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Evaluating the Role of Food Bloggers in Shaping Healthy Vs Unhealthy Eating Patterns in GEN Z: A cross-sectional study

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Abstract

The recent growth of social media influencers, notably food bloggers, has remarkably affected the dietary habits of Generation Z (Gen Z) as they are immersed in the digital transformation. Food bloggers outline their perception of food, leading to the development of obesity and its complications and the non-communicable diseases due to the lack of nutritious food by promoting high-calorie foods. An online survey was conducted as a questionnaire in Egypt from July 21 to September 3, 2024, and was shared on a lot of social media platforms. The current study included 150 respondents with the majority (88%) being females. The consistent exposure to food bloggers correlated with an increase in food cravings (74.7%, p = 0.002). Furthermore, on a health-wise, participants favoring food bloggers who focus on healthy eating and nutritional value were 76.7% (p = 0.087), highlighting that they can encourage healthier habits and affect health positively. The research hypothesizes that food bloggers have an impact on Gen Z health drawn from their consistent exposure to them and following their recommendations; however, they can have a positive impact too by functioning as influential representatives for a healthier lifestyle.

Keywords: Gen Z; Food bloggers; Obesity; Healthy food.

1. Introduction

Social media is currently utilized by 5.07 billion people [1], which translates into more than half the population (62.6%), where the average person spends 2 hours and 20 minutes per day on social media, turning our attention to Egypt. At the outset of 2024, 45.15 million social media users aged 18 and above were using social media, which corresponds to 64.1 percent of the total population aged 18 and above. Gen Z encompasses individuals aged between 12 and 27 years old [2] and they are presently the second youngest generation, with Gen Alpha coming after them and millennials before them. The key characteristic of this cohort is that they are profoundly online, and they usually turn to the Internet when searching for any kind of knowledge. For instance, 60 percent of one billion-plus users of TikTok are made up of Gen Z, as this video-sharing social media application majorly directs feelings and culture for this generation [3]. Addressing social media consumerism, there is no age group better than Gen Z, where they were born in the virtual era. While being involved in this digital transformation, their preferences and encounters are deeply influenced by engaging daily on social media, which brings us to analyze how food bloggers can mark Gen Z health and dietary choices.

Food bloggers are content creators where often include storytelling and personal perspectives [2] through featuring and constantly promoting high-calorie and unhealthy foods leading to unexpected consequences [3]. A recent study was published addressing the fact of whether a healthy food blogger is a friend or foe. Surprisingly, eighty percent of the recipes recommended by food bloggers contained more fat than a Mars bar, and twenty-five percent of the recipes contained over half of the recommended daily sugar intake [4]

advocated by WHO [5] and SACN [6], which is 5% of the total energy. Additionally, 75 percent contained more fat than a trendy online cake recipe. The increase in fat accumulation with a body mass index (BMI) exceeding 25 and 30 is regarded as overweight and obesity, respectively [7].

High BMI is accountable for over 120 million adult person-years lost to the most common non communicable diseases (NCDs), which are diabetes, stroke, coronary heart diseases, and cancer, that are responsible for 71% of the total mortality burden. Egypt holds the 15th rank globally in obesity, featuring males and females; furthermore, the annual growth rate of adults and children with high BMI estimated from 2020 to 2035 is 2.9% and 3.5%, respectively [8]. It is important to acknowledge the problem of NCDs that is rising with respect to obesity, as the person years lost to NCDs linked to high BMI in 2019 were 4,209,720 billion, while deaths reached 130,233 million. type 2 resulted in 636,508 million person-years lost, and deaths reached 13,420 k. Finally, and importantly, cancers contributed to 175,508 million person-years lost [9, 10]. The vigorous marketing and endorsement of unhealthy food, which has been acknowledged in a lot of reports on the global influence of current food systems, is linked to some of the greatest and most profound challenges that are facing mankind, notably the obesity epidemic and its complications [12]. The primary aim of this research is to evaluate the role of food bloggers as a potential risk factor in sharing in the dietary patterns of the age group GEN Z and how they contribute to unhealthy eating behaviors that can lead to obesity and its complications, highlighting the immediate need to raise public awareness, apply regulations, and pay close attention to the content and nutritional value of the food that they promote. Additionally, screening whether food bloggers can have a positive influence on health by supporting healthier contents.

