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Influence of Social Media on Dietary Choices among Female Undergraduate Students

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Introduction

Social media has become an important part of everyday communication and information exchange, transforming how individuals interact, obtain information, and make decisions about health and lifestyle.[1] The rapid expansion of platforms such as Facebook, Instagram, YouTube, TikTok, and X has created an environment in which users are continuously exposed to information generated by individuals, organizations, commercial actors, and influencers. The global social media environment has expanded substantially in recent years, supported by widespread smartphone ownership, improved internet access, and increasingly personalized content delivery. [2] Beyond communication and social interaction, social media has therefore become an important source through which health-related information and behavioral norms are encountered and interpreted [3,4].

The implications of this increased exposure are particularly relevant for young adults, who are among the most active users of social media. Social media can facilitate access to health information, peer support, social connection, and opportunities for health promotion. However, the information available through these platforms varies considerably in quality and may include commercial, misleading, or non-evidence-based content. [4, 5] Exposure to social comparison, idealized lifestyles, and appearance-related content may also influence psychological well-being and health-related behaviors. [5, 6] These concerns are particularly important during the transition to adulthood, when individuals are developing greater independence in food selection and establishing dietary behaviors that may persist into later life. [7]

Diet is one area in which the influence of social media has become increasingly evident. Food-related content is widespread across social media platforms and includes recipes, restaurant and product recommendations, food advertisements, nutrition advice, weight-management strategies, fitness content, and influencer endorsements.[8 , 9] Such content may positively influence dietary behavior when it promotes healthy foods, cooking skills, balanced diets, or evidence-based nutrition information. Conversely, exposure to highly processed foods, food marketing, restrictive diets, and unsubstantiated nutrition claims may encourage less healthful dietary practices. [9-11] The visual and interactive nature of platforms such as Instagram and TikTok may make food-related messages particularly persuasive because users can observe and imitate the eating behaviors, food preferences, and lifestyles presented by peers and influencers.

Social media food marketing is an additional concern. Young people may encounter commercial food and beverage promotions that are integrated into entertainment, influencer content, and ordinary social interactions rather than presented as conventional advertisements. Evidence from Nigeria indicates substantial exposure of adolescents to fast-food marketing through social media, illustrating the increasing importance of the digital food environment in shaping young people's experiences with food. [12,13] The distinction between information, entertainment, and advertising may be unclear to users, potentially increasing the persuasive influence of food-related content. At the same time, the popularity of online dietary trends may encourage young adults to adopt practices such as restrictive dieting, "clean eating," intermittent fasting, or other approaches without adequate consideration of their nutritional appropriateness [10].

The influence of social media may be particularly important among female university students. Young women may experience additional pressures related to body image, appearance, weight, and socially constructed ideals of attractiveness. Exposure to idealized bodies, "fitspiration," weight-loss content, and appearance-focused messages can contribute to body dissatisfaction and may influence eating behavior. [14, 15] These pressures may create a tension between nutritional adequacy and the pursuit of socially desirable body shapes. Consequently, social media may influence dietary choices not only through direct food and nutrition information but also through perceptions of body image, peer norms, identity, and the perceived social acceptability of particular eating behaviors.

This issue has particular relevance for students in health-related disciplines. Students in the Faculty of Basic Medical

and Health Sciences receive formal education concerning health, disease prevention, and, depending on their programme of study, nutrition and healthy lifestyle practices. Nevertheless, formal health knowledge does not necessarily protect individuals from exposure to persuasive or misleading information in digital environments. The coexistence of formal health education and continuous exposure to social media content creates an important context for examining whether knowledge is translated into dietary behavior. Understanding this relationship is particularly relevant among female students, for whom social and appearance-related pressures may interact with health knowledge and influence food-related decisions.

Accordingly, this study aimed to investigate the influence of social media on the dietary choices of female undergraduate students in the Faculty of Basic Medical and Health Sciences at Lead City University, Ibadan, Nigeria. Specifically, the study assessed the frequency and pattern of social media use; examined factors influencing students' dietary choices; assessed students' perceived influence of social media on their dietary choices; and examined the relationship between average daily social media use and the adoption of food trends or eating habits promoted online.

