

ORIGINAL ARTICLES

## The status of watching eating videos on social networks and relationship with eating behaviors of youngers

Nguyen Phuong Thao<sup>1</sup>, Ha Thi Kieu Trang<sup>2</sup>, Nguyen Hanh Minh<sup>3</sup>, Le Huong Giang<sup>4</sup>, Nguyen Minh Huong<sup>5</sup>, Le Xuan Hung<sup>6\*</sup>

### ABSTRACT

**Objective:** This study reports the current situation on watching eating videos on social networks and its relation to dietary behaviour of students at Hanoi Medical University.

**Methods:** This cross-sectional research was conducted at 124 students with Hanoi Medical University from August 2021 to January 2022.

**Results:** The time spent watching eating videos on social networks is used from 1 hour to 2 hours, there are 79 students, of which 22 are male students and 57 female students (accounting for 62.86%), and 57 female students (accounting for 64.77%). Research also shows that influencing factors such as age, gender, eating with the family, the choice of content on social networks and eating attitudes have an influence on the level of thinking and behavior, the level of experience and speed of eating when watching eating videos.

**Conclusions:** Therefore, we conducted a study entitled: “The status of watching eating videos on social networks and relationship with eating behaviors of youngers” to: Describe the reality of watching eating videos on social networks to young people’s eating behavior; Explore the relationship of watching eating videos on social networks to young people’s eating behavior.

**Keywords:** Eating videos, youth eating behaviors, social networks, ...

### INTRODUCTION

Social networking is the use of Internet-based social media sites to connect with friends, family, colleagues, or customers. A social networks can have a social purpose, a business purpose, or both, through sites like Facebook, Twitter, LinkedIn, TikTok, YouTube, and Instagram (1). As of January 2021, the population of Vietnam reached 97.8 million people, of which the number of social networks users reached more than 72 million people (accounting for 73.7% of

the population) (1). According to statistics, Vietnamese people use social platforms on average about 2 hours and 21 minutes; in which Youtube 92%, Facebook 91.7%, Tiktok 47.6%, Zalo 76.5% (1).

Social media content is content created by individuals or companies for social networks like Facebook, Instagram, Youtube, or Twitter... These platforms are of particular interest as they allow direct interaction with more users than the classical method(2). The content shared on social networks is extremely diverse, in which the top types of content



**Corresponding author:** Le Xuan Hung  
Email: [phuongthaosntt@gmail.com](mailto:phuongthaosntt@gmail.com)  
<sup>1</sup>Hanoi Medical University

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include: Articles, images, videos, diary videos, online videos, infographics,... In that video is considered one of the best ways to influence the consumption habits of foodies; 53% of them say video is their favorite type of food on social media, compared to 35% recommending pictures (3). Since then, watching eating videos is becoming a trend among young people because of the increase in searches on this topic.

Food videos are popular on the Internet with diverse content and expressions including Video recipes, video reviews of dishes and restaurants, mukbang videos, diary videos of what to eat a day... All videos are built with rich content, eye-catching and attractive images that make most viewers want to eat the way people who make food videos. This can affect the eating behavior of viewers. One study found that college students in their 20s are not concerned with their diet due to irregular attendance, limited time, and poor nutritional knowledge, leading to the possibility of undernutrition or obesity (4). Therefore, we conducted a study entitled: "The status of watching eating videos on social networks and relationship with eating behaviors of youngers" to: (1) Describe the reality of watching eating videos on social networks to young people's eating behavior; (2) Explore the relationship of watching eating videos on social networks to young people's eating behavior.

## METHODS

### Study design

This is a cross-sectional study to describe the reality and relationship between watching eating videos on social networks and the eating behavior of students of Hanoi Medical University.

### Time and location

This research is conducted at Hanoi Medical University Vietnam students from August of 2021 to January of 2022.

### Participants

The research was conducted on students of Hanoi Medical University.

**The inclusion criteria:** Aged 18-25, used Social media, and agree to participate in the study to participate in the study.

**The exclusion criteria:** Have mental health problems, inability to answer questions, inability to perceive behavior.

### Sampling and Sample Size

Sample size: using sample size formula the sample size for descriptive research estimates a ratio:

$$n = Z^2_{(1-\alpha/2)} \frac{p(1-p)}{(\epsilon p)^2}$$

where:

n: sample size (number of subjects).

P: According to a reference study, 45% of young people will eat more when watching eating videos, so choose  $p=0.45$ .

