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Influences of Social Media on Nutrition Perceptions and Body Image Among Female College Students: A study of Health Impacts and Behavioral Responses

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Influences of Social Media on Nutrition Perceptions and Body Image Among Female College Students: A study of Health Impacts and Behavioral Responses

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by

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Dedication

This project is dedicated to my family. They are my biggest supporters and have consistently encouraged me to work earnestly towards my goals. Because of them, I have been able to complete this work with their encouragement. Thank you for always being there for me.

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CHAPTER 1

Introduction

Background and Need

Social media is a large part of many people's lives, especially college students. Research done by Pew Research Center (2021) found that 71% of adults ages 18-29 use Instagram and 70% use Facebook. Social Media is used to communicate with friends and family, post photos, and “follow” people they may or may not know. Information is constantly being spread throughout social media, despite consumers being oblivious to their consumption of it. For many, social media is the main source of their scientific information, whether it is from a credible source or not (Pew Research Center, 2017). One might choose to participate in a fad diet, start taking a supplement, or try a new recipe just because they saw it in their social media feed.

A research article done by Accardo (2023) discussed how social media can create unrealistic beauty standards related to body weight, despite information coming from non-credible sources that are not backed by scientific research. This is just one small example of how social media provides misinformation to the masses. Additionally, one randomized control-study done in 2021 tested the effects of social media marketing on the food choices of children (Coates, 2021). Children between the ages of nine and eleven were randomly assigned different accounts to view, with some showing "influencers" eating healthy snacks, some choosing less healthy snacks, and some choosing non-food items. The results of the research showed that the children who viewed the content with unhealthy snacks consumed a higher number of calories

and greater amounts of unhealthy snacks when compared to the group who was shown non-food items (Coates, 2021). This research provides even more evidence of the influence that social media can have on consumers regarding food choices and actions.

Social media is influencing the items people eat, their relationship with food, and their body image. Much of the nutrition-related content found on social platforms can have negative outcomes; however, there is research that shows some positive correlations: such as a study done that discussed some positive influences social media can have on an individual's life related to health (Akram, 2017). Some of these included easy ways to contact health professionals, "access to information in developing regions", and "support for health-related causes" (Akram, 2017, p. 349). This research revealed ways that social media can also be a positive influence for its consumers.

Problem Statement

Social media content is influencing college women's perceptions of nutrition, body image and overall health (Aparicio-Martinez, P., 2019). Social media contains misinformation, and many women are using it as a source for their health information (Naeem, 2020; Pew Research Center, 2021). As they trust it as a reliable source, it may be harming their health in ways they are not aware of. As internet usage continues to increase, social media is becoming a valuable component of health care that must be investigated for validity and potential impacts to its users.

Purpose Statement

The purpose of this study is to identify what nutrition information is found by college-aged females through social media outlets and how it is influencing their thoughts, habits, and

body-image. Through this research the researcher will analyze the information that is found by female college students on social media platforms and the steps they may take after receiving that information.

Research Questions

The following research questions were explored in the study:

1. How do female college students feel that the nutritional information shared on social media is equivalent to national nutritional requirements set forth by the Dietary Guidelines for Americans?

2. How have female college students changed their eating habits due to nutritional information they received on social media?

3. How has nutritional information received on social media affected female college students' body image?

Terminology

Diet- the kinds of food that a person, animal, or community habitually eats (Oxford Languages, N.D.)

Diet Patterns- the quantities, proportions, variety, or combination of different foods, drinks, and nutrients in diets, and the frequency with which they are habitually consumed (Dietary Guidelines for Americans, 2020-2025)

Body Image- a person's mental picture of how good or bad their physical appearance is, especially when compared with how they think they should look (Oxford languages, N.D.)

The Academy of Nutrition and Dietetics (AND)- “the world's largest organization of food and nutrition professionals. The Academy is committed to improving the nation's health and advancing the profession of dietetics through research, education, and advocacy” (eatright.org, N.D.).

CHAPTER 2

Literature Review

Through the literature review, it was found that social media greatly impacts those who use it. Social media is defined as, "websites and applications that enable users to create and share content or to participate in social networking" (Oxford Languages). After specifically finding research related to its impact on nutrition-related topics, a few themes were identified. They are: the use of social media and dietary influence, the misinformation on social media, and social media's influence on body image.

The Use of Social Media and Dietary Influence

The Prevalence of Social Media

Social media is used often and for a variety of reasons. According to Pew Research Center (2021), "A majority of Americans said they used YouTube and Facebook, while use of Instagram, Snapchat and TikTok was especially common among adults under 30" (Pew Research Center, 2021, p.1). Pew noted that 84% of young adults (age 18-29) used social media. Out of those, the most popular being Instagram and Snapchat (Pew Research Center, 2021). As of August 2023, 78% of adult women reported using at least one social media site (Statista, 2023). More specifically, social media users are spending multiple hours on platforms every day. In their research, Tariq and Safdar noted that, "It has become a cultural norm to be addicted to social media" (2023). They described that often "FOMO" (fear of missing out) further leads to addiction to these platforms. 40% of users in their study reported using social media for over four hours per day, with Instagram and Facebook being the favorites (Tariq, M., 2023).

Similarly, the Gallup survey found that over half of teens (ages 13-17) also spend over four hours on social media platforms every day (Forbes, 2023). Social media sites such as Instagram utilize "selective exposure" which feeds Instagram users' content that they "follow" and "like" (Turner, 2017). Meaning, as the user views certain information, Instagram will automatically show them more of that information, which is reinforcing content that may be negatively or positively impacting them. As more and more time is spent on the various platforms, the users are limiting their exposure to real life and increasing their exposure to the virtual world of social media. It was reported that 67% of people said they have more friends on social media than in real life (Tariq, M. et. al, 2023). As the prevalence of usage continues to increase, it is important to understand the impacts that information found through the sources can have on the user.

Social Media and Dietary Influences

With this widespread use, the users of social media are intaking a lot of information and connecting with others often and for many different reasons (Forbes, 2023). Pew Research Center (2021) also noted several reasons people used social networking sites with the highest being staying in touch with current friends and family as well as connecting with old friends. Whiting (2013) also reported the following reasons people use social media: social interaction, information seeking, pass time, entertainment, relaxation, communicatory utility, convenience utility, expression of opinion, information sharing, and surveillance/knowledge about others. More specifically, many people utilize social media to gain new information about their well-being. A majority of internet users have searched online for information regarding their health and diseases (Pew Research Center, 2011). The user is intaking information from sources that are likely not supported by scientific, evidence-based research and are therefore unreliable in terms of credibility. With the ease and visually friendly way that content is made on social media, it

seems much easier to search something there rather than reading primary research articles. Nutrition information is found often by social media sites. The 2023 Food and Health Survey found that 42% of Americans have come across nutrition-related content in the past year. It can be shown in many ways. Content on social media platforms has the potential to alter what a person eats (World Health Organization, 2021). Specifically, among college students, this is cause for concern because they may be making choices regarding their own daily food choices for the first time. There are many reasons that individuals choose the foods they do ranging from personal appearances to cooking preferences to living situation (Lambert, M. et. al, 2019). The foods a person chooses are extremely important regarding their health and longevity. Food choices can impact whether a person develops chronic diseases such as cardiovascular disease or diabetes (Centers for Disease Control and Prevention, 2022). It also impacts performance, mood, and energy levels. If positive food choices are not promoted on social media, the users may be potentially harming themselves by believing the misinformation. It was found that the number one source of nutrition information in a qualitative study was social media and that the Australian National Dietary Guidelines were not promoted on social media (Lambert, M. et. al, 2019). In the United States, the Dietary Guidelines for Americans are developed every five years by a committee of professionals. Some of the most important recommendations in the latest addition are: Following a healthy diet at every life stage, consuming nutrient dense foods and beverages that fit with one's culture and personal preferences, meeting food group needs while staying within calorie limits, and limiting foods and beverages that are higher in added sugars, saturated fats, sodium, and alcohol (Dietary Guidelines for Americans, 2020-2025). Many young adults may be unaware of these scientific-backed, established recommendations because their

main source is social media which contains many other forms of recommendations (Lambert, M. et al., 2019).

