

Does watching others eat in videos make you buy?

Food eating videos and their relationships to food purchase.

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## **ABSTRACT**

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Young people globally are increasingly watching food eating videos. Researchers do not yet understand why individuals watch these videos when they are eating and what impact they have on the watcher. This study investigates the relationships between food choice motives (specifically mood), attitudes towards the video, attitudes towards the vlogger, purchase intention, food neophobia, and sensitivity to visual food cues by applying the theory of planned behavior (TPB). The study was conducted in two phases: a qualitative content analysis and an experimental design. The content analysis phase analyzed the comments of 16 food eating videos on Chinese social media. It showed that audiences may have different attitudes, consumption patterns and eating habits. Three types of audiences were identified by explorative typology: psychological pleasure seekers, common point seekers, and eating desire eliminators. Based on the content analysis findings, an independent measures design was used to randomly assign participants to two groups (n=269) to answer self-administered online questionnaires. The data was analyzed using descriptive statistics, exploratory factor analysis, confirmatory factor

analysis, linear regression, and moderated regression analysis. Results show that audiences' attitude towards the video is a predictor of purchase intention. Food neophobia moderates the relationships between mood and the viewer's attitudes towards the video; it also moderates the relationship between the viewer's attitudes towards the vlogger and purchase intention.

Sensitivity to visual food cues is found to have a mild moderating effect on the relationship between the viewer's attitude towards the vlogger and purchase intention.

This research is different from previous research because it uses the TPB rather than counteractive-control theory, which focuses on audiences' purchase intention rather than food intake. It also focuses exclusively on mood as a food choice motive. This study's findings fill the gap between theory and practice and demonstrate that watching food eating videos can impact audiences' purchase intention. Marketers can use the findings to maximize their profits while policymakers and health associations could establish new guidelines for vloggers to encourage healthy eating habits in their audiences.

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## 1. Introduction

Digital marketing has become popular in recent years, and many companies have increased their expenditure on social media platforms such as Instagram and Facebook to publish photos and videos to promote their products (Powell et al., 2013). Some researchers have also observed that food digital marketing is an emerging trend that will likely continue to grow, although it has been downplayed by most researchers and marketers (Montgomery et al., 2011).

In recent years, vlogs—a combination of the words video and blog—have become popular all over the world. Vloggers are known as content creators: a person who creates video blogs (or vlogs) and share these videos with other social media users (Woojin & Yuri, 2019). Food eating videos are a growing phenomenon among young people in Asia, and this trend is spreading to western countries (Long & Owen, 2018). When searching “eating show” on Google, there are more than 927 million results. When searching “吃播” (“eating shows” in Chinese), there are 183 million results. At the same time, searching “Chinese eating show” shows 52.9 million online video results.

The themes of eating shows vary. In some videos, vloggers prepare or arrange the foods before eating and share their recipes in the video. Some vloggers focus on tasting and evaluating popular foods or snacks, and they give exhaustive feedback after eating. However, the most popular food eating videos always are overeating challenges, where vloggers eat a large portion of a meal. There are two different eating shows: live eating streaming and pre-recorded eating shows (Fan, 2018 June). Live eating streaming has real-time communications between streamers

and audiences and usually contain fewer advertisements. In South Korea, people enjoy watching others eat over live stream, and have created the word “Mukbang”, which means “eating broadcast,” to reflect this particular food eating show (Pereira et al., 2019). When watching mukbang, audiences can communicate with the host instantly. Pre-recorded eating shows, which are much popular in China and Japan, are edited before being uploaded online. Audiences enjoy watching these videos especially when they are eating alone at home (Fu et al., 2020). Although the audiences are unable to chat with the vlogger in real-time, but the vloggers try to create a feeling that they are communicating with the audiences by continuous talking and asking questions. The audiences can leave their comments and repost the video. Pre-recorded eating video contains more advertisements for food products or kitchen supplies.

In China, vloggers are increasingly uploading their pre-recorded food eating videos to different social media. Some videos have more than 2 million views on YouTube and 50 million views on Weibo (a Chinese social media site). The viewers leave thousands of comments under each video. People seem to enjoy watching others eating, especially when they eat junk foods and consume a large portion of a meal.