Methods

Study Design and Setting

A descriptive cross-sectional survey was conducted among female undergraduate students in the College of Medicine, Lead City University (LCU), Ibadan, Oyo State, Nigeria. The College comprises eight departments: Medicine and Surgery, Nursing Science, Medical Laboratory Science, Physiotherapy, Radiography and Radiation Science, Physiology, Anatomy, and Human Nutrition and Dietetics.

Study Population and Sample Size

The study population comprised 3,037 female undergraduate students enrolled across the eight departments of the College of Medicine. The minimum sample size was determined using Cochran's formula:

$$\cap 0 = \frac{z^2pq}{d^2}$$

Where Z = 1.96 at a 95% confidence level, p = 0.60, q = 0.40, and e = 0.05. The calculated initial sample size was 369. Because the population was finite, the finite population correction was applied, yielding a minimum sample size of 329. An additional 10% was added to account for potential non-response, resulting in a target sample of 362 participants. Of the 362 questionnaires administered, 353 were completed and included in the analysis, giving a response rate of 97.5%.

Sampling Procedure

A multistage sampling technique was employed. The College of Medicine was purposively selected as the study setting. The eight departments were subsequently treated as strata, and the sample was allocated proportionately according to the number of female undergraduate students in each department. Within each stratum, eligible participants were selected using simple random sampling.

The proportionate allocation was as follows: Medicine and Surgery (84), Nursing Science (69), Medical Laboratory Science (69), Physiotherapy (30), Radiography and Radiation Science (37), Physiology (25), Anatomy (7), and Human Nutrition and Dietetics (41).

Data Collection Instrument

Data were collected using a structured, self-administered questionnaire consisting of four sections.

Section A: assessed sociodemographic characteristics, including age, religion, ethnicity, family position, marital status, average monthly income, proportion of income spent on food and data, parents' educational qualification, and parents' occupation.

Section B: assessed the frequency and duration of daily use of 14 social media platforms using six categories: not used, <1 hour, 1–2 hours, 2–3 hours, 3–4 hours, and >4 hours.

Section C: assessed factors influencing food choice using 33 food-choice motive items adapted from the Food Choice Questionnaire developed by Steptoe et al. Each item was rated on a 4-point Likert scale ranging from 1 (not important at all) to 4 (very important). A mean score of 2.50 or higher was considered indicative of an important food-choice factor.

Section D: comprised 21 statements assessing perceived influence of social media on dietary choices and eating behaviours, including exposure to food-related content, food trends, online food purchasing, recipe searching, food-related accounts, snacking, appetite, and consumption of foods promoted online. Responses were recorded as True (1) or False (0).

Validity and Reliability

The questionnaire was assessed for face and content validity by experts in Human Nutrition and Dietetics and Public Health at Lead City University. Their recommendations were incorporated to improve the clarity, relevance, and appropriateness of the items.

The internal consistency of the questionnaire was assessed using Cronbach's alpha, which yielded a coefficient of 0.831, indicating good internal consistency.

Data Collection Procedure

Data were collected over approximately three weeks by the researcher with the assistance of trained research aides. Eligible participants were informed about the study and provided informed consent before completing the questionnaire. Participation was voluntary, and completed questionnaires were collected immediately or within one day of administration. No personally identifying information was collected.

Statistical Analysis

Data were coded and analyzed using IBM SPSS Statistics version 25.0. Categorical variables were summarized using frequencies and percentages, while continuous variables

were summarized using means and standard deviations. The frequency and pattern of social media use were described using frequencies and percentages across the reported duration categories.

Mean scores and standard deviations were calculated for the dietary-choice factors and ranked according to their mean scores. A mean score of ≥2.50 was considered indicative of an important dietary-choice factor, while a score <2.50 was considered less important.

Responses to the 21 perceived social-media influence statements were summarized using frequencies and percentages. Spearman's rank-order correlation was used to examine the relationship between average daily social media use and adoption of food trends or eating habits promoted online. Simple linear regression was subsequently performed to assess the association between average daily social media use and adoption of food trends or eating habits promoted online. Statistical significance was set at $P < .05$, with two-tailed tests.

