

## Association Between Fast Food–Related Media Exposure and Consumption Frequency Among Young Adults in Kepulauan Riau

### *Hubungan antara Paparan Media Terkait Fast Food dengan Frekuensi Konsumsi Fast Food pada Dewasa Muda di Kepulauan Riau*

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#### **Abstract:**

Overnutrition is one of public health concern in Indonesia, with increasing prevalence among young adults. Fast food consumption, characterized by high fat and low nutrient content, has been associated with various behavioral and environmental determinants, including media exposure. This study aimed to analyze the association between fast food–related media exposure and consumption frequency among young adults. A cross-sectional study was conducted among 158 individuals aged 19–29 years in Kepulauan Riau, Indonesia, using purposive sampling. Data were collected through a structured electronic questionnaire assessing media exposure and frequency of fast food consumption. Statistical analysis was performed using Spearman's rank correlation test. The results showed that the majority of respondents were highly influenced in fast food–related media exposure (68.4%) and reported frequently in fast food consumption frequency (51.9%). However, no significant correlation was found between media exposure and consumption frequency ( $p = 0.296$ ), with a very weak positive correlation coefficient ( $r = 0.084$ ). These findings suggest that media exposure alone is not a strong determinant of fast food consumption behavior. Other factors such as individual preferences, social influences, and environmental conditions may play a more substantial role. Future interventions should adopt a multifactorial approach by addressing not only media exposure but also individual, social, and environmental determinants of dietary behavior. Strengthening nutrition education and improving healthy food accessibility are essential to reduce fast food consumption among young adults.

**Key word:** *fast food consumption, media exposure, young adults, dietary behavior, social media*

## 1. INTRODUCTION

Overnutrition is one of public health concern in Indonesia that demands urgent attention. Overweight and obesity result from an imbalance between energy intake from the diet and energy expenditure through physical activity. Globally, in 2022, approximately 2.5 billion adults aged 18 years and older were classified as overweight, of whom 890 million were living with obesity (1). In Indonesia, the prevalence of overnutrition, particularly among adults aged over 18 years, has shown a substantial increase over the past decade. Data from the National Basic Health Research and the Indonesian Health Survey indicate that the prevalence of obesity among adults rose from 15.4% in 2013 to 21.8% in 2018, and further to 23.4% in 2023 (2)(3).

According to Ahmed et al. (2025), obesity is triggered by the interaction of genetic, behavioral, environmental, and socioeconomic factors. It can lead to high-calorie diets and sedentary lifestyles in individuals. (4). This condition is particularly prevalent among young individuals, as this stage represents a critical transition period in the development of health-related behaviors, including dietary patterns. Maillet et al. (2021) reported that the transition from adolescence to young adulthood is a vulnerable phase for the establishment of lifelong health habits; however, this period is often characterized by unhealthy eating patterns, weight gain, and disordered eating behaviors (5). Unhealthy dietary patterns commonly observed include the consumption of foods high in sugar, salt, and fat, often referred to as fast food. Dietary changes in this age group are influenced by multiple factors (6). A qualitative study among university students conducted by Kabir et al. (2023) found that intrapersonal, interpersonal, and environmental factors significantly influence eating behaviors and food choices. Social and environmental factors—including campus culture, lifestyle, exposure to advertising, peer influence, academic demands, and the price and availability of food—also contribute significantly to determining eating habits (7).

Another factor influencing changes in dietary consumption is the use of social media. A study conducted by Amalia et al. (2023) reported that both the frequency and duration of social media use are associated with changes in eating behavior, indicating that individuals with higher frequency and longer duration of use tend to exhibit poorer dietary habits (8). In addition, exposure to fast food marketing has been positively associated with brand preferences and consumption across multiple countries. Across nearly all countries, individuals exposed to McDonald's marketing were more likely to report fast food consumption than those without such exposure, with the strongest associations observed in Chile, followed by Canada, the United Kingdom, the United States, and Mexico. (9). This pattern may be partly explained by behavioral influences, as Yun et al. (2025) found that individuals who frequently watch food-related content are more likely to engage in eating behaviors such as late-night eating, ordering takeout, and dining out (10).

