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Motivational Strategies for Improving Healthy Eating Habits: A Thematic Analysis of a MyPlate Twitter Campaign

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Motivational Strategies for Improving Healthy Eating Habits: A Thematic Analysis of a MyPlate

Twitter Campaign

By

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This thesis has been examined and approved by the following members of the student's

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Abstract

This study examined the #MyPlateMyWins Twitter campaign from ChooseMyPlate.gov to understand the motivational strategies used to influence people to change their eating habits. Although studies have explored healthy diet promotion in a variety of contexts, researchers have been slower to explore how Twitter is used in this regard. Applying Uses and Gratification (U&G) theory and using a thematic analysis, this paper found three major strategies used by the campaign: Starting with small changes in health behavior; being a healthy eating role model for kids; and, remaining physically active. These findings should be helpful for organizations or individuals to design effective strategies on social media platforms to advocate people to change their healthy eating behavior. A major limitation of this research is that it used data from only one campaign and one hashtag. Accordingly, I suggested conducting future research using persuasive contents from more than one campaign and hashtag to find the more refined outcome.

Keywords: healthy eating, social media, thematic analysis, Twitter, U&G theory

Contents

CHAPTER ONE: INTRODUCTION

SparkPeople, a home of 16 million registered members, publishing information related to health, fitness, and food, quoted William Londen, "To insure good health: eat lightly, breathe deeply, live moderately, cultivate cheerfulness, and maintain an interest in life" (SparkPeople, 2011). Most individuals across the world understand the importance of health for being happy, healthy, and active throughout our lives. Yet, at the same time, many do not know how to lead a healthy life or (un) consciously take actions that put our health in jeopardy. Rolls (2003) stated that Americans have no self-control over food choice, in terms of how much food they should eat or what food they should eat. Even in laboratory settings where food and eating were the main focus, many participants were found to be unaware about appropriate food consumption, Rolls added. As a result, Rolls found people's health is at risk with various types of diseases along with unhappiness. More than 80 percent of adults in the United States are not involved with eating low-calorie foods or engaging in leisure-time physical activities (Mokdad, Ford, Bowman, Dietz, Vinicor, Bales, & Marks, 2003). According to the Physical Activity Council (PAC) (2016), around 82 million people over age six are not physically active. This paradox is particularly apparent in the United States, where facilities and programs for maintaining good health abound and yet, health literacy and the capacities for enacting healthy behaviors remain an enduring challenge. Researchers have asserted that people need to acquire knowledge and develop awareness about what they are eating or drinking in each meal. Health literacy enables people to control and shape their health (Nutbeam, 2008). Around 80 million Americans have limited health literacy, which puts them at a greater risk of poorer access to health care and poorer health outcomes (Berkman, Sheridan, Donahue, Halpern, & Crotty, 2011). However, health behavior change depends on individuals' capacity to understand health information along

with socio-cultural factors and barriers (Baker, 2006). Several factors contribute to the

prevalence of obesity, including: food environment, decreases in physical activity, sleep debt,

drug-induced weight gain, and changes in distribution of ethnicity and age (Wright & Aronne,

2012). Socio-economic status, social roles and circumstance, and cultural factors further

contribute to this issue as well (Ball & Crawford, 2010).

  As an example, I look at my own life: I am an educated person with general knowledge

for distinguishing what foods are good or bad for my health. Despite this knowledge, I am used

to eating less-nutritious foods because of good taste and being tempted with attractive media

advertisements. Prior to coming to the United States in 2014, maintaining good health was less

of a concern to me. Rather, my concerns were more about my job performance and wage

earnings at the end of each month because I believed that money would make me happy.

Moreover, a happy life for me means that I am capable of buying food, living in a standard

house, and having enough money for entertainment. In Bangladesh, food is viewed as a measure

of whether you are rich or poor. Rich people regularly eat different kinds of meat (beef, goat, &

chicken) and fish, which are costly, with their meals. In contrast, poor people mostly eat fresh

vegetables, especially as they have more limited capacity for storing food. In addition, rich

people always use transportation, even for short distances. On the other hand, poor people travel

to most of their destinations by walking, except for long distances. Poorer people also do their

own household work, whereas many rich people have home servants. As a result, I can say,

people's healthy eating behavior depends on their social class. Because of different food habits

and lifestyle, I observed that people who are considered as being from poorer classes mostly look

slim and suffer less from different diseases, whereas higher-class people are seen mostly as

overweight or obese and suffer from different diet-related diseases. However, the reverse

scenario is often seen in the United States: Higher-class people tend to look slimmer and fit because of their conscious food habit and physical activities, whereas lower-class individuals are disproportionately overweight or obese.

In coming to the United States, I'm increasingly aware of people around me who are conscious of health and fitness. People are always running on the pavement or active in the gymnasium. There are even separate lanes for cyclists. Fast-food shops, such as McDonald's, provide healthy food choices, such as a healthy salad mostly made with chicken, vegetables and fruit. Another fast food chain shop, Wendy's, similarly offers chicken salads and grilled chicken wraps. Moreover, all kinds of packaged foods in the country contain nutrition information so that people easily understand what they are eating, and their calorie intake.

Despite having these food choices and access to different kinds of health facilities (gymnasiums, pavement, cycling lanes), the Centers for Disease Control and Prevention (CDC) estimates that around 70 percent of Americans, ages 20 and over, are categorized as overweight, and 37 percent are obese (CDC, 2016). Having lived in the United States for approximately two years, I am gaining weight and becoming fat because of my sometimes-unhealthy eating habits and lack of participating in any physical activities. I eat meat (mostly beef) almost five days a week. These eating habits make me too lazy to wake up, lethargic, and I sometimes experience stomach pains. People around me have similar problems of gaining weight, and suffering from different illnesses. Out of curiosity, I conducted a Google search and found various types of suggestions mainly on eating vegetables and fruits, avoiding meat items, drinking plenty of water and avoiding soft drinks, and exercising for maintaining good health. Being encouraged by this information, I tried to bring changes in my eating habits by reducing meat consumption, drinking more water, adding vegetable items with a weekly meal list, and participating in some physical

activities. These changes are helping me lead a more active life as I can more easily wake up in the morning, and no longer suffer from stomach pain, gas, and heartburn.

Problem Statement

Information regarding a variety of health issues, including healthy eating behavior, is widely available on the Internet. In a survey, Pollard, Pulker, Meng, Kerr, and Scott (2015) found around one-third of the online health information seekers in the Australia use the Internet as the main source for getting ideas about healthy food. Thanks to availability of health information on the Internet, people seek health information from online sources. This prompted health organizations and professionals in both public and private sectors to educate people to enable them to quality online health information. The U.S. Department of Health Human Services launched such a project titled "Healthy People 2020" to enable people to make informed health decisions. One of the project's four over-arching goals is to promote quality of life, health development, and health behavior changes across all stages of life (People, 2016, p. S159).

People's poor knowledge and skills for evaluating online health information are also problematic (Cline & Haynes, 2001). Inability to choose reliable health information or the reluctance to apply this information puts a large portion of people in danger of different diseases (Ramirez, Martinez, Freres, Lewis, & Hornik, 2009; Kwon, Yoo, & Aguilar, 2013). If people are able to get correct health information, they are supposed to develop their habit to eat healthy food, which helps them to maintain a healthy lifestyle. Otherwise, people's healthy food habit and lifestyle might be at risk. Studies show that people's access to social media are rapidly increasing, and thus social media emerges as an important communication channel for providing health information and promoting public health (Loss, Lindacher, & Curbach, 2013).

Additionally, health professionals and health organizations are increasingly leveraging social media by posting health information aimed at improving health literacy (Erzurum, 2015; Fox, 2011; So, Prestin, Lee, Wang, Yen, & Chou, 2016). Social media are considered open source communication platforms where anyone, lay person or expert, can post and share (potentially) misleading and unreliable health information (Sharma, Yadav, Yadav, & Ferdinand, 2016).

Many health organizations are using social media platforms to convey healthy-related messages and advocate people in this connection. The online communication between health-related organizations and people is not the same of face-to-face communication. Marshal McLuhan's concept of new way of communication suggests the "medium is the message" (McLuhan & Fiore, 1967). Such online communication is more interactive on social media platforms than traditional online communication because social media provides two-way communication. Considering all of this, the way of social media communication used by health-organizations with people is significant to let them receive proper message and take right health-related decision. However, no study was found how Twitter campaign advocates people on health-related issues.

Purpose of the Study

This study examined the Twitter contents of a U.S. Department of Agriculture (USDA) health campaign to contribute to the improvement of public health. Specifically, I explored how the USDA used Twitter for the MyPlate campaign, which was launched in 2011 to educate Americans about new dietary guidelines and promote healthy eating behaviors. I intended to focus on MyPlate's Twitter posts, as well as the feedback provided from Twitter users that came in the form of comments.

Moreover, my exploration of MyPlate's presence on Twitter is guided by the framework of Uses and Gratification (U&G) theory. The theory provided a lens for studying media content exposure and consumption with respect to media users' gratification and needs. Rosengren (1974) explained that "needs generate perceived problems and suggest solutions which motivate contact with mass media and inspire other forms of social activity which then either successfully or unsuccessfully gratify the need" (as cited in Lull, 1995, p. 94). When it comes to online health information, people are motivated to consume content that comes from a reputed source to fulfill their needs (Kim & Choi, 2004). Health information linked to the MyPlate campaign comes from the USDA's national dietary guidelines, which are updated every five years. To analyze the Twitter data of the campaign, I employed a thematic approach which allows for analyzing meaning in context, and finding manifest themes observable within data and latent theme from data interpretation (Chapter, 2004). To examine the role of health promotion of the MyPlate campaign through social media, I posit the following research question:

RQ1: How does the MyPlate campaign seek to motivate Twitter users and promote healthy eating behaviors?

Precis of the Chapters

In chapter 2, I discussed three concepts that include social media, healthy eating behavior (HEB), and obesity management along with theoretical framework of the study. Social media platforms, especially Twitter, are discussed, focusing on their growth as new medium for health information. I examined the existing debate on the definition of HEB and its pros and cons in respect to practicality. I also highlighted the factors of obesity and the way out of addressing the problem. As the theoretical lens, I introduced Uses and Gratifications theory for my study. In chapter 3, I discussed thematic analysis as well as data collection procedures and data analysis

process. Chapter 4 focused on findings and analysis of the study. Three themes – small changes in eating habits, being a healthy eating role model, and remaining physically active – are discussed in this chapter. The last chapter reinforced the discussion on findings of the study as well as limitation, real word implications, and future research direction.

CHAPTER TWO: LITERATURE REVIEW

In this chapter, I discussed existing literature about the growing importance of social media in respect to the promotion of healthy eating behaviors. In order to develop a foundation of the study, this literature review focused on Twitter as a social media platform for online health content. Second, this study discussed healthy eating behaviors. Finally, the chapter addressed the importance of reliable online health content for healthy lifestyles.