Table 1: Sociodemographic Characteristics of Participants (n = 353)

Variables	n	%
Age, y, mean ± SD	19.67 ± 3.55	
Department		
Medicine and Surgery	85	24.1
Nursing	69	19.5
Medical Laboratory Science	67	19.0
Physiotherapy	43	12.2
Anatomy	5	1.4
Human Nutrition and Dietetics	33	9.3
Radiography	51	14.5
Total	353	100.0
Religion		
Islam	91	25.8
Christianity	258	73.1
Traditional	3	0.8
Others	1	0.3
Total	353	100.0
Ethnicity		
Yoruba	271	76.8
Igbo	56	15.9
Hausa	7	2.0
Others	19	5.3
Total	353	100.0
Position in the Family		
1st–3rd	286	81.0
4th–6th	55	15.6
7th and above	12	3.4
Total	353	100.0
Marital Status		
Single	331	93.8
Currently married	17	4.8
Separated	4	1.1
Cohabiting	1	0.3
Total	353	100.0
Average Monthly Income, ₦		
<10,000	39	11.1
10,000–30,000	83	23.5
30,001–50,000	70	19.8
50,001–100,000	99	28.0
>100,000	62	17.6
Total	353	100.0
Percentage Spent on Food		
0–20%	57	16.1
21–40%	88	24.9
41–60%	130	36.8
≥61%	78	22.2
Total	353	100.0
Percentage Spent on Data		
0–20%	64	18.1
21–40%	90	25.5
41–60%	82	23.2
≥61%	117	33.2
Total	353	100.0
Parents' Educational Qualification		
No formal education	4	1.1
Primary education	10	2.8
Secondary education	102	28.9
Tertiary education	237	67.2
Total	353	100.0

Ethical Considerations

Ethical approval was obtained from the Research Ethics Committee of Lead City University, Ibadan. Written informed consent was obtained from all participants before data collection. Participation was voluntary, and participants could decline or withdraw without penalty. Confidentiality and anonymity were maintained throughout the study, and the collected data were used solely for research purposes.

Results

A total of 362 questionnaires were administered, of which 353 were completed and included in the analysis, yielding a response rate of 97.5%. The mean age of participants was 19.67 ± 3.55 years. Most participants were from Medicine and Surgery, were Christian, identified as Yoruba, were in the first to third birth position, and were single (Table 1).

Parents' Occupation		
Self-employed	252	71.4
Civil servants	89	25.2
Unemployed	12	3.4
Total	353	100.0

Note: SD, standard deviation. Percentages are based on the total sample (n = 353), except age, which is presented as mean ± SD.

TikTok and WhatsApp had the highest mean frequency of use and the greatest proportions of participants reporting more than 4 hours of daily use. In contrast, Skype, Discord, LinkedIn, Facebook, and blogs had relatively high proportions of non-users (Table 2).

Table 2: Frequency of Social Media Use Among Participants (n = 353)

Social Media Platform	Not Used, n (%)	<1 h, n (%)	1–2 h, n (%)	2–3 h, n (%)	3–4 h, n (%)	>4 h, n (%)	Mean	SD
Facebook	271 (76.8)	38 (10.8)	22 (6.2)	8 (2.3)	6 (1.6)	8 (2.3)	1.48	1.082
LinkedIn	272 (77.1)	53 (15.0)	19 (5.4)	6 (1.7)	2 (0.6)	1 (0.2)	1.35	0.750
Telegram	153 (43.3)	148 (41.9)	29 (8.2)	15 (4.2)	3 (0.8)	5 (1.6)	1.82	0.979
Twitter	224 (63.5)	44 (12.5)	36 (10.2)	21 (5.9)	11 (3.1)	17 (4.8)	1.87	1.419
TikTok	33 (9.3)	34 (9.6)	45 (12.7)	59 (16.7)	35 (9.9)	147 (41.8)	4.33	1.737
Snapchat	45 (12.7)	69 (19.5)	50 (14.2)	44 (12.5)	48 (13.6)	97 (27.5)	3.77	1.806
YouTube	49 (13.9)	80 (22.7)	72 (20.4)	39 (11.0)	45 (12.7)	68 (19.3)	3.44	1.718
WhatsApp	11 (3.1)	36 (10.2)	56 (15.9)	42 (11.9)	45 (12.7)	163 (46.2)	4.59	1.573
Skype	322 (91.2)	10 (2.8)	9 (2.5)	3 (0.8)	1 (0.3)	8 (2.4)	1.23	0.876
iMessage	223 (63.2)	43 (12.2)	40 (11.3)	20 (5.7)	8 (2.3)	19 (5.3)	1.88	1.424
Discord	298 (84.4)	32 (9.1)	13 (3.7)	2 (0.6)	2 (0.6)	6 (1.6)	1.29	0.850
Pinterest	138 (39.1)	103 (29.2)	61 (17.3)	22 (6.2)	10 (2.8)	19 (5.4)	2.21	1.375
Blog	282 (79.9)	28 (7.9)	16 (4.5)	8 (2.3)	10 (2.8)	9 (2.6)	1.48	1.153
Instagram	86 (24.4)	83 (23.5)	56 (15.9)	52 (14.7)	32 (9.1)	44 (12.4)	2.98	1.688

Note: SD, standard deviation.