When young people and singles eat alone, watching these videos can overcome their loneliness. In the Asian food culture, eating alone is considered inappropriate (Wu, 2018). Overcoming eating disorders is considered another important reason for watching as well, as appetite may improve (Jaureguilorda, 2019). On the other hand, some viewers who have strict

diet control watch these videos to make themselves feel like they have eaten the food by watching (Jaureguilorda, 2019).

Many companies are finding food eating video to be a new way to promote their products, thus they sponsor vloggers to eat certain food in the videos. Instead of the sponsorship and advertising fee, many famous vloggers also start their online businesses and sell their food products in this manner.

## **2. Research objectives**

Food eating videos are different from mukbang and other food-related shows, such as cooking, food, and travel shows. Food eating vloggers cannot communicate with their audiences in real-time, thus they pay more attention on showing their enjoyment when eating a large portion of foods and try to promote communication and intimacy with their audiences (Choe, 2019).

Unlike general food-related shows, the food eating video is a new and unique phenomenon that researchers do not yet fully understand. There is limited research on why people watch these videos and whether watching these videos impacts the audiences' attitudes and purchase intentions. Therefore, the purpose of this research is to answer the following research questions:

- 1) Why do people like watching others eating while eating?
- 2) Do watching these videos cause audiences to develop purchase intention?
- 3) Will the audiences have the same attitudes and purchase intention when vloggers eat healthy or unhealthy foods?

To address these research questions, a hypothetical model is proposed following a comprehensive review of the relevant factors in the literature.

### **3. Literature review**

This section provides a literature review of mukbang, food eating videos, Chinese eating culture, the theory of planned behavior, food choice motives, attitudes, purchase intention, food neophobia, and sensitivity to visual food cues. This study focuses on these areas as they are expected to inform a model that can explain the relationship between food eating videos and purchase intention. Previous research provides a theoretical basis for some of the potential effects. A synthesis of the existing literature and the contribution of this study to the literature are also discussed in this section.

#### **3.1 Literature review**

##### **3.1.1 Mukbang**

Mukbang is audiovisual live streaming where the host consumes large quantities of food and interacts with the viewers (Pereira et al, 2019). It has become a new trend in South Korea since 2010, and has gradually become popular in Asian countries. It is now a new entertainment source for Westerners as well (Long & Owen, 2018; Pereira et al, 2019).

Mukbang has been theorized to solve the loneliness of unmarried or uncoupled people; to provide people with a virtual substitute for socializing (Hong, 2016; Strand & Gustafsson, 2020); and to satisfy the psychological needs of companionship and to validate their existence (Cha, 2014). When viewers watch mukbang streams, they perceive intimacy from the host. Some

viewers obtain psychological satisfaction because of the visual-audio stimuli from the eating streaming. Some viewers also watch mukbang streams to satisfy their curiosity. These motivations constitute the three major motivations for watching: “sense of connectedness, vicarious pleasure, and spectacle” (Anjani et al.,2020).

### **3.1.2 Food eating videos**

Food eating videos evolved from mukbang (Fan, 2018). However, it is different from the mukbang from two aspects. First, the food eating videos are pre-recorded and edited, but the mukbang streams are live shows. Second, viewers of mukbang streams can interact with the host in real time, but viewers of food eating videos cannot communicate with the vlogger instantly, but they can leave their comments under the food eating videos to share their feelings and experiences with others.

Previous research has focused on the reasons why individuals watch these videos. It is commonly believed that the loneliness may be a reason for watching (Wu, 2018; Zhao, 2020). The feelings of loneliness and isolation can be alleviated because the viewers feel like there are many lonely people behind the screen (Wu, 2018), and they feel that they are accompanied by others when they eat alone and watch these videos (Chen, 2019).

Psychological satisfaction can also explain why people watch food eating videos. Similar to “food porn,” vloggers always try to use the glamourized visual presentation of cooking or eating to attract audiences. In food eating videos, the vloggers tend to place their food close to the screen and eat loudly. Some vulgar behaviors, such as rough eating, excite and please the

audience. These strong visual and auditory experience is completely different from eating alone, and this experience satisfies the audiences, increase their appetite (Kang et al., 2020).