Social Media

The emergence of social media and Web 2.0[1] represent new modes of communication that empower people to freely express their ideas online while simultaneously receiving feedback from others in creative, and sometimes in critical ways (Lozano & Lores, 2013). Social media differ from traditional media by democratizing the ability of individuals to publish information, as they are less expensive, more accessible, and have more publishing tools within the reach of consumers (Erzurum, 2015). In addition, the traditional media, such as newspapers and television channels, are in a limited position in terms of direct interaction with its audiences, who are mostly passively involved with its contexts. Some of the most common forms of interactive programs of the traditional media are talk shows, instant text messaging, and letters to the editor (Meraz, 2009; Rafaeli, 1988). Increasingly, the sharing or posting the contents of traditional media by individuals or organizations enriches social media**,** such as Facebook, Twitter, and YouTube (Arisoy, 2016; Yoo, Kwon, & Pfeiffer, 2013). Then, people on the social media give their feedback on that content. In addition, social media work as a nexus from both individual-to-individual and individual-to-organization, allowing people to sustain knowledge and develop

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[1] The term Web 2.0 was developed by O'Reilly (2007) to explain the more dynamic use of the web following the growth of social media and other user-generated platforms.

interactive relationships with different types of groups and individuals (Carpenter &

Lertpratchya, 2016). Because of its global visibility, social media provide easy access to online

social support for the people who are seeking information and emotional support on a health

issue (Chen, Yang, Toso-Salman, Schear, & McGoldrick, 2016). Moreover, social media work

as a good medium for health organizations to collect a variety of data from people who are

sharing their demographic and everyday lifestyle information, such as work, communication, and

life (Ben-Harush, Carroll, & Marsh, 2012; Robledo, 2012).

Thanks to their accessibility via smartphones, social media platforms are more accessible

than traditional modes of communication. Lenhart (2015) found that 88 percent of Americans

between the ages of 13-17 own or have access to smartphones. Lenhart noted that Facebook is

the most visited website among teenagers and 71 percent of the teens frequently visited the site.

Other popular social media sites included Instagram (52%), Snapchat (41%), and Twitter (33%).

Fox (2006) stated that 80 percent of adult American Internet users searched different kinds of

health information online such as specific diseases or medical problems (64%), medical

treatments or procedures (51%), diet, nutrition, vitamins, or nutrition supplements (49%), and,

exercise or fitness (44%). According to Fox, 66 percent of online health information seekers find

health information through a general search in search engines (like Google or Yahoo), and 27

percent seek health information through specific health websites. These findings indicated

growing demand of online health information among people. Wartella, Rideout, Montague,

Beaudoin-Ryan, and Lauricella (2016) similarly found that 84 percent of U.S. American

teenagers receive health information through the Internet in order to engage in healthier habits

related to eating, sleeping, controlling stress, and being fit. Specifically, they found 49 percent of

teens use Google to direct them to health information and 31percent browse medical websites.

However, a good portion of teens found health information from social media instead of traditional types of online platforms, such as one in five from YouTube, 9 percent from Facebook, and 4 percent from Twitter. Divecha, Divney, Ickovics, and Kershaw (2012) indicated that health promoters find online communication medium as a good channel for disseminating health information to promote people's health. It also found that the tendency to use social networking sites for the purpose of finding health information is growing.

The above literature review expressed that social media became popular communication tools because of their diversified functions of interaction, such as content sharing and receiving, real-time interaction, and opportunities for social connections across time and distance. Moreover, studies indicate a growing interest in the use of social media for health promotion.

Social media as health promotion tool

The use of social media has grown rapidly over the last couple of years, and the trend continues to grow as a result of its multi-purpose functions. Facebook's statistics show that the active users of this company were 360 million as of December 1, 2009, and the number reached 1.18 billion as of September 2016 ("Company-info Facebook," n.d.). The growth of Twitter is also noticeable, as its active users increased from 30 million in the first quarter of 2010 to 317 million in the third quarter of 2016 ("About Twitter," 2016.). Another popular social media site, YouTube, indicated that they have more than one billion regular users, as one-third of Internet users watch its video contents ("YouTube," 2016).

Erzurum (2015) argued that social media platforms are quickly growing mediums for the diffusion of information and ideas, where both health organizations and professionals have opportunities for active involvement in individual and community health promotion. Fox (2011) mentioned that 62 percent of adult American Internet users use social media sites such as

Facebook for following their friends' health experiences and updates, getting health information and drawing the attention of others to certain health issues. Moreover, 39 percent of e-patients (people who are totally dependent on online health information for their treatment) collect health information from social media sites for their health queries and updates (Fox & Jones, 2009). Twelve percent of e-patients also use Twitter to update their health information or see updates from others, the researchers added. So, et al. (2016) found that Twitter is an effective tool for disseminating and sharing health information, because people mostly retweet interesting facts and statistical data, which are emotionally evocative and humorous. Turner and Robinson (2014) also suggested that Twitter is an excellent tool for disseminating health information to the millions of people within a short time. In terms of access in social media, Facebook is the most popular social networking site in the United States as 72 percent adults use this platform (Duggan, 2015). Loss et al. (2013) stated that Facebook is a novel platform to expose health information publicly, and interact with its users to exchange their ideas and support a particular issue. This interaction empowers the Facebook users to take action for improving their health.

Colgrove (2014) stated that the flow of health information has traditionally followed a top-down approach, as people would rely on the expert opinions of health professionals. However, the recent developments of the Internet and social media have created vast opportunities for individuals to obtain health information from different communication channels that are enriched with content contributed by health professionals. As a result, social media are used not only to obtain health information, but also to get advice for healing from different diseases. According to Ratzan (2011), social media platforms are effective for communicating health information aimed at preventing diseases and improving wellness during unrest and conflict situations. Sundar, Rice, Kim, and Sciamanna (2011) considered new media as the most

important technological tools for improving health throughout the society. They pointed out a number of advantages for obtaining health information online:

> Better informed patients for physicians, broader range of health information, collaborative health decision making, connect patients and healthcare providers who are geographically or professionally isolated, convenient and efficient learning environments, and increase interaction with others dealing with the same problem. (p.183)

This new communication medium is also a platform for gathering health information on a particular health issue. However, getting accurate health data from social media in some cases is quite difficult. For example, Walker (2013) explained that more than 300 organizations signed up to observe "Rare Disease Day" through social media with the goal of creating more awareness and resources for the people who are suffering from different diseases.

Furthermore, social media reduce the gap between healthcare providers and recipients because of their online presence and interaction. Macario, Ednacot, Ullberg, and Reichel (2011) explained that communication is effective when health promotion practitioners use social media to provide their expert opinions and inspire people to be part of their conversation. As a result of the presence of both health professionals and health consumers on social media, people are finding benefits for health treatment purposes (Marcario, et al., 2011). However, Marcario et al. expressed caution that without involvement of health professionals on social media, gaps will be filled by others who do not have expertise and proper knowledge about health issues. For example, Sharma, et al. (2016) stated that misleading online health information sometimes gets significant attention and becomes an additional factor for addressing health problems. The researchers found that inappropriate health content on social media caused the blocking of a measure aimed at controlling a pandemic in Brazil.

Health consumers frequently face difficulties in measuring what is good or bad health information (Macario et al., 2011). Moreover, 52 percent of people believe that almost all health information available online is credible and 44 percent believe that this information is accurate (Rainie &Fox, 2000). In a recent study, researchers discovered that out of 200 posts on Facebook regarding the Zika virus, twelve percent were misleading (Sharma et al., 2016). Moreover, there is a risk that misleading information will become more popular on social media than accurate information. For example, "the most popular misleading post was a video titled "10 reasons why Zika virus fear is a fraudulent medical hoax." It had more than 530,000 views, more than 19,600 combined shares, and more than 600 supportive comments" (Sharma et al., p.2).

Health organizations circulate health messages or information via social media to connect many people. Biswas (2013) analyzed two leading health organizations, including the Centers for Disease Control and Prevention (CDC), to see how they used social networking sites during pandemic situations such as H1N1 flu (known as swine flu or Influenza A) in 2009. He mentioned that organizations circulated five types of messages during crises, which included: diagnosis or investigation, prevention measures, treatment issues, situation update, and promotion of web based services through their official website and social media sites, such as Twitter and Facebook.

Additionally, health organizations use interactive features of social media for establishing their credibility. Park, Reber, and Chon (2016) analyzed three major health organizations (the American Heart Association, the American Cancer Society, and the American Diabetes Association) to investigate their Twitter use for health promotion and public engagement. These organizations used Twitter to engage people by tweeting and retweeting health messages through photos and videos to build community. Park et al. suggested that health organizations could

engage people to address their issues by delivering more action-oriented tweets and play an important role in health literacy. Abramson, Keefe, and Chou (2015) analyzed the Facebook pages of Breast Cancer organizations and suggested that health organizations should moderate and monitor their Facebook pages for correcting and deleting incorrect user-generated contents. They added that evidence-based efforts and educational aims work better for reducing health risk.

Current studies found that health organizations mostly use Twitter and Facebook as social media tools for effective communication, and promoting health wellness and diseases prevention. The usage of social media's interactive features is increasing the credibility of health organizations as well as playing important role for boosting health literacy and reducing different kinds of health hazards. Thus, health organizations' presence on the social media with a variety of contents is a potential way to promote healthy eating behavior.

Healthy Eating Behavior

Healthy Eating Behavior (HEB) is a person's preference for healthy food items. This preference mainly depends on one's categorization of foods and eating situations as healthy or unhealthy (Falk, Sobal, Bisogni, Connors, & Devine, 2001). Conceptualizing a concrete definition of HEB is difficult as interrelated factors, reflecting one's personal, social, cultural, and environmental influences on choosing particular foods with respect to identity, image, and social belonging (Verstraeten et al., 2014). Povey, Conner, Sparks, James, and Shepherd (1998) explained:

> Eating vegetables, eating fruit and having a balanced diet were perceived as the most important part of healthy eating, whereas avoiding sweets, avoiding meat and eating meat were seen as the least important. The behaviors perceived as the most unhealthy, on the

other hand, were eating high fat foods, eating greasy food and eating junk food, whereas

those perceived as the least unhealthy were avoiding meat, eating foreign food and

avoiding traditional English food. (p. 176)

Falk et al. (2001) found that perceptions about healthy eating included "eating low fat,

eating natural or unprocessed foods, balanced eating, eating to prevent disease, maintaining

nutrient balance, eating to manage an existing disease, and eating to control weight" (pp. 429-

30). Ramirez et al. (2009) stated that people could be psychologically motivated to adopt healthy

eating behavior while gaining health information from different sources such as friends, family,

and media that give tips them on dieting, eating healthy food, and exercise.

