

Influence of Social Media Use on the Eating Behavior and Food Preferences of Undergraduate Students in the University of Nigeria, Nsukka

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Abstract

This research evaluated the influence of social media use on the eating behaviors and food preferences of undergraduate students in the University of Nigeria. Four objectives and two hypotheses guided the study. A descriptive and correlational research designs was adopted for the study for a population of 39,295 students. Multi-stage sampling technique was used to select a sample of 368 students. Data was collected using structured questionnaires validated by three experts. Data was analyzed using frequencies, percentages, mean, standard deviation, and chi-square. The result revealed that the majority (73.1%) of the respondents make occasional use of social media applications with WhatsApp (96.2%), YouTube (84.8%), Gmail (83.7%), Facebook (78.5%) and Instagram (72.8%) being used by many of the students. The less common applications were Skype (10.6%), Tumblr (14.1%), and Reddit (14.7%) among others. The respondents' eating behaviours showed that more than a third (35.1%) of them were emotional under eaters and those with hungry eating behaviour were 26.6%. A greater proportion (26.6%) of the students preferred snacks, 26.1% preferred dairy, 25.8% preferred fruits and very few (3.0%) preferred vegetables. Findings further showed that the frequency of social media use was not significantly associated with the eating behaviours and food preferences of the students. The study recommended that the University authority should provide nutrition education that will foster a healthier campus environment.

Keywords: Social media, Eating behaviour, Undergraduate students, Food preferences

Introduction

According to Reid and Weigle (2014), the impact of social media among adolescents and young people can be a powerful change agent. With technological convergence (accessing several technologies from one device), many young adults can access social media on their mobile phones and prefer to always have access to their social networks (Vaterlaus et al., 2015). Social media is a collective term for websites and applications that promote communication, community-

based input, content-sharing, and collaboration. It is an effective tool that can be used to influence, inform, and persuade as well as stay in touch with friends and family (Nesi et al., 2018). Social media mobile applications have global reach, use, and engagement. In an earlier global report, approximately 85% of adolescents and young adults reported using a social media website (Reid & Weigle, 2014). Various forms of social media in existence include blogs, micro-blogs, wikis, social networking sites, photo-sharing

sites, instant messaging, video-sharing sites, podcasts, widgets, virtual worlds, and more. These platforms allow users to have conversations, share information, and create web content. Social media outlets are no longer just an avenue to connect with friends but are increasingly a mechanism for consumers to get information about diverse phenomena such as politics, education, health, and nutrition among other things. For instance, a study by Masoud et al. (2019), determined that 94.2% of university students used at least one social media network, and more than half of these students spent about 1–4 hours a day on social media. These extended times spent on social media could easily lead users to develop specific changes in behaviour (Durmaz et al., 2023), notably their eating behaviour.

Eating behaviours are defined as conscious, collective, and repetitive habits, which lead people to select, consume, and use certain foods or diets, in response to influences which could be social media influence and cultural influences (Medina et al., 2020). Eating behavior is a broad term that encompasses food choice and motives, feeding practices, dieting, and eating-related problems such as obesity, eating disorders, and feeding disorders. It is complex in the sense that human beings make hundreds of food decisions each day that are influenced by a variety of personal, social, cultural, environmental, and economic factors (LaCaille, 2013). Several environmental factors influence people's eating patterns. One of these is the usage of the internet and social media, which have become an integral part of daily life because of advances in information and communication technology (Durmaz et al., 2023).

Studies (Al Ali et al., 2021; Güneş& Demirer, 2023) have shown that social media use has a significant impact on eating behaviours among undergraduate students.

According to study by Fardouly et al. (2015), social media use was associated with increased frequency of eating out, eating high-calorie foods, and skipping meals. The study found that students who spent more time on social media were more likely to eat fast food, consume sugary drinks, and eat fewer fruits and vegetables. Social media use was also associated with disordered eating behaviours, such as binge eating, purging, and fasting (Fardouly et al., 2015). Furthermore, a review by Kucharczuk et al. (2022), concluded that food and beverage companies use celebrities and influencers on social media for marketing their products thereby contributing to the food preferences of individuals especially adolescents and young adults.