Psychological contradiction is another important reason for watching food eating videos. Many audiences desire food and they watch the videos to pretend that the food they eat is as delicious as the vlogger eats in the video (Wu, 2018; Zhao, 2020). By doing so, they could reduce their appetites and control their food intake (Fan, 2018).

However, watching food eating shows may not really help audiences to control food intake. Food eating shows are demonstrated to influences audiences' food consumption. Researchers have found that food-related shows on social media encourage and stimulate audiences, especially children, to eat more foods than they need (Bodenlos & Wormuth, 2013), and a recent study demonstrated that mukbang will result in an increased desire to consume food. Moreover, it concluded that there is no evidence to support that individuals who use mukbang to diet will decrease their appetite after watching mukbang (Xu, 2019). Instead, research show that the more exposure a person has to food eating shows, the more their eating habits are influenced (Coates et al., 2019; Kang et al., 2020). It was also found that some viewers have the impulse to eat when watching food eating shows: watching food eating shows was found to be positively related to unhealthy eating habits since these shows sometimes involve unhealthy or even harmful eating habits (Kang et al., 2020).

The growing popularity of food eating videos and concerns of their impacts on audiences' food consumption have caused researchers to examine the advertising placement in food eating

videos. In the past few years, consumers are looking for more authentic and transparent marketing. Food eating video provides more details and information than television shows (Yang & Babenskaite, 2019). By introducing, eating, describing, and evaluating food, audiences can intuitively see and experience the products. For food manufacturers, advertising placement is a fast way to monetize vloggers' popularity. The strong visual impact creates lively advertising, which can impact the audience's purchasing impulse and lead to a sales boost (Tang & Cai, 2019).

### **3.1.2 Chinese eating culture**

Much like many other countries around the world, increasing numbers of Chinese are eating alone. The rise of single-person Chinese households and the lack of time are the main reasons why more Chinese dine alone (Li, 2019). However, it remains uncommon to eat alone in public in China because it may result in losing important social benefits (Ma, 2015). In China, dining is not simply eating foods, but also a social activity, and eating with a group of people identifies the sociability of food consumption. Food is an important instrument for the Chinese to establish and maintain the interpersonal relationship, represent social status, preserve traditions, and celebrate important events (Ma, 2015).

Since eating alone is not the mainstream in Chinese eating culture, young Chinese enjoy watching food eating videos while eating because these videos satisfy their need for companionship and reduce their loneliness. A quasi-social relationship between the vlogger and the viewers is established through the vlogger's discourse (Wu, 2018).



### **3.1.3 Theory of planned behavior**

For many social psychologists and marketing researchers, discovering the determinants of behaviors has been their primary goal. Ajzen (1985) proposed a theory of planned behavior (TPB) to explain that behavioral intention is determined by the attitudes towards behavior, subjective norms, and perceived behavioral control. Individuals' behavioral beliefs are the favorable or unfavorable attitudes towards the behavior (Ajzen, 2002). The subjective norm refers to the belief that most people approve and support certain behaviors; it develops from the social pressure exerted by other to behave in a certain manner (Ajzen, 2002). Perceived behavioral control refers to external factors that could prevent certain behavioral intention and behaviors in individuals (Ajzen, 2002).

Individual traits are important when predicting and explaining human behaviors (Ajzen, 1988), thus the TPB has been expanded when used to study consumers' food purchasing behaviors (Fila & Smith, 2006; Chen, 2007; Nezakati et al., 2014; Chu, 2018). Self-efficacy—an individual's perceived ability to perform a behavior—and perceived barriers—such as perceived inconvenience, expense, danger and discomfort—are included in the TPB model (Fila & Smith, 2006). Personality traits, including food choice motives, food neophobia, and food involvement, are added to the TPB model when studying the organic food consumption patterns (Chen, 2007).

