, self-efficacy, and perceived norms variable were labeled as the independent variable. Intentions were placed as the dependent variable for all three hypotheses.

Finally, $RQ_1$ asked if the subjects who saw the promotional health video that contained a high number of likes would perceive the video as more important compared to the subjects who viewed the video with a medium or low number of likes, or none at all. To test this research question, a one-way repeated measures ANOVA was performed. In the analysis, a grouping variable was created, where each group received a respective number. This variable was designated as the “factor.” A variable measuring perceived importance was created, and was determined to be the dependent variable.

To determine if subjects’ attitudes, intentions, efficacy, subjective norms, and perceptions of importance varied by a number of different factors, including: 1) if their respective group influenced the outcome variable, 2) if their correct or incorrect recall of the number of likes that the video contained influenced the outcome variable, and 3) if their correct or incorrect recall of the number of likes within their respective group influenced the outcome variable, one-way repeated measures ANOVAs were performed. The number of factors was determined to be “2.” Then, a variable that determined whether or not the subjects correctly recalled the number of likes that the video contained was created (“0” for incorrect recall, “1” for correct recall). This variable was placed into the between-subjects factor(s), as well as the grouping variable. Pre and post attitudes,
intentions, efficacy, perceived norms, and perceptions of importance variables were designated as the within-subjects variables.

**Use of Amazon Mechanical Turk**

Amazon Mechanical Turk (MTurk) is a platform that allows researchers to conduct research with a large pool of participants and quick data collection (Buhrmester, Kwang, & Gosling, 2011). Among the social and other sciences, quality of data and a representative sample is a major concern of using a crowdsourcing site such as MTurk (Peer, Vosgerau, Acquisti, 2014). However, this thesis, in addition with other scholars, justifies the use of MTurk as a robust, quality, and diverse method to obtain data. In a review that compares traditional convenience samples with MTurk samples, Berinsky, Huber, & Lenz (2012) found that MTurk samples contain a more equal number of men and women, are younger, are less white in terms of racial composition, and are more educated than studies that use in-person convenience samples. To sum, the results of this study suggest that respondents who are recruited from MTurk are more representative of the U.S. population than in-person convenience samples (Berinsky et al., 2012). In another review of MTurk quality, Buhrmester et al. (2011) described how Mechanical Turk samples are slightly more demographically diverse than other sampling methods, such as the typical convenience sampling of the American college student.

Literature also indicates that the uses of MTurk samples are valid because it is just as high-quality as traditional means of sampling. In Buhrmester et al.’s (2011) paper, the researchers tested whether MTurk workers would complete a task for the lowest payment rate, which is one cent. Over 500 participants in under 33 hours were willing to complete
the task successfully with little compensation. In another study, Peer et al. (2014) tested the effectiveness of attention check questions in terms of MTurk participants with a high reputation, versus a low reputation. Results of this study indicated that those who had above 95% approval ratings on MTurk rarely failed attention check questions, while attention check questions for low-quality workers (below a 95% approval rating) improved data quality and reduced human error. These results demonstrate that workers are willing to complete simple tasks for little compensation without compromising the quality of data.

This thesis justifies the use of Amazon Mechanical Turk due to the previously mentioned collection of studies and reviews, but also takes the advice of other researchers and past literature to ensure data quality. First, MTurk participants in this study were only limited to high-quality workers; that is, MTurk workers with a high approval rating of over 95% were permitted to participate, as suggested by Peer et al. (2014). Literature also suggests that a higher payment can improve task performance and reduce random responses (Aker, El-Haj, Albakour, & Kruschwitz, 2012; Kazai, 2010). In the current study, subjects were offered an incentive of $1.00 each, which is regarded as a high MTurk reimbursement, since most tasks reward just pennies, nickels, or dimes to complete (Buhrmester et al., 2011). Finally, subject location was reduced to the United States, as a means of ensuring that they understood the English language. To that end, data was collected on the 8th of January, 2019, within the timespan of two hours.

Subjects
The subjects of this study were recruited via Amazon Mechanical Turk via a combination of a convenience and simple random sampling. After eliminating data, the final sample size was 272 subjects \( (N = 272) \). Data were eliminated by the researcher because it was either missing, or subjects indicated that they were not paying attention after failing two or more out of the six attention check questions that they were given at various points throughout the study. 28 subjects were eliminated from the study. In total, 50 participants \( (N = 50) \) were randomized in the group whose video contained no likes, 53 participants \( (N = 53) \) were randomized in the group whose video contained low likes, 55 participants \( (N = 55) \) were randomized in the group whose video contained medium likes, 47 participants \( (N = 47) \) were randomized in the group whose video contained high likes, and 60 participants \( (N = 60) \) were randomized in the control group.

To determine who the study’s subjects were, several demographic items were posed following the completion of the posttest. The majority of the study’s subjects were male, with 68\% \( (N = 185) \) identifying as male and 32\% \( (N = 87) \) identifying as female. Subjects reported that they were white \( (50.7\% \ (N = 138)) \), Asian or Asian American \( (33.1\% \ (N = 90)) \), Black or African American \( (8.1\% \ (N = 22)) \), Hispanic or Latino(a) \( (4.0\% \ (N = 11)) \), American Indian or Alaskan Native \( (2.6\% \ (N = 7)) \), or Native Hawaiian or other Pacific Islander \( (0.4\% \ (N = 1)) \). In addition, 13 subjects \( (N = 13) \) (4.8\%) identified themselves as some sort of “other” race. The ages of participants ranged from 18-64 years of age, with the majority of subjects \( (90.4\%) \) falling between the age range of 18 and 43 years old and the remaining \( (9.6\%) \) lying between the ages of 44 and 64. Most subjects were educated with at least some college \( (15.1\% \ (N = 41)) \), an associate’s degree \( (7.4\% \ (N = 20)) \), a bachelor’s degree \( (57.7\% \ (N = 157)) \), or a master’s degree \( (11\% \ (N = 30)) \). Finally, subjects indicated
that they were married (48.2%) \((N = 131)\), single (46%) \((N = 125)\), or divorced (4.7%) \((N = 13)\).

The following chapter reviews the results of the current study. Chapter four also contains the presentation of the study’s tables and figures. Following the next chapter is a discussion of this study’s results and implications, as well as suggestions for future research.
Chapter 4: Results

The present chapter highlights the key results of the investigation. First, it will restate the hypotheses and research questions which were presented in chapter 2. Then, it will state the results of the aforementioned hypotheses and research questions, and provide interpretations based on the statistical tests indicated in chapter 3. Finally, the current chapter will present several tables in order to provide visual support and clarity to the results.

First, an independent t-test analysis was conducted to determine whether subjects’ baseline attitudes, intentions, perceptions of importance, and self-efficacy were relatively similar at pre-test. According to the results of this test, no statistically significant differences between the groups regarding attitudes ($p = .893$), intentions ($p = .748$), perceptions of importance ($p = .823$), subjective norms ($p = .722$), or self-efficacy ($p = .650$) was found. Therefore, it could be concluded that all groups met the basic assumption that their levels of the aforementioned variables were about the same and that the study could continue on with analyses.

Results $H_1$

$H_{1a}$ predicted that subjects who viewed the PSA video with a higher number of likes would have more favorable attitudes towards exercise than those who viewed the video with a low amount of likes, or none at all. The differences between the aforementioned groups could not be determined to be statistically significant in terms of exercise attitudes, ($F(3, 208) = .27, p = .85$) (See Table 14). In addition, whether or not subjects correctly recalled the number of likes that the video contained, and whether or not their group and
whether or not they correctly recalled the correct number of likes that the video contained had no significant effect on their attitudes. Subjects across all groups, including the control group, showed significant changes in exercise attitudes (See Table 8). Thus, it can be concluded that the amount of likes shown on the PSA video had little effect on subjects. $H_{1a}$ could not be supported.

Table 8

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Value</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes experimental groups</td>
<td>.99</td>
<td>.68</td>
<td>204</td>
<td>.57</td>
</tr>
<tr>
<td>Attitudes (all groups)</td>
<td>.98</td>
<td>4.43</td>
<td>204</td>
<td>.04</td>
</tr>
<tr>
<td>Attitudes by correct likes recall</td>
<td>.98</td>
<td>.57</td>
<td>204</td>
<td>.45</td>
</tr>
<tr>
<td>Attitudes by correct likes recall and group</td>
<td>.97</td>
<td>2.47</td>
<td>204</td>
<td>.06</td>
</tr>
</tbody>
</table>

$H_{1b}$ predicted that those who viewed the health PSA video with a high number of likes would demonstrate stronger intentions to exercise, than those who viewed the PSA video with a low number of likes, medium amount of likes, or none at all. In terms of exercise intentions, the differences between groups were not found to be statistically significant ($F(3,208) = .12, p = .95$) (See Table 14). In addition, whether or not subjects correctly recalled the number of likes that the video contained, and whether or not their group and whether or not they correctly recalled the correct number of likes that the video contained was not a determinant of their intentions. Subjects across all groups, including the control group, showed significant changes in exercise intentions (See Table 9).
Therefore, this study can conclude that the amount of likes that were shown on the PSA video did not affect subjects’ intentions to exercise. $H_{1b}$ could not be supported.