$\epsilon$ : desired error between research sample and population, take  $\epsilon = 0.15$ .

$Z_{1-\alpha/2}$ : The accuracy of the study should be expected to reach 95% by 1.96.

Result:  $n = 124$  and total of 124 eligible research subjects matched the selection criteria and agreed to participate in the study.

Sampling method: Convenience sampling

### Research Instruments and Assessments

#### *Sociodemographic Data Form*

This form was prepared by the researchers, in this form, gender, age, weight, height, live

with someone. Students involved in the study were asked to fill in this form.

### ***Watching eating videos on social networks Assessment Form***

This form was prepared by the researchers, in this form, choose the social networks that you use often, time for social networks, favorite type of social networks content, which kinds of food videos do you usually watch, average time watching your social networks eating videos.

### ***Adult Eating Behaviour Questionnaire – AEBQ***

The Adult Eating Behaviour Questionnaire (AEBQ) is a set of 35 questions evaluating 8 delicious characteristics on a 5-point Agree/Disagree scale. Claudia Hunot et al. researched 2 samples in 2013 (n=708) and 2014 (n=954) collected online, both samples completed AEBQ. Reliability of the AEBQ was assessed using Cronbach's  $\alpha$  and two-week test-retest in a sub-sample of 93 participants. Correlations between appetitive traits measured by the AEBQ and BMI were calculated (5).

### **Data Collection Procedure**

Data is collected by following these steps:

- Step 1: The enumerators are trained in both quantitative tools.
- Step 2: Contact the class presidents of the classes to ask for permission to conduct data collection surveys.
- Step 3: Approach, introduce the study and

agree to participate.

- Step 4: Send online survey link: The investigator sends the link to the research object. Participants respond to a pre-compiled questionnaire and the information provided by respondents will be kept completely confidential. In the event that the subject is unable to arrange to participate, the investigator will be contacted at an appropriate time.

- Step 5: Synthesize information and clean data

### **Data Analysis**

Data is checked and converted before being entered into the computer by using Excel software. This research has used algorithms for descriptive statistics (percentage, mean, standard deviation) to describe the characteristics of participants. Regression analysis is used to analyze the independent variable and the dependent variable. Chi-square was applied to assess the difference between ratios with the corresponding 95% confidence interval (95%CI). The analysis will be performed by STATA 14.0 software.

### **Ethics approval**

Before collecting the data, informed consent was obtained from the participants. This study only used retrospective questionnaires without clinical intervention. All ethical considerations, including obtaining verbal consent, were approved by the Institutional Review Board of Hanoi Medical University.

## **RESULT**

**Table 1. General information**

General		Frequency (n)	Percentage (%)
Gender	Male	35	28.3
	Female	88	70.96
	Others	1	0.81
BMI	< 18.5	27	21.77
	18.5 - 24.9	92	74.19
	> 24.9	5	4.03
Live with someone	Alone	13	10.48
	Family	78	62.91
	Friends	33	26.61

Among 124 students participating in the study, 35 were male (28.3%); 88 were female (70.96%). In which, 21.77% of subjects had BMI less than 18.5; 74.19% of subjects had BMI between 18.5-24.9; 4.03% of subjects

had BMI greater than 24.9. For the type of residence, 78 people reported living with their family (62.91%); 33 people (26.61%) living with friends, and 13 people living alone (10.48%).

**Table 2. Description of the situation of watching eating videos on social networks**

Questions	Answers	Gender				p – value*
		Male n = 35		Female n = 88		
		n	%	n	%	
Time for social networks	<4h	13	34.12	30	34.09	0.06
	4-9h	17	48.57	50	56.81	
	>9h	5	17.14	8	9.09	
On average, how much time do you usually spend on watching food videos on social networks?	<1h	8	22.86	13	14.77	0.22
	1 - 2h	22	62.86	57	64.77	
	>2h	5	14.29	18	20.45	

**\*Chi-Squared**

Among 124 students who responded, the average time using social networks is from 4 hours to 9 hours with 67 students, of which 17 are male students (accounting for 48.57%) and 50 are female students (accounting for 56.81%). On average, the time spent watching

eating videos on social networks is used from 1 hour to 2 hours, there are 79 students, of which 22 are male students and 57 female students (accounting for 62.86%) and 57 female students (accounting for 64.77%).