The highest-rated dietary choice factor was taste (mean = 3.64), followed by pleasant smell (3.50), nutritional value (3.49), maintaining health (3.47), and feeling good (3.38). Factors with mean scores below the prespecified threshold included absence of additives, low calorie content, country of origin, and expiry-date checking (Table 3).

Table 3: Key Factors Influencing Dietary Choices Among Participants (n = 353)

Variables	Not Important at All, n (%)	A Little Important, n (%)	Moderately Important, n (%)	Very Important, n (%)	Mean	SD
Food is easy to prepare	49 (13.9)	72 (20.4)	92 (26.1)	140 (39.7)	2.92	1.073
Food contains no additives	103 (29.2)	94 (26.6)	75 (21.2)	81 (22.9)	2.38	1.132
Food is low in calorie	75 (21.2)	110 (31.2)	94 (26.6)	74 (21.0)	2.47	1.047
Food tastes good	16 (4.5)	20 (5.7)	38 (10.8)	279 (79.0)	3.64	0.785
Food contains natural ingredients	21 (5.9)	62 (17.6)	95 (26.9)	175 (49.6)	3.20	0.933
Food is not expensive	32 (9.1)	80 (22.7)	112 (31.7)	129 (36.5)	2.96	0.978
Food is low in fat	55 (15.6)	90 (25.5)	103 (29.2)	105 (29.7)	2.73	1.051
Food is familiar to me	43 (12.2)	68 (19.3)	104 (29.5)	138 (39.1)	2.95	1.035
Food is high in fibre and roughage	58 (16.4)	122 (34.6)	107 (30.3)	66 (18.7)	2.51	0.977
Food is nutritious	19 (5.4)	28 (7.9)	66 (18.7)	240 (68.0)	3.49	0.857
Food is available in shops/ supermarkets	42 (11.9)	57 (16.1)	94 (26.6)	160 (45.3)	3.05	1.044
Food is good value for money	27 (7.6)	36 (10.2)	79 (22.4)	211 (59.8)	3.34	0.944
Food cheers me up	22 (6.2)	50 (14.2)	82 (23.2)	199 (56.4)	3.30	0.932
Food smells nice	16 (4.5)	31 (8.8)	68 (19.3)	238 (67.4)	3.50	0.836

Food can be cooked simply	34 (9.6)	54 (15.3)	88 (24.9)	177 (50.1)	3.16	1.009
Food helps me cope with stress	31 (8.8)	56 (15.9)	107 (30.3)	159 (45.0)	3.12	0.974
Food helps me control my weight	41 (11.6)	57 (16.1)	91 (25.8)	164 (46.5)	3.07	1.043
Food has pleasant texture	41 (11.6)	51 (14.4)	86 (24.4)	175 (49.6)	3.12	1.046
Environmentally friendly packaging	25 (7.1)	46 (13.0)	75 (21.2)	207 (58.6)	3.31	0.951
Politically approved country of origin	131 (37.1)	100 (28.3)	66 (18.7)	56 (15.9)	2.13	1.085
Check food date (expiry)	119 (33.7)	108 (30.6)	68 (19.3)	58 (16.4)	2.18	1.075
Vitamins and minerals	30 (8.5)	44 (12.5)	113 (32.0)	166 (47.0)	3.18	0.952
Food looks nice	17 (4.8)	41 (11.6)	99 (28.0)	196 (55.5)	3.34	0.865
High protein content	20 (5.7)	38 (10.8)	99 (28.0)	196 (55.5)	3.33	0.883
Little time for preparation	44 (12.5)	89 (25.2)	95 (26.9)	125 (35.4)	2.85	1.042
Keeping healthy	21 (5.9)	33 (9.3)	58 (16.4)	241 (68.3)	3.47	0.892
Good for skin	28 (7.9)	47 (13.3)	56 (15.9)	222 (62.9)	3.34	0.984
Makes me feel good	23 (6.5)	34 (9.6)	81 (22.9)	215 (60.9)	3.38	0.907
Country of origin	114 (32.3)	94 (26.6)	64 (18.1)	81 (22.9)	2.32	1.151
Usually eat this food	55 (15.6)	78 (22.1)	109 (30.9)	111 (31.4)	2.78	1.056
Helps me cope with life	58 (16.4)	60 (17.0)	96 (27.2)	139 (39.4)	2.90	1.102
Bought in shops	37 (10.5)	58 (16.4)	102 (28.9)	156 (44.2)	3.07	1.012
Food is cheap	44 (12.5)	61 (17.3)	99 (28.0)	149 (42.2)	3.00	1.047