Chan and Tsang (2011) stated that young people consider healthy eating as beneficial and

desirable, but also boring and dissatisfying. Moreover, media have positive impact on choosing

healthy food. Media play a significant role in motivating people regarding health behavior

change, such as altering eating behaviors. Kwon et al. (2013) found media that have direct and

indirect effect on attitudes towards healthy eating. Chew, Palmer, Slonska, and Subbiah (2002)

studied a TV series in order to examine people's health knowledge, health beliefs, and health

behavior. They also found that viewers of the program related to health and fitness became active

in changing their health behaviors when they developed confidence in their health

knowledge. Heuman, Scholl, and Wilkinson (2013) also found that kids' eating habits are

influenced by what they see in the media. They focus on different types of fast food and found

that parents face difficulties to deter their kids from consuming unhealthy foods. They stated that

controlling the kids' eating habits is impossible alone by the parents. There is also need for

support from communities such as teachers, coaches, local leaders, and celebrities to address the

issues. Falk et al. (2001) stated that health practitioners could promote more health messages by

understanding the cognitive process of people's health beliefs and eating practices. In addition, researchers suggested for using of social media users' demographic data and their length of involvement with the social media for improvement of people health behaviors (Korda & Itani, 2013; Maher et al., 2014).

However, researchers found that there are some barriers for changing healthy eating behaviors. Physical barriers, such as the lack of money and time, and psychological barriers, such as the inability to assess healthy food, make it difficult for people to make healthy food choices (Povey et al., 1998; McKinley, 2009). Prestin & Nabi (2012) explained that physical barriers prohibit individuals to bring change in their health behavior. For example:

> Individuals may feel unable to quit smoking for a number of reasons: inability to resist cigarettes during nicotine cravings (physiological), lack of knowledge of how to quit (cognitive), inability to alleviate stress without smoking (affective), or unwillingness to sacrifice an enjoyable activity (motivational). (p. 522)

In the literature, researchers defined what food is considered healthy eating and what food should be avoided or consumed less for maintaining a good health. Scholars are increasingly focusing on health literacy and motivations for adopting the healthy eating behaviors to address the prevalence of obesity. Specifically, having less ability to understand health messages brings different health outcomes (Berkman et al., 2011) and increased confidence in health knowledge encourages people to change in their health behaviors.

Summary

There are a number of studies about healthy eating behavior, knowledge of heath, and beliefs, and attitudes about healthy food. For example, Ryan (2009) stated that, "Health behavior change can be enhanced by fostering knowledge and beliefs, increasing self-regulation skills and

abilities, and enhancing social facilitation" (p.1). In this regard, health professionals can be influential in changing people's health behavior. Chew et al. (2002) conducted research to see how a TV show increases people knowledge of health. Falk, et al. (2001) discussed peoples' attitude about healthy food and interpretation to determine the measurement of healthy and unhealthy food (Povey et al., 1998). Verstraeten, et al. (2014) found some others factors, including food safety perception, taste preference, habit strength, and peer norms work behind healthy eating behavior.

Other studies discussed the impact of social support from different ways, such as interpersonal communication, friends, family, and media, and threat appraisal on health behavior changes. Ramirez, et al. (2009) mentioned that information-seeking from different sources such as the media, friends, and family members help individuals to learn some specific techniques and grow psychological commitment to drive to change health eating behavior. Some people are also encouraged to change their health behavior because of perceived threat of obesity, social norms to be thin for being attractive, and seek helpful information from social network (McKinley, 2009).

Other studies highlighted socio-cultural factors, financial barriers, and physical constraints of work as influences for making decisions about health eating behavior. Heuman, et al. (2013) explained that people in different stages of life face different kinds of problems. For example, TV advertisements influence kids to eat less nutritious food. Financial problems and time management factors oblige people for eating less healthy food such as fast food. Even food choices and attitudes about physical appearance vary from culture to culture, which also is another barrier for developing healthy eating behavior.

Research also addressed the reliability of online health information in terms quality of information, using information for personal purpose, source credibility of health outcomes. Adams (2010) stated that reliability of online health information is a widely-concerned issue in respect to the emergence of Web 2.0. Freeman and Spyridakis (2004) mentioned that readers evaluate sources of information in different levels – such as publishers, authors, and originator of information. They also evaluate information provided by that source. In addition, credibility depends on people's experiences of Internet use and their interest in the topics.

A few studies analyzed the effectiveness of health messages. Prestin and Nabi (2012) examined message effectiveness in terms of skills and motivation of individuals through efficacy judgment. Peng (2009) conducted research on a computer game that was designed following the theories of health belief model, social cognitive theory, and the theory of reasoned action in order to promote healthy diet among young adults. However, a question of what communication strategies are used while disseminating health-related information, especially on social media such as Twitter, aiming to persuade people to develop healthy eating behavior in still unanswered. Filling this gap of research area may help health-organization use better strategies to persuade readers to develop their healthy eating habits. Existing literature focused on reliable online health contents, health literacy, and motivation for promoting healthy eating behavior.

This study examines the text of Twitter of the "MyPlate" campaign of the U.S. Department of Agriculture (USDA) to understand how it attempts to motivate people to develop healthy eating behaviors. To analyze MyPlate's tweets, the U&G theory is used as a theoretical lens. The theory is popular for its user-centric approach and has been utilized to understand people's motivation regarding the use of social media (Ruggiero, 2000; Stafford, Stafford, & Schkade, 2004).

Theoretical Framework

The Uses and Gratification theory was developed to study the people's satisfaction of

media consumption and types of content that fulfill their needs (Cantril, 1942 as cited in

Ruggiero, 2000). The U&G approach concentrates on the purposes of an individual in choosing a

particular media outlet or its content and the level of gratification provided by the media outlet in

response to the desires of audience (Blumler & Katz, 1974). The theory was organically

developed to make connection between the two issues of traditional media. However, researchers

later modified and improved the theoretical perspective to explain the issues of social media such

as Twitter and Facebook etc. Many studies examined the uses and gratifications of new media.

These studies found that information, entertainment, interaction, and passing time or diversion

are among the most frequent gratifications in social media (Rubin, 2009). Another study

conducted among the college students found some reasons of using social media. The reasons

included receiving customer service and coupons or prizes (Vorvoreanu, 2009). That means the

audience desired to have some benefits for their interaction with new media. Findings of

Kietzmann, Hermkens, McCarthy, and Silvestre (2011) indicated that audience intends to use

social media to receive something useful for their professional lives. As such, professional

communicators might be successful in providing maximum gratification to audience through

social media. However, this study is utilizing the U&G theoretical perspective to identify the

strategies that were used by a social media platform, Twitter, in its campaign for healthy-eating

habits.

Gratification seeking, media exposure, and audience interpretations are the three key

elements for researching under the lens of U&G (Swanson, 1987). Swanson noted, "These

elements concern the role of gratification seeking in exposure to mass communication, the

relation of gratification seeking to the interpretive frames through which audience members understand media messages, and linking gratifications to the content of mass media" (p. 1). Ruggiero (2000) stated that new technology is the novel avenue for communication research. U&G is considered as a productive model for explaining web-based activities where users can interact with thousands of sources by posting messages and responding (Ruggiero, 2000). The uses of web applications are much more flexible in terms of content availability, such as audio and video, instant access, and available sources for finding gratification by an individual (Eighmey, 1997). In the 21st century, individuals use the Internet to fulfill gratifications, such as interpersonal communication, para-social interaction, companionship, escape, entertainment, and surveillance (Ruggiero, 2000). The potential of the U&G theory is strong because of its applicability in a variety of contexts. The theory is now used widely to study media in respect to "motives, social and psychological antecedents, cognitive, attitudinal, and behavioral outcomes" (Papacharissi, 2008, p. 139). Reinforcing the theory's purpose, Severin and Tankard (2010) discussed the possibilities for significant contributions to our understanding of the new media use in digital age. New media focuses on real time interaction with the audiences (Ruggiero, 2000).

Researchers have identified different motives for analyzing online contents. Lee and Ma (2012) stated that people use social media not only for their current informational need but for the fulfillment of future informational needs. People use social media based on the need to belong and the need for self-representation (Nadkarnii & Hofmann, 2012).

The new platform of information consumption through the Internet changes the concept of traditional audiences from the mass-market medium to high volume information in different formats such as audience to audience and organization to audience (Ruggiero, 2000). Still, this

approach needs more clarity to become a more comprehensive theory with respect to some of the

central concepts such as "social and psychological backgrounds, needs, motives, behavior, and

consequences" (Ruggiero, 2000, p.12). In the early perspective of the U&G theory, studies on

media effect dominated empirical research, which focused on audiences who were both passive

viewers and victims of mass media. However, in the new perspective, proponents claimed that

people actively use the media to gratify their needs (Lull, 1995). Explaining the needs from

different perspectives such as physiological and biological needs, Lull found "no doubt these

needs are fundamental to the individual's well-being. But gratifying a need can mean much more

than responding to biological and psychological deficiencies" (p. 99). The context of need

gratification requires further clarification regarding about exactly what needs are, where they

originate, and how they are gratified. Lull found that a number of U&G researchers have

contributed to the confusion by defining need in their research from different contexts. Recently,

the theory has been used to explore people's gratification and needs in different contexts of

social media use, such as for instant communication (Cheung, Chiu, & Lee, 2011), socialization

and openness to experiences (Correa, Hinsley, & De Zuniga, 2010; Quan-Haase, & Young,

2010), seeking information (Park, Kee, & Valenzuela, 2009), social support (Kim, Sohn, & Choi,

2011), increasing self-esteem and self-representation (Nadkarni & Hofmann, 2012), problem

solving (Éva & Mirkó, 2012).

There are some recent developments of the theory, specifically in the context of social

media. They include media selection and uses of its content in rational way, understanding the

effects of the contents, and satisfaction in particular needs of the users (Severin & Tankard,

2010). Chen (2011) found the U&G as suitable theory for social media research. Chen also

stated that people's involvement with the medium is for satisfying their needs and connecting to

others. Research in this field tends to emphasize how social media users generate content with respect to "social and affection needs, the need to vent negative feelings, and recognition, entertainment, and cognitive needs" (Leung, 2013, p.1003).

Cognitive Needs

The U&G theory explains what cognitive needs motivate people to choose particular social media contents. Cognitive needs lead people to use virtual media for fulfillment of some needs, such as "purposive value, self-discovery, entertainment value, social enhancement, and maintaining interpersonal interconnectivity" (Cheung & Lee, 2009, p. 281). Purposeful use of social media content motivates people to be actively involved with their targeted goals offline (Park et al., 2009). However, people's behaviors change based on their situational and dispositional factors, either it constrains or compels them (Dweck & Leggett, 1988). Dweck and Leggett stated that "dispositions are seen as individual difference variables that determine the a priori probability of adopting a particular goal and displaying a particular behavior pattern, and situational factors are seen as potentially altering these probabilities" (p. 269). An individual's cognitive development happens as a result of continuous process of information on an issue from the surrounding experiences (Ruben & Stewart, 2006). "The concept of needs, which most U&G theorists embrace as a central psychological concept, is nearly irreproachable in more established disciplines" (Ruggiero, 2000, pp. 26-27). Cognitive needs, as an internalized state, motivate behavior in a critical context (Buttle, 1989). The question in which to examine how and why individuals use media to satisfy their particular needs lies under the theoretical lens of U&G (Quan-Haase, & Young, 2010).