Dietary Content on Social Media

Social media contains many different forms of content that is rapidly spreading. TikTok alone has 237.5 billion views on their popular hashtag, #FoodTok (Bedford-Flood, 2023). Hashtags can link certain types of information that contain the tag. So, if a user posts something related to food on TikTok, they can add the hashtag (#FoodTok) and their post will be linked with thousands of other posts with similar content. Specifically, it contains a variety of posts related to diet and intake. Knowing the type of content that exists is important in identifying credible sources. One study identified five themes among popular nutrition accounts: Recipes, food and nutrition practices, body goals, food literacy, and cooking at home (Denniss et al., 2023). While none of these posts are inherently bad, each of them has the potential to promote unhealthy dietary practices. In one review of dietary content found on social media, it was found that social media content was centered around non-core foods, which are foods that do not fall in to the main four food groups (Qutteina et al., 2021). These main four food groups are: breads/cereals, meat/fish/poultry, milk, fruits/vegetables (Qutteina et al., 2019). The non-core foods are primarily high-calorie and low in nutrient-density, which is not supported by the Dietary Guidelines for Americans (Dietary Guidelines for Americans, 2020-2025). Not all dietary content is necessarily false or harmful. One review found that the concept of eating "real foods" was popular online as well as increasing fruit and vegetable consumption (Ramachandram et al., 2018). With the different kinds of information, the user is likely to not have a clear understanding of what information is from a professional who is qualified to make those claims and what information is false.

Misinformation on Social Media

Widespread Misinformation

With the widespread use of a variety of platforms, it can be difficult to distinguish what information is credible. A review on "the role of social media in primary care" described the danger of the misinformation phenomenon, writing that social media platforms can spread any information in such a short amount of time to a large radius of people (Rashid, et al., 2021). Social media is quickly and widely spreading information that is questionable regarding validity and reliability. Leeder (2019) investigated this question, testing whether students could identify whether headlines they were presented were true or false. It was found that students could only correctly identify about 62% of the news stories (Leeder, 2019). Similarly, it was found social media was responsible for spreading over half of misinformed sources about COVID-19 (Naeem, 2020). Research has been done on various topics found on social media that relate to health, testing their credibility with confirmed sources of information. Slick et al. (2023) examined information found on a Facebook page aiming to educate on sickle-cell disease, finding that over 50% of the page contained misinformation that did not match evidence-based practice guidelines. A similar study explored a platform called Pinterest, looking for information related to nutrition and cancer prevention. The results showed that less than one out of every five sources were created by someone with a nutrition health credential and the majority of them were created for profit (Warner et al., 2022).

Emerging Trends

Nutrition trends on social media are often low-quality and unreliable (Kabata, P., 2022 & Denniss, 2023). There are many reasons trends emerge. Some may be for monetary gain, hopes

of weight loss, or longevity benefits. Trends can catch wind quickly, especially when endorsed by popular figures online, also known as influencers. Celebrity endorsement are also major factors in food purchases and consumption (Calvo-Porall, C. et al., 2021). As these individuals who likely have no nutrition research background make these nutrition recommendations, more and more consumers are making dietary choices that will directly impact their health (Center for Disease Controls and Prevention, 2022). Often fad diets are found on social media, which are defined as, "a popular dietary pattern known to be a quick fix for obesity" (Tahreem, K. et al., 2022). There are several popular fad diets including the Atkins Diet, Ketogenic Diet, Paleolithic Diet, Mediterranean diet, vegetarian diet, intermittent fasting, Detox diet, Weight Watchers, Slim Fast, and Jenny Craig (Tahreem, K. et al., 2022 & Khawandanah, J. et al., 2016). Each of these diets are characterized by increasing or decreasing certain macronutrients or micronutrients. For example, the ketogenic diet has gained popularity in the past few years. One study found that there were over 21 million posts that contained #keto in them (Lister, N.B. et al., 2023). This diet encourages removing all forms of refined carbohydrates (breads, pasta) and increasing fat consumption (avocados, oils, nuts). This diet was originally created to treat epilepsy in children, but it is now used for a form of quick-fix weight loss (Wheless, J. W., 2008). While this diet may be productive in decreasing the number on the scale, it removes an essential food group that is needed for optimal body function. It also goes against the evidence-based research in the national dietary guidelines (Dietary Guidelines for Americans 2020-2025). This is just one example of a diet that has spread rapidly in popularity but is not supported in the research.

Effects of Social Media on Dietary Patterns

Social media platforms can have positive or negative influences on what an individual believes or knows about health. Many people using social media or the internet base their eating choices on information they see on social media: thus, causing them to make questionable health choices or have poor body image. Content created on social media can promote negative stigmas about health, including weight stigmas. Accardo (2023) asked the question, "How do individuals' perceptions on weight, health and nutrition in relation to social media change after becoming educated on the various interrelated issues?". The researcher aimed to create a more balanced definition of health that included more than just body weight stigmas that are often promoted on social media. Following the education, participants volunteered to take part in a focus group. The students discussed feeling "distrust" towards some medical professionals and toward social media because of the false narratives that are often spread about body weight related to health (Accardo, 2023). Dietary patterns are a way of understanding someone's daily eating habits and typical nutrient intake. Kabir (2018) showed these can be influenced by:

> Individual factors (cooking skills, food taste, food taboos, and knowledge and perceptions), societal factors (influence of peers and social norms), factors related to university (campus culture and frequency of examination), and environmental factors (availability of cooking resources and facilities and food prices) (p.1).

Additional research has found that social media is also a major influence on eating patterns. Participants in a study who viewed content related to nutrition and fitness were more likely to report dietary restrictions (McKnight, 2021). These types of posts, named "fitstagram" content, were found to lead to disordered eating and restriction of important nutrients

(McKnight, 2021). Similarly, it was found that children's viewing of unhealthy nutrition content caused them to consume higher amounts of calories and unhealthy snacks (Coates et al., 2019). Studies on Orthorexia Nervosa (ON) have been increasing in frequency. High Instagram use increased symptoms of ON, which is defined as "an unhealthy obsession with eating healthy food" and could lead to "the onset and progression of eating disorders" (Turner, 2017). Koven (2022) mentioned that ON often begins with intentions to achieve good health but leads to a path of restriction that can result in deficiency of important nutrients.

Psychological Impacts of Food Choices

Food choices can have not only physical but mental effects. An unhealthy diet is associated with increased risk for depression and stress, while a healthy diet is associated with a more positive well-being (Hong, S. A. et al., 2017). Similarly, social media can be a space that promotes strict beauty standards, which can affect an individual's mental health. In one study, one participant stated, "many spaces on social media are breeding grounds for weight-hate and both intentional and unintentional promotion of strict body standards" (Accardo, 2023, p.8). Further proving this point, it was found that decreased social media use was linked to increased confidence in body image and weight (Smith, 2024). This was accomplished by limiting screen time for participants (Smith, 2024).

Health Education and Awareness on Social Media

In many instances, social media and online platforms can positively influence knowledge. It can also be a quick way to spread awareness and implement prevention measures for various health issues (Xu et al., 2016). One study found that educational videos posted to online platforms improved patient knowledge and health literacy about type 2 diabetes (Leong et al.,

2022). For health professionals, utilizing social media is an effective way to spread credible information related to their practice. For example, a Registered Dietitian could post a graphic summarizing nutrition research that is easier for the reader to understand while still being scientifically valid. Like this, it was found that after a 6-week nutrition intervention delivered through Twitter, several nutrition factors (knowledge, BMI, fat-loss) improved (Coccia, C. et al., 2020). Knowing that social media is a tool for behavior change, it is important to rightfully evaluate information from credible sources.