**Table 3. Time for using networks on the social networks**

Variable	N	Mean (±SD)	Min	Max
Choice Facebook	113	5.31 (±3.31)	1	20
Choice Youtube	99	5.59 (±3.5)	1	20
Choice Instagram	74	5.43 (±3.88)	1	15
Choice Tiktok	71	5.77 (±3.93)	1	20
Choice Twitter	13	6.07 (±2.56)	2	12

The mean time for using on Facebook of the participants was 5.31±3.31 hours (range: 1~20). As for the other social networks platforms, the mean time for Tiktok was 5.77±3.93 hours (range: 1~20); for Youtube,

it was 5.59±3.5 hours (range: 1~20). Besides, the selection of Twitter, the mean time for using was 6.07±2.56 hours (range: 2~12), and for using on Instagram, it was 5.43±3.88 hours (range: 1~15).

**Table 4. Regression between choice of Tiktok, Twitter platform and time watching eating videos on social networks to eating behavior**

AEBQ Score	Coef.	Std.Err	p – value*	95% CI
Choice Tiktok	6.78	2.57	<b>0.02</b>	1.33 – 12.23
Choice Facebook	1.35	4.51	0.76	-7.55 – 10.32
Choice Instagram	0.21	2.96	0.95	-5.65 – 6.06
Choice Twitter	9.07	4.23	<b>0.03</b>	0.69 – 17.45
Choice Youtube	-2.17	3.38	0.52	-8.67 – 4.53
BMI	-2.96	2.55	0.25	-8.01 – 2.09
Live with someone	1.79	2.05	0.36	-2.19 – 5.95
Time for social networks	0.24	2.17	0.91	-4.06 – 4.55
Video watching time	7.04	2.28	<b>0.01</b>	2.78 - 11.83

The mean AEBQ total score of Tiktok users is higher than the total score of non-Tiktok users by 6.78 points with p=0.015 (95% CI). The mean AEBQ total score of Twitter users is higher than the total score of non-Twitter users by 9.07 points with p=0.03 (95% CI). When users have one more hour to watch eating videos, the total score of AEBQ also higher by 7.04 points with p=0.01 (95% CI).

The research we carried out was to find out about the status of watching eating videos and the relationship between young people’s eating behavior. The results obtained from the study, we found that watching eating videos has a higher influence on eating behavior in girls and is popular between the ages of 18 to 21 years old. With the use of social networks among 124 students, we find that on average, students spend from 4 hours to 9 hours on the use of social networking platforms (54.03%) and according to them spend a lot

**DISCUSSION**

of time online. Social is for entertainment and information capture every day. Based on the analysis results of time using on the social networking platforms, it was found that the most used time was on Facebook, Tiktok, and Youtube platforms, for about 20 hours and 15 hours for Instagram. The high proportion of watching time over the three platforms is perfectly reasonable with the social networks trends of young people today. With an average usage frequency of 4-9 hours a day, our research found that using social networks has become a habit for young people (6). Accordingly, on average, they also spend from 1 to 2 hours a day watching different types of eating videos on social networks (63.71%) with the most popular types of food-related content being answered. they are: Video recipes (86.29%); Video Mukbang (49.19%); Video diary 1 day what to eat (46.77%); Food review video (45.97%). Through the investigation, we found that women spend a lot of time using social networks as well as watching different types of eating videos on social networks. In one study it was shown that short-form viewing is considered as “addictive” as mukbang videos, and our study also found that watching mukbang videos accounts for a higher proportion of eating video content types other on social networks (6). Indeed, short-form videos are now very popular and available on many social platforms such as youtube, Facebook, Instagram, TikTok... Especially, the TikTok platform was chosen by survey respondents with higher video viewing time. in our research. According to a study, the content of TikTok is very active, with a lot of activities online and offline, targeting young people with imagination and curiosity. In addition, Technical advantages like the special effects are very cool and cater to the trend. Moreover, TikTok is the short video software of today’s headlines. Today’s headline has a powerful algorithm and artificial content

recommendation mechanism, and TikTok is also mainly using the human body key detection technology to achieve accurate user posture to target posture. Matching is based on AI intelligent algorithm technology. Having strong algorithmic technical support can be said to be a major advantage in development (1). So users will want to watch more videos when using TikTok. That’s why the video viewing time is higher when users choose the TikTok platform as the table we have given. This leads to in their free time, the viewership rate is high, which shows that the need for young people to interact with social networks is great and there are studies (6) that prove it.