Another theory used by researchers in food consumption is counteractive-control theory, which claims that exposure to temptation can result in self-regulation because there is recognition by the tempted individual that the temptation can jeopardize their long-term goals (Trope &

Fishbach, 2000). Exposure to food cues was believed to lead to self-regulation and reduced calorie intake (Trobe & Fishbach, 2000; Ouwehand & Papies, 2010). Recent research studying mukbang used this theory and found that watching mukbang reduces dieters eating due to self-regulation but increases their desire to eat (Xu, 2019).

Counteractive-control theory has been helpful in food consumption research as most of research has focused on food restraint behaviors and how exposure to food stimuli impacts food consumption. However, this theory may be inappropriate for the proposed research question on development of purchase intention after watching food eating videos. In contrast, the TPB is commonly used to study individuals' behavioral intentions and predict consumption patterns and would be useful for examining the proposed research question. By using the TPB, this study can explore this phenomenon from a new angle and will expand our understanding of food eating videos.

#### **3.1.4 Food choice motives**

The European Food Information Council (EUFIC) defines food choice as how people decide on the foods to purchase and eat. Steptoe et al. (1995) developed the Food Choice Questionnaire (FCQ) to measure the consumers' food choice motives, including health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern. Lindeman & Väänänen (2000) expanded the original FCQ to include other factors related to ecology, religion, and politics.

Previous research has found that sensory appeal (e.g. taste, flavor, and freshness) is the most important food choice motive for Western consumers; price, convenience, and health concerns also impact their food choices (Honkanen & Frewer, 2009; Januszewska et al., 2011; Carrillo et al., 2011; Zakowska-Biemans, 2011). However, the most important food choice motives in Asian countries are different. Weight control, health, convenience, mood, and natural content are more important to Asian consumers (Prescott et al., 2002; Januszewska et al., 2011; Pearcey & Zhan, 2018).

*Weight control.* Weight control is the key motive driving consumers' food choices. Many individuals would like to lose or maintain their weight to improve their appearance and their health (Santos et al., 2017). A meta-analysis conducted in 2017 revealed that nearly half of the general population was dieting in an attempt to control their weight; dieting included restraining their appetite and restricting specific foods (Santos et al., 2017). Existing research also demonstrates that individuals who are controlling their weight will pay more attention to nutritional information when purchasing food products (Vyth et al., 2010).

Moreover, cultural difference in body image is a factor resulting in weight control behaviors. People from Asian countries pay more attention to their weight than people from Western countries because of a common aesthetic preference for thinness. Both females and males show an increased willingness to lose weight and keep a slim form (Wardle et al., 2005; Zhang, 2012; Noh et al., 2018), and many young Chinese maintain weight control behaviors even though they are underweight (Wang et al., 2018).

*Convenience.* Convenience refers to the ease of preparation and availability of food (Steptoe et al., 1995), and it is consistently rated as one of the most important food choice motives in many countries (Carrillo et al., 2011; Januszewska et al., 2011; Milošević et al., 2012). Food consumption is not a one-stage process: it involves thinking, planning, purchasing, preparing, cooking, eating, and cleaning. As a result, researchers suggest that convenience includes both time and effort saving, and that effort should include mental and physical efforts (Candel, 2001; Buckley et al., 2007; Wales, 2009). Researchers also found that time and effort contribute to perceived inconvenience, which was counted as the third dimension of food-related convenience (Jaeger & Cardello, 2007; Wales, 2009).

Previous research shows that consumers convenience includes a requirement that food be easy to purchase in local grocery stores (Hjelmar, 2011). When food is less convenient to purchase or to prepare, consumers have a more negative attitude towards the food (Chen, 2007) and the food product becomes less popular and preferable (Wales, 2009).

*Mood.* Moods are described as “long-lasting psychological arousal states with interacting dimensions related to energy, tension, and pleasure that may appear and persist in the absence of obvious stimuli and may be more covert to observers” (Thayer, 1989). Researchers have found that mood is an important determinant of food choice since eating can be a way for individuals to enhance positive emotions and cope with negative emotions, such as stress, anxiety, depression, and fear (Macht, 2008; Gardner et al., 2014; Cardi et al., 2015). Moreover, emotional eating and altered mood can result in changes in food choice and food consumption (Singh, 2014).