2. Materials and Methods

A cross-sectional study in the form of an online survey. The study and the online questionnaire were approved with number 0306953 by the Department of Scientific Research and Innovation at the Ethics Committee, Faculty of Medicine, Alexandria University. The online questionnaire was conducted in Egypt from July 21 to September 3, 2024, and developed from 19 questions (Supplementary Table 1). It was shared through a lot of social media platforms, including Facebook, LinkedIn, WhatsApp, and Instagram [13]. The questionnaire included questions as following: gender, age category, prefer healthy food or fast food, prefer blogs that focus on healthy eating or fast food, or include nutritional information, have you ever participated in a diet plan advertised by a food blogger? [13]. Have you noticed any change in your weight since you started watching food bloggers? How often do you try restaurants/cafés based on food bloggers recommendations? Have you adopted any specific healthy eating habits from food bloggers? How do food bloggers affect your mental or emotional relationship with food? Do you exercise regularly (3 to 4 times per week) [13]. The study aimed to identify significant predictors of how exposure to food bloggers on social media influences dietary changes and the prevalence of obesity. Initially, we reviewed existing literature and formulated the questions based on it, where the focus was on the role of food bloggers in shaping Gen Z dietary behaviors, to see and understand the effect that food bloggers have on Gen Z on their dietary choices and health outcomes. In the study, we use the SPSS software package version 20.0. (Armonk, NY: IBM Corp., released 2011). Categorical data were represented as numbers and percentages to analyze our data collected from the survey. To see if their relationship between the promotion of high-calorie foods and healthy foods by food bloggers and their effects on dietary patterns and health awareness by conducting statistical and descriptive analysis. This analysis aimed to uncover how different types of food promotions by bloggers correlate with the eating habits and health consciousness of individuals.

3. Results

3.1 Demographic Data

Most of the participants were female (88%), while 12% were male. Regarding age distribution, most participants (80.7%) belonged to Generation Z (12–27 years old), followed by Millennials (28–43 years 12.7%) and Generation X (44–59 years, 6.7%). Generation X (44–59 years, 6.7%) (Figure 1).

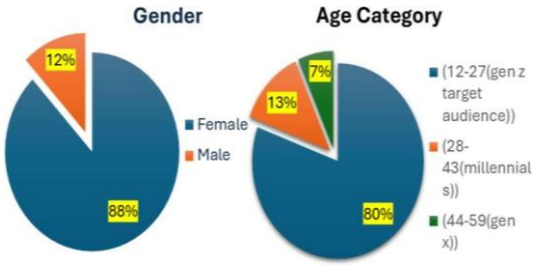

Figure 1. Demographic data of the studied groups.

3.2 Food Preferences and Social Media Exposure

When asked about their food preferences, 52.7% preferred blogs that focus on healthy eating, while 47.3% preferred fast-food blogs. A significant number of participants (70.7%) reported seeing food bloggers on their screens daily, while 15.3% saw them weekly, 4% monthly, and 10% rarely. Among those who saw food bloggers daily, 62.6% reported seeing them more than twice per day, 21.1% once per day, and 16.3% twice per day (Figure 2).

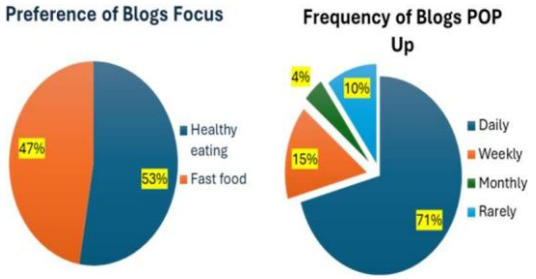

Figure 2. Food preferences and frequency of food bloggers pop up.

3.3 The Influence of Food Bloggers on Eating Habits, Weight Changes, and Emotional Well-being

A majority (62.7%) believed that food bloggers influenced their food choices, while 37.3% disagreed. Additionally, 76.7% preferred food bloggers who provided nutritional information, while 23.3% did not. Regarding weight changes since following food bloggers, 33.3% noticed a change in their weight, of which 63.4% reported weight gain and 36.6% reported weight loss. Only 38.7% of respondents reported adopting healthy eating habits from food bloggers, whereas 61.3% did not. When asked about their emotional relationship with food, 34.7% said food bloggers had a positive effect, 17.3% reported a negative effect, and 48% felt no impact

A total of 28% felt pressured to eat a certain way due to food bloggers, while 72% did not. 75.2% reported experiencing food cravings after watching food bloggers' content, compared to 24.8% who did not (Figure 3). Individuals who encountered food bloggers daily were significantly likely to experience food cravings (74.7%) with a FET= 13.295*and p value of 0.002*.