Through the study, we found that watching eating videos has a higher influence on eating behavior in women and they also often spend a lot of time using social networks. In our study, watching eating videos on social networks of people living with their families accounted for 6 times more than those living alone, while in a study in Korea, those living alone accounted for a higher percentage (7). We found that the average length of time watching eating videos on social networks for 18-24 year olds is greater than 2 hours, and several other studies have shown that as well (6). Watching eating videos was not associated with BMI (under 18.5 is 21.77%, 18.5-24.9 is 75.8%, above 24.9 is 2.42%) but directly related to feelings of eating and eating behavior is similar to a proven study. According to one study, one of the most important aspects of viewing mukbang is that individuals seem to use mukbang to compensate for unmet social needs in their real lives. Almost all available research argues that viewers satisfy a social need when watching mukbang. These are mainly lonely people who use mukbang to ease their social isolation by interacting with a virtual community of common interests (7). This is consistent with the existing literature on other online activities showing that individuals engage in online

activities for social interaction. A previous study indicated that increased time viewing on Facebook, Tiktok, and Youtube, especially during the period of Vietnam is facing the Covid-19 epidemic, supporting the theory that the longer the quarantine period, the more time available, the less work to do, and the higher the level of social networks utilization on social platforms (8). Furthermore, spending more time on social networks helps people to update rapidly information, reduce loneliness, expand their relationships with people. People can also enhance their cooking skills by watching cooking shows, which is consistent with information published in another study that watching eating videos can change human eating habits (4),(8). According to the research results obtained, the majority of study participants agree that watching a video about eating makes them feel more loved for food, want to eat more, feel hungry when watching, satisfied and very satisfied, satisfied to watch... (6). The results from our study show that the level of consent increases with more video viewing time, which shows an association between the use of social networks and the eating behavior of today's youth. Another study found that by watching eating videos participants more often controlled food intake than others. They can eat more or less depending on the type of video they watch. Especially in our study, we see more clearly the effect of watching videos on TikTok on eating behavior as another study also showed that the effect of watching diet and weight loss on TikTok social networking app (10) research has not directly tested whether body mass correlates inversely with activation of these regions during response inhibition tasks. The present study used functional magnetic resonance imaging (fMRI). The Twitter application has been found to influence eating behavior. In our study, we discovered that a small number of users but a lengthy period of use could explain this conclusion, which has

to be addressed in future research. One study suggested that the frequency of watching eating videos played an important role and caused participants to increase both satisfaction and disgust when eating but in our study watching eating videos only increased satisfaction, but decreased distaste (11).

Application of research in the work and scientific research of medical students; build a reasonable living mode and use of social networks for students in general and medical students in particular. As we all know, this study has investigated the status of watching eating videos and its relationship with eating behavior in young people - this is a new study in our country on this issue, so the application of the results should be considered. The results of this study are quite new because of the urgency of the problem to young people today.

With the development of information technology, watching videos is more and more popular. Especially in the field of food, it is very easy to be expressed through video, conveying content quickly and easily. Therefore, it attracts a large number of participants with no age limit. During the time of doing this research, we found that the research is quite new and catches up with the current trend of young people. Although the problem is quite new in Vietnam, the reference source in the country is still limited. But in some developed countries, there have been many unique studies on this issue. The toolkit is easy to implement and has received a lot of attention from young people, so the data is easy to collect and has high accuracy. So it's even more obvious how practical the problem is.

## **CONCLUSION**

Through this study, we have determined the association between watching eating videos

and eating behavior for students of Hanoi Medical University.

Research also shows that influencing factors such as age, gender, eating with the family, the choice of content on social networks and eating attitudes have an influence on the level of thinking and behavior, the level of experience and speed of eating when watching eating videos. Because watching eating videos on social networks is a new phenomenon among young people, it is necessary to have an analysis on the reality of watching eating videos on social networks and the relationship between viewers' eating behaviors.

The results of this study can be applied to the current situation where the diet is changed by the outbreak of the Covid-19 epidemic. Due to social distancing, students stay at home more, leading to an increase in the proportion of people eating with their families and a change in lifestyle, one of which is that they spend more time using social networks. socialize and watch eating videos on these platforms. The prevalence of eating alone has increased and there have been significant lifestyle changes, such as increased media viewing. According to the results of this study, the level of eating disorder is high when there is no eating partner. Furthermore, it is important to consider eating attitudes and eating habits as factors that influence eating behavior disorders. The results of this study were aimed at preventing the worsening of binge eating disorder. The data from this study have implications for related research and intervention development.

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