Note: SD, standard deviation. Responses were measured on a 4-point Likert scale: 1 = not important at all, 2 = a little important, 3 = moderately important, and 4 = very important. Mean scores ≥2.50 indicate an important factor.

More than half of participants (52.4%) perceived social media as influencing their food choices. Following food trends (60.9%), following food-related accounts (59.8%), reading food-related stories (58.4%), and searching for recipes (63.5%) were commonly reported. However, direct adoption behaviours were less frequently reported; only 31.2% reported eating diets influenced by social media and 34.6% reported buying food seen online (Table 4).

Table 4: Perceived Influence of Social Media on Dietary Choices Among Participants (n = 353)

Variables	True, n (%)	False, n (%)
Social media influence affects my food choice	185 (52.4)	168 (47.6)
I eat diets influenced by social media	110 (31.2)	243 (68.8)
I consume fast food	138 (39.1)	215 (60.9)
I often buy food I see online	122 (34.6)	231 (65.4)
I often recommend food seen online	140 (39.7)	213 (60.3)
Social media makes me forget hunger	157 (44.5)	196 (55.5)
I eat food seen on social media	56 (15.9)	297 (84.1)
Celebrity food influences my choice	76 (21.5)	277 (78.5)
I eat while using social media	56 (15.9)	297 (84.1)
I read food stories online	206 (58.4)	147 (41.6)
Social media is beneficial to my diet	117 (33.1)	236 (66.9)
I search for recipes online	224 (63.5)	129 (36.5)
I follow food trends on social media	215 (60.9)	138 (39.1)
Social media influences what I eat, cook, and buy	136 (38.5)	217 (61.5)
I follow food-related social media accounts	211 (59.8)	142 (40.2)
Social media helps me organize my diet	81 (22.9)	272 (77.1)
I snack constantly while on social media	163 (46.2)	190 (53.8)
I like food more when I see it on social media	78 (22.1)	275 (77.9)
I eat more when using social media	165 (46.7)	188 (53.3)
Social media increases my desire for food	123 (34.8)	230 (65.2)
Social media makes me lose appetite	82 (23.2)	271 (76.8)

Note: Responses are presented as n (%).

There was a statistically significant negative association between average daily social media use and adoption of food trends or eating habits promoted online (Spearman $\rho = -.336$, $P < .001$) (Table 5).

Table 5: Relationship Between Average Daily Social Media Use and Adoption of Food Trends/Eating Habits Promoted Online (n = 353)

Variables	Spearman ρ	P value
Average daily social media use × adoption of food trends/eating habits promoted online	−.336	<.001

Note: ρ, Spearman rank correlation coefficient. Spearman rank-order correlation was used; 2-tailed P values are reported.

The regression model was statistically significant, $F(1,351) = 54.811$, $P < .001$, and explained 13.5% of the variance in adoption scores ($R^2 = .135$). Average daily social media use was negatively associated with adoption scores ($\beta = -.368$, $P < .001$) (Table 6).

Table 6: Regression Analysis of Average Daily Social Media Use and Adoption of Food Trends/Eating Habits Promoted Online (n = 353)

Model/Variable	B or SS	SE or df	β or F	t or P value
Model summary				
R	.368			
R^2	.135			
Adjusted R^2	.133			
Standard error of the estimate	.20634			
ANOVA				
Regression	2.334	1		<.001
Residual	14.944	351		
Total	17.277	352		
F		54.811		
Coefficients				
Constant	1.905	.040	—	47.117
Average daily social media use	−.120	.016	−.368	−7.403

Note: Dependent variable = adoption of food trends/eating habits promoted online. Predictor = average daily social media use. B, unstandardized regression coefficient; SE, standard error; β, standardized regression coefficient. For the ANOVA section, values are sums of squares (SS), degrees of freedom (df), F, and P value as applicable. Simple linear regression was used.