People use social media for three reasons: Consuming, participation and production (Shao, 2009). "Participating includes both user-to-user interaction and user-to-content interaction

such as ranking the content, adding to playlists, sharing with others, posting comments, etc."

(Shao, 2009, p. 9). Existing studies state that cognitive need push people to consume particular

social media content or generate content to motivate people. The USDA's MyPlate health

campaign generates content on Twitter to promote healthy eating behavior. This study

specifically uses U&G theory to explore the campaign's strategies for motivating people to

engage in healthy eating.

CHAPTER THREE: METHOD

I chose to use a qualitative research approach, and more specifically, thematic analysis as a research method to examine the text of Twitter of MyPlate, a USDA health promotion campaign. This study specifically explored MyPlate's strategies used to motivate people to engage in healthy eating behaviors. The step-by-step process of Braun and Clarke (2006) for thematic analysis examines the data of the study, which includes familiarizing yourself with your data, generating initial codes, searching for themes, reviewing themes, defining and naming themes, and producing the report. The data were collected from the Twitter posts under the unique ID, @MyPlate, of the USDA health promotion campaign.

Since 2011, MyPlate has been a healthy eating promotion program under the USDA and the "2010 Dietary Guidelines for the Americans" to help people to make healthy food choices. MyPlate replaced another health project, MyPyramid. The USDA launched MyPyramid in 2005 following the Food Guide Pyramid in 1992. According to National Nutrition Monitoring and the related Research Act, the USDA is responsible for developing national dietary guidelines every five years. Following the recommendation of the updated guidelines, USDA introduced the MyPlate campaign for promoting healthy eating lifestyles. The organization mentioned in its Twitter home page that the purpose of the "#MyPlate campaign is a simple reminder to make healthful choices for meals and snacks. Tips, recipes, and more!" (ChooseMyPlate.gov, 2009). This campaign focused on five food groups as the building block of a healthy diet, which includes vegetables, fruits, grains, protein, and dairy.

MyPlate is a unique program designed to remind Americans about eating healthy through different communication channels including social media such as Twitter and Facebook. "MyPlate is only the first step in a multi-year effort to raise awareness and educate consumers of

every age" (USDA, 2011, para. 4). MyPlate featured different kinds of food suggestions for

children, adult, family, professionals, and students. As the USDA website shows, "We hope that

MyPlate becomes your plate in the months and years ahead. We'd love to see what's on your

plate so snap a photo of your next meal and share with us on Twitter using the hashtag

#MyPlate" (USDA, 2011, para. 5). As an information tool, www.choose MyPlate.gov

disseminates healthy eating materials in a customized way for a daily food plan. The USDA

updated its current campaign to MyPlate MyWins in alignment with the new dietary guidelines

of 2015-2020 to provide more personalized healthy food choices and solutions, giving

importance to the culture and preference of the people, and introduced new hashtag #MyPlate

MyWins. The campaign has 95.4 thousand followers on Twitter, and as of April 6, 2017, had

posted 7,960 tweets in this online media. Observing the Twitter page of the campaign, I found

the USDA disseminated information about healthy eating mostly under two hashtags - #MyPlate

and #MyPlateMyWins. However, I chose to analyze the data related to its latest hashtag -

#MyPlateMyWins. The new campaign mentioned that "MyPlate, MyWins encourages

consumers to find and celebrate their wins and their real solutions. Since everyone has different

eating habits, MyPlate, MyWins helps individuals create their own, personalized nutrition goals

and solutions" (MyPlate, 2016, para. 4). As a result, I chose data from the hashtag under the

unique ID, chooseMyPlate.gov@MyPlate, and I applied qualitative research design for this

study.

  Qualitative research is a valuable approach for understanding and interpreting the

meanings of people's experiences with health and illness (Rice & Ezzy, 1999). In general, the

outputs of qualitative research include the "development of conceptual definitions, development

of typologies and classifications, exploration of associations between attitudes, behaviors,

experiences, developing explanations of phenomena, and generating new ideas and theories"

(Britten, 2011, p. 385). Britten stated that beyond development of concepts and theories,

qualitative researchers can assist in uncovering more comprehensive understandings of health

communication by describing 'how, why and what' of the research phenomenon. Parsons,

Atkinson, Simperl, and Weal (2015) asserted that keywords of sample tweets facilitate for

identification of the basic themes. They also suggested that thematic analysis is helpful to find

out themes from tweets by putting some questions such as: What are the main keywords of the

tweets? How was the tweet conveyed? What is the main piece of information to take away from

the tweet? After collecting the data from MyPlate's tweets, I coded the tweets for understanding

different patterns and themes of the data aiming to find out the intended communication

strategies. There are three themes or patterns found in the data. Based on the three themes, the

study analyzed the data in order to find out details about the strategies used the campaign to

persuade people for developing their healthy eating habits.

Thematic Analysis of the #MyPlateMyWins Campaign

"Thematic analysis is a method for identifying, analyzing and reporting patterns (themes)

within data" (Braun & Clarke, 2006, p. 79). Thematic analysis focuses on understanding the

themes and patterns of living and behavior (Aronson, 1995). This approach is strongly suited for

descriptive analysis (Vaismoradi, Turunen, & Bondas, 2013). In this analysis, a theme describes

something important about the data based on the research question (Braun & Clarke, 2006).

Vaismoradi, Turunen, and Bondas (2013) argued thematic analysis focuses on the abstract

meaning of data and highlights on the latent meaning of data. However, Braun and Clarke (2006)

refuted this claim, explaining "the 'keyness' of a theme is not necessarily dependent on

quantifiable measures, but rather on whether it captures something important in relation to the

overall research question" (p. 82). My research goal was to analyze the tweets posted by

MyPlate to uncover important themes for understanding how its tweets motivate people for

promoting healthy eating behavior.

Data Collection Procedures

I collected data from Twitter in two ways – using software and later manually. First, I

collected all the posts, 3200, under the verified Twitter ID – ChooseMyPlate.gov - of the

MyPlate social media campaign using NodeXL software. Then, I looked at customized posts,

412, under the hashtag -#MyPlateMyWins. Later, I checked each of the 412 posts, dated January

7, 2016 to April 6, 2017, manually in its Twitter page and deleted 23 tweets those came from

other IDs, not from ChooseMyPlate.gov. A good source of my data collection was from

reference links associated with the most of the Twitter posts, which navigated me to the main

pages of the campaign main website - choosemyplate.gov - and found details information about

that posts. Since, there is a strict word limit of 140 characters in a post, information through the

reference links provided a way to understand the post holistically. The source posts different

kinds of contents in Twitter, such as texts, images, and videos in its tweet. Only the texts were

the main resource for the data[2] collection of the study.

Data Analysis

Braun and Clarke (2006) mentioned that the data analysis process under the thematic

analysis starts during data collection when an analyst begins to notice the patterns of meaning

and issues of potential interest in the data. They explained that analysis involves a constant

moving back and forward process between the entire data set. Writing is the integral part of

analysis, it starts in the first phase with jotting down the ideas and potential coding schemes for

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[2] The dates of all of the tweets used in the study were recorded as the references of data collection.

an inductive data analysis. Braun and Clarke offered six phases for data analysis and stated that

these phases are not exactly rules for qualitative researchers. The six phases of data analysis are

'familiarization yourself with your data, generating initial codes, searching for themes, reviewing

themes, defining and naming themes, and producing the report.

In the first phase, Braun and Clarke (2006) suggested for data collection in an interactive

way so that analysts can get some initial ideas and interests or thoughts prior to start data

analysis. Before starting coding, I read the entire data aiming to search for meanings and patterns

in the tweets (Braun & Clarke, 2006; Vaismoradi et al, 2013). This process helped me to be

familiarized with all aspects of the data set.

After having some primary ideas and interests, the second phase starts with initial codes

from the data based on identifying features from the data (Braun & Clarke, 2006). In this stage, I

organized the data into meaningful groups looking for as many potential themes or patterns

possible. Themes are defined as units derived from patterns such as "conversation topics,

vocabulary, recurring activities, meanings, feelings, or and proverbs" (Taylor & Bogdan, 1989,

p.131 as cited in Aronson, 1995).

The third stage is for searching theme in which interpretive analysis of data begins. In

this stage, Braun & Clarke (2006) suggested developing a table or a map with the collated codes

along with a brief description of the codes. This phase ended with a collection of themes and

sub-themes along with having a sense of significance for individual themes (Braun & Clarke,

2006).

The fourth stage of data analysis involved the refinement of themes following reviewing

and refinement processes (Braun & Clarke, 2006). They explained that, for reviewing processes,

an analyst needs to review the coded data to determine whether the codes are in a coherent

pattern with the themes. If the codes do not fit with the themes or are found to be problematic, then the analyst needs to rework on themes and building new themes (Braun & Clarke, 2006; Fereday & Muir-Cochrane, 2006). Refinement process follows the reviewing process, but in terms of the entire data set. This process checks the validity of individual themes in respect to the entire data set (Braun & Clarke, 2006). These two processes helped me to find out new themes and refine the theme map.

In the fifth stage, following the data analysis steps developed by Braun and Clarke (2006), each theme of this study was defined and refined for analysis, which separately identified the story of each theme aiming to explore the research question. At the end of this phase, I wrote about the scope and content for each theme as part of defining them (Braun & Clarke, 2006).

The sixth and final phase involves write-up of the report. In this phase, I mentioned the complicated story of the data in a way to convince the readers to understand the merit and validity of the analysis (Braun & Clarke, 2006). Sufficient evidence and vivid examples need to be used during writing a report for each theme and illustrate the story about the data (Braun & Clarke, 2006). At this stage, the researcher is encouraged to present creativity during writing a report in terms of story line, map, and model (Vaismoradi et al., 2013).

CHAPTER FOUR: FINDINGS AND ANALYSIS

I found three overarching themes that emerged from the analysis of the 389 tweets

collected under the hashtag #MyPlateMyWins. Categorization of the three themes was necessary

for better analysis of the tweets and understanding the pattern of strategies used to motivate

healthy eating behaviors. The themes are: 1) making small changes in eating habits (268 tweets

or 68.9%), 2) being a healthy eating role model for children (42 tweets or 10.8%), and 3)

remaining physically active (27 tweets or 6.9%). However, some 52 tweets (13.4%) did not fall

in any of these categories because of their scattered use. These tweets were posted to inform

people about other issues, such as reminding them about breast-feeding and requesting them to

sign up with their email addresses to get an update from MyPlate campaign. Examples of

representative tweets for each theme are included in figure 1. In this chapter, I explored each of

the themes in more detail based on the evidence found through my data analysis and

interpretation of themes carried out by using the lens of U&G theory. Additionally, I will include

a brief discussion in the conclusion chapter on the tweets that did not fall into any of the three

themes.

Figure 1

Healthy Eating Messages included in #MyPlateMyWins	
Themes	**Evidence**
Small changes in eating habits	• Small changes to what you eat & drink add up! • Make small changes at lunch to find a healthy eating style that works for you.