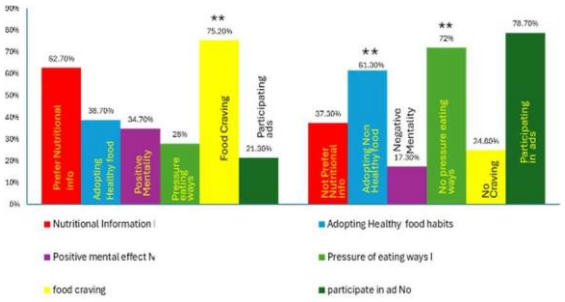

Figure 3 Influence of food bloggers on habits.

3.4 Health Conditions and Diet Plans

Among participants, 35% reported having obesity, 10% had diabetes, 15% had hypertension, and 48.8% reported other health conditions. Additionally, 21.3% had followed a diet plan recommended by a food blogger, while 78.7% had not. Regarding exercise habits, only 30.7% exercised regularly (3–4 times per week), while 69.3% did not (Figure 4). Females were more likely to exercise regularly (50%) than males (28%).

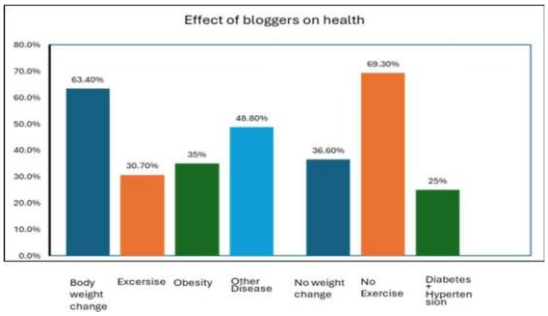

Figure 4. Effects of food bloggers on health

3.5 Restaurant and Café Visits Based on Blogger Recommendations

A small percentage (3.3%) reported that they always tried new restaurants based on food blogger recommendations, while 58.7% sometimes did and 38% rarely did, (Figure 5). When asked to rate how much food bloggers influenced their eating habits on a scale from 1 to 10, responses varied widely. Some participants noted a negative influence, while others indicated that the impact was minimal or negligible.

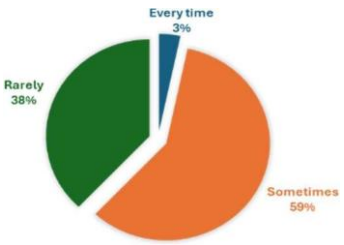

Figure 5. Effect of food bloggers on restaurant choices.

3.6 Statistical correlation of various survey questions regarding food bloggers' influence on dietary choices, food cravings, and engagement.

Data were analyzed using the IBM SPSS software package version 20.0. (Armonk, NY: IBM Corp, released 2011). Categorical data were represented as numbers and percentages. A chi-square test was applied to compare between two groups [14]. Alternatively, the Fisher exact test was applied when more than 20% of the cells had an expected count less than 5. The significance of the obtained results was judged at the 5% level. P-value ≤ 0.05: Statistically significant results [15].

No Significant Relationship: Preferences for healthy eating blogs and bloggers who provide nutritional information (Q3 & Q7, $p = 0.087$).

Significant Relationships:

Adoption of healthy eating habits and emotional impact of food bloggers (Q14 & Q15, $p = 0.002$).

Frequent encounters with food bloggers and food cravings (Q4 & Q17, $p = 0.002$). Food bloggers' influence on food choices and restaurant visits (Q6, Q13, Q17, $p < 0.001$). Encounter frequency and engagement with bloggers' recommendations (Q6, Q4, Q5, $p < 0.001$).

Near-Significant Relationship: Gender and regular exercise (Q1 & Q18, $p = 0.058$), with females exercising more.

Mixed Results: Frequent exposure to food bloggers was associated with food choices, but daily encounters did not have a significant impact (Q13, Q4, Q5, $p = 0.048$ & 0.660).

Table 1. statistical relationships between various survey questions regarding food bloggers

Table 1	Question Pair	Test	Result	P-Value	Statistical Significant
1.1	Q3 & Q7	Chi-Square	2.938	0.087	Non-Significant
1.2	Q14 & Q15	Chi-Square	12.22	0.002*	Significant
1.3	Q1 & Q18	Chi-Square	3.596	0.058	Non-Significant
1.4	Q4 & Q17	Fisher Exact	13.295	0.002*	Significant
1.5	Q6 & Q13 & Q17	Fisher Exact & Chi-Square	38.27	0.001*	Significant
1.6	Q6 & Q4 & Q5	Fisher Exact & Chi-Square	18.655	0.096	Non-Significant
1.7	Q13 & Q4 & Q5	Fisher Exact	11.497	0.048*	Significant

* Significant P-value ≤ 0.05.

