

From Instagram to Evidence: The Influence of Social Media on the Nutritional Understanding and Behavior of Young Adult Women

Kerri McClanahan¹, Kelly A. Way^{2*}, Nick Johnston³, M. E. Betsy Garrison⁴

^{1,2,3,4}University of Arkansas

Doi <https://doi.org/10.55640/ijssll-05-08-02>

ABSTRACT

Background: Social media plays a central role in the daily lives of college-aged women, serving as a primary source of communication, entertainment, and health information. These platforms offer opportunities for promoting nutrition awareness but also present risks when unverified or misleading content is shared by unqualified influencers.

Objective: This study examined the influence of social media on young adult women, focusing on their understanding of evidence-based nutrition guidelines, perceptions of source credibility, and related behaviors.

Method: A survey distributed via Qualtrics at a mid-South U.S. university assessed participants' foundational nutrition knowledge, social media use, and perceptions of information sources. The instrument was aligned with the most current Dietary Guidelines for Americans and included items addressing both credential recognition and demographic cues influencing trust.

Results: Participants (n = 332) were primarily White women aged 18–21, with 99% actively using social media. Most respondents recognized registered dietitians as reliable sources, yet over half also trusted “nutritionists,” a title lacking standardized regulation. While many participants correctly identified certain national dietary guidelines (e.g., carbohydrates as the body's primary fuel), notable gaps persisted, particularly regarding protein requirements. Visual and demographic cues, such as gender, age, and race, also shaped perceptions of credibility. Nearly 70% reported that social media influences their food choices.

Conclusion: Social media shapes young women's nutritional understanding and behaviors, with both informed preferences and persistent misconceptions evident. Findings highlight vulnerabilities in discerning evidence-based guidance, especially when heuristic cues override credential recognition. Interventions to improve nutrition literacy should integrate media literacy skills, clarify credential distinctions, and strategically feature diverse, relatable credentialed professionals in social media outreach.

Keywords: Social media, dietary guidelines, nutrition knowledge, sources of nutrition information, young adult women.

INTRODUCTION

Social media plays a central role in the lives of emerging adults, particularly college-aged women, who utilize platforms such as Instagram, Facebook, and TikTok for communication, entertainment, and health-related information. With over 84% of adults aged 18–29 engaging daily with social media (Auxier & Anderson, 2021), these platforms have increasingly become influential yet often unverified sources of nutrition information. While social media can positively foster health awareness and supportive communities, the prevalence of misinformation disseminated by unqualified influencers poses substantial risks, potentially shaping users' dietary choices negatively.

Theoretical perspectives such as source credibility theory (O'Keefe, 2002) and dual-process models of information processing, particularly the Elaboration Likelihood Model (Petty & Cacioppo, 1986), provide frameworks for understanding how young adults assess nutrition information credibility. These theories suggest users may frequently rely on heuristic cues, including visual appearance and demographic similarity, rather than formal credentials to determine trustworthiness (Fogg, 2003; Perloff, 2014). Additionally, ambiguity surrounding credentials, particularly distinctions between registered dietitians who possess standardized qualifications and nutritionists who often do not (Metzger & Flanagin, 2013), further complicates the credibility assessments made by young adults.

This is particularly critical for young adult women, who may be independently navigating food choices for the first time and are vulnerable to social comparisons influenced by visually oriented content (Fardouly & Vartanian, 2016; Holland & Tiggemann, 2017). Despite these risks, social media holds considerable potential for positive influence when evidence-based nutritional information is clearly disseminated and recognized. Given the growing prominence of social media, understanding how college-aged women interpret and act upon nutritional content encountered on these platforms is essential.

Therefore, this study aimed to describe the types of nutritional information consumed by female college students via social media and examine its influence on their nutrition knowledge and behavior. Specifically, the research questions (RQ) guiding this investigation were:

RQ1. What are female college students' perceptions of nutritional information consumed on social media?