(68.9 % of tweets)	• Looking to cut back on salt? Cut back little by little. Your taste for salt will lessen over time. • Fill half your plate with fruits and veggies • Make half your grains whole grains.
Being a healthy eating role model for children (10.8 % of tweets)	• We're honoring dads that are healthy eating role models, like Bryan! • Be a healthy role model! Show kids that you enjoy veggies & fruits • Just like many moms, Shelley is trying hard to make healthy eating work for her family. • Talk to them about the food you buy, cook, eat, and enjoy. • Kids love to help cook! Watch how these families get kids involved to teach them about healthy food.
Remaining physically active (6.9 % of tweets)	• Got 10 mins? Being active for ≥10 mins at a time has health benefits. • Taking the stairs instead of the elevator gets your heart pumping.

	• Make physical activity a part of your family's daily routine. • Make summer plans that keep you active!

Small Changes in Eating Habits

A total of 268 tweets, or 68.9 percent of all tweets analyzed in this study, are included in this theme. The tweets within this theme advocated readers to make small changes in their eating habits. Rather than encouraging people to make radical changes to their diet and food habits, this strategy sought to persuade the readers to take an incremental approach to change their eating behaviors. For instance, one tweet stated, "make small changes: Try shifting from whole milk to 2%, then to 1%, and eventually to skim milk" (ChooseMyPlate.gov, April 29, 2016). The strategy of advocating incremental changes in eating habits has the potential to be successful because of three issues: First, the idea of eating healthier is intimidating or overwhelming for many people; second, taking small steps is more realistic for many people than making large-scale changes to their habits; and, third, taking small steps leads to longer-term behavior changes than making larger changes to eating habits (Ricci, 2016; D'Agrosa, n.d.). Chan and Tsang (2011) found that healthy eating is sometimes considered boring and dissatisfying, which may reduce people's discipline to maintain behavior changes. Aiming to make the healthy eating practice enjoyable and interesting, the MyPlate campaign worked to increase people's sense of belonging to healthy food and eating habits from a small starting point. The campaign, thus, tried to involve people in the process of healthy eating development. Empowering people by increasing their knowledge of healthy eating habits can motivate them to gradually build future

habits as well (Johansen, Bjørge, Hjellset, Holmboe-Ottesen, Råberg, & Wandel, 2010). The

MyPlate campaign's messages also appeared to be intended to persuade readers to develop three

specific habits: being more selective about food consumption; developing a habit of cooking at

home; and establishing healthy eating goals. These intended habitual developments are

considered as sub-strategies under the theme.

Selective Food Consumption

A total of 151 tweets fell into the sub-category of intending to motivate readers to

become more selective in their food consumption. The messages included in this sub-category

recommended readers consider incorporating foods with higher nutritional values instead of what

they typically choose. While suggesting a change in people's breakfast habits, a tweet

mentioned: "a nutritious breakfast is important for everyone, especially kids!"

(ChooseMyPlate.gov, March 6, 2017). The tweets advised people to integrate seafood, fruits, and

vegetables in their dinner rotation, and to use smaller plates at meals to help control overeating.

Since eating preferences vary from person to person, the MyPlate campaign focused on a

variety of healthy eating habits instead of offering a one-sized-fits-all solution. Without hurting

their preferences, the tweets appeared to have advocated selection of food items that ensure

nutrition as well as respect their preferences, which has been found to be important for gaining

audience's attention and compliance (Nadkarni & Hofmann, 2012). Povey et al. (1998) indicated

that giving value to one's dietary choices could encourage people to develop their existing eating

habits by adjusting healthy food items. Macdiarmid, Loe, Kyle, and McNeill (2013) found that

people have an unclear perception about healthy eating foods. Even, they might not be aware that

they can still eat foods they like with a few changes to make them healthier. People's eating

habits depend on many factors such as culture, taste, cost, and personal lifestyle. When people

see that mediated content legitimizes their choice, the U&G theory suggests consumers may be more likely to use the content in the future (Blumler & Katz, 1974).

The #MyPlateMyWins campaign emphasized a variety of healthy eating options so that people do not need to compromise their personal choices. However, when people are hungry, they have less determination to choose healthy food. People make mindless eating decisions most of the time when they are hungry (Wansink & Sobal, 2007). As a result, they need to be aware of their nutritional choices when they start and stop eating for better control of their food intake (Wansink & Sobal). To address this issue, the campaign advised readers to be strategic in selecting a time to have meals and meal planning, such as "eat before you shop" (ChooseMyPlate.gov, July 1, 2016). Additionally, the Twitter campaign offered alternatives to commonly consumed items. For instance, tweets emphasized water consumption instead of drinking sugary beverages. "Non-diet soda, energy or sports drinks, and other sugar-sweetened drinks contain many calories from added sugars and few nutrients" (ChooseMyPlate.gov, May 20, 2016). This campaign identified drinking as important as what we eat. Previous studies found that in commercial advertisements, traditional media used one-way communication to influence people to consume unhealthy foods, such as high-calorie beverages (Heuman et al., 2013). On the other hand, the MyPlate Twitter campaign has no commercial purpose, and the organization is interactive with its audience, which may provide a stronger message for influencing people to change their beverage consumption habits. As per the U&G theory, online communication is provides an opportunity for audiences to interact with the content and express their opinions. As a result, this medium can offer more gratification than traditional media (Ruggiero, 2000). In the same way, the campaign can motivate people to eat other nutritious foods from five food groups,

such as vegetables, fruits, protein, grain, and dairy recommended by the Dietary Guidelines for Americans 2015-20.

Moreover, the tweets emphasized choosing high nutrition-value foods that are effective both for maintaining good health as well as preventing and addressing different diseases. This strategy made people aware of benefits of healthy eating for long-term health. So et al. (2016) found that lack of appropriate diet is responsible for many diseases. The outcome of previous studies was found to be followed in this Twitter campaign as part of its strategies. For instance, Macdiarmid et al., (2013) suggested people taking different approaches, such as a small change in eating behavior, to engage people with the healthy eating habits. The Twitter campaign also highlighted that some healthy foods are good for hearts, and addressing obesity and type 2 diabetics. An embedded link in a MyPlate tweet stated, "diets rich in potassium may help maintain healthy blood pressure. Vegetable sources of potassium include sweet potatoes, white potatoes, white beans, tomato products (paste, sauce, and juice), beet greens, soybeans, lima beans, spinach, lentils, and kidney beans" (ChooseMyPlate.gov, April 7, 2016). By advocating for these specific items, the MyPlate campaign encouraged readers to be selective in choosing foods. This approach of suggesting small changes in selective food consumption is one of the core strategies used by the campaign to motivate people for developing their health-eating behavior.

While analyzing the data in light of U&G theory, its assumptions relating to social media were found to be functioning in this sub-theme too. As the theory suggested, the campaign provided different information relating to selecting healthy foods on Twitter. Such tweets were found to be suggesting gratification for the audience, especially who are interested in health issues (Rubin, 2009). People who are interested in their health issues are supposed to be more

curious and would compose an active audience for campaign's tweets, based on the theory's

assumption. Moreover, this theoretical assumption is indirectly followed in the strategies of

MyPlate's campaign. One example in responding to a follower tweet, the campaign retweeted

that "Great to hear! Here's a link to get started…" (ChooseMyPlate.gov, March 15, 2016).

Food-Making Habits at Home

Intending to make small changes in eating habits, the campaign pushed people to cook

food at their homes. Tweets that focused on this strategy appeared in approximately 22% of the

tweets (59 tweets) in this theme. Motivating readers to cook food at home and improve their diet

requires addressing a few barriers, such as the availability of time, desire for convenience, and

lack of motivation for home cooking (Macdiarmid et al., 2013). In order to persuade people to

cook at home, the campaign focused on simple and easy strategies for making meals. In contrast

to home cooking, people have less control over the quality and quantity of what they eat while

dining out. To address this issue, the MyPlate campaign offered ideas to help people prepare

their daily meals including breakfast, snack, lunch, and dinner. For instance, a tweet said, "Want

to cook more at home? Check out #WhatsCooking for recipe inspiration:

http://1.usa.gov/1JXndYk #MyPlateMyWins" (ChooseMyPlate.gov, January 16, 2016). In the

tweet's embedded link, information was provided about cookbooks, tools for creating a personal

cookbook, and browseable recipes focusing on different nutrition themes. Another tweet

suggested a breakfast recipe that includes blending yogurt with banana, peanut butter and ice,

and smoothies with fruit and low-fat dairy. The process of cooking food at home is thus

presented to motivate audiences by making it seem easy and comfortable. That means the

campaign tried to convince its audiences that cooking is not a tough job rather it is ongoing work

they should maintain in order to lead a healthy life. This is also connected to cognitive needs of

the audience. People find cooking to be overwhelming and intimidating. MyPlate presented its

tweets and information in ways that appear intended to help the audience get around cooking and

re-structure the way they think about cooking at home.

The campaign emphasized bringing practical changes in people's eating habits, as

immediate and drastic changes are often unsustainable. People have individual food norms along

with a number of cooking barriers that need to be lessened up gradually (Reicks, Trofholz, Stang,

& Laska, 2014). As a result, the campaign focused on small, but practical, changes by helping

readers to cook specific food items at home. In order to address their cooking barriers, the

campaign advised busy families to cut and store fruits and veggies in their refrigerator to make

meal preparation easier during the week. This process may help people address their time

limitations in making food. Once people see that the process works for them, it is likely they will

be motivated to continue or even increase cooking at home. The campaign mentioned in an

embedded link of a tweet "a little encouragement can go a long way" (ChooseMyPlate.gov,

January 18, 2017).

Centola (2010) mentioned that repeated health messages from a professional source

encourage people to become more willing to adopt mediated behaviors to satisfy their needs.

Since the campaign's tweets are posted by professional nutritionists, people may be motivated to

use the content for their social needs like healthy eating development. For example, the

campaign sought to engage people with a tweet that stated "we're all in this together! MyPlate

nutritionists share their #MyPlateMyWins & want to hear from you!" (ChooseMyPlate.gov,

January 14, 2016). Following the companionship gratification, the tweet "we're all in this

together" might make people more willing to try cooking at home. When other people do it and

help each other out, developing food making habit is supposed not to be scary. They can see one

another succeeding.

The findings within this sub-theme continued to illustrate the importance of the

motivational strategy of emphasizing small changes so that people do not feel less motivated or

less convenient in this healthy eating development effort. In all stages of food selection, food

making, and food consumption, the campaign focused on incremental changes that can provide

long-term health support (Bruce, 2008).