Food preference, also known as food choice, refers to how people decide on what to buy and eat. A complex set of factors that vary from person to person and depend on culture, heritage, and upbringing all influence food preference (European Food Information Council [EUFIC], 2022). The food choice of undergraduate students, who are mainly adolescents and young adults, is greatly influenced by certain factors such as food cost, access to food, culture, religion, appetite, taste, and social media. This indicates that students are drawn to what they see on social media. Not only does the social media influence food choices, but it also advertises so much about fit and lean bodies which makes adolescents become in awe of looking slim and attractive. As a result, they indulge in dieting culture and start consuming a variety of diets and supplements without consulting an expert. This proves fatal in the long run, as it potentially leads to eating disorders, poor health, and poor performance (Kucharczuk et al., 2022). A study by Cardello et al. (2012) found that exposure to food images on social media increased students' desire for

unhealthy foods, such as pizza, burgers, and fries. Conversely, students who were exposed to healthy food images, such as fruits and vegetables, were more likely to choose healthy foods.

With the increase in technology and internet use among young adults and university students, social media usage is also becoming widespread. A study carried out by Durmaz et al. (2023) shows that, in the digitalized world and due to the influence of post COVID-19 pandemic, almost all training and activities are carried out online. The study determined that more than half of the students (52.6%) spent more than 2 hours a day on social media, 39.5% used social media to spend time and share, and 35.6% used it for staying up to date. On the other hand, 81.1% of the students were interested in nutrition news on social media, and 31.9% stated that they followed nutrition news for weight control and weight loss. Another study found that most students spent 1–4 hours/day on social media, mainly using social media to stay up to date (Talaue et al., 2018). The widespread use of social media among university students suggests that social media has a strong influence on young adults. This effect of social media on students can affect all areas of their lives as well as their eating behavior and food preferences. A study by Murray et al. (2016) concluded that spending more time on the internet increases the level of exposure to social media and can affect eating behavior. This study determined that, as the effect of social media on eating behavior increased, unhealthy food choices increased (Murray et al., 2016). With the increase of time spent on social media, the level of influence of students from social media increases, and their exposure to news and posts about nutrition and food increases, thus increasing social media's effect on eating behavior. Hence, it is thought that the increased exposure of the students to these

posts can affect their unhealthy eating behaviour (Durmaz et al., 2023).

The technological developments in the world, the increase in the use of the internet and the use of different social media tools have created awareness in the field of nutrition as well as in other fields, and have brought a different dimension. Through the Internet and social media, all developments and activities in the field of nutrition can be followed, thereby increasing access to information and awareness (Thurairatnam, 2021). On the other hand, people's desire to learn about new diets has increased; because of this demand, various food vendors have emerged online, displaying various types of products and imposing various nutritional values to them. Consequently, a significant number of people, in their attempt to enhance their diet intake, unwittingly fall victim to those vendors (EUFIC, 2022). The etiology of eating behaviour is multifactorial, and exposure to media messages is considered to be a contributor. Although traditional media, such as television and magazines, have been examined extensively in relation to eating concerns, the influence of social media has received relatively less attention (Sidani et al., 2016). This study therefore aimed to investigate the influence of social media use on eating behavior and food preferences of undergraduate students in the University of Nigeria.

Objectives of the study

The broad objective of this study was to determine the influence of social media use on the eating behavior and food preferences of undergraduate students in the University of Nigeria. The specific objectives were to:

1. identify the social media applications commonly used by the respondents;
2. determine the frequency of social media use among the respondents;

3. identify the eating behaviours of the respondents; and
4. identify food preferences of the respondents.

Null hypotheses (H₀)

The following null hypotheses were tested at $p \leq 0.05$ level of significance.

H₀₁ -There is no significant relationship between social media use and eating behaviors of undergraduate students in the University of Nigeria.

H₀₂ -There is no significant relationship between social media use and food preferences of undergraduate students in the University of Nigeria.

Methodology

Study Design: The study adopted a correlational research design. This design is most suitable for this study because the study investigated relationships between variables without the researcher controlling or manipulating any of them (Bhandari, 2023).