Social Media's Influence on Body Image

Social Comparison, Body Image, and Self-Esteem

Social Comparison is defined as, "the proposition that people evaluate their abilities and attitudes in relation to those of others in a process that plays a significant role in self-image and subjective well-being" (American Psychological Association, 2018). This can be in a way where an individual thinks they are better than another person or worse than another person. On social media, this is seen in various ways. With young women spending approximately four hours on social media, this is a breeding ground for social comparison (Forbes, 2023). When it comes to diet and nutrition, this can manifest itself in body image. Body image is described as, "a person's subjective picture or mental image of their own body" (Oxford Languages, n.d.). Many things can influence a woman's body image such as their relationships, their food consumption, and their media consumption. Like social comparison, these can be positive or negative. The media often promotes unrealistic beauty standards that are related to being thin, excessive exercise, or participating in fad diets. The current research is varied on whether health-focused trends on social media are positive or negative for women's self-esteem (Kapadia, A. et al., 2024 &

Lewallan, J., 2016). In some ways they can provide motivation for young woman to accomplish their goals. But many times, social media content leaves women feeling unsatisfied in their own body and wishing they looked differently.

Peer Influence and Social Norms

There are many factors that can influence an individual's diet and body image. Young adults are highly influenced by their peers when it comes to diet (Rice, 2019). Similarly, as they engage with their peers on social media, their feelings towards their appearance can be affected. Social norms are often pushed on social media. Social norms can be defined as "the perceived informal, mostly unwritten, rules that define acceptable and appropriate actions within a given group or community, thus guiding human behavior" (UNICEF, 2021). Social norms can manifest themselves in many different ways and can be positive or negative influences to behavior. For example, there are social norms related to the way someone "should" look. For women specifically, it has been found that they are more likely to see negativity in their appearance when compared to men (Strahan et al., 2001). According to a Canadian Health Survey, 85-90% of women do not feel satisfied with their body appearance (Strahan et al., 2001). Social media can be a vessel to further enforce these negative feelings. Social norms on social media can range from weight-shaming as well as enforcing that a certain body type, weight, or size is better than the other. With the constant stream of photos being posted, these false beauty ideologies are being reinforced, but oftentimes, these photos that exist are not legitimate. One study found that 40% of users edited their photos (Agrawal, H., 2021). With the combination of unrealistic standards and edited photos, women are constantly being faced with the battle of comparing their appearance to others. As this happens, they may choose to alter their food intake to reach a specific body shape or size that was never real in the first place.

Vulnerable Populations

Social media content can influence anyone, but there are specific populations that may be more vulnerable to the negative effects it can have on body-image and self-esteem. Those with eating disorders are at high-risk for having these impacts. Individuals with eating disorders have the highest risk for mortality among the various mental health disorders (Smink et al. 2022). Eating disorders can manifest themselves in various ways. The National Institute of Mental Health lists the following types of eating disorders: anorexia nervosa, bulimia nervosa, and binge eating disorder. According to the National Eating Disorder Association, 9% of the U.S. population will have an eating disorder during their lifetime (Economic Cost of Eating Disorders Report, 2020). They also report that 22% of children and adolescents worldwide show disordered eating (López, 2023). Through social media, eating disorders can be either ignored or glorified in the media. One example is Instagram influencer, Eugenia Cooney. In her posts, she is obviously malnourished, yet proudly dances, encouraging her 726k followers that they should look like her. For someone in a vulnerable population, this would be triggering to see when they are scrolling their account. This is just one out of many ways that social media can be dangerous for those who struggle with disordered eating.

Supportive Communities for Dietary Goals

As mentioned previously, social media can have many negative or positive impacts related to nutrition. It can provide a community of support for people who have specific health goals such as weight loss or improved fruit and vegetable intake. Certain trustworthy applications could also provide educational resources as well as connect individuals with each other who have similar goals (Leong et al., 2022; Xu et al., 2016). In recent years, there has been

growth in the “body positivity” movement, which aims to “address unrealistic ideals about beauty, promote self-acceptance, and build self-esteem through improving one's self-image and learning to love oneself to the fullest (Cwynar-Horta, J. (2016), p.1”. The research has shown that body positivity can help to fight the body dissatisfaction that arises through viewing media (Andrew, R. et al., 2015). Connecting with others on social media with this positive content, may decrease the risk for poor body image. Through this and other ways, women can connect with each other on social media and have positive outcomes on their nutrition status rather than negative. Through the various social media sites, the user can find others who may have similar nutrition-related hobbies and connect with them, furthering their goals.

Summary

Social media is constantly influencing our relationship with food, as shown in the reviewed research. Multiple studies demonstrated cases in which negative health outcomes developed such as disordered eating (McKnight, 2021), poor body image (Accardo, 2023), and Orthorexia Nervosa (Turner, 2017). In some cases, there were positive health outcomes from the use of social media for health information (Leong et al., 2022; Xu et al., 2016). Social Media platforms such as Instagram, Tik Tok, Facebook, and Pinterest contain a vast array of information, often that information is not science based and is used for profit of the creator. The reviewed studies provide the researcher with important background knowledge to further investigate social media and nutrition factors among female college students.

CHAPTER 3

Methodology

Through the literature review, it was found that social media contains many sources of nutrition information that impact an individual's relationship with food and dietary habits. It was found that there is a gap in the research of female college students and their relationship between social media and nutrition implications. The following section will describe the research methods for the study.

Research Design

Planning and development for the research design began in the fall 2023. An extensive literature review in combination with the objectives of this study was used as the guideline to build the questionnaire. A quantitative approach was used in this study to develop a non-experimental research design for the purpose of social media's influence on nutrition.

Because typical survey studies are used to assess attitudes, preferences, opinions, practices, procedures, and demographics (Gay & Airasian, 2003), a descriptive survey research design was deemed appropriate for this study. An approval form for research involving human subjects was submitted to the Institutional Review Board. The approval form was accepted and approved on August 19, 2024 (Appendix A). A questionnaire survey was designed and administered to female college students at the University of Arkansas (See Appendix B). Changes and modifications were made to the questionnaire based on the Institutional Review Board suggestions. The questionnaire was then distributed to the participants via Qualtrics.

Rigor

Validity

Face and content validity were achieved through the reviewing of the survey. All nutrition facts included in the survey instrument will be from "The Dietary Guidelines for America" (2020-2025), which was established by United States Department of Agriculture (USDA) and the U.S. Department of Health and Human Services. To strengthen internal validity, the survey instrument was sent to a large number of students at the University of Arkansas who qualify for the study. Students could choose to fill out the survey or decline the invitation. To strengthen external validity, the criterion for participation was clearly outlined.

Reliability

Through the use of faculty in the Dale Bumpers College of Agricultural, Food and Life Sciences (AFLS), the research methodology was reviewed and critiqued to best fit the needs of the research questions.

Population and Sampling

Data was collected by the researcher using convenience sampling, a method in which "the researcher announces the study and participants self-select if they wish to participate" (Stratton, 2021, p.1). The sample for this research is female college students. This sample was chosen to gain a more specific understanding of the impact of social media on the nutrition factors discussed. Because it would be impossible to survey all college aged women, the population targeted in this study will be college aged women attending the University of Arkansas in the academic year of 2024-2025.

Instrumentation

The instrument design encompassed a descriptive survey with sections related to the research questions and developed based on a comprehensive literature review. The questionnaire utilized in the study was comprised of 3 major sections. Individual survey development allows for analyzing specific needs that may not be necessarily possible through a national survey (Dillman, 2006). Through the use of a series of open and closed-ended questions, the researcher examined each of the research questions.

The first research question: "How do female college students feel that the nutritional information shared on social media equivalates to national nutritional requirements set forth by the Dietary Guidelines for America?" was analyzed through a series of questions designed to gain understanding of the participant's nutrition background knowledge. This included questions about The Dietary Guidelines for America, which is published by the United States Department of Agriculture (USDA) and the United States Department of Health and Human Services. It is published every five years and includes recommendations for specific nutrients to promote overall health and disease prevention (Dietary Guidelines for America, 2020). This section of questions addressed specific nutrient recommendations to gauge if the participant is aware of recommendations. It included questions regarding if these recommendations are what are commonly seen on social media.