RQ2. What is female college students' understanding of evidence-based dietary guidelines?

RQ3. Who do female college students visually trust for credible nutrition information?

METHODS

A quantitative, non-experimental approach was used to address the study's research questions. Following Institutional Review Board approval (protocol

#2405539075), an online survey was distributed to female college students at a single mid-south public university via Qualtrics (McClanahan, 2024). Participants were recruited from across the campus using multiple outreach strategies and included snowball sampling and targeted social media posts shared through student and academic networks.

To address the research questions a series of questions assessed participants' foundational knowledge of evidence-based nutrition. These items focused on key components of the *Dietary Guidelines for Americans* (the United States Department of Agriculture and the U.S. Department of Health and Human Services, 2020), that provide nutrient recommendations intended to promote health and prevent chronic disease. Participants were also asked about their social media usage and to identify whether the nutrition information they commonly encounter on social media reflects these national standards, offering insight into both their awareness of the guidelines and their ability to evaluate the credibility of online content.

RESULTS

The sample comprised of 332 female respondents primarily aged 18–21(89%) who self-identified as White. Their reported social media use was nearly universal, frequent and involved exposure to food and drink content (Table 1).

Table 1. Description of Social Media Usage (n = 332)

Category	Response*	n	%
Platforms Used (Multiple Responses)	Instagram	324	98%
	Snapchat	289	87%
	TikTok	265	80%
	Pinterest	225	68%
	Facebook	175	53%
	YouTube	151	45%
	Twitter	42	13%
Most Active Platform	Instagram	144	43%
	TikTok	105	32%
	Snapchat	59	18%
	YouTube	10	3%
	Pinterest	8	2%
	Facebook	3	1%
	Twitter	1	0%
Hours Per Day on social media	3–4 hours	146	44%
	1–2 hours	123	37%

	5–6 hours	29	9%
	30–59 minutes	23	7%
	> 6 hours	5	2%
	< 30 minutes	3	1%
Checks Per Day	10+ times	176	53%
	6–10 times	109	33%
	1–5 times	44	13%
Food/Drink Posts Seen Per Day	1–5 times	134	40%
	6–10 times	109	33%
	10+ times	81	24%

***Excludes non-active respondents**

Results related to RQ1 revealed that most respondents preferred receiving nutrition information from registered dietitians. More than half of the respondents indicated that they also consumed nutrition information from nutritionists

(typically people without a standardized certification or formal training). This is further emphasized in that almost all of participants acknowledged that most social media influencers lack the credentials necessary to provide reliable nutrition guidance (Table 2).

Table 2. Perceptions of Nutrition Information Sources on Social Media (n = 332)

Category	Response	n	%
Trusted Nutrition Sources on social media	Registered Dietitian	282	85%
	Nutritionist	206	62%
	Medical Doctor	187	56%
	Health/Wellness Influencer	148	45%
	Family	65	20%
	Friend	45	14%
	Celebrity	21	6%
Perceived Credibility of Influencers	True – Influencers have credentials	39	12%
	False – Influencers lack credentials	293	88%

Results related to RQ 2 indicated that most respondents correctly identified carbohydrates as the body's primary fuel source. However, less than half correctly answered the question about appropriate protein intake, suggesting some

gaps in understanding. When asked about caloric needs for an active 21-year-old female, a little over half responded correctly (Table 3).

Table 3. Knowledge of Nutrition Guidelines Among Female Respondents (n = 332)

Nutrition Topic	Statement	n	%
Carbohydrates	Low-carb diet is optimal	45	14%
	Carbs are fuel; should be ~50% of diet	287	86%
Protein Intake	10% of calories is adequate	144	43%
	Protein should make up majority of diet	188	57%
Caloric Needs	Sedentary 21 y/o needs 1,600 calories	151	45%
	Active 21 y/o needs 2,400 calories	181	55%

After viewing images of individuals in the survey to address RQ3, most respondents correctly chose registered dietitians over influencers. Interestingly, many respondents favored the

female over the male registered dietitian and preferred a younger African American female over an older White female. These preferences suggest that perceived

relatability or demographic factors may influence trust in nutrition sources and should be explored further (Table 4).