Table 9

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Value</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Intentions experimental groups</td>
<td>.99</td>
<td>.40</td>
<td>204</td>
<td>.74</td>
</tr>
<tr>
<td>Intentions (all groups)</td>
<td>.96</td>
<td>8.68</td>
<td>204</td>
<td>.00</td>
</tr>
<tr>
<td>Intentions by correct likes recall</td>
<td>.99</td>
<td>.91</td>
<td>204</td>
<td>.34</td>
</tr>
<tr>
<td>Intentions by correct likes recall and group</td>
<td>.97</td>
<td>1.83</td>
<td>204</td>
<td>.14</td>
</tr>
</tbody>
</table>

$H_{1c}$ predicted that those who viewed the health PSA video with a high number of likes would demonstrate higher perceptions of self-efficacy in terms of exercise, compared to those who viewed the PSA video with a low number of likes, medium amount of likes, or none at all. Differences across groups were not statistically significant ($F(3, 208) = 1.12, p = .34$) (See Table 14). In addition whether or not subjects correctly recalled the number of likes that the video contained, and whether or not their group and whether or not they correctly recalled the correct number of likes that the video contained had no significant effect on their perceptions of self-efficacy. Subjects across all groups, including the control group, showed significant changes in exercise self-efficacy (See Table 10). To conclude, those who saw the PSA video containing high likes did not differ on levels of self-efficacy
than those who viewed the video with low or no likes. Therefore, $H_{1c}$ could not be supported.

**Table 10**

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Value</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Self-efficacy experimental groups</td>
<td>.98</td>
<td>1.58</td>
<td>204</td>
<td>.20</td>
</tr>
<tr>
<td>Self-efficacy (all groups)</td>
<td>.32</td>
<td>429.36</td>
<td>204</td>
<td>.00</td>
</tr>
<tr>
<td>Self-efficacy by correct likes recall</td>
<td>.99</td>
<td>.18</td>
<td>204</td>
<td>.68</td>
</tr>
<tr>
<td>Self-efficacy by correct likes recall and group</td>
<td>.97</td>
<td>.98</td>
<td>204</td>
<td>.40</td>
</tr>
</tbody>
</table>

$H_{1d}$ predicted that those who viewed the health PSA video that contained a high number of likes would yield stronger subjective exercise norms than those who viewed the health PSA video with a medium or low amount of likes, or none at all. Differences across groups were not statistically significant ($F(3, 208) = 1.21, p = .31$) (See Table 14). In addition, whether or not subjects correctly recalled the number of likes that the video contained, and whether or not their group and whether or not they correctly recalled the correct number of likes that the video contained had no significant effect on their subjective exercise norms. Subjects across all groups, including the control group, showed significant changes in subjective exercise norms (See Table 11). To sum, those who saw the health PSA with a high number of likes did not show stronger subjective exercise norms than those who viewed the health PSA with a medium or low number of likes, or none at all. $H_{1d}$ could not be supported.
Table 11

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Value</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Subjective norms experimental groups</td>
<td>.98</td>
<td>1.40</td>
<td>204</td>
<td>.24</td>
</tr>
<tr>
<td>Subjective norms (all groups)</td>
<td>.92</td>
<td>18.60</td>
<td>204</td>
<td>.00</td>
</tr>
<tr>
<td>Subjective norms by correct likes recall</td>
<td>.99</td>
<td>1.57</td>
<td>204</td>
<td>.21</td>
</tr>
<tr>
<td>Subjective norms by correct likes recall and group</td>
<td>.99</td>
<td>.60</td>
<td>204</td>
<td>.61</td>
</tr>
</tbody>
</table>

Table 12

<table>
<thead>
<tr>
<th>Variable</th>
<th>N</th>
<th>Mean*</th>
<th>Std. Deviation*</th>
<th>Mean**</th>
<th>Std. Deviation**</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>272</td>
<td>4.05</td>
<td>.66</td>
<td>4.11</td>
<td>.66</td>
</tr>
<tr>
<td>Intentions</td>
<td>3.81</td>
<td>.85</td>
<td>3.87</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td>Self-Efficacy</td>
<td>5.81</td>
<td>1.50</td>
<td>3.87</td>
<td>.84</td>
<td></td>
</tr>
<tr>
<td>Subjective Norms</td>
<td>3.74</td>
<td>.64</td>
<td>3.89</td>
<td>.67</td>
<td></td>
</tr>
<tr>
<td>Perceived Importance</td>
<td>3.24</td>
<td>.78</td>
<td>4.08</td>
<td>.76</td>
<td></td>
</tr>
<tr>
<td>Valid N (listwise)</td>
<td>272</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Results RQ1

RQ1 asked if subjects who viewed the health PSA video with a high number of likes would perceive the video topic as more important compared to those who saw the PSA.
video containing low or no likes. To test this question, a one-way repeated measures
ANOVA was conducted. Results indicate no statistically significant differences between
groups \((F(3, 208) = 1.22, p = .30)\) (See Table 8). In addition, subjects’ respective groups,
whether or not they correctly recalled the number of likes that the video contained, and
whether or not their group and whether or not they correctly recalled the correct number
of likes that the video contained had no significant effect on their attitudes (See Table 13).
Therefore, the subjects who viewed the health PSA with a high number of likes did not
perceive exercise as more important than those who saw the video with a low amount of
likes, or none at all. \textit{RQ} \textsubscript{1} was not statistically significant.

\textbf{Table 13}

<table>
<thead>
<tr>
<th>Predictor</th>
<th>Value</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Perceived importance (all groups)</td>
<td>.392</td>
<td>316.34</td>
<td>204</td>
<td>.00</td>
</tr>
<tr>
<td>Perceived importance by correct likes recall</td>
<td>1.00</td>
<td>.01</td>
<td>204</td>
<td>.93</td>
</tr>
<tr>
<td>Perceived importance by correct likes recall and group</td>
<td>.99</td>
<td>.46</td>
<td>204</td>
<td>.71</td>
</tr>
</tbody>
</table>

\textbf{Table 14}

\textit{Means and standard deviations of outcome variables by experimental groups}

<table>
<thead>
<tr>
<th>Attitudes</th>
<th>No Likes Mean</th>
<th>SD</th>
<th>Low Mean</th>
<th>SD</th>
<th>Medium Mean</th>
<th>SD</th>
<th>High Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>Pre</td>
<td>4.21</td>
<td>.70</td>
<td>3.91</td>
<td>.71</td>
<td>3.98</td>
<td>.68</td>
<td>4.06</td>
<td>.55</td>
</tr>
<tr>
<td>Post</td>
<td>4.27</td>
<td>.62</td>
<td>4.05</td>
<td>.80</td>
<td>4.07</td>
<td>.60</td>
<td>4.13</td>
<td>.62</td>
</tr>
</tbody>
</table>

| SE | Pre | 6.10 | 1.50 | 5.53 | 1.69 | 5.61 | 1.50 | 5.72 | 1.34 |
|    | Post | 7.78 | 2.16 | 6.98 | 2.34 | 7.04 | 2.32 | 7.43 | 2.00 |
Intentions

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.94</td>
<td>4.00</td>
</tr>
<tr>
<td>SD</td>
<td>.84</td>
<td>.87</td>
</tr>
</tbody>
</table>

Norms

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.85</td>
<td>4.05</td>
</tr>
<tr>
<td>SD</td>
<td>.60</td>
<td>.62</td>
</tr>
</tbody>
</table>

PI

<table>
<thead>
<tr>
<th></th>
<th>Pre</th>
<th>Post</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mean</td>
<td>3.20</td>
<td>4.20</td>
</tr>
<tr>
<td>SD</td>
<td>.79</td>
<td>.75</td>
</tr>
</tbody>
</table>

### Results $H_2$

$H_{2a}$ predicted that subjects who viewed the health PSA video would yield more favorable exercise attitudes from pre- to post-test than those who did not view the health PSA video. Results of this test indicated that those who viewed the health PSA did not necessarily yield more favorable exercise attitudes than those who did not view the health PSA video ($F(1, 270) = 1.10, p = .21$). Therefore, $H_{2a}$ could not be supported.