Study Population: The study population consisted of 39,295 undergraduate students studying in Nsukka and Enugu campuses during the 2021/2022 session (University of Nigeria Admissions Department, 2021).

Sample Size and Sampling Procedure: The WHO (2013) guideline for the calculation of sample size in a survey was used to determine the sample size of the population using the formula below.

$$n = \frac{z^2 \times p(1-p)}{e^2} \div \left[1 + \frac{z^2 \times p(1-p)}{e^2 N} \right]$$

Where;

n = sample size

z = level of confidence (1.96);

p = baseline levels of the indicators (0.5 or 50%);

e = margin of error (0.05 or 5%);

N = Population size.

This gave a total of 381 undergraduate students that served as samples for the study. The study adopted a multi-stage sampling technique in selecting the samples. The first stage involved the use of simple random sampling by balloting for the selection of 30% (three) of ten faculties in UNN, Nsukka Campus, and 30% (two) of seven faculties in UNN, Enugu Campus. In stage two, proportionate sampling was used to determine the number of students to be selected from each faculty. In the final stage, simple random sampling without replacement was used to select the sample size computed for each faculty. Only the students who were available during the data collection period and gave their consent participated in the study.

Instrument for Data Collection: The instrument for data collection was a structured questionnaire. The questionnaire was structured based on fulfilling the objectives of the study and it comprised of sections A-D. Section A was used to obtain information on the background information of the respondents. Section B was used to elicit information on the types and level of social media use among the respondents. Section C was an adaptation of the Adult Eating Behaviour Questionnaire (AEBQ) by Zickgraf and Rigby (2019). The AEBQ is a 35-item measure that assesses eight appetitive traits on a 1-5 Likert agree/disagree scale. The eight eating behaviours were Food responsiveness, Hunger, Enjoyment of eating, Emotional overeating, Emotional undereating, Satiety responsiveness, Slow eating, and Food fussiness. Section D was used to obtain information on the food preferences of the respondents. The food preference questionnaire requires participants to rate their liking of 72 individual foods on a 6-point response scale,

ranging from “not at all” to “a lot”. The food preference ratings were then grouped into six internally reliable categories as follows vegetables, fruits, meat/fish, dairy, snacks, and starches.

Validation and reliability of the instrument:

The structured questionnaire was validated by three experts from the Department of Home Science and Management. Their suggestions and observations were used to improve the questionnaire items. The reliability of the test instruments was obtained using the Cronbach Alpha reliability test. The reliability index of the instrument was 0.98 and was considered highly reliable (Goforth, 2015).

Data collection method: With the help of trained assistants, 381 copies of the questionnaires were administered to students by hand in their different lecture halls. Variables were explained to them and any questions they had were answered. Due to incomplete information, 13 questionnaires were discarded giving a 97% return rate and 368 as the new sample size.

Data and statistical analysis: The scores of each respondent on the items for each eating behaviour were summed up and the behaviour they scored highest in was taken as their eating behaviour. The responses on social media use were summed up and scores ranged from 1-60. Scores of 1-12 reflected very low use of social media, 13-24 reflected rare use, 25-39 showed occasional use and 40-60 was regarded as very frequent use of social. For responses on the frequency of the use of social media applications, a percentage of 50 and above was regarded as ‘commonly used’ while below 50 percent was regarded as ‘not commonly used’. The data collected was entered into the computer software package,

Statistical Product for the Service Solution (SPSS) version 23.0. The result was presented as frequencies and percentages. Chi-square was used to define the relationship among categorical variables. $P < 0.05$ was accepted as the level of significance.

Results

Socio-economic/demographic characteristics of the respondents

The socio-demographic data of the respondents showed that 50.3% of them were males, while 49.7% were females. Majority (76.7%) were aged 19-20years, while a few (0.3%) were aged above 30years. More than half (59.2%) of them had ₦10,000-₦30,000 allowance while 0.8% had above ₦50,000 monthly allowance. A greater proportion (54.1%) of the respondents was students of Nsukka campus while 45.9% were of Enugu campus. Up to 41.0% were in other years, 36.4% were in their first year and 22.6% were in final year. Their area of residence showed that 56.0% resided in the hostels while 44.0% stayed off-campus. Majority (82.6%) of them were of the Igbo ethnic group, while very few (2.7%) were of Hausas. Most (94.3%) of the respondents were Christians, while 2.7% were Muslims.