Discussion

This study found that social media was widely used among female undergraduate students, with particularly high engagement with WhatsApp and TikTok. However, the findings indicate that overall time spent on social media was not positively associated with greater adoption of food trends or eating habits promoted online. Although 52.4% of participants reported that food-related content on social media influenced their food choices, substantially smaller proportions reported specific behavioural responses, including eating a diet promoted on social media, purchasing food promoted on social media, or consuming foods seen on social media despite these being outside their usual food habits. This distinction is important because exposure to food-related content may increase awareness or interest without necessarily resulting in behavioural adoption. Previous research has similarly identified social media as an important source of food and health information while demonstrating that engagement with online content does not necessarily translate directly into dietary behaviour [11, 16].

Taste was the most important factor influencing food choice in the present study, followed by pleasant smell, nutritional value, keeping healthy, and making participants feel good. This finding reinforces the multidimensional nature of food choice among young adults. Sensory appeal remains an important determinant of food selection, with taste consistently identified as a major motive underlying food choice. [17] Recent research using food-choice motive frameworks has likewise demonstrated the continuing importance of sensory appeal alongside health, price, convenience, and other considerations. [18] Thus, even among students with substantial exposure to nutrition-related information, dietary decisions may continue to reflect immediate sensory and personal considerations.

The relatively high importance attached to nutritional value and health-related characteristics is also noteworthy. Participants rated food as nutritious and keeping healthy highly, suggesting that health considerations were important components of their food-selection decisions. This is consistent with evidence that food choice among university students is shaped by a combination of health-related motives, personal preferences, and practical considerations rather than by a single determinant. [19, 20] The findings therefore suggest that nutrition knowledge or health awareness may coexist with sensory, economic, and convenience-related motivations when students make everyday food choices.

Social media appeared to have an important informational role in participants' food-related activities. More than half reported following food trends, following food accounts or pages for inspiration or recipe ideas, reading food-related stories, and searching for recipes after seeing dishes on social media. This pattern suggests that social media may provide an avenue through which students encounter, evaluate, and explore food-related information. Research among young adults has similarly shown that social media platforms are used to obtain health information, although users differ in the platforms and sources they trust. [16] The growing use of social media for food and nutrition communication therefore provides an opportunity for nutrition educators to deliver accessible evidence-based information to university students.

The findings relating to eating while using social media were mixed. Although 44.5% of participants reported forgetting that they were hungry while using social media, 46.2% reported constantly snacking while browsing social media, and 34.8% reported that foods seen on social media made them want to eat more. These findings suggest that the relationship between social media engagement and eating behaviour may not be

uniform. Previous studies have reported associations between social media engagement and eating-related behaviours, including problematic eating patterns, although the direction and magnitude of these relationships vary across populations and measures. [21,22] The present findings similarly support the need to consider the type of social media engagement and the nature of food-related exposure rather than treating social media use as a single behavioural construct.

A significant negative relationship was observed between average daily social media use and adoption of food trends and eating habits promoted online (Spearman $\rho = -0.336$, $P < .001$). The regression model also showed a significant negative association between average daily social media use and adoption scores ($\beta = -0.368$, $P < .001$), with social media use explaining 13.5% of the variance in adoption. This finding does not support the assumption that greater overall social media use is necessarily associated with greater adoption of food trends promoted online. One possible explanation is that total time spent on social media captures many activities that are unrelated to food. Consequently, duration of use may be less informative than the frequency and type of exposure to food-related content. Social media research has increasingly emphasized the importance of distinguishing general platform use from specific engagement with health, food, and nutrition content [11, 16].

The negative association should also be interpreted cautiously because the study was cross-sectional. The finding indicates an association between average daily social media use and the measured adoption score but does not establish that increased social media use reduces adoption of food trends. Other factors not examined in the present analysis may contribute to food-trend adoption, including individual food preferences, availability and affordability of foods, peer influence, nutrition knowledge, and the specific characteristics of social media content encountered. Food choice is inherently multidimensional, and environmental and individual determinants may operate simultaneously [23].