Setting Healthy Eating Goals

Being goal-oriented in making healthier eating choices was the final sub-theme under

making small changes in healthy eating habits. A total of 58 tweets, which is 21.6% of tweets in

this theme, emphasized goal-setting. The tweets advocated setting a goal for developing better

lifelong food habits. To help people to do so, the campaign recommended readers seek help from

others when they face challenges and celebrate success together if they see any positive changes

in their eating habits. The #MyPlateMyWins, under which the campaign tweets were posted, is

itself persuasively promoting readers to develop their healthy eating habits by growing a sense of

"win" in their minds. That means when people see the hashtag, they unconsciously utter and

think about "winning" by meeting a target, which is advocated by the campaign tweets for them

to consume selected food items. Such development of winning sense with other people is also

connected the idea of companionship gratification. At the same time, it advocated sharing their

progress of healthy lifestyle and "celebrate a win." When a new change, even if it is small,

happens in people's healthy eating habits, they are suggested to celebrate it as "win." Such

celebration might create a sense of happiness and enjoyment in people's minds, finally

persuading them to continue with such healthy eating change. Bruce (2008) suggested people to

invite their support group to celebrate success when they reach small weight loss or exercise

goals. This celebration of success is the sign of gratification of using a particular content.

McAndrews, McMullen, and Wilson (2011) stated that most people change their eating

habits gradually, but this improvement happened mostly through ups and downs of their trying.

That means sometimes people can be stuck in their effort and even can go ahead when they get

motivations. In this regard, individual plan, support from others can help people move forward

(McAndrews et al., 2011). For instance, one tweet said, "people need to take small, realistic steps

to ensure that healthy eating becomes a part of their lifestyle rather than a fad that fizzles out

after a few days" (ChooseMyPlate.gov, January 18, 2017). People also need to set a personal

goal with regard to the food items they choose to buy, as well as setting daily calorie limits, and

physical activity targets. The campaign suggested that individuals can develop their own style of

healthy eating habits by planning meals ahead of time. In a tweet, MyPlate proposed that "if

you're new to meal planning, start small and work up to more" (ChooseMyPlate.gov, March 16,

2017). For long-term eating habit development, the campaign suggested going outside one's

comfort zone and teaming up with the people who want to achieve a similar goal. At the same

time, the campaign tried to prepare people to be patient and not give up their efforts because

change is a challenging process.

Likewise, the U&G theory focused on the benefit of social network use for connecting

people with the same goal. Ruggiero (2000) stated that online networks function as a platform to

spread messages to the thousands of sources, where people can receive messages and give

feedback. The more people will receive a healthy eating message from the campaign, the more

they might be encouraged to change their eating behavior and their change will inspire others to

follow them. Thanks to their access to enormous information and knowledge from online

sources, they feel the need for receiving and utilizing the messages to meet their necessity of developing healthy eating practice. Cheung and Lee (2009) mentioned that virtual media users continue consuming the particular contents and referring to others when they are satisfied.

The findings suggested gradual improvement of healthy eating habits through small changes. Three sub-categories that discussed within the theme, small changes in eating habits, were found to be interrelated in terms of their purpose. Under this theme, a total of 151 tweets, which is the highest number of tweets in this theme, are found utilizing the strategy of educating people about their personal food choice, practical change in food consumption, eating habit development within the domain of individual choice.

Being a Healthy Eating Role Model for Children

One of the core strategies of the campaign is to develop children's long-term healthy eating habits by involving parents, and other important adults, as mentors. Under this theme, 42 tweets that represent 10.8% of all the tweets analyzed in this study focused on engaging kids in healthy eating practices. Specifically, the tweets emphasized the importance of fostering children's interests in healthy foods. Aiming to achieve this goal, the MyPlate campaign encouraged parents to develop healthy eating habits to be role models for their children. When parents succeed in eating healthy foods, they could encourage and celebrate successes with their children. Being a role model encourages people to do what activities they (role models) do (Bruce, 2008). The MyPlate campaign tweets seemed to have used two major techniques to encourage parents to act as role models for their kids. These techniques are: 1) increasing kids' interests in healthy food and 2) getting kids involved in cooking and preparing food. The rest of this section explains how the two techniques work together to motivate audiences.

Growing kids' interest in healthy food

More than half of the tweets (26 tweets, representing 61.9%) under this theme fall into the technique of increasing kids interest about healthy food. The MyPlate campaign encouraged parents to create a psychological connection to their kids with healthy foods. In doing so, the MyPlate campaign suggested that parents inform their kids about food value, gardening, visiting farms, grocery shopping, and participating in fun activities. MyPlate suggested that the kids should work in the house, and the yard, perform chores like "raking, weeding, planting, or vacuuming" (ChooseMyPlate.gov, April 25, 2016). The campaign also recommended parents to deal with picky eaters positively saying that an individual is not the only person who face such problem of kids. "…picky eating is a typical behavior for many preschoolers… Your child may be unwilling to try new foods, especially fruits and vegetables" (ChooseMyPlate.gov, March 22, 2017). The tweet even focused on picky eaters for changing their eating habits. For this purpose, the campaign made parents aware of "typical behavior" of kids, conveying a message for parents that they should mentor their kids cautiously.

MyPlate campaign suggested parents participating in fun activities with their kids while making food. One such tweet said that "put a twist on fruit salad! Have children make funny faces using different fruits for the eyes, nose, and mouth" (ChooseMyPlate.gov, March 22, 2017). The campaign advised parents to watch videos attached with the tweet to learn how other parents are making healthy eating fun. That means MyPlate tries to motivate parents to use the learning for their kids healthy eating development. With such continuous involvement in healthy foods, kids might be interested in eating that food. In a tweet, the campaign mentioned that "Healthy eating is real food, a balanced diet, & a colorful plate..." (ChooseMyPlate.gov, August 24, 2016). As a testimony in another tweet, MyPlate nutritionist Shelley stated: "I love knowing

they get healthy food when we're not together, and my girls love all the colors"
(ChooseMyPlate.gov, January 20, 2016). MyPlate's suggestion of providing foods of different
colors seems to have persuasively drew the attention of kids to consume healthy foods because
different colors of foods increase food nutrition. Kids are normally attracted to different colors
such as red, yellow, and green (Reynolds, 2015), which can motivate them to eat colored foods.
Moreover, here, kids were imitating their parents' eating habits, which indicated that parents'
behavior impacted on their kids' eating behavior. As a testimony, MyPlate nutritionist Shelley
mentioned in a tweet that her son sees what food she took on her plate and eat, and the kid also
followed her by taking the kind of foods on the own plate. This testimony proofed that the
campaign strategy of making parents as the role model for their kids have significant impact on
healthy eating promotion among their family members. Shelley suggested that home could be
considered as the primary school for the kids, where parents can foster their kids' interest in
food. Following the interpretation of Shelley's suggestion, parents can instruct their kids about
the nutritional value of different foods, and even arrange visits to different farms and gardens to
introduce them with the fresh produce. Through different activities, kids' interest in food might
be increased, may enhance their willingness to follow their parents' lead. In short, children's
knowledge of and interest in healthy eating might grow depending on how their parents play
their roles.

Additionally, the campaign also suggested other techniques for parents to teach their
children about healthy eating benefits, specifically introducing their kids to healthy foods and
eventually increasing healthy eating habits. Enabling children to have fun with food items, such
as creating eyes, nose, and mouth with different fruits could be an enjoyable tool for developing

interaction between parents and kids. This should facilitate to grow kids' interests in different foods and help children follow their parents.

Kids' involvement in cooking and preparing food

Another strategy advocated of the MyPlate campaign is to engage kids in making food items. Parents should make food with their children to teach them about healthy foods. In this case, kids can learn how to make food and the importance of eating different types of healthy foods. Some 16 tweets representing 38% of all tweets under the theme endorsed the strategy of this campaign. The MyPlate health campaign suggested that "children are much less likely to reject foods they help make" (ChooseMyPlate.gov, January 17, 2017). The campaign advised parents to watch some real stories of healthy eating families through an embedded link on how to engage kids in the food making process. The campaign advocated parents of making mealtime as family time and recommended them to encourage their kids to pick herbs produced from their garden and use them in home-cooked meals. For family meals, MyPlate recommended dividing responsibilities among the children. "Young children can help set and clear the table" (ChooseMyPlate.gov, July 20, 2016). MyPlate made a list of kitchen activities for the kids aged from 2-5 years old. Kids might want to wipe tables, tear lettuce and greens, rinse vegetables or fruits, add ingredients, stir pancake batter, knead and shape dough, name and count foods, peel eggs, cut soft fruits, and making a sandwich (ChooseMyPlate.gov, March 27, 2016). However, this outcome confronted a bit with what Heuman et al. (2013) found in their study. They concluded that parents face challenges to keep their kids refrained from unhealthy food consumption. It is impossible for parents alone to control kids' eating habits. Rather, support from communities is need for them to do so.

Family support has a significant impact on kids' abilities to make behavioral changes (Epstein, Valoski, Wing, & McCurley, 1990; Benard, 1991). The MyPlate's campaign tried to motivate parents to give support to their kids in learning about healthy foods. This social support may gratify the parents to develop their kids learning about food making. A tweet stated that kids are "less likely to reject foods" that they made or helped to make (ChooseMyPlate.gov, January 17, 2017), which indirectly persuade parents to engage kids in food making activities. Another tweet encouraged parents to provide "small tasks" (ChooseMyPlate.gov, March 20, 2017) in the kitchen, further inviting parents to distribute food making responsibilities among their kids. This encourages parents to create an environment that is convenient for kids to learn about healthy foods. Children mirror their parents' eating habits. The interaction between parents and kids following these two strategies helped grow kids' interest about healthy food and their involvement in food making activities can promote healthy eating habits in a family. Parents normally guide their kids as they inherently hold the power to influence them. This innate power could be used to develop kids' eating habits. To motivate parents in this regard, another tweet expressed that the campaign honor the dads for being healthy eating role models (ChooseMyPlate.gov, January 19, 2016). This might be important for parents because they wanted their kids to be healthy by practicing healthy eating, which is also connected social needs of parents to guide their kids. In this way, MyPlate tried to serve the purpose of increasing kids' interest in healthy eating over a long period of time. This finding is supported by the U&G theory that suggested social need-driven interactivity (Ruggiero, 2000) among the social media users. MyPlate campaign strategy in developing healthy eating habits engaged not only the adults but also the kids through interactivity among family members.

Remaining Physically Active

As the complement to the promotion of healthy eating, MyPlate recommended people to be (if they weren't already) or remain physically active. Physical exercise is needed for having good health and reducing the risk of different diseases such as cardiovascular diseases, diabetes, and heart disease (McGinnis & Foege, 1993). To capitalize on people's natural interest in being healthy, the MyPlate tweets advocated them to remain healthy throughout its campaign by providing exercise-related information and techniques. A total of 27 tweets (6.9% of the total sample) emphasized the importance of physical activities to supplement healthy eating practices. One example of tweets in this regard was to "make physical activity a part of your family's daily routine. Walk together after dinner" (ChooseMyPlate.gov, September 7, 2016). Not only did the campaign encourage regular activity, it also explained how much time a person should exercise in a week. For instance, one tweet suggested "Adults should aim for at least 2½ hours or 150 minutes of physical activity each week" (ChooseMyPlate.gov, May 12, 2016).