Study based on secondary data from the Indonesian Family Life Survey (IFLS) Wave 5 in Indonesia reported that a large proportion of respondents exhibited frequent consumption patterns of fast food (89.42%) and instant noodles (56.63%), This indicates that fast food is constitutes a highly preferred dietary choice among the population (11). Meanwhile, data from Kepulauan Riau Province indicated that among individuals aged over 3 years, 60.4% consumed instant noodles or other instant foods 1–6 times per week, while 3.8% reported consumption at least  $\geq 1$  times per day (2). In a study examining the association between social media advertising exposure and the type, frequency, and consumption patterns of fast food among adolescents, it was found that the most commonly consumed traditional fast food was fried rice (70.73%), while fried chicken (80.49%) predominated among modern fast food options. Furthermore, the majority of respondents exhibited a high

frequency of fast food consumption, which was accompanied by a high level of advertising exposure across social media platforms such as TikTok, Instagram, and YouTube (12). Fast food consumption is widely driven by its accessibility, tastes good, convenient, and has friendly-packing than the traditional food items, however, these products are typically characterized by high fat and oil content and relatively lower levels of essential nutrients, including proteins and micronutrients (13). Based on data from the Indonesian Health Survey 2023, the majority of the population consumes fatty, high-cholesterol, and fried foods 1–6 times per week, accounting for 51.7%. In comparison, the prevalence in the Kepulauan Riau Province is higher than the national average, reaching 61% (2). Several studies have identified various factors influencing fast food consumption; however, research examining the relationship between fast food-related media exposure and consumption frequency among young adults remains limited. Therefore, this study aims to analyze the association between fast food-related media exposure and the frequency of fast food consumption among young adults using a cross-sectional approach.

## **2. METHODS**

The study design is an analytical study with a cross-sectional approach conducted in Kepulauan Riau, Indonesia. The target population consisted of young adults aged 19–29 years in Kepulauan Riau. Participants were recruited using a purposive sampling technique, the total number of sample who joined the study was 158 respondents. The independent variable was fast food-related media exposure, while the dependent variable was the total frequency of fast food consumption. Data were collected in June 2024 using a self-administered structured electronic questionnaire.

Fast food-related media exposure was dichotomized based on the median value into two categories: slightly influenced ( $\geq$  median) and highly influenced ( $<$  median). Frequency of fast food consumption was assessed based on reported intake frequencies for each food group using Food Frequency Questionnaire (FFQ). Total frequency of fast food consumption was calculated by summing the reported frequency of intake across various fast food categories per day. This variable was subsequently categorized into frequent ( $\geq$  median) and rarely ( $<$  median) consumption (14). Descriptive or univariate analysis was conducted to summarize the distribution of variables using frequencies and percentages. The association between variables was assessed using Spearman's rank correlation test. Variables were concluded as significantly associated if p-value  $<0.05$ .

## **3. RESULTS**

The results of the study present the frequency distribution of fast food-related media exposure and the total frequency of fast food consumption, as shown in the table below.

**Table 1. Distribution of Fast Food-Related Media Exposure and Consumption Frequency**

Variable	Frequency	
	N	%
<b>Fast Food-Related Media Exposure</b>		
Slightly influenced	50	31.6
Highly influenced	108	68.4
<b>Fast Food Consumption Frequency</b>		
Rarely	76	48.1
Frequently	82	51.9
Total	158	100

As shown in Table 1, the majority of respondents were classified as highly influenced by fast food-related media exposure (68.4%). In addition, most respondents reported a frequent level of fast food consumption (51.9%).

**Table 2. The Correlation between Fast Food-Related Media Exposure and Consumption Frequency**

Variable	Median	Mean±SD	r	p
Fast Food-Related Media Exposure	3.00	2.94±1.03	0.084	0.296
Fast Food Consumption Frequency	1.14	1.79±1.96		

As shown in Table 2, the mean frequency of fast food consumption was 1.79 times per day. The results of the statistical analysis revealed no significant correlation between fast food-related media exposure and consumption frequency ( $p = 0.296$ ), indicating that media exposure was not associated with fast food consumption behavior in this study. A correlation coefficient of 0.084 in the study examining the relationship between fast food-related media exposure and consumption frequency indicates a very weak positive association between the variables. This suggests that higher media exposure is associated with a slight increase in fast food consumption frequency.