$H_{2b}$ predicted that subjects who viewed the health PSA video would yield greater levels of perceived-self efficacy than those who did not see the video. The differences between groups who saw the video, versus those who did not, were not statistically significant ($F(1, 270) = .52, p = .20$). Therefore, results from this analysis indicate that $H_{2b}$ could not be supported.

$H_{2c}$ predicted that subjects who viewed the health PSA video would perceive exercise as a norm, compared to those who did not view the health PSA video. Results of this analyses showed non significant results ($F(1, 270) = 2.43, p = .12$). Therefore, results from this analysis indicate that $H_{2c}$ could not be supported.
H₂d predicted that subjects who viewed the health PSA video would demonstrate stronger exercise intentions than those who did not view the health PSA video. To test this hypothesis, a one-way repeated measures ANOVA was conducted. Results of this test were determined to be not statistically significant (F(1, 270) = 240, p = .29). Thus, H₂d could not be supported and it could not be determined that those who saw the exercise PSA video demonstrated greater exercise intentions than those who did not view the video.

Table 15

<table>
<thead>
<tr>
<th>Variable</th>
<th>F</th>
<th>df</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Attitudes</td>
<td>1.10</td>
<td>270</td>
<td>.21</td>
</tr>
<tr>
<td>Self-efficacy</td>
<td>.52</td>
<td>270</td>
<td>.20</td>
</tr>
<tr>
<td>Perceived Norms</td>
<td>2.43</td>
<td>270</td>
<td>.12</td>
</tr>
<tr>
<td>Intentions</td>
<td>240</td>
<td>270</td>
<td>.29</td>
</tr>
</tbody>
</table>

Results H₃

H₃a predicted that more favorable attitudes about exercise behaviors were associated with stronger intentions to exercise, as compliant with the TPB model. To test this hypothesis, a linear regression analysis was conducted. A significant regression equation was found, F(1, 270) = 162.38, p < .001), with an R² of .38. As the Theory of Planned Behavior posits, exercise attitudes predicted exercise intentions (β = .78, p < .001).

Therefore, H₃a could be supported.

H₃b predicted that high perceptions of self-efficacy relating to exercise would be associated with stronger intentions to exercise, which is also compliant with the TPB model.
A significant regression equation was found ($F(1, 270) = 347.69, p < .001$), with an $R^2$ of .56. The Theory of Planned Behavior suggests that higher levels of self-efficacy would predict behavior intentions; this study’s results indicated that elevated levels of self-efficacy were in association with exercise intentions ($\beta = .29, p < .001$). To conclude, $H_{3b}$ could be supported.

$H_{3c}$ predicted that high perceptions of exercise norms would be associated with stronger intentions to exercise, which is also an assumption of the TPB model. A significant regression equation was found ($F(1, 270) = 139.25, p < .001$), with an $R^2$ of .34. The Theory of Planned Behavior assumes that when an individual perceives a behavior as the norm, that person will show stronger intentions to perform the desired behavior ($\beta = .58, p < .001$). This study could find statistical support for this assumption. $H_{3c}$ could be supported.

This study was also interested in whether or not subjects were able to recall how many likes that the stimulus video that they viewed contained. This is detrimental to the current study, as it is an indicator of how individuals process and pay attention to content on social media. Analyses showed that 47.2% ($N = 100$) subjects were not able to correctly identify this number, while 52.8% ($N = 112$) were able to. In addition and as demonstrated in tables 3-6, subjects demonstrated a change in exercise attitudes, self-efficacy, intentions, subjective norms, and perceived importance, regardless of whether or not they actually saw the stimulus video ($p < .05$). Implications of this, as well as a discussion of this study’s hypotheses and research questions, are to be addressed in the following chapter.
Chapter 5: Discussion

The current chapter summarizes the results, which were presented in chapter 4. It will provide interpretations of the statistical results. In addition, the current chapter will provide any alternate explanations to better elucidate the present investigation’s results. It will also discuss in detail the limitations of the study, which will ultimately provide a clear path for researchers to take in future studies. Finally, the author and principal investigator of the study will outline the importance of the study’s results and will draw final conclusions about the relevance of health information in a viral, social setting.

The present research examined the psychological consequences or effects of social media post popularity on attitudes, self-efficacy, perceived norms, and intentions in the context of promotional health messages. Despite prior findings that suggest that post popularity may affect persuasive outcomes (Alhabash et al., 2015), this study did not find that there were significant impacts on individuals’ perceptions exercise, depending on post virality. To be specific, those who were placed in the high likes condition demonstrated no significant differences in attitude, self-efficacy, intention, or perceptions of importance relating to exercise habits than those who were placed in the medium, low, or no likes condition. Such findings could have been dependent on a number of factors.

A small number of prior studies attempt to investigate the effects of media marketing in the context of social media, where users have the ability to like, comment, and share messages. For example, Alhabash et al. (2015) found that when a Facebook status has a high amount of likes and shares, subjects demonstrated stronger intentions to perform the marketed behavior. However, in this study, subjects were exposed to multiple statuses with varying amounts of post virality. The present study only exposed subjects to one video
in order to completely isolate other possible factors that may have an influence about their attitudes and intentions to exercise. While the results of Alhabash et al.’s (2015) study show that varying amounts of social norms (e.g. a high amount of likes and shares) indicate the strength of the social norm and play a role in subjects’ intentions to perform a specific behavior, significant findings may have been due to multiple conditions that subjects were exposed to.

In another study, Kim (2018) looked at the effects of social media virality in a health-related setting. In this study, Kim was able to demonstrate that the presence of both high likes and high shares resulted in greater perceptions of message influence, as opposed to when a message contained low likes and low shares. Respectively, both Alhabash et al. (2015) and Kim’s (2018) studies tested the effects of both likes and shares, while this study only attempted to demonstrate how the “like” feature may or may not influence individuals’ perceptions of the message. The results of the current study suggest that post virality is a combination of many different factors and that social media “likes” alone may not be strong enough to indicate the strength of a social norm or endorsement.

When attempting to understand heuristic approaches to understanding technology and its implications, Sundar (2008) speaks of the ways in which digital technologies can convey cues of judgments or credibility. For example, the presence of interactivity (in the case of this study, interactivity may refer to social media “likes”) has the capability to transmit cues that guide the message receiver’s evaluation of the message. These cues may trigger a variety of heuristics relating to intention to perform a message, or even how to internalize the message and tailor it to the specific individual. The MAIN model (Sundar, 2008) attempts to explain how heuristics in the context of social media may lead to positive
or negative outcomes on a media user. One of the cues that the model discusses are modality cues, which exist on a number of digital devices and include audio, text, or visual cues. Modality cues act as a symbol system to trigger various heuristics in the minds of users and are likely to influence assessments and perceptions of the message.

Modality cues can also lead to overstimulation experienced by the user, which is commonly known as the distraction heuristic (Sundar, 2008). The distraction heuristic is particularly likely when the media user is left cognitively drained. Early conceptualizations of multimedia implications suggest that it may involve multiple senses (e.g. audio, video, and functions of social media), which can help process messages (Marmolin, 1991). However, Sundar (2008) argues that newer digital media may prevent users from effortfully evaluating a message, due to multiple ways in which users can process messages in a social setting. This simply will lead to sensory overload. In the present study, it is possible that users experienced sensory overload due to the volume of information that they were asked to process in a short amount of time. In turn, this could have led them to systematically process the message’s content as opposed to heuristic processing.

The reputation, or name recognition, of an online web source also serves as a heuristic cue that allows audience members to avoid cognitive effort to evaluate messages. Gigerenzer and Todd (1999) show that the recognition heuristic is psychologically rooted in basic heuristic principles of favoring recognized sources over unrecognized ones. This study shows that people value sources that they tend to familiarize with over sources that are foreign to them, which Gigerenzer and Todd (1999) name as the “recognition heuristic.” Familiarity with a source likely plays a role in the persuasiveness of a message, and persuasion research shows that individuals are more likely to judge a source as credible
than unfamiliar sources, and therefore, be more likely to perform a desired behavior (O’Keefe, 1990). As mentioned previously, the current study attempted to persuade audience members with the use of a fictional blog and PSA video that was relatively unpopular on social media to begin with. It is likely that subjects of this study used the recognition heuristic when judging and evaluating the message of the PSA video.

The current study’s non-significant findings could also be due to nature of the experimental design employed. To reiterate, this study used a pretest-posttest control group design. While pretest-posttest designs are widely used and proven to be effective in measuring changes in attitudes and perceptions across different groups, basic pretest-posttest designs also do not come without questions of validity (Dimitrov & Rumrill, 2003). Specifically, researchers are concerned with the pretest effects of using such a design and scholars are particularly interested in pretest sensitization, which occurs when study participants become sensitive or alerted to the variables of interest in a particular study (Jolliffe, 2002).