Reichert, Barros, Domingues, and Hallal (2007) found that lack of money and feeling tired are the major barriers for regular physical activities. They suggested developing strategies to encourage people for some aspects of physical activities. The campaign used a strategy of advocating alternative physical activities at home, work, and play, which may save people from buying a subscription of a gymnasium and allocating extra time. For example, the campaign expressed such strategy in an embedded link of a tweet:

Take a brisk walk around the parking lot, jog to the bus stop, or ride your bike to the subway station. If you have an infant or toddler, take a long walk using the stroller and everyone gets some fresh air. (ChooseMyPlate.gov, May 12, 2016)

When an individual know, people are doing something and see him or her doing the same thing, this makes him or her more accountable. There are some other suggestions for physical activities like taking stairs instead of the elevator, and hiking and biking in good weather. In addition to these suggestions, the campaign advocated that "while chatting on the phone, pace around the room or walk up and down. Every bit of exercise adds up" (ChooseMyPlate.gov, August 22, 2016).

In order to involve people in physical activities, the campaign encouraged people to start participating in simple activities. A tweet stated "you don't have to be an Olympic athlete to be active. Taking the stairs, mowing the lawn, and gardening count too" (ChooseMyPlate.gov, August 17, 2016). In the tweet, MyPlate used the words "Olympic athlete" metaphorically in order to make the task "work of physical activity" easier for people. Generally, to be an Olympic athlete, a person needs to go through much difficult physical activity. By presenting the "work of physical activity" as not the difficult task of being an Olympic athlete, the tweet persuaded readers to participate in physical exercises. To keep people motivated, the campaign advised them to recruit friends and family members who are in the same goal. Chen (2011) mentioned the U&G theory proposes that communication behavior is goal-directed. In this sense, people in the virtual media like Twitter can build a community based on their social interests and needs. And the gratification of active users depends on their time spent with the selected media along with the interaction among other users of the same network (Chen, 2011). In this case, the MyPlate Twitter campaign wants people to have the same kind of motivation with developing healthy eating. This provided the campaign an opportunity to gratify its users by providing cutting-edge information that might be useful in the context of their social needs.

The campaign's tweets informed readers that physical activity should not be a chore rather it can help people feel better to lead a healthy life. This might also connect to people's cognitive needs, helping them think about exercise differently so that they are willing to make it part of their regular routines. Around 27 tweets directly emphasized the significance of participating in physical activities. Research also found a lack of physical activities as one of the key barriers to healthy eating promotion (Nishida, Uauy, Kumanyika, & Shetty, 2004). For example, the campaign stated in a tweet "got 10 mins? Being active for ≥10 mins at a time has health benefits..." (ChooseMyPlate.gov, September 16, 2016). People frequently feel as if they are too busy to integrate physical activities into in their daily life. But people who have a healthy eating goal are supposed to use their free time for exercise.

Though a small number of tweets talked about physical exercise, many researchers relating to healthy eating promotion and obesity management gave intense focus on physical activities (Chan & Tsang, 2011; McGinnis & Foege, 1993; So et al., 2016; Wyatt et al., 2006). The campaign intended to motivate people to participate in physical activities whether formally or informally. Caloric intake and expenditure are determined by different specific acts, such as choosing foods and leisure time physical activities (Brug, 2008). To motivate people to remain physically active, the Twitter campaign made different posts that simultaneously reminded audience about taking healthy food and doing exercises. This finally intended getting people to re-think about their perspectives on exercise meet the cognitive needs. Since resources like time and money frequently keep people away from physical exercise (Reichert et al., 2007), the campaign provided alternative solutions. For example, tweets suggested taking the stairs instead of using an elevator, and walking short distances to destinations instead of using vehicles. For

these types of physical activities, people do not need to budget extra money and time, but integrate it into their regular activities.

People view the MyPlate Twitter for a specific purpose, which is about healthy eating development. MyPlate provided some specific information for physical activities on Twitter instructing people about some flexible options to keep them physically active. Different strategies in the form of social support might gratify the audiences to fulfill their social needs of being physically active. Social support acts as reminder for people in different social contexts because such reminder like physical activity for good health motivates people to be or remain physically active. MyPlate encouraged people to share the health information from its Twitter posts with the family members and friends.

In sum, in the first two themes – small changes in eating habits and being a healthy eating role model for the kids – promoted healthy eating, and the last theme promoted physical exercise. However, all three themes are important for developing and maintaining good health condition. Coates, Jeffery, and Slinkard (1981) stated that healthy eating and physical exercise are interrelated for a healthy life. In its entire Twitter campaign, MyPlate emphasized adopting healthy eating habits slowly, involving kids to increase their interest in healthy food, and to be active physically. The U&G theory suggested using media content rationally to understand its impact. The campaign content might impact its audiences since all of the tweets came from professional nutritionists who encourage people to develop their healthy eating habits. The campaign focused its content in a variety of ways, either explicitly or implicitly, for healthy eating promotion.

The U&G theory suggested that people use social media to fulfill their needs and gratification because of its interactive nature and the availability of multimodal contents such as

audio, video, and image (Ruggiero, 2000; Eighmey, 1997). The theory is extended here

following the findings of this study. The MyPlate harnessed the interactive communication

opportunity of Twitter by sharing healthy eating information with the audience in different

formats including text, image, audio, and video. And, the people also replied to the posts,

creating an interactive dialogue with the campaign. Following the idea of media scholar

McLuhan (1967) that the medium is the message, the social media platform, Twitter, holds the

capability to engage the audience and convey a strong message than that of traditional media

(Ruggiero, 2000). MyPlate campaign leveraged Twitter's interactivity in multiple ways to

influence people's eating habits. For instance, in response to a tweet posted by MyPlate during a

special motivation campaign titled "take a healthy eating challenge," an audience replied that

"@MyPlate challenge! @letsmove and check it out. Great family fun. I'm signing up!!!"

MyPlate then helped the person by responding that "...Great to hear! Here's a link to get started:

http://www.choosemyplate.gov/take-challenge" (ChooseMyPlate.gov, March 15, 2016). Here,

the two-way communication feature of Twitter enabled the person to directly reply to the

campaign and let it know about own interest in following healthy eating practices. The person's

reply "… I'm signing up!!!" reflected such interest. And, MyPlate was also able to help the

person by providing a link to sign up.

　　　Apart from the exchange of views and suggestions, some repeated posts of similar kinds

of messages were also found as another strategy aiming to positively influence the audience to

change their behavior. This constant delivery of the same kind of message might have been used

by the MyPlate campaign as a way of influencing and gratifying its audience. For instance,

Centola (2010) mentioned that repeated signals significantly increased the likelihood of adopting

a particular health behavior, and social support from multiple health "buddies" made people

much more willing to adopt the behavior. However, the U&G theory currently does not

mentioned such strategies that might be helpful for meeting people's cognitive needs, especially

from the content producer perspectives. Therefore, the U&G theory could be modified a bit

incorporating this perspective of gratifying audiences with repeated similar kind of message.

CHAPTER FIVE: CONCLUSION

This study explores the persuasive strategies that MyPlate utilized with its #MyPlateMyWins Twitter campaign to encourage people to change their eating behaviors. Using the U&G theory as the theoretical lens, the study reveals three such major strategies. In addition to highlighting the findings of this study, this section discusses the contribution of this study to existing communication scholarship. It also focuses on the findings' real-world implications, such as how the strategies could be utilized in other social media platforms and various domains of people's lives. Finally, the section discusses the limitations of the study and future research directions in this discipline.

While exploring the research question—how does the MyPlate campaign seek to motivate Twitter users and promote healthy eating behaviors?–the study indicates three persuasive strategies used to motivate audiences to develop healthy eating behaviors. Specifically, the strategies encourage readers to make small changes in eating habits, act as healthy eating role models for children, and remain physically active. Across each of the themes, the strategy of advocating incremental, rather than radical, change is applied for developing long-lasting changes. Previous research indicates this approach may be successful at both helping people begin to alter and maintain their healthy eating behaviors. For instance, the strategy of making small changes may be more successful in encouraging people who fear success or failure to take the initiative for changing eating behaviors (Zawistowski, 2015). Moreover, focusing on making small changes has the potential to be more successful over the long-term, as people must be vigilant about maintaining the motivation to keep up the changes (Hill, 2009).

Additionally, the focus on small changes acknowledges there are many different routes people can take to begin developing healthier eating behaviors. Ryan (2009) noted that changes relating to health can be increased in different ways, such as fostering knowledge and beliefs, and enhancing self-regulation skills and abilities in food consumption. Research has also indicated a need for health communicators to be attentive to one's personal, social, cultural, and environmental influences on choosing particular foods with respect to identity, image, and social belonging (Verstraeten et al., 2014). One of the notable communication strategies used by the #MyPlateMyWins Twitter campaign is the diverse array of information provided about what constitutes healthy eating practices, and the simple ideas of healthy eating solutions from different social perspectives. The #MyPlateMyWins campaign also gives people different exercise-related tips along with healthy eating information to keep people engaged for maintaining good health. This information might be useful for continuing to draw users back to its Twitter site. U&G theory suggests that people use particular media content frequently when they see some contents are fulfilling their social needs, such as information-seeking. In terms of information-seeking, Kim, Sohn, and Choi (2011) stated that people use social media for learning about new things and getting new ideas. The information provided by the campaign might encourage people who are following the campaign to use its Twitter content frequently for maintaining or improving healthy eating practices.

Moreover, not only does the #MyPlateMyWins provide health information, it also offers social support to users to help motivate the development of healthy eating habits. Kim et al. (2011) mentioned that people use social media in order to get advice from others and show sympathy to those on the same network. The campaign urges people to set a healthy eating goal and modify their existing eating habit to healthy eating. To keep people motivated, the campaign

encourages them to share their healthy eating styles with their friends and family members and celebrate every success of their healthy eating development. Such celebration of success has the potential to motivate them to continue their efforts. The campaign also encourages people to seek help from others if they are struggling in their healthy eating practices. Additionally, the campaign focuses on companionship by stating, "We're all in this together" to encourage people. The social supports offered by the campaign is another important motivational strategy used to encourage users' healthy eating development.

The study demonstrates the utility of U&G theory for analyzing the persuasive strategies of social media campaigns. Historically, the theory has been used to evaluate how and why individuals consume information from the mass media. A limitation of U&G theory is that it mainly focuses on mass media, where individuals simply receive information, but it emphasizes less on interactive dimensions of social media communication. Social media research on U&G theory is emerging, as new media gives users more freedom to control content and its use (Quan-Haase & Young, 2010). Specifically, Twitter users not only consume information but also produce information by giving their feedback, reaction, likes, and dislikes based on their needs and gratifications (Kim, Kim, & Hoon Sun, 2014). If the specific content satisfies the users, they became more motivated to use it. For example, one tweet of MyPlate about making a change in lunch options (switching from a 'peanut butter with jelly sandwich and a bag of potato chips' to 'peanut butter and banana sandwich with baby carrots') was shared by 140 followers and liked by 125 followers (ChooseMyPlate.gov, March 13, 2017). When people see something beneficial for them, they become interested in recognizing that contents by giving their 'like' and sharing same contents with others. Cheung and Lee (2009) stated that individuals' satisfaction can be inferred based on whether they are using particular virtual media continuously and

recommending its content to others. It could be extrapolated that users' response to particular

content on social media may be an indication of whether they are being persuaded to use that

information. Following this analysis, U&G theory could be extended by incorporating more

organizational perspectives to better understand how well social media content is meeting

audience's needs and gratification.