The findings have implications for nutrition education among university students. The high level of engagement with platforms such as WhatsApp and TikTok, together with the substantial use of social media for recipes, food trends, and food-related information, indicates that these platforms could provide useful channels for nutrition education. However, interventions should move beyond simply disseminating nutrition information and should support students in critically evaluating food-related content encountered online. Social media-based nutrition interventions may provide opportunities to influence eating behaviours when content is appropriately designed and delivered [24].

The study has several limitations. The cross-sectional design limits causal interpretation, and social media use and food-related behaviours were self-reported and therefore subject to recall and social-desirability bias. The study was also conducted in a single university and among female students within a health-related college, which may limit generalizability to other student populations. In addition, average daily social media use represents overall platform engagement and does not distinguish between food-related and non-food-related exposure. Future studies should therefore examine exposure to specific categories of food content, engagement with food influencers and commercial food marketing, and the credibility of nutrition information encountered online.

Implications for Research, Practice and Policy

Implications for Research

Future research should examine the specific characteristics of food-related social media exposure rather than relying solely on total time spent on social media. In the present study, overall social media use was significantly associated with adoption of food trends and eating habits promoted online, but the direction of the association indicates that time spent online alone may not adequately capture the nature of food-related exposure. Future studies should therefore assess the type, frequency, and source of food-related content encountered, including nutrition information, food trends, influencer content, and commercial food promotions. Longitudinal and intervention studies are also needed to determine whether exposure to specific forms of social media content is associated with subsequent changes in food choice and dietary behaviour. Research across multiple universities and student populations would further establish the generalizability of these findings.

Implications for Nutrition Education and Practice

The findings indicate that social media provides an important avenue for nutrition education among female undergraduate students. More than half of participants reported engaging with food-related content, including food trends, food accounts, stories, and recipes. Nutrition educators and dietitians can therefore consider commonly used social media platforms as complementary channels for delivering evidence-based nutrition education. Nutrition education delivered through these platforms should emphasize practical food-choice skills and the ability to critically evaluate nutrition and food-related information. This is particularly relevant because the quality and accuracy of online nutrition information can vary considerably. Digital nutrition education should therefore complement, rather than replace, established nutrition education approaches.

Implications for University Health Promotion

Universities can incorporate social media into broader student health-promotion activities, particularly where students already use these platforms for food-related information and inspiration. Health-promotion programmes could provide credible nutrition content through platforms commonly accessed by students and encourage engagement with qualified nutrition professionals and reliable health information sources. Such initiatives may be particularly relevant within university settings because students are developing greater autonomy over food selection and dietary practices. Evidence from university-based nutrition interventions indicates that nutrition education can support healthier dietary practices among students, although intervention approaches and outcomes vary. University health services could therefore integrate digital

nutrition literacy with existing health-promotion activities.

Implications for Policy

The findings support consideration of digital nutrition literacy within university and public health strategies targeting young adults. Policies and institutional health-promotion guidelines should encourage the dissemination of accurate, evidence-based nutrition information through digital platforms while supporting students' ability to identify and critically assess potentially misleading food and nutrition information. This is particularly important because online nutrition information is variable in quality and accuracy. Policy and programme development should also recognize that social media exposure is multidimensional and that overall time spent on social media should not be treated as a direct proxy for exposure to food-related content.

Conclusion

Social media represents an increasingly relevant context for nutrition education and food-related decision-making among university students. Its value for health promotion lies not only in its capacity to reach students but also in its potential to support critical engagement with the food and nutrition information encountered in everyday digital environments. Nutrition professionals and universities should therefore consider digital nutrition literacy as an important component of student health promotion. Future efforts should prioritize credible, engaging, and contextually appropriate nutrition communication while strengthening students' capacity to critically assess online food and nutrition messages. Further research is warranted to identify the forms of digital engagement that are most relevant to sustainable improvements in dietary behaviour.

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Conflict of Interest

The authors declare that they have no conflicts of interest relevant to this study.

Declaration of Generative Ai and Ai-Assisted Technologies

During the preparation of this manuscript, the authors used generative artificial intelligence and AI-assisted technologies for language editing, organization of manuscript content, and improvement of clarity and readability. The authors reviewed and verified the content and remain fully responsible for the accuracy, interpretation, and integrity of the work.

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