A similar problem in experimental research that uses a pretest is the concept of priming, in which individuals’ experiences with a past environment temporarily activates concepts that are presented for a short amount of time (Jolliffe, 2002). When feelings are primed, they are said to influence thoughts, feelings, and judgments about a topic (Lashley, 1951). In the present study, subjects were presented with the exact same items about their feelings and attitudes towards exercise that they were in the posttest. Due to the nature of the experimental design employed, it is possible that subjects became aware of the true variables of interest in the study, and responded to items in the posttest based on what they became aware of in the pretest. In fact, changes in attitude, perceptions of importance,
perceived norms, self-efficacy, and intentions were statistically significant across all groups, regardless if they had actually seen the study's true stimulus video or not \((p < .05)\). Therefore, it is a plausible explanation that the current study's pretest caused the subjects to think in a certain manner, which would have ultimately affected their behavior during posttest procedures. A common solution to pretest priming in research is the Solomon four-group design, in which only half of the participants are exposed to the pretest in order to judge whether or not the pretest was responsible for the outcomes of the posttest (Walton Braver & Braver, 1988).

The methodological decision to choose a relatively unpopular social media health PSA could also be another factor that determined the study' non-significant hypotheses. To reiterate, the principal investigator of the study chose to present subjects with a PSA video that was already low in popularity to minimize the chance that subjects have already seen the video, which could lead to desensitization (Cho & Salmon, 2007; Downs, 1972). However, it is also true that mass media messages that seek to influence health behaviors exist on a range of different levels, and it is often challenging to mobilize the public to become responsive to these messages (Cavill & Bauman, 2007). A review by Marcus, Owen, Forsyth, Cavill, & Fridlinger (1998) revealed that there are a range of techniques and intervention tools used by mass media health campaigners in order to change behavior, some of which were more successful than others. Therefore, it is reasonable to suggest that the stimulus chosen for the purposes of the current investigation was not effective or persuasive enough to begin with; that is, those who created the video may not have employed the most efficacious techniques that lead to changes in health beliefs or attitudes.
The results of the current literature also provide clear evidence of the ceiling effect. The term *ceiling effect* is a research limitation that occurs when the highest possible or near highest possible score is reached through the testing instrument (Salkind, 2010). This commonly occurs on questionnaires, standardized tests, or other measuring instruments in research studies and usually results in a low likelihood that the testing instrument did not indicate a person’s true level of change. Tables 12 and 14 clearly demonstrate this effect, as subjects scored high pretest attitudes, norms, efficacy, perceived importance, and intentions relating to exercise. With the mean scores for the aforementioned variables already high to begin with, the posttest for all groups may not show a true indication true change since there was not much room for subjects to increase their scores to begin with.

Another interesting and significant point of discussion that is noteworthy to mention is that many of the study’s subjects were not able to recall how many likes the study’s stimulus video contained. By way of explanation, when presented with a multiple choice question asking how many likes the video on the previous page contained, only 112 (52.8%) of subjects who were exposed to the stimulus were able to choose the correct answer. The other 100 subjects (47.2%) who were exposed to the stimulus demonstrated that they were not able to remember how many likes the video contained, which was clearly displayed at the bottom left-hand corner of the video and is a very similar design to how likes are displayed in an authentic social media setting.

While the magnitude of subjects who demonstrated that they were not able to recall the correct number of likes was surprising, such results could have been due to several factors; first, it may be reasonable to suggest that the subjects simply didn’t notice the likes because they were focused on the message of the video. Second, some research suggests
that there is pressure to receive a high amount of likes on your own posts, not necessarily so much on content that is posted by other individuals (Burrow & Rainone, 2016; Krämer & Winter, 2008; Scissors, Burke, & Wengrovitz, 2016). Third, it is also a plausible explanation that the subjects did not notice the amount of likes on the stimulus because it was not socially endorsed by an individual with a degree of closeness or familiarity to them (Scissors et al., 2016). Fourth, it is also reasonable to contend that the subjects simply did not notice the amount of likes that the video had because they simply did not look for it, or care to notice such cues. However, because this study did not ask for an explanation as to why or why not the subjects noticed how many likes the video contained, there is no way of knowing. As such, future studies should investigate these reasons thoroughly, as this research provides an avenue in doing so.

It is also noteworthy to mention that individuals who participate in a viral, social setting may not perceive there to be any differences between zero likes, or a “low” amount of likes. While Table 14 clearly demonstrates that there are no significant differences between any of the groups in the current investigation, it is particularly important to point out that the possibility that zero likes on social media may be interpreted the same as a low amount of likes. In a study by Reich, Schneider, & Heling (2018), the differences between zero, two, and thirty likes were assessed in an online experiment of Facebook users. While this study focused on how likes can influence the self, as opposed to how individuals perceive others’ online content, the authors of this study found that receiving zero likes or two likes on Facebook did not statistically differ in leading to subjects’ higher affect. As a comparison, participants who received thirty likes resulted in higher positive affect, self-esteem, and belongingness. Although the goal of this study was to uncover how social
media can impact how individuals feel about themselves, it is still plausible to suggest that the aforementioned results imply that individuals do not perceive any difference between zero and a low amount of likes. This idea is also demonstrated through the current investigation.

Despite this study’s non-statistically significant hypotheses, this study was able to demonstrate statistical support for The Theory of Planned Behavior. To reiterate, the TPB posits that an attitude towards a behavior in combination with subjective norms and perceived behavioral control will shape an individual’s intentions to perform a desired behavior (Ajzen, 1991). The current study was able to find support for the theory; specifically, the study was able to demonstrate that attitudes and perceptions of behavioral control (or self-efficacy) were statistically associated with intentions to perform a health behavior. In this study, the subjects who contained more favorable attitudes about exercise behaviors were more likely to express intentions to exercise in the future ($H_{3a}$). In addition, subjects who expressed stronger self-efficacious exercise behaviors were also more likely to demonstrate that they intend to carry out their exercise intentions ($H_{3b}$). Finally, subjects who demonstrated higher levels of perceived exercise norms were also more likely to intend to exercise ($H_{3c}$). While statistical evidence of the Theory of Planned Behavior has been found in a number of past studies (Armitage, 2005; Gerand & Shepherd, 2012; Godin & Kok, 1996; Norman et al., 2002; Sheeran, Conner, & Norman, 2001), this study adds to a large body of literature that confirms the “testability” of the TPB, which provides important implications in the context of health, health behaviors, health attitudes, and so on. In addition, the statistical significance of $H_{3a-c}$ is useful, specific to health practitioners and marketers, to help determine why individuals do or do not practice health-promoting
behaviors. It may also help provide insight to how information should or should not be presented as an effective intervention strategy, and describe how health information on the Internet can be perceived.

In the larger context, this study provides important insight as to how health information that is circulating on the Internet may be perceived. In the broad scheme of this research, the non-significant hypotheses do not necessarily mean that social media “likes” have no effect on message receivers. These findings indicate that social media likes are a pattern of complex mechanisms that still have yet to be explored and understood by researchers. In fact, this area of research can be considered relatively new, as new methods are constantly in evaluation to understand the social impact of social media (Pulido, Redondo-Sama, Sordé-Martí, & Flecha, 2018). Current research suggests that social media likes serve as a form of social cues of acceptance, but may mean different things to different users (Scissors et al., 2016). However, this study also suggests that simply receiving a like may be less important than who that like comes from. The results of this study sheds new values on what it means to receive a like, and what it means when the “right” person likes the content in question. As such, this study provides an avenue for future research to look into how social media likes affect how health messages are perceived in terms of who specifically liked the content in question.

**Limitations and future avenues for research**

As with any study, the current study does not come without limitations. First, as mentioned previously, this study did not employ a Solomon four-group design as its method. Instead, it was the decision of the researcher to use a pretest-posttest control
group design. Because of the experimental design, this research cannot conclusively explain this study’s lack of significant findings. Future research should replicate this study using the Solomon four-group design in order to determine if the pretest items primed the subjects to respond a certain way in the posttest. Second, the current study also studied one health message in the context of social media. Past studies that were also interested in the effects of social endorsements on social media chose to show multiple messages with a number of different social cues (Alhabash et al., 2015). The current research suggests that one instance of social cues may not be enough to resonate with the subjects. Therefore, future studies should follow up by showing multiple messages of the same topic with a varying amount of likes in order to determine how important likes actually are in a social media setting. Third, the current study also did not hone in on the implication that likes, comments, and shares have in a social setting. Instead, this research chose to focus on the impact that only likes have on users’ perceptions of health-related messages. To fill in a research gap in the future, studies should further investigate how a combination of likes, comments, and shares may or may not impact individuals’ understanding of health messages, as the results of this study imply that only likes may not be enough to sway participants to behave or think one way or the other.