Types of social media used by the undergraduates

Table 1 presents the types of social media used by the students. WhatsApp (96.2%), YouTube (84.8%), Gmail (83.7%), Facebook (78.5%) and Instagram (72.8%) were some of the social media applications used by most of the students. On the other hand, the less common social media apps were Skype (10.6%), Tumblr (14.1%), and Reddit (14.7%) among others.

Table 1: Types of social media commonly used by the students

Social media	Yes F (%)	No F (%)	Remark
WhatsApp	354 (96.2)	14 (3.8)	Commonly Used
YouTube	312 (84.8)	56 (15.2)	Commonly Used
Gmail	308 (83.7)	60 (16.3)	Commonly Used
Facebook	289 (78.5)	79 (21.5)	Commonly Used
Instagram	268 (72.8)	100 (27.2)	Commonly Used
Telegram	257 (69.8)	111 (30.2)	Commonly Used
TikTok	245 (66.6)	123 (33.4)	Commonly Used
Snapchat	208 (56.5)	160 (43.5)	Commonly Used
Twitter	204 (55.4)	164 (44.6)	Commonly Used
Messenger	183 (49.7)	185 (50.3)	Not commonly used
LinkedIn	136 (37.0)	232 (63.0)	Not commonly used
Pinterest	123 (33.4)	245 (66.6)	Not commonly used
Reddit	54 (14.7)	314 (85.3)	Not commonly used
Tumblr	52 (14.1)	316 (85.9)	Not commonly used
Skype	39 (10.6)	329 (89.4)	Not commonly used

Frequency of social media use among undergraduates

Table 2 presents the frequency of social media use among the undergraduates. The majority (73.1%) of them occasionally used social media applications, 22.6% rarely used them and a few (4.3%) used social media applications very frequently (4.3%).

Table 2: Frequency of social media use among undergraduates

Variable	f	%
Rare use of social media	83	22.6
Occasional use of social media	269	73.1
Very frequent use of social media	16	4.3
Total	368	100.0

Eating behaviours of undergraduates

Table 3 shows the types of eating behaviour among the students. A greater proportion of the students were emotional under eaters (35.1%), 26.6% of them were hungry eaters, 19.6% were food fussy, and 10.6% of them were emotional over eaters. Those who enjoy food were 3.0%, 2.4% were slow eaters, 1.6% were food responsive were and 1.1% of the students were satiety responsive (1.1%).

Table 3: Eating behaviours of undergraduates

Eating behaviours	f	%
Enjoyment of food	11	3.0
Emotional over eating	39	10.6
Emotional under eating	129	35.1
Food fussiness	72	19.6
Food responsiveness	6	1.6
Slowness in eating	9	2.4
Hunger	98	26.6
Satiety responsiveness	4	1.1
Total	368	100.0

Food preferences of undergraduates

Table 4 shows the food preferences of undergraduates. A greater proportion (26.6%) of the students preferred snacks, 26.1% preferred dairy, 25.8% preferred fruits, 16.6% preferred meat/fish, 3.0% preferred vegetables and 1.9% preferred starches.

Table 4: Food preferences of undergraduates

Food groups	f	%
Meat/fish	61	16.6
Dairy	96	26.1
Starches	7	1.9
Snacks	98	26.6
Fruits	95	25.8
Vegetables	11	3.0

Relationship between frequency of social media use and eating behaviour

Table 5 shows the relationship between social media use and eating behaviour of students. There was no significant relationship between social media use and eating behaviour of

undergraduates. However, compared to others, more respondents who were emotional over-eaters and hungry eaters used the social media very frequently. Hypothesis one is therefore not rejected.