Aside from the tweets under the three themes, a number of tweets, 52 (13.4 %), were not

related to the healthy eating practices analyzed in this study. For instance, one tweet said, "Going

to #FNCE? Find us at the Expo! Stop by Booth 3411 & check out new #MyPlateMyWins

resources. #RDchat" (ChooseMyPlate.gov, October 14, 2016). Another tweet stated, "it's

National Breastfeeding Month! Find resources & tools to support moms & moms-to-be here:

http://bit.ly/2b33D7i #MyPlateMyWins" (ChooseMyPlate.gov, August 8, 2016). This finding is

not an intrinsic part of the main themes found in the study. Rather, the random tweets reflect that

aside from the three main themes, there were a few other educational and persuasive tactics used

by the campaign that did not directly link to the incremental change strategies.

Contribution to Strategic Communication

Hallahan, Holtzhausen, Van Ruler, Verčič, and Sriramesh (2007) defined strategic

communication as "the purposeful use of communication by an organization to fulfill its

mission" (p. 3). Moreover, different types of organizations have different purposes. For example,

strategic communication in governmental and health organizations (such as the U.S.D.A)

frequently works to reduce the incidence of risky behavior and improve community members'

lives (Hallahan, Holtzhausen, Van Ruler, Verčič, & Sriramesh, 2007). In line with this

definition, the #MyPlateMyWins Twitter campaign engaged in strategic communication to

encourage readers to adopt healthier eating behaviors. In this regard, the campaign took the

strategy of providing 'enacted social support' (Barrera, 1986) to the people for improving their

healthy eating habits. Streeter and Franklin (1992) explained enacted support as the certain

actions performed by the third parties by offering suggestions and giving advices as the exhibit

expressions for supporting and assistance. The study finds that MyPlate throughout its campaign

provides significant health suggestions through social media communication to attract people to

the healthy eating practice, and encourage them for physical exercise. Even, the two key advices

included 'small change' and being 'role model' are found most significant in the campaign to

motivate people as part of its effort of healthy eating promotion. This study finds that 'small

change' might be considered more appealing to the audiences to accept its suggestions since

people have different cultures, taste, and preference. The same strategy is also applied to make

people physically active. In addition to the strategy, the campaign also encourages people to play

a role as 'role model' for others. Here, the campaign uses the role model strategy to influence not

only the people who are active on its Twitter network but also those who are surrounding them.

Thus, MyPlate tries to provide social support to the people who are online or offline

irrespectively, which could be considered as the strategic use of language to motivate a large

number of people through Twitter communication.

Contribution to Health Communication

This study also contributed to research in health communication, specifically persuasive

campaigns intended to produce healthy eating behavior change. Research in this field discusses

the perceived barriers to the healthy eating promotion. For example, Gough and Conner (2006)

found healthy eating barriers on the ground of poor taste and inability to satisfy. However, this

study tries to address the different kinds of healthy eating barriers by providing useful online

health information, and motivate people by using persuasive language through its Twitter posts

for improving people's healthy eating behaviors.

In this regard, this study focuses on a broad approach in terms of offering suggestions

aimed at improving health behaviors of diverse people. In this case, strategic use of ambiguity

could work for accomplishing the goal of unified diversity (Eisenberg, 1984). In terms of

strategic ambiguity, Eisenberg explained that in the society, tension prevails between individual,

aggregate, part and whole where addressing a problem is not always best resolved through

consensus but by using of ambiguity that is not clear in its discourse but an individual can

interpret it in different contexts. The study found that the MyPlate campaign provides

suggestions broadly instead of specific suggestion about which food people will include in their

meals for ensuring healthy eating meals. Moreover, the campaign suggested eating foods from

five specific groups (fruits, vegetables, grain, protein, and dairy). Since people have different

kinds of eating habits based on their taste, culture, and preference, giving limitation of specific

food item consumption might discourage them to initiate their eating habit development.

However, suggesting food consumption from five food groups might be more comfortable for

people to choose food within their domain of preference. So, when the individuals or

organizations will try to implement the strategies of the study, they can give priority more on the

five food groups to address the preference of people from diverse backgrounds.

MyPlate has professional nutritionists who work for the content development of its social

media campaign like Twitter to increase people's health knowledge. Though the campaign has a

general focus on public health development, its strategies used mainly for the people who have

barriers in improving their eating habits in respect to their culture, taste, lack of time, and

convenience. In addition to applying the strategies, the campaign provided some specific food

suggestions that could help people to ensure their healthy meal. Even, the campaign, as a complementary of healthy eating, focused on physical exercise. Kreuter and Wray (2003) stated that specific contents that address particular problem appear as effective to stimulate people's thinking. MyPlate in its entire Twitter campaign has used some specific contents with a particular goal of people's healthy eating promotion, which might impact on its audiences to change their eating habits.

Practical Implications

The strategies identified by this study may help both organizations and individuals to promote and practice healthy eating behaviors. The findings can also help organizations design strategies, especially on social media platforms to motivate people to change their eating habits. Though this study analyzed data from Twitter, the outcome might also be useful for studies on other social media platforms such as Facebook and Instagram. Since the two-way communication features are available on other social media platforms, interested people or organizations can utilize the strategies on any of the social media in considering the extent of their use.

The findings of this study are applicable to multiple groups of people who are interested in developing healthy eating habits since social media empowers people to learn from each other (Cheung et al., 2011). The MyPlate campaign focuses only on healthy eating development as well as physical exercise. Given the campaign's large audience (more than 96 thousand followers as of April 2017), it is clear there is a demand for information about improving wellness. Blumler and Katz (1974) stated that people use a specific media for gratifying particular social needs. In order to gratify people, organizations should use social media to make healthy habits seem enjoyable and sustainable. For instance, young people generally consider healthy eating as

beneficial but boring (Chan & Tsang, 2011). Interacting with young people via a Twitter campaign has the potential to engage them more than a traditional media campaign, which existing research suggests may motivate them to subsequent media use and influence behavior (Rubin, Perse, & Powell, 1985).

One of the major findings of the study emphasizes the importance of social support in persuasive messages aimed at encouraging healthy eating practices. At the most basic level, this could be applied in family settings where parents and other adults can work as role models for growing their kids' interests in healthy eating. In this regard, the campaign's Twitter posts were utilized as a communication tool to motivate parents to adopt the healthy eating culture in their lives and then urged them to provide same social support to the family members who are surrounding with them. This way of providing social support could also be utilized at the individual or group level. The family is considered as a group where parents play their role as guiding their kids. Like family, there are many other groups in the society like a village and a small community. In all of these groups, this strategy of being a role model for influencing other group members, who generally follow group leader(s) or mentor(s), could be utilized. In a group, leaders hold such potential to influence other members of the group (Gottschalk, 2013). This influence emerges through interpersonal communication between the group members and motivates group members to act in order to meet healthy eating needs. Therefore, any group of people can take lessons from this study findings and go ahead to apply this strategy to their respective group settings.

This strategy could also be applied in many organizational settings, such as workplaces. For example, corporations can try to utilize the working hours of their employees in a more effective way. Employees, especially those who do a sedentary job, generally do not get enough

time to go to the gymnasium and do exercise though it is considered helpful for improving their

productivity (Pozen, 2012). This study's findings can be applied to advocate short bursts of

exercising or healthy changes that could be integrated into busy working lifestyles. For instance,

a company could provide facilities to allow employees to exercise, encourage people to walk

more (by parking their cars farther away from the building or using the stairs instead of an

elevator). This strategy can also be utilized for the people who receive lower salaries, which

makes it difficult for them to spend money for a gymnasium. Additionally, organizations can

also use the study's strategies to encourage small changes in healthy eating behaviors. A

corporation's dining hall could promote modifying people's favorite foods, which might

motivate employees to experiment and try new changes. Finally, organizations can try to tap into

the social needs of individuals to encourage them to provide support and accountability for

others as they seek to make changes. This information might even inspire individuals monitor

and encourage others to begin or continue eating healthy items, which is connected to

surveillance gratification.

Certainly, it would be beneficial to organizations to provide social support related to

employees' health behaviors, which are linked to work attendance, productivity, and lower

health care costs. However, this kind of motivational approach does raise concerns and may not

be effective for many people. Research showed that some factors such as belief, attitude, and

culture make people rigid to change their behavior (Kollmuss & Agyeman, 2002). For example,

even though meat and fish are considered a part of balanced diet, it is unlikely practicing

vegetarians would be willing to change their eating behaviors to include them. In this case,

people might feel pressured or embarrassed to imitate others.

Limitations

Despite the thorough analysis of the tweets, there are several limitations on this study's findings. The study collected data from Twitter only under one hashtag, #MyPlateMyWins. However, there were other hashtags from the MyPlate twitter account, such as #MyPlate and #WhatsCooking. In other hashtags, the campaign might have included different content and utilized different persuasive strategies. However, the focus of this study was to emphasize motivational strategies used by the #MyPlateMyWins campaign. Therefore, future studies should explore persuasive Twitter campaigns using data collected from other hashtags. This study also did not include the contents of materials linked in several tweets. Analyzing the messages contained in the videos or other multi-media content produced by the USDA could offer productive future projects for researchers. Finally, the purpose of my study was to gain a deeper understanding of the strategies utilized by MyPlate.gov's #MyPlateMyWins Twitter campaign. As a result, this study did not look at whether the strategies were successful in motivating people to change their behaviors. Future research should explore persuasive strategies from the perspective of Twitter users to understand what kinds of content they find to meet their needs and gratifications.

In addition, since the study was conducted in the United States, its findings may not translate into multi-cultural perspectives. For example, people in the United States who are considered poor face difficulty to eat fresh food like vegetables because it is costlier than fast-food. However, in south Asian countries like Bangladesh and India fresh produces are cheaper than fast-food or any meat items.

The availability of health-related information online continues to prompt people to use the Internet. This pushed researchers to investigate how people seek authentic health information from online sources. Existing studies found that lack of motivation deters people from incorporating healthy eating practices in their life. MyPlate launched the new campaign under #MyPlateMyWins in January 2016 on Twitter. Analyzing the campaign's tweets, this study discovered three major strategies MyPlate utilized in their campaign. The findings indicated that strategies for bringing small changes could lead people to set life-long goals for improving their eating behavior. Despite a few limitations of this study, the findings contribute to the existing knowledge about MyPlate's Twitter campaign and how it seeks to meet readers' needs and gratifications.

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