The source of the message, as well as who has socially endorsed said message, also deserves attention in future research. Previous research that has dipped into source credibility has indicated that credibility, specifically in marketing and advertising, is widely important when considering messages in campaigns and other PSA’s (Iyengar & Valentino, 2000). More specifically, past literature has demonstrated that trusted sources, such as a celebrity or a well-known company, were more likely to be perceived as credible and
therefore, more likely to be paid attention to, are a more effective means of sending out behavior-related messages (La Ferle & Choi, 2005). As such, this study did not focus on the source of the message, but rather the message itself. Specifically, the present research created an entirely simulated social media website for the purposes of the experiment only, and did not necessarily mimic a well-known social media website. In addition, the stimulus video was taken from a company who is a nonprofit organization and has about 25,000 likes on Facebook. To put it into context, larger promotional health companies such as Planned Parenthood and Proctor & Gamble have as many as 1.1 million and 5.6 million likes on Facebook, respectively. Given the magnitude of popularity that other popular health companies have, it may be reasonable to suggest that the subjects of the current study did not perceive the promotional video as credible due to the company in which it was taken from. This study provides a direction for future research to not only look at how social media metrics have an effect on perceptions of health messages, but also how different sources may also influence perceptions as well.

**Conclusion**

In the present age, social media has undoubtedly enhanced communication between individuals, organizations, and companies. In addition, social media has served as an authentic approach to promoting different kinds of health messages in order to prevent or encourage changes in public health. Since its creation, social media has become a widely popular method of communication particularly by health corporations who have an agenda to promote public health. In fact, individual, corporation, and organizational use of social media for health-related purposes is continuously increasing (Thackeray et al., 2012). In
fact, many public health companies such as the Centers for Disease Control and Prevention are actively using social media to promote a healthy way of life. While such claims postulate the usefulness of social media for health companies, it raises the important question, what are the consequences of health messages in a viral setting?

By its very nature, the present study was conducted in order to determine how perceptions of health messages may be altered from the result of varying amounts of “likes” that are attached to the health message, which is an important function of a number of different social networking sites, including Facebook, Twitter, or Instagram. While the current study found support for the Theory of Planned Behavior (Ajzen, 1991) in the context of social media, it was unable to find empirical support for the hypothesis that attitudes, intentions, perceptions of self-efficacy and importance would be made stronger depending on the amount of “likes” that the specific health PSA contained. Nonetheless, this study is still important because 1) social media allows for organizations to communicate health messages to their target audience, 2) social media can be used to inform, educate, and mobilize the public to empower individuals about health issues that pose a threat to a community, 3) social media can be used to enhance the speed of communication of specific health messages, 4) social media can be used to promote changes in behavior, and 5) social media can be used to understand how the public reacts to various health issues. As such, this research contributes to a growing body of literature that attempts to uncover how messages are perceived in a viral setting. This research can be used to further understand how post virality can influence public reactions and understandings of health issues, which will ultimately help agencies develop a strategic plan to find the best practices to reach a larger amount of people.
Social media reaches a wide audience, and whether one feels that it may do more
good or more harm, it will continue to be a useful tool to convey health information to its
audiences. This study shows that health information in the context of social media is
extremely complex, but regardless, content that is posted to social media has an impact on
its audience. In the future, it is worth the effort to try to understand how content that is
posted in a viral social setting is understood by audiences, because social media provides
countless opportunities to convey messages to the public about health, which have the
potential to ultimately improve the health and lives of its users.
Appendix A

Video Selection Questionnaire

Properties

1) The message of the video is clear.
2) The audio of the video is of good quality.
3) The images in the video are of good quality.
4) The text in the video is easily readable.

Purpose

5) The message of the video is clear.
6) The video makes me feel like I have the ability to succeed in my exercise goals, whatever they may be.
7) The goal of this video is to evoke behavior change in others.

Importance

8) The video topic is of important concern.
9) I will likely remember the message of the video.

Perceived Persuasion

10) The message of the video is persuasive.
11) The video is likely to increase knowledge about the benefits of physical activity.
12) The video will likely create favorable attitudes about physical activity.

Appendix B

Video Treatment Script

<table>
<thead>
<tr>
<th>VISUALS</th>
<th>AUDIO</th>
</tr>
</thead>
<tbody>
<tr>
<td>TEXT</td>
<td></td>
</tr>
<tr>
<td>00:01 8 Amazing Benefits of Regular Physical Activity</td>
<td>00:01 Upbeat music</td>
</tr>
<tr>
<td>00:05 Reduce the incidence of heart disease and high blood pressure by approximately 40%.</td>
<td></td>
</tr>
<tr>
<td>00:09 Lower the risk of colon cancer by over 60%.</td>
<td></td>
</tr>
<tr>
<td>00:13 Reduce mortality and the risk of recurrent breast cancer by approximately 60%.</td>
<td></td>
</tr>
<tr>
<td>00:18 Lower the risk of developing type II diabetes by 58%</td>
<td></td>
</tr>
<tr>
<td>00:21 Be twice as effective in treating type II diabetes than the standard insulin prescription and can save $2250 per person per year when compared to the cost of the standard drug treatment.</td>
<td></td>
</tr>
<tr>
<td>00:28 Lower the risk of stroke by 27%.</td>
<td></td>
</tr>
<tr>
<td>00:31 Reduce the risk of developing Alzheimer’s disease by approximately 40%.</td>
<td></td>
</tr>
<tr>
<td>00:36 Can decrease depression as effectively as medication or behavioral therapy</td>
<td></td>
</tr>
</tbody>
</table>
The US Federal Physical Guidelines and many studies show that 150 minutes per week of moderate intensity physical activity is required to achieve these health benefits.

Visit exerciseismedicine.org to learn more!
Appendix C

Manipulation Check

Please indicate the quantity of likes and shares that each social media post contains:

<table>
<thead>
<tr>
<th>Very low</th>
<th>Low</th>
<th>Medium</th>
<th>High</th>
<th>Very high</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Image 1] 2 people like this. 7 shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>![Image 2] 6 people like this. 3 shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>![Image 3] 16 people like this. 11 shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>![Image 4] 24 people like this. 18 shares</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Appendix D

Prettest in Main Study

Central Route Processing (Involvement)

1) I am interested in the adoption of physical activity.
2) I have a preferred workout regimen.
3) I would be interested in reading about physical activity.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
<td></td>
<td></td>
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</tr>
</tbody>
</table>

Central Route Processing (Ability)

4) I consider myself to be knowledgeable about the benefits of physical activity.
5) I am familiar with ways to stay active and healthy.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
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<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
</tr>
</thead>
<tbody>
<tr>
<td>Agree</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Disagree</td>
<td></td>
<td></td>
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<td></td>
<td></td>
</tr>
</tbody>
</table>

Social Media Use

Please indicate how often you do the following

Check my social media feed
Post selfies on social media
Post updates on my location or what I am doing on social media
Post photos or videos I have recorded to social media
Post content that I want to go viral on social media
Often sometimes rarely never

**Intention**

6) I intend to exercise at least a few times per week within the next month.

7) I will try to exercise at least thirty minutes, three days per week within the next month.

8) I intend to take regular physical activity in the future.

9) Presently, I intend to do active sports or vigorous physical activities a few times per week during my leisure time.

10) It is likely that I will engage in physical activity in the near future.

1 2 3 4 5

Strongly Agree Strongly Disagree

**Attitude**

11) There are many benefits of regular exercise.

12) Regular physical activity can promote good health and combat various health conditions and diseases.

13) It is important to exercise to maintain my general health.

14) Doing physical exercise makes me feel more positive and optimistic.

15) Lack of exercise would put my health at risk.

1 2 3 4 5

Strongly Disagree Strongly Agree

**Perceived Self-Efficacy**
16) I am confident I can participate in regular exercise when I am in a bad mood.

17) I am confident I can participate in regular exercise when I feel I don’t have the time.

18) I can manage to carry out my exercise intentions, even when I have worries and problems.

19) I am certain that I can exercise regularly, even if my exercise partner returns to a sedentary lifestyle.

20) I am able to exercise at least three times per week for thirty minutes.

<table>
<thead>
<tr>
<th>0</th>
<th>1</th>
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<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not confident</td>
<td>Moderately confident</td>
<td>Highly confident</td>
<td></td>
<td></td>
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<td></td>
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<tr>
<td>at all</td>
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</tbody>
</table>

Perceived Importance

21) Getting regular exercise is:

22) Staying active throughout the day is:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Unimportant</td>
<td>Important</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

23) Regularly participating in fitness classes, such as biking, swimming, or yoga, is:

<table>
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<tr>
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<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Not significant</td>
<td>Significant</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

24) A regular walking routine is:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>Is of considerable concern</td>
<td>Is not of considerable concern (reverse coded)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
25) Being physically fit is:

Trivial   Fundamental

1 2 3 4 5

**Subjective Exercise Norms**

26) Most people in my social network want me to exercise regularly in the next 2 weeks.