Table 4. Visual Preference for Nutrition Information Sources Based on Images (n = 332)

Comparison	Response Option	n	%
Q1: Kardashian vs. Female RD	Kourtney Kardashian	23	7%
	Registered Dietitian (Female)	309	93%
Q2: Hemsworth vs. Male RD	Chris Hemsworth	161	48%
	Registered Dietitian (Male)	171	52%
Q3: Female RD vs. Male RD	Registered Dietitian (Female)	287	86%
	Registered Dietitian (Male)	45	14%
Q4: Young AA Female RD vs. Older White Female RD	Registered Dietitian (Younger, African American Female)	280	84%
	Registered Dietitian (Older, White Female)	52	16%

DISCUSSION

This study underscores the complex interplay between perceived source credibility, visual cues, and nutrition knowledge among college-aged women engaging with social media. The strong preference for Registered Dietitians (RDs) suggests that, within this sample, there is baseline recognition of formal credentials as markers of expertise (Eastin, 2001). However, trust in self-identified nutritionists, a title lacking standardized regulation, indicates reliance on heuristic cues beyond formal training (Metzger et al., 2010). This duality may reflect both accessibility and familiarity; nutritionists might appear more approachable or aligned with influencers' branding strategies, whereas RDs represent institutional authority (Metzger & Flanagin, 2013). Future research should probe these cognitive and affective pathways, potentially drawing on source credibility theory (O'Keefe, 2002) and dual-process models of information processing, such as the Elaboration Likelihood Model (Petty & Cacioppo, 1986), to distinguish when individuals rely on systematic versus peripheral cues.

Documented knowledge gaps, particularly around protein intake and caloric needs, suggest that exposure to prevalent social media trends (e.g., high-protein or low-carb messaging) may override or distort evidence-based guidance, especially when users lack critical appraisal skills (Fardouly & Vartanian, 2016; Holland & Tiggemann, 2017). This underscores the need for integrated media literacy training that not only disseminates accurate information but also equips young women to evaluate source legitimacy, interpret visual framing, and recognize unregulated claims (Livingstone & Helsper, 2007).

Visual and demographic preferences, such as favoring

younger African American female RDs, underscore that relatability and perceived similarity shape trust independently of formal qualifications (Fogg, 2003; Perloff, 2010). These findings align with prior evidence indicating attractiveness, perceived identity alignment, and representation influence persuasive health communication and credibility judgments (Langlois et al., 2000; Perloff, 2014). Incorporating these dynamics into nutrition education campaigns could enhance receptivity, for example, by featuring diverse, relatable credentialed experts in social media outreach. Collectively, the results highlight an opportunity to leverage existing partial trust in credentialed sources by making these experts more visible and relatable on social platforms while educating audiences about the ambiguity of unregulated titles.

Several limitations affect the interpretation of these findings. First, the sample was non-random and comprised of students at a single Mid-South university, limiting generalizability to broader emerging adult populations, including those not enrolled in higher education or from different geographic and cultural contexts. Second, the cross-sectional design precludes causal inference; it remains unclear whether social media exposure shapes beliefs or preexisting beliefs influence information consumption. Third, reliance on self-reported data introduces potential social desirability and recall biases, particularly concerning media usage and perceived trust. Fourth, while the study assessed recognition of credentialed versus unregulated sources, it did not experimentally manipulate source characteristics, limiting insight into mechanisms by which visual and demographic cues influence trust. Additionally, potential confounders, like prior formal nutrition education, personal health goals, or frequency of exposure to specific influencer

types, were not controlled. Finally, operationalization and psychometric validation of key constructs (e.g., "trust," "nutrition knowledge") require further clarification to ensure measurement reliability.