The second research question is: "How have female college students changed their eating habits due to nutritional information they received on social media?". To address this, the survey included a series of questions relating to regular eating habits and the content seen on social media regarding eating habits to understand if social media is influencing eating patterns.

The third research question asked: “How has nutritional information received on social media affected female college students body image?”. The last series of questions inquired about the personal perception that participants have of their own body and if social media has played any part in that, positive or negative. The survey is included in Appendix B.

Data Collection

The survey will be emailed to professors in a variety of colleges within the University of Arkansas who will be asked to share with their female students. The survey is designed to collect data over a two-week period. No incentives were offered for survey participation. Respondents were notified that their involvement was voluntary, and all information obtained from the survey would be treated confidentially.

Data Analysis

Data collection was conducted between August 26, 2024, and concluded on September 12, 2024. Once data collection was complete, the data was analyzed using Qualtrics.

CHAPTER 4

Results

This study offers insights into the knowledge and perceptions of college age females regarding the impact of social media on their knowledge of human nutrition. Participants willingly contributed to this research by responding to a survey. The collected feedback was aggregated using Qualtrics to streamline information and determine where data were statistically significant. To ensure confidentiality and safeguard the identity of the participants, the survey was completed anonymously. Participants did not receive any incentive for participation.

Following the research methodologies discussed in Chapter 3, this chapter will present the results of the research as it relates to answering the proposed research questions. Descriptive statistics were used to provide a demographic profile of the study participants:

Respondent Profile

The participants (n=332) were all female with ages ranging from 18 years old to 25 years old and above, with the majority (89%) of the participants being in the age group of 18-21. A substantial amount of the participants was classified as Juniors (127, 38.2%), followed by Seniors (96, 29%), and lastly Sophomores and Freshman responses were almost identical with 52 and 54 respondents.

The bulk of the participants identified themselves as white (274, 84%) with Hispanic participants (20, 6%) following. Human Nutrition and Dietetic majors (101, 30.4%) were a large portion of the respondents, after that were participants majoring in Hospitality Management (70,

21.1%), then Food Nutrition and Health majors (42, 13%). The complete demographic profile of the respondents is displayed in Table 1.

Table 1

Demographics Characteristics of Female Respondents: Year in School, Age, Ethnicity, Major

	n	%
Year in School		
Freshman	52	15.7%
Sophomore	54	16.3%
Junior	**127**	**38.2%**
Senior	96	28.9%
Graduate Student	3	0.90%
Total	332	100%
Age		
18-21	**297**	**89%**
22-25	27	8%
25+	8	2%
Total	332	100%
Ethnicity		
Asian or Pacific Islander	12	4%
Black or African American	9	3%
Hispanic or Latino	20	6%
Native American or Alaskan Native	4	1%
White or Caucasian	**279**	**84%**
Multiracial or Biracial	7	2%
A race or ethnicity not listed here	1	0%
Total	332	100%
Major		
Food, Nutrition, and Health	42	13%
Human Nutrition and Dietetics	**101**	**30.4%**
Food Science	2	0.60%
Apparel Merchandising/Product Development	25	7.5%
Public Health	10	3.0%
Nursing	5	1.5%
Exercise Science	4	1.2%
Hospitality Management	70	21.1%
Business	9	2.7%
Communication	7	2.1%
Sports Management	3	0.90%
Other	54	16.3%
Total	332	100%

The information about the participants' social media habits is continued in Table 2. Participants were asked what social media platforms they were currently active on with Instagram being the most popular (324, 98%), succeeded by Snapchat (289, 87%), TikTok (265, 80%), and Pinterest (225, 68%). Surprisingly, only 2 participants or 1% noted they were not active on social media.

Participants were then asked to report how many hours per day they spent on social media. The most common response was 3-4 hours per day, indicated by 146 participants (44%), followed by 1-2 hours per day, reported by 123 participants (37%). Surprisingly, 5 participants (2%) reported spending over 6 hours a day on social media, a significant outlier.

In addition to reporting their daily hours on social media, participants were asked how many times per day they check their social media accounts. The majority, 176 participants (53%), indicated they checked their social media more than 10 times a day, while 109 participants (33%) reported checking 6-10 times daily.

Finally, participants were asked how often they encountered posts related to food and drink items on social media each day. Approximately 40% (134 participants) reported seeing these posts 1-5 times daily, while 33% (109 participants) indicated they saw them 6-10 times per day. This data is displayed in Table 2.

Table 2

Demographics: Female Social Media Habits

	n	%
Social media currently active on (Select all that apply)		
Facebook	175	53%
Instagram	**324**	**98%**
Twitter	42	13%
TikTok	265	80%
Snapchat	289	87%
YouTube	151	45%
Pinterest	225	68%
Not active on social media	2	1%
Social media most active on		
Facebook	3	1%
Instagram	**144**	**43%**
Twitter	1	0%
TikTok	105	32%
Snapchat	59	18%
YouTube	10	3%
Pinterest	8	2%
Not active on social media	2	1%
Total	332	100%
Hours per day spent on social media		
Less than 30 minutes	3	1%
30-59 minutes	23	7%
1-2 hours	123	37%
3-4 hours -	**146**	**44%**
5-6 hours	29	9%
More than 6 hours	5	2%
I am not active on social media	3	1%
Total	332	100%
Number of times social media is checked per day		
None	2	1%
1-5 times daily	44	13%
6-10 times daily	109	33%
10+ times daily	**176**	**53%**
Total	332	100%
Number of times food/drink items are seen while on social media		
None	6	2%
1-5 times daily	**134**	**40%**
6-10 times daily	109	33%
10+ times daily	81	24%
Total	332	100%

Research Question #1

The first question sought to confirm who participants were more likely to take nutrition advice from on social media by asking as series of questions related to posts displaying pictures of celebrities, registered dietitians, and health enthusiasts. Additionally, questions were asked regarding who the participants would take advice from as well as general nutrition questions related to diet.

The participants shared a host of perceptions that could have an impact on how society views nutrition and social media. Relevant to this study and based on the data provided below in Table 3.

When asked whom they were most likely to take nutritional advice from on social media, the majority of respondents (282, 85%) chose a registered dietitian, which is expected given that most participants were majoring in human nutrition and dietetics. However, 62% (206 respondents) also indicated they would take advice from a nutritionist, even though a nutritionist is not a formally recognized degree or certification in the field of nutrition. This response appears somewhat contradictory, as 88% of participants (293) had previously acknowledged that social media influencers lack the credentials to provide reliable nutritional education.

Table 3

Research Question 1: Female perceptions of social media nutrition validity

	n	**%**
Who are you most likely to take nutrition advice from on social media? (Select all that apply)		
Registered Dietitian	**282**	**85%**
Nutritionist	206	62%
Health and wellness influencer	148	45%
Celebrity	21	6%
Medical Doctor/General Practitioner	187	56%
Family	65	20%
Friend	45	14%
Food and nutrition influencers have credentials to educate the public on nutrition information.		
True	39	12%
False	**293**	**88%**

Next, participants were asked a series of general questions about diet and nutrition to evaluate their overall knowledge of human nutrition. The results suggest that participants had a moderate understanding of the subject. For example, 287 participants (86%) correctly identified carbohydrates as a good fuel source for the body, suggesting they should make up half of one's diet. However, when asked about protein intake—whether 10% of calories should come from protein or if protein should make up the majority of the diet—188 participants (57%) answered incorrectly. In the final question, participants were asked whether an active 21-year-old should consume 1,600 or 2,400 calories daily; the majority (181 participants, 55%) answered this correctly. These findings are presented in Table 4.