27) Most people in my social network would approve if I exercised regularly in the next 2 weeks.

28) Most people in my social network think I should exercise.

29) The people in my life whose opinions I value would approve of me walking on a treadmill for at least 30 minutes each day in the forthcoming month.

30) It is expected of me that I am active each day in the forthcoming month.

    1 2 3 4 5 6 7

Strongly disagree   Strongly Agree

**Big 5 Distractors**

31) I am the life of the party.

32) I am always prepared.

33) I don’t talk a lot.

34) I have difficulty understanding abstract ideas.

35) I feel comfortable around people.

36) I have little to say.

37) I sympathize with others’ feelings.
38) I start conversations.
39) I get chores done right away.
40) I am easily disturbed.
41) I have a soft heart.
42) I get upset easily.
43) I have excellent ideas.
44) I follow a schedule.
45) I get irritated easily.
46) I am exacting in my work.
47) I am quiet around strangers.
48) I am quick to understand things.
49) I don't mind being in the center of attention.
50). I often feel blue.

Strongly Disagree (1) Disagree (2) Neutral (3) Agree (4) Strongly Agree (5)
Appendix E

Simulated Social Media Blog and Stimulus Material

Main page with stimulus for experimental groups

Main page for control group
Things to know before your trip to Greece

1. Eat and drink like a local.
   Eating is invariably a casual affair in Greece. Look out for the restaurants that the locals dine in as the food will be much better. Just remember that Greeks eat late - often after 10pm.

   Always ask for local bottled wine, which is cheaper than bottled, or try a ferry spirit such as ouzo or tsipouro. Likewise, don't be lobbied off with bottled water, as what comes out of the tap is perfectly potable.

2. Go island hopping.
   There's no doubt that the golden age of island hopping was in the 70s and 80s, and most people now stick to one island per holiday. But ferry services are still plentiful and mostly reliable through the warmer months. Why not choose a group of islands like the feneions, the Dodecanese or the picturesque juicy Cyclades and see as many as you can? Always plan to return to your departure airport a day or two ahead of your flight through.

3. Love the strays and leave 'em.
   Today the stray cats of Santorini are fed and cared for by the island's residents and celebrated by visitors. There are now several charitable organisations dedicated to the health and well being (including spay/neuter services) for the island's stray cat population. The island recommends visitors to be kind and share food, but walk away to prevent a short livelihood.

---

2-ingredient banana oatmeal cookies

**Ingredients:**
- 1 cup quick oats (see note)
- 1 large overripe banana mashed to a liquid-like consistency
- 1/2 cup chocolate chips or other add-ins of your choice (optional)

**Directions:**
1. Preheat oven to 350°F. Line a baking sheet with silicone baking mat.
2. In a large bowl, add oats and mashed bananas. Mix with a fork until it becomes an evenly mixed, thick batter. If you plan on using add-ins like chocolate chips, mix them into the cookie batter at this time.
3. Make 4 rounds/balls out of the cookie batter. Place onto baking sheet, spacing about 2 inches apart. Gently press down on each ball so that it flattens into a round disc. Cookies will not spread much during baking, so place the in order when shaping and flattening your discs.
4. Bake for about 15 minutes until cookies are lightly browned and set. Cookie bottoms should also be brown and easily come off baking sheet. Let cookies cool before eating. Store untern cookies in the fridge.

**Notes:**
- Please use quick oats because old fashioned and steel-cut oats need more time to cook.

---

Distractor content for all groups
Appendix F
Posttest in Main Study

**BFI-10**

I see myself as someone who is reserved.

I see myself as someone who is generally trusting.

I see myself as someone who tends to be lazy.

I see myself as someone who is relaxed and handles stress well.

I see myself as someone who has few artistic interests.

I see myself as someone who is outgoing and sociable.

I see myself as someone who tends to find fault with others.

I see myself as someone who does a thorough job.

I see myself as someone who gets nervous easily.

I see myself as someone who has an active imagination.

Strongly disagree Disagree Neutral Agree Strongly agree

**Central Route Processing (Involvement)**

1) I am interested in the adoption of physical activity.

2) I have a preferred workout regimen.

3) I would be interested in reading about physical activity.

1 2 3 4 5 6 7

Agree Disagree
Central Route Processing (Ability)

4) I consider myself to be knowledgeable about the benefits of physical activity.

5) I am familiar with ways to stay active and healthy.

6) Intention

6) I intend to exercise at least a few times per week within the next month.

7) I will try to exercise at least thirty minutes, three days per week within the next month.

8) I intend to take regular physical activity in the future.

9) Presently, I intend to do active sports or vigorous physical activities a few times per week during my leisure time.

10) It is likely that I will engage in physical activity in the near future.

Attitude

11) There are many benefits of regular exercise.

12) Regular physical activity can promote good health and combat various health conditions and diseases.

13) It is important to exercise to maintain my general health.

14) Doing physical exercise makes me feel more positive and optimistic.
15) Lack of exercise would put my health at risk.

1    2    3    4    5

Strongly Disagree Strongly Agree

Perceived Self-Efficacy

16) I am confident I can participate in regular exercise when I am in a bad mood.

17) I am confident I can participate in regular exercise when I feel I don’t have the time.

18) I can manage to carry out my exercise intentions, even when I have worries and problems.

19) I am certain that I can exercise regularly, even if my exercise partner returns to a sedentary lifestyle.

20) I am able to exercise at least three times per week for thirty minutes.

0   1   2   3   4   5   6   7   8   9   10

Not confident   Moderately confident   Highly confident

at all

Perceived Importance

21) Getting regular exercise is:

22) Staying active throughout the day is:

Unimportant       Important

1    2    3    4    5

23) Regularly participating in fitness classes, such as biking, swimming, or yoga, is:
Not significant          Significant
1   2   3   4   5

24) A regular walking routine is:

Is of considerable concern          Is not of considerable concern (reverse coded)
1   2   3   4   5

25) Being physically fit is:

Trivial                          Fundamental
1   2   3   4   5

**Subjective Exercise Norms**

26) Most people in my social network want me to exercise regularly in the next 2 weeks.

27) Most people in my social network would approve if I exercised regularly in the next 2 weeks.

28) Most people in my social network think I should exercise.

29) The people in my life whose opinions I value would approve of me walking on a treadmill for at least 30 minutes each day in the forthcoming month.

30) It is expected of me that I am active each day in the forthcoming month.

   1   2   3   4   5   6   7

   Strongly disagree          Strongly Agree

**Distractor Items**

31) The website looks neat and clean.
32) After viewing the website, I have a good idea of what the website is about/theme of the website.

33) The website was welcoming and inviting.

34) The website was easy to navigate.

35) The website has a good online presence.

36) All information posted to the website page was relevant.

37) After viewing the website, I would like to become a frequent reader/visitor of the website.

38) The website is well organized.

39) The website seemed well thought out.

40) The website is likely to appeal to a variety ages.

41) If given the chance, I would ‘like’ posts on this website.

42) If given the chance, I would ‘like’ and ‘share’ content posted from this website.

43) I would recommend website to a friend.

44) The content posted to the website was unique and piqued my interest.

45) I have a fairly good understanding of the message that the website is trying to portray.

46) The website seemed professional.

47) I think the website would be a good space for people to socialize in.

48) All photos posted to the website were clear and of good quality.

49) I will likely remember this website experience.

50) The website left me with a good impression.

<table>
<thead>
<tr>
<th>Strongly Agree</th>
<th>Agree</th>
<th>Neutral</th>
<th>Disagree</th>
<th>Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2</td>
<td>3</td>
<td>4</td>
<td>5</td>
</tr>
</tbody>
</table>
**Comparison Orientation Measure**

I often compare with how I am doing socially (eg. Social skills, popularity) with other people.

I often compare myself with others with respect to what I have accomplished in life.

I always like to know what others in a similar situation would do.

If I want to find out how well I have done something, I compare what I have done with how others have done.

I always pay a lot of attention to how I do things compared with how others do things.

Strongly disagree disagree neutral agree strongly agree

**Demographic Information**

What is your age in years?

What is your gender?

Male    Female    Prefer not to answer

What is your education level?

Some high school    High school diploma    Some college    Associate’s degree    Bachelor’s degree    Some graduate school    Masters or law degree    PhD, MD, or other advanced degree

What is your marital status?