Table 5: Relationship between social media use and eating behaviours of undergraduates

Variable	EF F (%)	EOE F (%)	EUE F (%)	FF F (%)	FR F (%)	SE F (%)	H F (%)	SR F (%)	Total F (%)
Rare use	2 (2.4)	4 (4.8)	32 (38.6)	16 (19.3)	2 (2.4)	2 (2.4)	23 (27.7)	2 (2.4)	83 (100.0)
Occasional use	9 (3.3)	30 (11.2)	92 (34.2)	56 (20.8)	4 (1.5)	7 (2.6)	69 (25.7)	2 (0.7)	269 (100.0)
Very frequent use	0 (0.0)	5 (31.3)	5 (31.3)	0 (0.0)	0 (0.0)	0 (0.0)	6 (37.5)	0 (0.0)	16 (100.0)

$\chi^2 = 17.248, df = 14, p = 0.243$

χ^2 = Chi-square value; p = Level of significance; df = degree of freedom; EF - enjoyment of food; EOE - emotional over eating; EUE - emotional under eating; FF - food fussiness; FR - food responsiveness; SE - slowness in eating; H - hunger; SR - satiety responsiveness

Relationship between social media use and Food Preferences of undergraduates

Table 6 presents the relationship between social media use and students' food preferences. There was no significant

relationship between social media use and food preferences of undergraduate students in the University of Nigeria. Hypothesis 2 is, therefore, not rejected.

Table 6: Relationship between social media use and food preferences of undergraduates

Variable	Meat/fish F (%)	Dairy F (%)	Starch F (%)	Snacks F (%)	Fruits F (%)	Vegetables F (%)	Total F (%)
Rare use	14 (16.9)	21 (25.3)	1 (1.2)	25 (30.1)	21 (25.3)	1 (1.2)	83 (100.0)
Occasional use	45 (16.7)	73 (27.1)	6 (2.2)	68 (25.3)	67 (24.9)	10 (3.7)	269 (100.0)
Very frequent use	2 (12.5)	2 (12.5)	0 (0.0)	5 (31.3)	7 (43.8)	0 (0.0)	16 (100.0)

$\chi^2 = 6.723, df = 10, p = 0.751$

χ^2 = Chi-square value; p = Level of significance; df = degree of freedom

Discussion

This study was carried out to ascertain the influence of social media use on the eating behavior and food preferences of undergraduate students in University of Nigeria. In modern society, social media is one of the most frequently used mediums to communicate with one another (Dollarhide, 2024). Various forms of social networking are frequently used among undergraduates. Emanating from the study are findings that the social media platforms used by majority of the undergraduate students included WhatsApp, YouTube, Facebook and

Instagram, with WhatsApp being the most dominant among them all with the percentage value of 96.2%. Supporting the finding of this study, a study conducted by Ahmad et al. (2020) revealed that 93% of undergraduate students used WhatsApp for collaborative learning. This finding is also in line with that of Akintola (2016) who discovered that WhatsApp is the favorite social media platform for undergraduates in Universities in Kwara State. Walker (2014) also reported that WhatsApp has become the social media tool of choice in Qatar and other Arab countries such as Lebanon and Sudan.

According to Holliday (2014), messaging applications like WhatsApp and WeChat are the future of social media, because of their dynamic nature.

Social media can have both positive and negative effects on the eating behaviors of students when used in a moderate manner. The result of this study shows that more than two-thirds of students make moderate use of social media applications. This implies that majority of undergraduates in the study area spend 1-3hours daily on different social media applications. This finding is in line with the study by Talaue et al. (2018), which revealed that students spend, on average, 1 to 3 hours per day on social media. Similarly, study by Alshanqiti et al. (2023) indicated that 26.1% of students spend 3-4hours on social media per day, indicating moderate usage.