4. Discussion

A cross-sectional study was performed to explore the role of food bloggers in shaping healthy and unhealthy eating patterns in Gen Z, aged 12-27 [16], in the form of an online survey. A 19-item questionnaire was conducted that was distributed via Facebook, LinkedIn, WhatsApp, and Instagram with a total of 150 participants. The majority of them were females (88%), which explains that females are more affected by food bloggers than males (12%).

Statistical analysis is used to explain the correlation between variables included in two statistical tests, the Chi-square test (χ^2) and the Fisher exact test (FET). The results from the chi-square value of 2.938 ($p=0.087$) are higher than 0.05, which indicates that the correlation between individuals that prefer healthy vs. unhealthy eating and individuals who prefer blogs focusing on nutritional information is no significant correlation (Table 1.1). The chi-square value of 12.220* ($p = 0.002$*) showed that individuals who have adopted healthy eating habits influenced by food bloggers are more likely to report a positive mental or emotional relationship with food (Table 1.2). The chi-square value of 3.596 and p-value = 0.058 are near to 0.05, which showed a near-significant correlation for both genders who exercise regularly (Table 1.3). The Fisher Exact Test (FET) indicated a statistically significant relationship between the frequency of food bloggers appearing on participant's screens and food cravings. Specifically, the FET value of 13.295* ($p=0.002$*) suggests that food bloggers on social media are closely related to food cravings (Table 1.4). The results of FET=38.270* with $p<0.001$* and $\chi^2 = 11.701$ with $p=0.001$ supported the behavioral impact of food bloggers (Table1.5). The significant impact of food bloggers on food cravings and restaurant choices shows their potential role in shaping eating habits. When drawing a correlation between individuals, in which food bloggers influence their choices and their food preferences, with an increase in frequency of visiting restaurants/cafés based on their recommendations, which include the promotion of content of high-calorie food and the rise of food cravings after. The results from both FET= 18.655* with $p<0.001$* and $\chi2= 4.689$ with $p=0.096$ demonstrated that frequent exposure to food bloggers affects the choice of individuals with the type of food and daily exposure with no significant effect (Table 1.6). The results from FET=11.497* with $p=0.048$* and FET=3.341 with $p=0.660$ indicated that individuals who are exposed to food blogs are greatly influenced in their choice of cafés and restaurants that food bloggers recommended, and daily exposure is not significant (Table 1.7).

According to global data, 41 million adults die annually from NCDs. There are about 5 million of these deaths with high body mass index (BMI) [8], which explains the relation between deaths from NCDs and high BMI. It is consistent with our results that 33.3% of participants had changes in their weight, where 63.4% of them had weight gain. Which indicates the fact that individuals who are consistently exposed to the content of food blogging are at risk of developing NCDs related to obesity. The "100 Million Health" survey reports that 39.8% of Egyptian adults are obese, with a notable gender inequality: 49.5% of females and 29.5% of males are affected. This difference showed that females tend to have higher obesity rates than males. In Egypt, obesity is considered one of the main reasons that leads to an increase in chronic health conditions such as diabetes. 85% of females and 62% of males who have diabetes are obese [17], which explains the correlation between obesity and life-threatening conditions. The rate of BMI increases annually in Egypt by 2.9%, which confirms the necessity for interventions.

Our study also highlights the importance of raising awareness about the potential negative effects of food bloggers that promote unhealthy food choices. Despite the many disadvantages of food bloggers, there is a potential to gain benefits from them by using social media purposefully in terms of spreading awareness about healthy eating and its necessity to maintain health and avoid obesity.

One of the most important features of our study is that it is the first study in Egypt targeting Gen Z and the influence of food bloggers on shaping their healthy and unhealthy foods. However, other studies have focused on the influence of food bloggers on food consumption. But our study was primarily focused on targeting Gen Z to suggest the influence of food bloggers on their food choices. The limitation of our study is that it was an open online study on social networking sites, where 12.7% of the participants were millennials, but this limitation is considered an advantage as future studies can benefit from it and also know the impact of food bloggers on other generations in their food choices.

5. Conclusion

In conclusion, our study involved a total of 150 participants, 88% females, which explains that females are more affected by food bloggers than males. 80.7% of participants were from Gen Z (ages 12-27), which is the target of the study. Daily exposure to food bloggers was reported by 70.7% of participants, with a striking 62.6% encountering food blogger content more than twice per day. This high frequency of exposure underscores the pervasive nature of food bloggers in the digital lives of Gen Z, potentially amplifying their influence on dietary habits. Future studies should deliberate broadening the scope of the research sample to incorporate younger generations and older generations, such as Generation Alpha and millennials, enabling a comparative analysis of food bloggers impact across multiple generational cohorts weights indicating normal growth.

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