Individuals with more negative moods, such as stress, will eat more food than needed (Chua et al., 2004; Cardi et al., 2015). Positive moods also lead to a significant increase of food intake (Bongers et al., 2013; Cardi et al., 2015). Researchers have also found that positive mood can increase the preference for healthy food and negative mood increases the preference for unhealthy food, such as sweets and fast food (Oliver et al., 2000; Rafael et al., 2009; Gardner et al., 2014).

Moreover, research shows that Chinese develop negative moods when eating alone (Kou, 2017). When Chinese people eat alone in restaurants, they feel embarrassed and self-conscious, and want to consume their meal and leave the restaurant quickly. When they dine alone at home, they not only feel bored and lonely, but also want to look for something that could distract them from feeling that way. The lack of communication with others may result in the accumulation of negative moods (Kou, 2017).

### **3.1.5 Attitudes**

Attitude has a strong influence on individuals' behaviors because it is a combination of individuals' beliefs, feelings, and behavioral tendencies towards a particular object, person, thing, or event (Hogg & Vaughan, 2005). The attitude towards food eating videos and attitude towards vloggers are discussed in this section.

*Attitude towards food eating videos.* Previous studies mainly focused on the attitudes towards the mukbang. This paper reviews the attitude towards mukbang, although there is very limited research on food eating videos. A cross-cultural research found that host attractiveness

and social normative influence positively impact attitudes towards the mukbang, while loneliness and health consciousness were not significantly related to attitudes towards the mukbang (Pereira et al., 2019). Moreover, the attitudes towards the mukbang were found to positively relate to the intention of watching mukbang. The more positive attitude the viewer has towards the mukbang, the more likely they are to watch mukbang (Pereira et al., 2019).

*Attitude towards vloggers.* A previous study found that the audiences of eating shows socialize and communicate with each other through comments and likes, and that these online communications could impact their attitudes towards vlogger and their choice to follow the vlogger (Bruno & Chung, 2017).

### **3.1.6 Purchase intention**

Purchase intention is defined as the consumer's resolve to purchase certain products (Spears & Singh, 2004). Lu et al. (2014) suggest that "purchase intention is consumer's willingness to buy a given product at a specific time or in a specific situation."

According to the theory of reasoned action (Fishbein & Ajzen, 1975), and the TPB (Ajzen, 1985), consumers' attitudes will impact their purchase intention. In TPB, purchase intention could also be influenced by subjective norms, perceived behavioral control (Ajzen, 1985), perceived barriers, and self-efficacy (Fila & Smith, 2006).

Studies of digital marketing and online shopping demonstrate that consumers' attitudes towards blogs could positively impact their purchase intention (Bouhleb et al., 2010; Lu et al., 2014), and the benefits received by the bloggers have no significant influence on consumer

attitude (Lu et al., 2014). A recent study found that online food vloggers' reviews on social media, such as YouTube and Instagram, could change audiences' buying interests and purchase intention, and the rating, recommendation, and perceived benefits offered are the most important factors that impact audiences' purchase intention (Briliana et al., 2020).

### **3.1.7 Food neophobia**

Food neophobia is defined as “a reluctance to eat and/or avoidance of novel food” (Pliner & Hobden, 1992). It is typically regarded as a personal trait because individuals have large differences regarding food neophobia. In other words, people can be placed on a food neophobia continuum in terms of their acceptance or reluctance to eat novel foods (Pliner & Salvy, 2006). On the other hand, food neophobia is a generalized behavior because situational factors impact individuals' avoidance of new food (Pliner & Salvy, 2006).

Researchers find that food neophobia has a negative impact on food choice and food consumption for both familiar and unfamiliar foods (Tuorila & Hartmann, 2020; Huang et al., 2019; Jaeger et al., 2017; Siegrist et al., 2015; Choe & Cho, 2011). Individuals who have a high level of food neophobia have lower food intake frequency and preferences (Siegrist et al., 2015; Jaeger et al., 2017). Other studies have found that food neophobia does not directly influence individuals' attitudes or purchase intention but moderates the relationships between them and their antecedents (Eertmans et al., 2005; Chen, 2007; Huang, L. et al., 2019).