Table 4

Research Question 1: Female perceptions of social media nutrition validity

	n	**%**
Of the following statements, which do you believe to be true?		
1. A low-carbohydrate diet is optimal for overall health and weight management.	45	14%
2. Carbohydrates are a fuel source for the body and should makeup approximately half of the diet.	**287**	**86%**
Of the following statements, which do you believe to be true?		
1. 10% of calories from protein is adequate amount for the average diet.	144	43%
2. Protein should make up a majority of the diet.	**188**	**57%**
Of the following statements, which do you believe to be true?		
1. 1,600 calories are the estimated energy requirement for a sedentary 21-year-old female.	151	45%
2. An active 21-year-old needs 2,400 calories.	**181**	**55%**

In the final part of research question 1, participants were shown photos of social media influencers and asked to indicate from whom they were most likely to take nutritional advice. Overall, participants performed well, with the majority selecting the registered dietitian in each

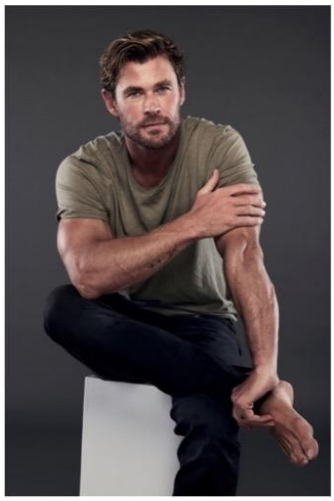
set of photos. However, it is noteworthy that when shown a male and female registered dietitian side by side, 86% of respondents favored the female dietitian. Additionally, when asked to choose between an "older" white female and a younger African American female, 280 participants (84%) selected the younger African American female. These results are listed below in Table 4, and comments from participants related to their selections are displayed in Appendix C.

Table 5

Research Question 1: Female perceptions of social media nutrition validity

	n	**%**
Of these two people, who would you most likely take nutrition advice from based on the following photos?		
Question 1:		
Kourtney Kardashian photo	23	7%
Registered Dietitian photo (Female)	**309**	**93%**

Question 2:		
Chris Hemsworth photo	161	48%
Registered Dietitian photo (Male)	**171**	**52%**



Question 3:

Registered Dietitian (Female)	**287**	**86%**
Registered Dietitian (Male)	45	14%

Question 4:

Registered Dietitian (Female, African American, younger)	**280**	**84%**
Registered Dietitian (Female, Caucasian, older)	52	16%

Research Question #2

Research question 2 focused on exploring the impact of social media on the eating habits of female participants. This was assessed through a series of questions, including how often they sought nutritional information on social media, whether they had heard about specific diets through social media, whether social media had influenced their eating habits, and what those influences were. The results are presented in Table 5.

Interestingly, 43% of participants (142) reported using social media 1-5 times per week to seek information about nutrition and dietetics, while 31% (104) indicated they never use social media for these purposes. When asked if social media influences their food choices, 69% (230 participants) responded that it does.

The survey listed specific diets and strategies, asking respondents whether they had encountered them on social media. The most recognized was weight loss strategies, noted by 93% of participants (308), followed by high-protein diets (82%, 273 participants) and the use of vitamin and mineral supplements (80%, 264 participants).

Lastly, participants were asked whether social media had influenced their eating habits in any of the listed areas. The majority (242 participants, 73%) reported being influenced in their hydration habits, followed by protein intake (202 participants, 61%), adding supplements to their diet (159 participants, 48%), and reducing food intake (154 participants, 46%).

Table 6

Research Question 2: Female eating habits and social media

	n	%
How many times a week do you use social media to find information regarding nutrition and dietetics?		
Never	104	31%
1-5 times weekly	**142**	**43%**
6-10 times weekly	26	8%
10+ times weekly	8	2%
Once monthly	52	16%
Total	332	100%
Does social media impact your food choices?		
Yes	**230**	**69%**
No	102	31%
Have you ever seen any of the following information on social media? (Select all that apply)		
The ketogenic diet	189	57%
High-protein diet	273	82%
Weight loss strategies	**308**	**93%**
Vitamin and mineral supplementation	264	80%
Has something on social media influenced one of the following eating habits? (Select all that apply)		
Reduction of food intake	154	46%
Increase in food intake	53	16%
Protein intake	202	61%
Carbohydrate intake	28	8%
Hydration	**242**	**73%**
Addition of one or more supplements to the diet	159	48%
Have you ever eliminated a food from your diet based on information you have received on social media?		
Yes	**170**	**51%**
No	162	49%
Have you ever participated in a fad diet (e.g. the ketogenic diet, the carnivore diet, etc.)?		
Yes	88	27%
No	**244**	**73%**

Research Question #3

The third research question examined the impact of social media usage on body image among female college students. To assess this, the Body Esteem Scale (BESSA) was employed, as adapted from the Body Esteem Scale for Adolescents and Adults used in a study done by Concordia University (Mendelson, 2022). This scale evaluates individuals' feelings about their

appearance over the past six months. Most responses fell into the "sometimes" category. However, there were two notable exceptions: "Weighing myself depresses me" had the most frequent response in the "rarely" category, while "I'm pretty happy about the way I look" was most answered as "always."

Participants were initially asked to complete the BESSA scale. Following this, they were shown a series of three pictures and then asked to retake the BESSA scale to determine if their perceptions of body image had changed after viewing the images. The results from the BESSA scale before the images were shown is displayed in Table 6.

Table 7
Research Question 3: Female body image and social media PRIOR to viewing images

The following statements describe how some people feel about their appearance. Please read each statement and use the Body Esteem Scale (BESSA) below to indicate how often you have felt this way/agreed in the PAST SIX MONTHS:

	Never	Rarely	Sometimes	Often	Always
I like what I look like in pictures.	3	52	**145**	112	20
I feel I weigh the right amount for my height.	23	58	**104**	103	44
Weighing myself depresses me.	48	**81**	80	79	44
I worry about the way I look.	15	42	111	**114**	50
I think I have a good body.	12	54	**150**	95	21
I'm as nice looking as I'd like to be.	22	84	**145**	64	17
I'm proud of my body.	7	51	**144**	106	24
I like what I see when I look in the mirror.	6	51	**145**	113	17
I am satisfied with my weight.	26	94	**106**	83	23
I wish I looked better.	9	30	**106**	112	75
I really like what I weigh.	47	94	**107**	59	25
My looks upset me.	35	97	**146**	46	8
I'm as nice looking as most people.	7	34	**151**	109	31
I'm pretty happy about the way I look.	10	42	118	**123**	39

After completing the initial BESSA scale, participants were shown three images of Instagram influencers in the following order: Olivia Dunn, an influencer and athlete from Louisiana State University; Sommer Ray, an influencer and model; and Michelle Lewin, an international influencer and bodybuilder.

After viewing the images, participants were asked to complete the BESSA scale again. The purpose of this second time taking the BESSA was to determine if the images had influenced their responses. Like the first survey, many replies fell within the "sometimes" category. However, there were some notable changes between the first and second surveys.

Participants initially indicated that they "sometimes" felt they weighed the right amount for their height. However, after viewing the photos and retaking the BESSA, many changed their response to "often" feeling they weighed the right amount. This suggests that viewing the images of the influencers led them to feel more positive about their weight relative to their height.

There was minimal change in participants' pre- and post-scores for the statement "Weighing myself depresses me." In the initial BESSA scores, the majority of respondents (81) indicated they were rarely depressed about weighing themselves. After viewing the influencer

photos, the majority (82) reported feeling sometimes depressed. This shift indicates that only one participant changed their response after viewing the photos, suggesting that overall, this result remained essentially unchanged.

A similar pattern was observed with the statement "I worry about the way I look." Before viewing the influencer photos, 114 participants reported often feeling this way. After viewing the photos, the number of participants who often felt this way dropped to 109, while there was an increase in those who reported always feeling this way. This shift suggests that participants felt worse about their appearance after seeing the influencer photos.

Participants initially indicated that they were sometimes satisfied with their weight (106 responses). However, after viewing the influencer photos, this number decreased to 94. There was a corresponding increase in the number of participants who selected "rarely" and "never" regarding their satisfaction with their weight. This shift suggests that participants' satisfaction levels with their weight declined after viewing the influencer photos.