#### **4. DISCUSSION**

This study showed that fast food-related media exposure has no significant correlation with the frequency of consuming fast food. These findings demonstrate that media exposure alone is not associated with the overall frequency of fast food consumption, as dietary behavior is influenced by multiple factors. Research conducted by Bhatoolaul et al. (2024) reported that advertising exposure is only one of several determinants affecting fast food consumption among adults. Other contributing determinants comprise socioeconomic status, portion size, and the availability and accessibility of fast food, in addition to demographic and behavioral characteristics, including age, sex, levels of physical activity, nutritional knowledge, time constraints, and exposure to food-related advertising. (15).

In addition, the type of media to which individuals are exposed may also influence decision-making processes in food selection. Social media exposure does not directly influence an individual's eating behavior. Not all individuals who engage with culinary content are necessarily influenced to modify their

dietary habits, whether positively or negatively. This is supported by a study conducted by Amalia et al. (2023), which found that individuals exposed to food-related content can still demonstrate good eating behaviors (8). Based on the findings, social media was identified as the most frequently encountered form of media among respondents compared to print media and television. A study conducted by Muthia et al. (2022) reported that external eating habits, social media-driven eating behavior, frequency of social media use, and duration of use are associated with food intake. Among various platforms, Instagram was the most commonly used for seeking food-related references, compared to YouTube, TikTok, and other platforms (16).

A study involving adolescents aged 11–19 years reported that approximately 90% of participants had been exposed to online food and beverage advertising within the week preceding data collection. Moreover, engagement with advertisements promoting fast food and ultra-processed products across social media platforms and websites, along with greater overall social media use, was positively associated with an increased self-reported frequency of consumption of these products (17). The results of this research are consistent with those reported by Lala, which found no significant association between the level of advertising exposure and the consumption habits of traditional fast food ( $p$ -value = 0.445). One possible explanation for this finding is the shift in information consumption patterns. Adolescents tend to place greater trust in organic sources of information, such as peer recommendations, content creators, and influencer reviews, rather than formal commercial advertisements (12).

Additionally, this study found that the correlation coefficient of 0.084 observed in this study indicates a very weak positive association between fast food-related media exposure and consumption frequency, suggesting that media exposure alone may not be a strong determinant of dietary behavior. This finding implies that although individuals may be exposed to fast food advertising, such exposure does not necessarily translate into increased consumption frequency. One possible explanation is that selection of food are shaped by multiple interacting factors, including food-internal factor, external food-related factor, individual state factors, cognitive influences, and sociocultural factors (18). The other research indicated that being exposed to content related to junk food was associated with increased feelings of hunger, stress, sadness, and exhaustion, along with an increased tendency to crave salty, savory, and high-fat foods (19). The influence of media exposure on fast food consumption also depends on residential characteristics. This is because most fast food advertisements are mainly concentrated on television stations operating in metropolitan areas and are supported by easier access to fast food outlets. Online and social media are significant predictors of fast food consumption among children living in suburban areas. This happens because the scope of social media is not constrained by geographical boundaries (20).

The findings from the current research contrast with earlier studies that online media and social media can influence the intake of unhealthy food and drink choices. Exposure to online food advertisements and food promotional content on YouTube is significantly associated with increased consumption of unhealthy foods and beverages (21). This study focuses on the adult demographic, which tends to possess greater financial means and make more independent buying choices in comparison to younger individuals (22). Accordingly, evidence shows that from August 2021 to August 2023, approximately one out of every three adults aged 20 years and above consumed fast food on any given day (32.0%). The proportion of daily calorie intake from fast food declined with increasing age and became higher as weight status increased (23)

Social media exposure to food advertisements tends to increase the frequency of purchasing such foods among obese participants compared to non-obese participants. Participants who frequently purchase food after seeing advertisements tend to consume more potato chips and fast food. This is influenced by the large amount of information received through social media platforms such as Snapchat, TikTok, and Instagram. Therefore, it is important to implement policies regulating unhealthy food and beverage advertisements on social media platforms, especially those targeting younger generations, in order to prevent more serious health problems (24).

## **5. CONCLUSION**

This study concludes that fast food-related media exposure is not significantly associated with the frequency of fast food consumption among young adults. The very weak positive correlation indicates that media exposure alone is not a strong determinant of dietary behavior. These findings highlight the importance of considering a multifactorial perspective, where individual, social, and environmental factors may play a more substantial role in shaping fast food consumption patterns. Therefore, efforts to reduce fast food intake among young adults should focus on comprehensive strategies, including strengthening nutrition education and promoting healthier food environments.

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