### **3.1.8 Sensitivity of visual food cues.**

Food cues refer to situations that are related to viewing or smelling food stimuli, advertisements, or food-related memories. These cues can be regarded as the conditioned stimulus and can result in food-related reactions and subsequent food intake (Wadhera & Capaldi-Phillips, 2014; Martin-Soelch et al., 2007). One study has shown that consumers will have expectations of the taste, the flavor, and the texture when they look at the appearance of the food before eating (Hurling & Shepherd, 2003).

Previous studies found that individuals who are exposed to food cues (such as the sight and smell of food or watch others eat) will have an increase desire to eat, even though they are not hungry (Fedoroff et al 2003; Polivy et al 2008; Stroebe, & American Psychological Association, 2008; Bodenlos & Wormuth, 2013). This psychological behavior is called external eating (Catherine et al., 2017). Contradictorily, some studies find that food cues can remind dieters to control food consumption and increase the feeling of satiety because of the self-regulation process (Trope & Fishbach, 2000; Stroebe et al., 2008).

Previous research also found that visual food cues can reduce the reluctance to eat new food and increase the acceptance of new foods (Wadhera & Capaldi-Phillips, 2014; Jansen et al., 2010; Houston-Price et al., 2009;).

### **3.2 Synthesis of literature**

In general, mukbang is a food eating live streaming that is theorized to solve psychological needs. Food eating video evolved from mukbang, but it does not involve instant communications between the vlogger and the viewer.



Current studies focus more on mukbang than pre-recorded food eating videos. Only a few researchers have studied food eating videos, food eating video's antecedents and the reasons why audiences watch these videos. Loneliness was found to be the antecedent of food eating videos. Loneliness, psychological pleasure and psychological contradiction are believed to be the main reasons for watching food eating videos but there is no empirical data to support this. The potential impacts of watching these videos were studied by several researchers. However, these studies were based on the counteractive-control theory (Trope & Fishbach, 2000) and focused on the relationship between watching food eating videos and restrained food eating behaviors and the impact the videos have on dieters' appetite and weight control goals. There is a research gap related to the potential marketing impact of these videos.

More importantly, many existing studies proceed from the theoretical level and lack data to support their conclusions. It is necessary to conduct an empirical study to fill these research gaps and provide evidence to support these theories.

### **3.3 Contribution to the literature**

This research contributes to the literature in the following ways. Firstly, the focus of this study is on food eating videos rather than mukbang. Rather than applying existing research on mukbang to this new trend in China, the findings of this study will allow researchers to better understand this unique phenomenon among young Chinese.

Secondly, the focus on mood, one of the food choices motives, is a novel perspective for this work. Existing research examined how food eating videos can change personal moods and

how the viewers' mood is altered by watching, but few of them have considered whether individuals who have different food motivations will have different responses to the same video.

More importantly, this study provides empirical evidence to support previous statements that food eating videos can impact individuals' food eating behaviors. As few researchers studied Chinese food eating videos from the theoretical level, empirical work is still limited. This paper fills the gap between theory and practice by examining the effects of food eating videos on young Chinese people based on content analysis and by conducting a real-time manipulated experiment.

Then, unlike previous research that used the counteractive-control theory, the TPB is used to examine the food eating video and its influences from a marketing perspective. This research also introduces personal traits, such as food choice motives, food neophobia, and sensitivity to visual food cues. This is an attempt to expand the TPB for food marketing and to consider the impacts of these factors in the context of Chinese food eating videos. The findings of this research will provide new research orientations for future researchers.

This study considers the impacts of the viewers' attitudes towards the video and the vlogger and provide a deeper understanding of this emerging phenomenon. The findings of this research are an important and valuable reference for future researchers.