Married    Divorced    Single    Widowed    Separated    Other
What is your race?

Caucasian  Hispanic/Latino  Asian/Pacific Islander  African American  Caribbean
Native American  Other (Please specify)
Appendix G

Exact Research Instrument with Documented Procedural Instructions*

*Please note that all items were randomized.

Page 1:
My name is Adriana Mucedola, and I am a graduate student at Syracuse University. I am interested in learning more about website creation. I have created a lifestyle website/blog and would like your feedback. You will be asked to read through my website and answer various opinion questions about it. This will take approximately 20 minutes of your time.

I am inviting you to participate in my research study. For your involvement in this study, you will be compensated $1.00. Information will be anonymous. This means that your name will not appear anywhere and your specific answers will not be linked to your name in any way. Involvement in this study is voluntary. This means that you can choose whether to participate and that you may withdraw from the study at any time without penalty.

Whenever one works with the Internet, there is always the risk of compromising privacy, confidentiality, and/or anonymity. Your confidentiality will be maintained to the degree permitted by the technology being used. It is important for you to understand that no guarantees can be made regarding the interception of data sent via the Internet by third parties.

If you have any questions, concerns, or complaints about the research, please contact my advisor, Dr. Rebecca Ortiz at rortiz09@syr.edu.

By continuing, I certify that I am 18 years of age or older, and I wish to participate in this research study.

Page 2:
Please indicate your level of agreement with each of the following statements.

I am easily disturbed.
I get upset easily.
I get irritated easily.
Regular physical activity can promote good health and combat various health conditions and diseases.
Most people in my social network think I should exercise.

[Strongly Disagree] [Disagree] [Neutral] [Agree] [Strongly Agree]

Please respond to the following statements.
A regular walking routine is...
Being physically fit is...

[Of considerable concern] [2] [3] [4] [Not of considerable concern]

Page 3:
Please respond to the following statement.

Regularly participating in fitness activities, such as biking, swimming, or yoga, is...

[Not significant to me] [2] [3] [4] [Significant to me]

Please indicate your level of agreement with each of the following statements.

I have a soft heart.
Presently, I intend to do active sports or vigorous physical activities a few times per week during my leisure time.
It is important to exercise to maintain my general health.
Doing physical activity makes me feel more positive and optimistic.
I am exacting in my work.
I get chores done right away.
I follow a schedule.

[Strongly Disagree] [Disagree] [Neutral] [Agree] [Strongly Agree]

Please respond to the following statements.

I am confident that I can participate in regular exercise, even when I am in a bad mood.
I can manage to carry out my exercise intentions, even when I have worries or problems.

[Not Confident at all] [2] [3] [4] [Moderately Confident] [6] [7] [8] [9] [Highly Confident]

Page 4:
Please indicate your level of agreement with each of the following statements.

I don’t mind being in the center of attention.
I am interested in the adoption of physical activity.
I intend to exercise at least a few times per week within the next month.
I am quiet around strangers.
There are many benefits of regular exercise.
Lack of exercise would put my health at risk.
I am the life of the party.

[Strongly Disagree] [Disagree] [Neutral] [Agree] [Strongly Agree]
Page 5:
Please indicate your level of agreement with each of the following statements.

I am quick to understand things.
I have a preferred workout regimen.
It is likely that I will engage in physical activity in the near future.
I am always prepared.
I intend to take up regular physical activity in the future.
I often feel blue.
I am familiar with ways to stay active and healthy.

[Strongly Disagree] [Disagree] [Neutral] [Agree] [Strongly Agree]

Please respond to the following statements.

I am confident that I can participate in regular exercise, even when I feel I don’t have the time.
I am certain that I can exercise regularly, even if my exercise partner returns to a sedentary lifestyle.

[Not Confident at all] [2] [3] [4] [Moderately Confident] [6] [7] [8] [9] [Highly Confident]

Page 6:
Please indicate your level of agreement with each of the following statements.

I have little to say.
I would be interested in reading about physical activity.
I will try to exercise at least 30 minutes, three days per week within the next month.
I have difficulty understanding abstract ideas.
I feel comfortable around people.
I don’t talk a lot.
I consider myself to be knowledgeable about the benefits of physical activity.

[Strongly Disagree] [Disagree] [Neutral] [Agree] [Strongly Agree]

Please respond to the following statements.

Getting regular exercise is...
Staying active throughout the day is...

[Unimportant] [2] [3] [4] [Important]

Page 7
Please respond to the following statement.

I feel that I am able to exercise at least three times per week for thirty minutes.
[Not Confident at all] [2] [3] [4] [Moderately Confident] [6] [7] [8] [9] [Highly Confident]

Please indicate your level of agreement with each of the following statements.

Most people in my social network want me to exercise regularly in the next two weeks.
Most people in my social network would approve if I exercised regularly in the next two weeks.
The people in my life whose opinions I value would approve of me walking on a treadmill for at least 30 minutes each day in the forthcoming month.
It is expected of me that I am active each day in the forthcoming month.
I sympathize with others’ feelings.
I start conversations.
I have excellent ideas.

[Strongly Disagree] [Disagree] [Neutral] [Agree] [Strongly Agree]

Page 8
Please indicate how often you do the following.

Check my social media feed.
Post selfies on social media.
Post updates on my location or what I am doing on social media.
Post photos or videos I have recorded to social media.
Post content that I want to go viral on social media.

[Often] [Sometimes] [Rarely] [Never]

Stimulus Materials for Experimental Groups
Page 9
On the next page, you will begin to view the blog which I have created and would like some feedback on. For context, the blog is a lifestyle blog. The next page will show the blog’s homepage in its entirety. Please take note of all text on the blog, and read each caption carefully. You will be asked several questions about the blog’s content, style, layout, etc.

By clicking "next," you will begin to view the blog’s homepage. After viewing the homepage, you will be asked a question about it.

Page 10
[Subjects view simulated blog homepage. The page will not let subjects advance for at least 15 seconds].

Page 11
What was the title of the blog that you just viewed on the previous page?
A Blog About Cats
Adriana’s Blog
Livethelifestyle.
Confessions of a College Students

Page 12
Thank you for viewing the home page.

In the next 3 pages, you will be asked to view individual content that has been posted to the blog. You will be asked to read articles and watch videos. Please make sure that your volume is on. Please take note of all text on the posts, and read each article carefully. After seeing each page, you will be asked a question relating to the blog's content, style, layout, etc.

By clicking 'next,' you will begin to view the blog content.

Page 13
[Subjects view simulated blog article about Greece. The page will not let subjects advance for at least 15 seconds].

Page 14
The previous article made suggestions about traveling to which country?
Sudan
Greece
Kenya
Madagascar

Page 15
Please watch the following video, which is content that was directly posted to the blog. Please make sure your volume is turned on.

If you are using a mobile device and you are unable to see the video, please tap on the white space and it will appear. If you are on a mobile device and cannot see the video well, please click on the full screen button so the video will fit your device's screen.

You will need to watch the video in its entirety in order to advance to the next page.

Page 16
[Subjects view stimulus video. Group 1 views with zero likes. Group 2 (low likes) views with 4 likes. Group 3 (medium likes) views with 431 likes. Group 4 (high likes) views with 1,048 likes. The page will not subjects advance for at least 65 seconds].

Page 17
What was the video on the previous page about?
Exercise
Disney World
How to save money
Turtles

Approximately how many likes did the previous video have?

Do you perceive that number of likes to be a low, medium, or high amount?

Low
Medium
High

Page 18
[Subjects view simulated blog article about cookie recipe. The page will not let subjects advance for at least 15 seconds].

Page 19
Which of the following was an ingredient listed in the recipe shown on the previous page?

Oatmeal
Swordfish
Carrots
Chicken stock

Stimulus Materials for Experimental Groups
Page 9
On the next page, you will begin to view the blog which I have created and would like some feedback on. For context, the blog is a lifestyle blog. The next page will show the blog’s homepage in its entirety. Please take note of all text on the blog, and read each caption carefully. You will be asked several questions about the blog’s content, style, layout, etc.

By clicking "next," you will begin to view the blog’s homepage. After viewing the homepage, you will be asked a question about it.

Page 10
[Subjects view simulated blog homepage. The page will not let subjects advance for at least 15 seconds].

Page 11
What was the title of the blog that you just viewed on the previous page?

A Blog About Cats
Adriana’s Blog
Livethelifestyle.
Confessions of a College Students

Page 12
Thank you for viewing the home page.

In the next 3 pages, you will be asked to view individual content that has been posted to the blog. You will be asked to read articles and watch videos. Please make sure that your volume is on. Please take note of all text on the posts, and read each article carefully. After seeing each page, you will be asked a question relating to the blog's content, style, layout, etc.