Additionally, the question "I'm pretty happy about the way I look" showed a similar trend, with participants feeling less positive about their appearance after viewing the influencer photos. The participants' responses to the BESSA scale after viewing the influencer photos are recorded and displayed in Table 7.

Table 8

Research Question 4: Female body image and social media POST viewing images

The following statements describe how some people feel about their appearance. Please read each statement and use the Body Esteem Scale (BESSA) below to indicate how often you have felt this way/agreed in the PAST SIX MONTHS:

	Never	Rarely	Sometimes	Often	Always
I like what I look like in pictures.	9	62	**142**	98	15
I feel I weigh the right amount for my height.	25	64	94	**99**	44
Weighing myself depresses me.	50	81	**82**	73	40
I worry about the way I look.	14	53	107	**109**	43
I think I have a good body.	18	56	**136**	94	22
I'm as nice looking as I'd like to be.	21	72	**137**	76	20
I'm proud of my body.	11	68	**126**	95	26
I like what I see when I look in the mirror.	10	57	**151**	88	20
I am satisfied with my weight.	30	**95**	94	81	26
I wish I looked better.	15	40	**123**	109	39
I really like what I weigh.	38	94	**97**	71	26
My looks upset me.	31	89	**138**	60	8
I'm as nice looking as most people.	7	47	**144**	104	24
I'm pretty happy about the way I look.	10	47	**129**	111	29

The results outlined in this chapter are further analyzed and discussed in Chapter 5 of this study. The subsequent chapter delves deeper into the implications of the findings, exploring how the changes in participants' body image perceptions, as measured by the BESSA scale, relate to the influence of social media imagery. Chapter 5 also considers potential factors contributing to these shifts and discusses the broader impact on body image among college-aged females, providing recommendations for future research and practical applications.

CHAPTER 5

Discussion and Conclusion

The purpose of this study was to identify what nutrition information is found by college-aged females through social media outlets and how it influences their thoughts, habits, and body-image. Additionally, this study was seeking to understand how well female college students could identify correct nutrition information as well as the impact that social media images have on body image. This was done through a quantitative, non-experimental research design. A survey questionnaire, approved by the Institutional Review Board, was developed to test the following research questions:

1. How do female college students feel that the nutritional information shared on social media is equivalent to national nutritional requirements set forth by the Dietary Guidelines of Americans?
2. How have female college students changed their eating habits due to nutritional information they received on social media?
3. How has nutritional information received on social media affected female college students' body image?

After completing the survey, the results indicated that most respondents were Caucasian, juniors (college classification), and were between the ages of 18-21. Nearly half were pursuing majors related to nutrition, with hospitality being the second most popular field of study. Additionally, 99% of participants reported being active on social media, with Instagram as the most frequently used platform—exceeding the national average of 84% for young adults, as cited in the literature review (Pew Research Center, 2021). Furthermore, 44% of respondents reported

using social media for 3-4 hours per day, and 40% checked it over ten times daily. Given the high level of social media engagement, it is important to understand its impact on various aspects of life. This study aims to explore the relationship between social media use and nutritional factors among female students.

Research Question #1

The first research question focused on how social media information compares to the national standards set forth by the Dietary Guidelines for Americans. This series of survey questions focused on testing if the participant was aware of the national guidelines. Some of the questions also tested who the participant would take nutrition advice from, based on their appearances. One unexpected finding was that a majority of participants said they would take nutrition advice from a "Registered Dietitian (RD)". This shows positive nutrition knowledge for the participants, with RDs being accredited through the Academy of Nutrition and Dietetics. Contrary to these findings, 62% also said they would take nutrition advice from a "Nutritionist". While some nutritionists may have correct nutrition advice, they do not have the training, education, or experience that an RD has. They have no qualifications for their title, meaning that anyone could call themselves a "Nutritionist". Registered Dietitians must have a bachelor's degree, and all undergo rotations to train them for their job along with taking an exam to earn their title. Many nutritionists on social media may seem educated on the topic but lack the real experience and credentials that RDs have. Over half of participants note they would take advice from a nutritionist; this causes concern on if they are receiving accurate information from who they follow on social media or may just be taking advice from.

In the next section, participants were asked several questions about national nutrition requirements. This section served to test the understanding of participants' knowledge of

nutrition and dietetics. A majority were able to correctly identify that carbohydrates are the main fuel source for the body. This is a positive finding because many social media influencers try to enforce low-carbohydrate diets that can be detrimental to health and performance. Fifty-seven percent of respondents answered question #2 incorrectly, which stated that protein should constitute much of the diet. The high-protein diet is also a common social media fad that is pushed by influencers. Protein is an essential nutrient for muscle building and cell function, but according to national guidelines, only needs to make up 10-35% of the diet to be adequate. A clear understanding of nutrition guidelines is important for overall health of women this age. The push for fad diets can remove macronutrients that important for optimal function and performance of the body.

Lastly, participants were asked to identify who they were most likely to take nutrition advice from based on two different images. These images contained a combination of celebrities and registered dietitians. This section also contained an open response question after each set of photos that asked participants why they chose the image that they did. Most participants correctly chose the RD over the celebrity in each question. Some noted that they chose the celebrity (Chris Hemsworth) because he looks more "fit and muscular". Some described choosing the RD because they appeared more knowledgeable on the topic. This section explored reasons people may take advice from one person over another, based solely on appearance. Many made their choice because the photo contained someone with a body that was desirable, and they wanted to look like them. On the other hand, many discussed that they would take advice from someone who appears more knowledgeable. The topic of reliability based on appearance could be researched more, especially based on the mixed results from this study. A notable finding was that 86% of participants preferred the female dietitian over the male. This raises the question of

whether females are more likely to follow health advice from other women. Given the target population of college-aged females, this preference may have influenced their choices in each set of images. Further research is needed to explore this topic in greater depth.

Research Question 2

The second research question examined the eating habits of female college students and the relationship with their social media use. As discussed in the literature review, food-related content on social media can include recipes, nutrition practices, body image goals, food literacy, and home cooking (Denniss et al., 2023). Previous research has also demonstrated that social media influences food choices.

Participants were asked a series of questions specifically about their activity on social media content that includes nutrition information. It was found that a majority (69%) of participants stated that their social media impacts their food choices. The majority also stated that they use social media for nutrition content 1-5 times weekly. This is vital information to be aware of because of the misinformation that exists on social media. More specifically, diet trends on social media can be damaging to one's health and even contribute to disordered eating. Ninety-three percent of participants reported encountering information about weight-loss strategies on their social media. People in vulnerable populations that may struggle with disordered eating or social comparison can be triggered by weight-loss content that may make them feel they need to restrict nutrient or caloric intake. Nearly half of participants selected that their social media usage has influenced them restricting their food intake. This statistic is concerning, especially since many participants are in nutrition-related majors and therefore know the dangers of restricting food intake.

When asked whether participants had participated in a fad diet, 73% answered “no”. As the literature noted, fad diets can be dangerous for health and often cut out essential macronutrients. While they may provide a “quick-fix” that leads to rapid weight loss, it is often found that those who do fad diets end up gaining even more weight after stopping their diet. This was one surprising yet positive finding, that only one quarter have participated in these potentially dangerous diets.

Research Question # 3

The third and final research question investigated participants' body image using the Body Esteem Scale for Adolescents and Adults (BESSA). Participants completed the BESSA once, reflecting on their body image over the past six months. Participants were then shown a series of images sourced from Instagram, intended to represent the typical beauty standards frequently encountered by young women in their daily social media experience. After viewing the images, participants were asked to complete the BESSA a second time to assess whether the images influenced their feelings about their bodies. The results showed that some statements remained unchanged between the pre- and post-image surveys. Several statements showed a negative shift for participants. For instance, after viewing the images, participants reported being less satisfied with their weight and appearance. Additionally, fewer participants expressed pride in their bodies. These findings suggest that social media images may contribute to negative feelings about body weight and appearance among female college students.