Understanding the eating behaviors of undergraduate students is essential for promoting their overall health and well-being. It is of paramount importance in fostering not only their physical health but also their overall well-being and academic success (Tanton et al., 2015). This study revealed that a greater proportion of the respondents were emotional under eaters, followed by those with hungry eating behaviour. This finding suggests that more of the students eat less in response to stress or negative emotions followed by those that eat when they are starved or have appetite for food. These implications show that there are significant challenges related to emotional well-being and nutrition among this student population. This study aligns with the research conducted by Ahmed et al. (2023), which showed that a greater number of the participants exhibited poor emotional eating behavior. However, these results contradict the findings of Ashurst et al. (2018) which revealed that participants who experienced

strong emotions, particularly sadness, tended to consume significantly more food.

Recognizing the ever-changing and varied culinary preferences of adolescents and young adults is crucial for addressing their nutritional requirements and cultivating a health-conscious campus atmosphere (Liu et al., 2022). Findings of this study showed that a greater proportion of the respondents preferred snacks, followed by those that preferred dairy products with vegetables being the least preferred. This implies that undergraduate students prefer food items such as biscuits, cookies, cake, ice cream, chocolate bars, buns, sweets and yoghurts but do not prefer vegetables like mushroom, broccoli and beetroot. This might be attributed to the unavailability of these vegetables in the study area. These results are similar to the findings of Tok et al. (2018) which showed that frequent snacking, fried food consumption at least three times per week and low intake of daily fruits and vegetables were common among the sampled University students.

Young adults increasingly use social media to share images, videos, and opinions on various areas including food (Filippone et al., 2022). The result of this study showed that there was no significant relationship between social media use and the eating behaviour of undergraduates. This suggests that using *technology that allows the sharing of ideas and information might not affect students' food and beverage consumption habits*. In contrast, Sidani et al. (2016) reported that students who spend more time on social media had poorer eating behavior and were more likely to consume fast food and sugary drinks. Findings further showed that compared to others, more respondents who were emotional over-eaters and hungry eaters used social media more frequently than their counterparts. This suggests that excessive use of social media among students could result in emotional

overeating which is eating more as a way of suppressing or soothing negative emotions, such as stress, anger, fear, boredom, sadness, and loneliness (Pruthi, 2022). Again, excessive use of social media could result in students who are often so hungry that they experience stomach rumbling and lightheadedness when they miss meals.

Social media outlets are no longer just an avenue to connect with friends but are increasingly a mechanism for consumers to learn about food (Reau, 2013). This study revealed that there is no significant relationship between social media use and food preferences of undergraduates in University of Nigeria. The implication is that using communication websites does not in any way exert influence on the students' personal like or dislike of a particular food or food group. This could be because they had knowledge of healthy eating and were thus aware that the low-cost processed high energy foods (Idongesit & Oto, 2023) commonly advertised on social media, such as fast foods, energy drinks, sweet and chocolate products, were unhealthy. This finding contradicts the research by Vaterlaus et al. (2015) which showed that social media platforms allow students to interact with their friends and inform others about their food choices through restaurant reviews, pictures, and posts, hence allowing users to influence each other's food choices.

Conclusion

The study aimed to investigate the influence of social media use on the eating behavior and food preferences of undergraduate students at the University of Nigeria, Nsukka. WhatsApp emerged as the most common social media platform, with an overwhelming 96.2% adoption rate among students. The students generally used social media occasionally, typically spending 1 to 3 hours daily on these platforms. Eating

behaviors among students revealed a greater prevalence of emotional under eating and hungry eating behavior. While most students expressed positive food preferences for snacks and dairy, a few exceptions existed, mainly concerning certain vegetables. Social media use was not significantly associated with eating behaviours and food preferences of the respondents. This underscores the importance of addressing emotional well-being and nutrition-related issues among undergraduates.

Recommendations

Based on the findings of the study, the following recommendations were given.

1. Given the prevalence of emotional under eating behavior, universities should prioritize mental health awareness and support services to address emotional well-being among students.
2. School authorities in conjunction with nutrition-related departments should design nutrition education programs that cater to the diverse food preferences of undergraduate students, utilizing social media platforms for accessible and engaging nutritional information.
3. Students should be encouraged to be mindful of social media's potential influence on their eating behaviors and to make informed choices regarding the content they engage with.
4. Regular assessment of students' eating behaviors and food preferences should be conducted by relevant fields to adapt strategies and interventions as needed.

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