By clicking 'next,' you will begin to view the blog content.

Page 13
[Subjects view simulated blog article about Greece. The page will not let subjects advance for at least 15 seconds].

Page 14
The previous article made suggestions about traveling to which country?
Sudan
Greece
Kenya
Madagascar

Page 15
Please watch the following video, which is content that was directly posted to the blog. Please make sure your volume is turned on.

If you are using a mobile device and you are unable to see the video, please tap on the white space and it will appear. If you are on a mobile device and cannot see the video well, please click on the full screen button so the video will fit your device's screen.

You will need to watch the video in its entirety in order to advance to the next page.

Page 16
[Subjects view control video, which is a 60-second kitten compilation. The page will not let subjects advance for at least 65 seconds].

Page 17
What was the previous video about?

How to fly an airplane
Where to go if you lose your wallet
DIY rug
Kittens

**Page 18**
*Subjects view simulated blog article about cookie recipe. The page will not let subjects advance for at least 15 seconds.*

**Page 19**
Which of the following was an ingredient listed in the recipe shown on the previous page?

- Oatmeal
- Swordfish
- Carrots
- Chicken stock

**Page 20**
Thank you for viewing the blog.

In this last section, you will be asked additional follow-up questions about the blog and content that you have just seen.

By clicking 'next,' you will begin the last portion of this survey.

**Page 21**
Please indicate your level of agreement with the following statements.

After viewing the website, I have a good idea of what the website is about/the theme of the website.
The website was easy to read.
The website had a good online presence.
All information and content posted to the website page was relevant.
Most people in my social network would approve if I exercised regularly in the next two weeks.

[Strongly Disagree]  [Disagree]  [Neutral]  [Agree]  [Strongly Agree]

Please respond to the following statements.

Getting regular exercise is...
Staying active throughout the day is...

[Unimportant]  [2]  [3]  [4]  [Important]

**Page 22**
Please indicate your level of agreement with each of the following statements.

After viewing the blog, I would like to become a frequent reader or visitor to the blog.
Presently, I intend to do active sports or vigorous physical activities a few times per week during my leisure time. The people in my life whose opinions I value would approve of me walking on a treadmill for at least 30 minutes each day in the forthcoming month.

I intend to exercise at least a few times per week within the next month.

The blog was well organized.

I can manage to carry out my exercise intentions, even when I have worries and problems.

I am certain that I can exercise regularly, even if my exercise partner returns to a sedentary lifestyle.

I am able to exercise at least three times per week for thirty minutes.

The blog looked welcoming and inviting.

The blog looked neat and clean.

The content posted to the blog was unique and piqued my interest.

I am interested in the adoption of physical activity.

Lack of exercise would put my health at risk.

The blog seemed to be well thought out.

The blog is likely to appeal to a wide variety of ages.

I would be interested in reading about physical activity.

If given the chance, I would ‘like’ posts on this blog.

I will likely remember the blog experience.

I consider myself to be knowledgeable about the benefits of physical activity.

I will try to exercise at least thirty minutes, three days per week within the next month.
It is important to exercise to maintain my general health.  
Most people in my social network think I should exercise.  
I would recommend this blog to a friend.  
All photos posted to the blog were clear and of good quality.

[Strongly Disagree]  [Disagree]  [Neutral]  [Agree]  [Strongly Agree]

Please respond to the following statement.

I am confident that I can participate in regular exercise when I am in a bad mood.  
I am confident that I can participate in regular exercise when I feel I don’t have the time.

[Not Confident at all]  [2]  [3]  [4]  [Moderately Confident]  [6]  [7]  [8]  [9]  [Highly Confident]

**Page 25**

Please respond to the following statement.

Regularly participating in fitness classes, such as biking, swimming, or yoga is...

[Not Significant to Me]  [2]  [3]  [4]  [Significant to Me]

Please indicate your level of agreement with each of the following statements.

I have a preferred workout regimen  
There are many benefits of regular exercise.  
It is expected of me that I am active each day in the forthcoming month.  
The blog looked professional.  
I intend to take up regular physical activity in the future.  
Doing physical exercise makes me feel more positive and optimistic.  
The blog left me with a good impression.

[Strongly Disagree]  [Disagree]  [Neutral]  [Agree]  [Strongly Agree]

**Page 26**

Please indicate your level of agreement with each of the following statements.

If given the chance, I would ‘share’ content posted on the blog to my own social media.  
I am familiar with ways to stay active and healthy.  
It is likely that I will engage in physical activity in the near future.  
I have a fairly good understanding of the message that the blog was trying to portray.  
Most people in my social network want me to exercise regularly in the next two weeks.  
Regular physical activity can promote good health and combat various health conditions and diseases.  
I think the blog would be a good space for people to socialize in.
Please respond to the following statements.

A regular walking routine is...
Being physically fit is...

[Of Considerable Concern] [2] [3] [4] [Not Of Considerable Concern]

Please indicate your level of agreement with each of the following statements.

I often compare how I am doing socially (ex. social skills, popularity) with other people.
I see myself as someone who is reserved.
I see myself as someone who is generally trusting.
I see myself as someone who tends to be lazy.
I often compare myself with others with respect to what I have accomplished in life.
I see myself as someone who gets nervous easily.
I see myself as someone who has few artistic interests.

Please indicate your level of agreement with each of the following statements.

I see myself as someone who is relaxed and handles stress well.
I always like to know what others in a similar situation would do.
I see myself as someone who is outgoing and sociable.
I see myself as someone who tends to find fault with others.
I see myself as someone who does a thorough job.
If I want to find out how well I have done something, I compare what I have done with how others have done.
I see myself as someone who has an active imagination.
I always pay a lot of attention to how I do things compared to how others do things.

What is your age in years?

What is your gender?

Male
Female
Non binary/third gender
Prefer not to say
Other (please indicate:)

**Page 30**
What is your highest level of education?

- Some high school
- High school diploma
- Some college
- Associate's degree
- Bachelor's degree
- Master's degree
- Ph.D., M.D., J.D., or other advanced degree
- Other (please indicate:)

**Page 31**
What is your marital status?

- Married
- Divorced
- Single
- Separate
- Widowed
- Other (please indicate:)

**Page 32**
What is your race/ethnicity? Please select all that apply.

- White or Caucasian
- Hispanic or Latino(a)
- Asian or Asian American
- Black or African American
- American Indian or Alaska Native
- Native Hawaiian or Other Pacific Islander
- Other (please indicate:)

**Page 33**
Thank you for taking the survey. Your response has been recorded.

Your MTurk completion code is:
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EDUCATION
Ph.D., Syracuse University, Anticipated 2022
  Mass Communications

M.A., Syracuse University, June 2019
  Media Studies
  Advisor: Dr. Rebecca Ortiz
  3.91 GPA

B.A., SUNY Oswego, May 2017
  Broadcasting and Mass Communications major, Music minor
  3.94 GPA
  Summa Cum Laude

A.A.S., Cayuga Community College, May 2015
  Telecommunications/Music Recording
  4.0 GPA
  Summa Cum Laude

RESEARCH INTERESTS
  • Health communications
  • Effects of mass media campaigns on health behaviors
  • Feminist theory and gender studies

CONFERENCE PRESENTATIONS


Mucedola, A. (2018). An apple a day? Responses to contradictory nutrition information on Facebook. Paper accepted for presentation at the annual midwinter conference of the Association for Education in Journalism and Mass Communication, Norman, OK.

EXPERIENCE

S.I. Newhouse School of Public Communications at Syracuse University

Media Law: COM 408
IA; Prof. Nina Brown, Fall 2017, Spring 2018, & Fall 2018
This course teaches the importance and implications of the First Amendment, specific to the professions of advertising and public relations. This course explored the rights and responsibilities awarded to the press and other media professionals.

S.I. Newhouse School of Public Communications at Syracuse University

Research Assistant; Dr. Lars Willnat
Summer 2018
Contributed to the research of Dr. Lars Willnat by collecting scholarly articles pertaining to social media’s impact on journalists and the journalism profession. Utilized EndNote to manage references and PDF files.

State University of New York at Oswego

Mass Media & the Law
Teaching Assistant; Dr. David Crider, Spring 2017
Mass media and the law is a course that examines the freedoms and rights afforded to the various media via the First Amendment. The course additionally explores the rights and social responsibilities of the press, the rights and protections afforded to individuals, and pressures upon the media from governmental and economic sources.

INTERNSHIPS

2015  Audio Production Intern, Galaxy Communications, Syracuse, New York
2016  Facebook Media Specialist, Outings & Adventures, Virtual Internship
2016  Social Media Supervisor, Outings & Adventures, Virtual internship

STUDY ABROAD