This brings up the question: How do the images we see on social media impact how we view ourselves? There are many possible factors as to why these two subcategories were impacted. The most obvious reason is social comparison. Social comparison on social media can be positive or negative, but oftentimes, it can lead to an understanding of a beauty standard that it

unrealistic. In photos like these, the person viewing them has no way to know if they are even real or not. Influencers on social media have the power to edit and post images with no accountability for if the photos they post are accurate. Then women see these images and believe that if they copy the lifestyle of the seemingly "perfect" women, then they will look just like them. This circles back to the dieting and restriction concern that many women are buying in to. Additionally, the participants may believe that these standards of beauty are the social norms for women their age. Yet when you compare the lifestyle of many influencers, it does not actually line up with the national guidelines and recommendations. These findings should be further researched to have a clearer correlation on these results.

Recommendations for Future Research:

Future research on this subject is important because it can deepen our understanding of how social media influences body image and eating habits, particularly among young adults. As social media use continues to grow, its potential impact on mental health, self-esteem, and lifestyle choices is increasingly relevant. Investigating factors such as age, gender, and academic background can help identify vulnerable groups and inform targeted interventions. Additionally, understanding these dynamics can guide educational and health initiatives to promote positive body image and healthy behaviors in a media-saturated environment.

Future research on this topic should explore the following areas:

- Variations in results across different age groups
- How outcomes may differ when using male participants
- Comparisons among students from different academic majors, as a large proportion of participants in this study were nutrition-related majors

Limitations:

Several limitations were identified in this study. It was conducted exclusively with students from the University of Arkansas, but it could be replicated at other universities for broader insights. Additionally, the research reached only a limited range of majors on campus, potentially missing perspectives from students in other fields of study.

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APPENDICES

APPENDIX A: IRB APPROVAL

UNIVERSITY OF ARKANSAS

To:	Kerri McClanahan
From:	Douglas J Adams, Chair IRB Expedited Review
Date:	08/19/2024
Action:	**Exemption Granted**
Action Date:	08/19/2024
Protocol #:	2405539075
Study Title:	The Influence of Social Media on Nutrition.

The above-referenced protocol has been determined to be exempt.

If you wish to make any modifications in the approved protocol that may affect the level of risk to your participants, you must seek approval prior to implementing those changes. All modifications must provide sufficient detail to assess the impact of the change.

If you have any questions or need any assistance from the IRB, please contact the IRB Coordinator at 109 MLKG Building, 5-2208, or irb@uark.edu.

cc: Kelly A Way, Investigator

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APPENDIX B: QUALTRICS SURVEY

You are invited to participate in a research survey about: The Influence of Social Media on Nutrition.

Introduction/Description: As part of my undergraduate honors thesis research, I am conducting a study to investigate how social media impacts food choices and body image in female college students. My goal is to further understand how social media platforms can influence several nutrition factors including body image, participation in fad diets, and nutrition knowledge. I would sincerely appreciate your time and participation in this study.

The survey will take 10-15 minutes of your time.

Risks and Benefits: There is no direct benefit to the respondent by participating in the study. The benefit received will be a contribution of knowledge regarding the research topic. There are no anticipated risks to participating in the study. Voluntary participation: Your participation in the research is completely voluntary. If you choose to participate in this survey, you may choose to not answer all the questions. You may leave the survey at any time without consequence to you.

Confidentiality: No individually identifying information will be used in any reports or publications resulting from this research. All data collected will be kept confidential to the extent allowed by law and University policy. All data will be combined and only group summaries will be included in the survey reports. No data will be reported in a manner that would allow a reader to associate any responses to individual respondents.

Results from this research will be reported as aggregate data.

Questions: If you have any questions or concerns about this study, you may contact Kerri McClanahan or Dr. Kelly Way through any of the means below.

For questions or concerns about your rights as a research participant, please contact Ro Windwalker, the University's Compliance Coordinator, at (479) 575-2208 or by email at iwindwal@uark.edu or irb@uark.edu. Your completion of the survey indicates your consent for your responses to be used in the research as described. You acknowledge that you read the description, including the purpose of the study, the procedures to be used, the potential risks and side effects, the confidentiality procedures, as well as the option to leave from the study at any time.

Thank you in advance for taking the time to participate in this research.

Principal Investigator: Kerri McClanahan, kemcclan@uark.edu

Faculty Advisor: Dr. Kelly Way, kway@uark.edu

SECTION 1: Demographics

1. Year in school:
   a. Freshman
   b. Sophomore
   c. Junior
   d. Senior
   e. Graduate student

2. Age:
   a. 18-21
   b. 22-25
   c. 25+

3. Gender:
   a. Male
   b. Female
   c. Transgender
   d. Nonbinary
   e. Other
   f. Prefer not to answer

4. What is your ethnicity?
   a. Asian or Pacific Islander
   b. Black or African America
   c. Hispanic or Latino
   d. Native American or Alaskan Native
   e. White or Caucasian
   f. Multiracial or Biracial
   g. A race/ethnicity not listed here

5. What is your major?
   a. Food, Nutrition, and Health
   b. Human Nutrition and Dietetics
   c. Other: _____

6. Please select all social media platforms that you are currently active on (Select all that apply):
   a. Facebook
   b. Instagram
   c. Twitter
   d. TikTok
   e. Snapchat
   f. YouTube
   g. Pinterest
   h. I am not active on social media

7. Please select the social media platform that you are most active on (Select all that apply):
    a. Facebook
    b. Instagram
    c. Twitter
    d. TikTok
    e. Snapchat
    f. YouTube
    g. Pinterest
    h. I am not active on social media

8. On average, how many total hours a day do you spend on social media?
    a. Less than 30 minutes
    b. 30-59 minutes
    c. 1-2 hours
    d. 3-4 hours
    e. 5-6 hours
    f. More than 6 hours
    g. I am not active on social media

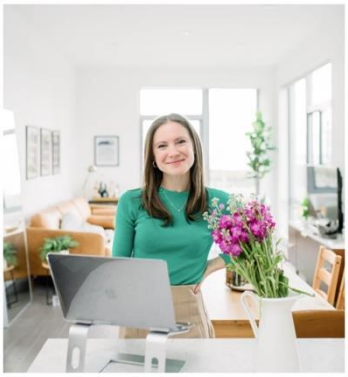
9. How many times a day do you check your social media?
    a. None
    b. 1-5 times daily
    c. 6-10 times daily
    d. 10+ times daily
    e. Once weekly
    f. Once monthly

10. How many times a day do you see food/drink items while scrolling through social media?
    a. None
    b. 1-5 times daily
    c. 6-10 times daily
    d. 10+ times daily
    e. Once weekly
    f. Once monthly

SECTION 2: Nutrition information and perceptions

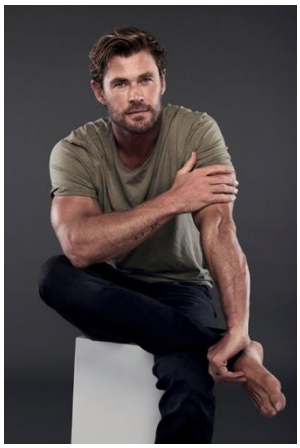
1. Who are you most likely to take nutrition advice from on social media? (Select all that apply)
    a. Registered Dietitian (RD)
    b. Nutritionist
    c. Health and wellness influencer
    d. Celebrity
    e. Medical Doctor/General Practitioner

2. Of these two people, who would you most likely take nutrition advice from based on the following photos?



3. Why did you select the photo you did? (optional)

4. Of these two people, who would you most likely take nutrition advice from based on the following photos?



5. Why did you select the photo you did? (optional)

6. Of these two people, who would you most likely take nutrition advice from based on the following photos?

7. Why did you select the photo you did? (optional)

8. Of these two people, who would you most likely take nutrition advice from based on the following photos?

9. Why did you select the photo you did? (optional)

10. True or False: Food and nutrition influencers have credentials to educate the public on nutrition information.

11. Of the following statements, which do you believe to be true?

    a. A low-carbohydrate diet is optimal for overall health and weight management.
    b. Carbohydrates are a fuel source for the body and should make up approximately half of the diet.