Future research should test how adjustments in source presentation, such as transparency about qualifications and demographic matching, affect trust and belief accuracy. Longitudinal studies could assess whether improved media literacy leads to sustained changes in nutrition-related behavior.

CONCLUSION

This study contributes to the understanding of how college-aged women navigate nutrition information on social media by highlighting both informed preferences and persistent ambiguities. While many participants correctly identify and prefer credentialed experts like Registered Dietitians, substantial trust in unregulated nutritionists and observable knowledge gaps reveal vulnerabilities in discerning evidence-based guidance. Visual and demographic characteristics further modulate perceived credibility, suggesting that interventions aiming to improve nutrition literacy should emphasize accurate content and strategically consider representation and relatability in messenger selection. Practical applications include developing a media literacy curriculum explicitly addressing credentialing and the influence of appearance on trust, as well as designing social media campaigns featuring diverse, approachable credentialed professionals.

REFERENCES

1. Auxier, B. & Anderson, M. (2021). *Social Media Use in 2021*. Pew Research Center. <https://www.pewresearch.org/internet/2021/04/07/social-media-use-in-2021/>
2. Eastin, M. S. (2001). Credibility assessments of online health information: The effects of source expertise and knowledge of content. *Journal of Computer-Mediated Communication*, 6(4).
3. Fardouly, J., & Vartanian, L. R. (2016). Social media and body image concerns: Current research and future directions. *Current Opinion in Psychology*, 9, 1-5.
4. Fogg, B. J. (2003). *Persuasive Technology: Using Computers to Change What We Think and Do*. Morgan Kaufmann Publishers.
5. Holland, G., & Tiggemann, M. (2017). A systematic review of the impact of the use of social networking sites on body image and disordered eating outcomes. *Body Image*, 17, 100-110.
6. Langlois, J. H., Kalakanis, L., Rubenstein, A. J., Larson, A., Hallam, M., & Smoot, M. (2000). Maxims or myths of beauty? A meta-analytic and theoretical review. *Psychological Bulletin*, 126(3), 390-423.
7. Livingstone, S., & Helsper, E. J. (2007). Gradations in digital inclusion: Children, young people, and the digital divide. *New Media & Society*, 9(4), 671-696.
8. McClanahan, K. (2024). *Influences of Social Media on Nutrition Perceptions and Body Image among Female College Students: A Study of Health Impacts and Behavioral Responses*. [Honors Undergraduate Thesis, University of Arkansas]. University of Arkansas Libraries.
9. Metzger, M. J., & Flanagin, A. J. (2013). Credibility and trust of information in online environments: The use of cognitive heuristics. *Journal of Pragmatics*, 59, 210-220.
10. Metzger, M. J., Flanagin, A. J., & Medders, R. B. (2010). Social and heuristic approaches to credibility evaluation online. *Journal of Communication*, 60(3), 413-439.
11. O'Keefe, D. J. (2002). *Persuasion: Theory and research*. SAGE Publications.
12. Perloff, R. M. (2010). *The Dynamics of Persuasion: Communication and Attitudes in the 21st Century* (4th ed.). Routledge.
13. Perloff, R. M. (2014). Social media effects on young women's body image concerns: Theoretical perspectives and an agenda for research. *Sex Roles*, 71(11-12), 363-377.
14. Petty, R. E., & Cacioppo, J. T. (1986). *Communication and Persuasion: Central and Peripheral Routes to Attitude Change*. Springer-Verlag.
15. U.S. Department of Agriculture, & U.S. Department of Health and Human Services. (2020). *Dietary patterns* (Chapter 8). In *Dietary guidelines for Americans, 2020–2025*. https://www.dietaryguidelines.gov/sites/default/files/2020-07/PartD_Ch8_DietaryPatterns_first-print.pdf