12. Of the following statements, which do you believe to be true?
    a. 10% of calories from protein is an adequate amount for an average diet.
    b. Protein should make up a majority of the diet.

13. Of the following statements, which do you believe to be true?
    a. 1,600 calories is the estimated energy requirement needed for a sedentary 21 year old female.
    b. An active 21 year old needs 2,400 calories

SECTION 3: Eating due to social media

1. Who do you follow on social media?
    a. Friends
    b. Family
    c. Celebrities
    d. Brands
    e. Other (please explain)

2. What are your common behaviors on social media?
    a. Liking photos

b. Commenting on photos
c. Posting photos
d. Scrolling on the home page
e. Interacting with the search page
f. Shopping
g. Gathering information/research
h. Other (please explain)

3. How many times a week do you use social media as a way to find information regarding nutrition and dietetics?
   a. Never
   b. 1-5 times weekly
   c. 6-10 times weekly
   d. 10+ times weekly
   e. Once monthly

4. Have you ever seen any of the following information on social media? (Select all that apply)
   a. The ketogenic diet
   b. High-protein diet
   c. Weight-loss strategies
   d. Vitamin and mineral supplementation

5. Does what you see on social media influence what you eat or drink? (Yes/No)

6. Please elaborate on the previous question (optional): _____

7. Have you ever seen something on social media that influenced one of the following eating habits? (Select all that apply)
   a. Reduction of food intake
   b. Increase in food intake
   c. Protein intake
   d. Fat intake
   e. Carbohydrate intake
   f. Hydration
   g. Addition of one or more supplements to the diet (e.g. collagen, multivitamin, vitamin C)

8. If a picture of a food on social media has more likes are you more likely to choose it? (Yes/No)

9. Have you ever tried a new restaurant based on information or a recommendation on social media? (Yes/No)

10. Have you ever eliminated a food from your diet based on information you have received from social media? (Yes/No)

11. Have you ever participated in a fad diet (e.g. the ketogenic diet, the carnivore diet, etc.)? (Yes/No)

SECTION 4: Body image and social media

Instructions: Please complete the following Body Esteem Scale (BESAA).

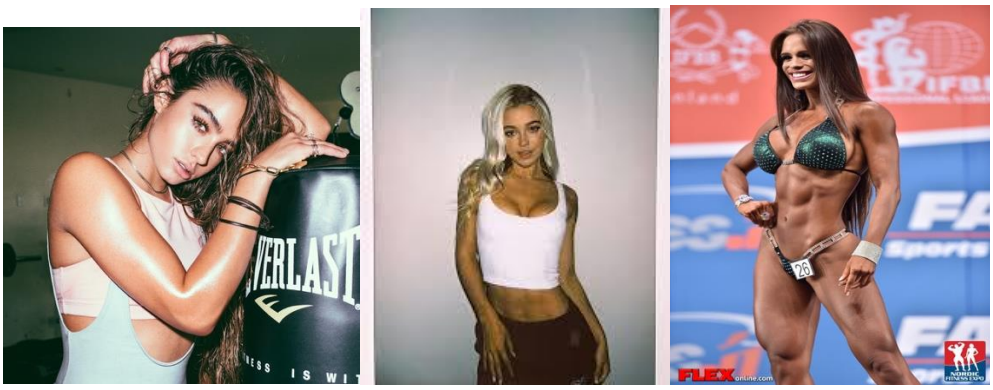
Body Esteem Scale (BESAA)

The following statements describe how some people feel about their appearance. Please read each statement and use the scale below to indicate how often you have felt this way/agreed in the PAST SIX MONTHS:

1=Never 2=Rarely 3=Sometimes 4=Often 5=Always

1. I like what I look like in pictures. **(BESAA1)**	1	2	3	4	5
2. I'm proud of my body. **(BESAA2)**	1	2	3	4	5
3. I like what I see when I look in the mirror. **(BESAA3)**	1	2	3	4	5
4. I am satisfied with my weight. **(BESAA4)**	1	2	3	4	5
5. I wish I looked better. **(BESAA5)**	1	2	3	4	5
6. I really like what I weigh. **(BESAA6)**	1	2	3	4	5
7. My looks upset me. **(BESAA7)**	1	2	3	4	5
8. I'm as nice looking as most people. **(BESAA8)**	1	2	3	4	5
9. I'm pretty happy about the way I look. **(BESAA9)**	1	2	3	4	5
10. I feel I weigh the right amount for my height. **(BESAA10)**	1	2	3	4	5
11. Weighing myself depresses me. **(BESAA11)**	1	2	3	4	5
12. I worry about the way I look. **(BESAA12)**	1	2	3	4	5
13. I think I have a good body. **(BESAA13)**	1	2	3	4	5
14. I'm looking as nice as I'd like to. **(BESAA14)**	1	2	3	4	5

Instructions: You will now view a variety of images:



Instructions: Please complete the following Body Esteem Scale (BESAA) again based on how you feel following viewing the images.

Body Esteem Scale (BESAA)

The following statements describe how some people feel about their appearance. Please read each statement and use the scale below to indicate how often you have felt this way/agreed in the PAST SIX MONTHS:

1=Never 2=Rarely 3=Sometimes 4=Often 5=Always

1. I like what I look like in pictures. **(BESAA1)**	1	2	3	4	5
2. I'm proud of my body. **(BESAA2)**	1	2	3	4	5
3. I like what I see when I look in the mirror. **(BESAA3)**	1	2	3	4	5
4. I am satisfied with my weight. **(BESAA4)**	1	2	3	4	5
5. I wish I looked better. **(BESAA5)**	1	2	3	4	5
6. I really like what I weigh. **(BESAA6)**	1	2	3	4	5
7. My looks upset me. **(BESAA7)**	1	2	3	4	5
8. I'm as nice looking as most people. **(BESAA8)**	1	2	3	4	5
9. I'm pretty happy about the way I look. **(BESAA9)**	1	2	3	4	5
10. I feel I weigh the right amount for my height. **(BESAA10)**	1	2	3	4	5
11. Weighing myself depresses me. **(BESAA11)**	1	2	3	4	5
12. I worry about the way I look. **(BESAA12)**	1	2	3	4	5
13. I think I have a good body. **(BESAA13)**	1	2	3	4	5
14. I'm looking as nice as I'd like to. **(BESAA14)**	1	2	3	4	5

Thank you for completing this survey.

APPENDIX C: RESPONSES TO OPEN-ENDED SURVEY QUESTIONS

Section 2 of the survey asked participants who they would most likely take nutrition advice from based on two photos. They were then asked to explain why they chose the photo they chose. Below is a summary of the comments for each question.

Kourtney Kardashian and Registered Dietitian:

- Skepticism towards celebrity endorsement
- Preference for professional appearance
- The RD has a laptop, making her appear more knowledgeable.
- Kourtney Kardashian does not have nutrition credibility.

Chris Hemsworth and Registered Dietitian:

- The professional seems to have more knowledge.
- Chris Hemsworth has a desirable physique and therefore may have nutrition knowledge.
- Preference for non-celebrities

Male RD and Female RD:

- Presence of food in the photo
- Preference for female opinion
- The female has a positive demeanor

African American/younger RD and Caucasian/older RD:

- Preference for the younger woman who might have more nutrition knowledge.
- Preference for the image that contains healthy foods

Section 3 of the survey asked,

1. Does what you see on social media influence what you eat or drink? (Yes/No)
2. Please elaborate on the previous question (optional): _____

The responses are summarized below:

- Many participants feel influenced by diet trends on social media.
- Utilizing social media for recipes
- Some participants have found trusted influencers to follow on social media, using personal discretion when taking nutrition advice.
- Participants recognize that social media contains misinformation.