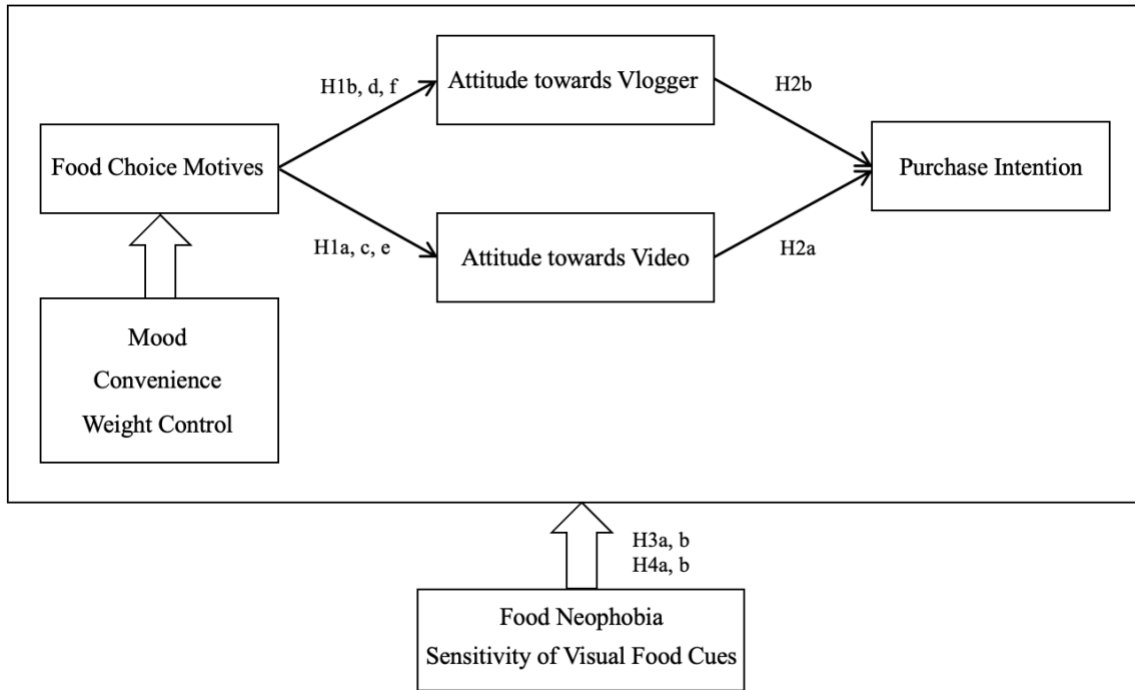
Lastly, existing studies focus on audiences' motives for watching. Only a few research studies have addressed how marketers might maximize their profit through these videos. This gap means that food companies lack information about audiences' food preferences in eating videos. By analyzing audiences' responses to healthy and unhealthy food eating videos, this research

sheds light on their preferences and attitudes and determines that healthy food eating videos have a more positive impacts on purchase intention. This conclusion will help fill this gap and will help food companies looking to advertise efficiently.

In general, this research is important for both researchers and practitioners. The findings of this research may provide empirical evidence to support previous statements and will fill a gap between theory and practice. This research provides new research directions for future research, that includes both watching/eating behaviors and purchasing behaviors. Moreover, practitioners can better understand how these attitudes affect the audiences' purchase intention and which will allow them to improve their marketing strategies.

#### **4. Research model**

The TPB from Ajzen (1985) is used because it is well accepted by social psychologists and marketing researchers for explaining the consumers' food purchase behaviors (e.g., Fila & Smith, 2006; Chen, 2007; Chu, 2018). Behavioral intention and behaviors in TBP are shaped by the attitudes towards behavior, subjective norms, and perceived behavioral control. In research on purchasing organic foods, Chen (2007) expanded the TPB model with individual traits, including food choice motives, food neophobia, and food involvement. The mainframe of this research comes from the TPB referred to in Chen's (2007) study: food choice motives and food neophobia are included in the model. Moreover, the sensitivity of visual food cues, which might have moderating effects on the relationship between the model and the antecedents, is also added to the model (Figure 1).



**Fig.1. Proposed Research Model for Food Purchase Intention**

## 5. Hypotheses development

### 5.1 Food choice motives

Stephoe et al. (1995) developed the FCQ for measuring the consumers' food choice motives, including health, mood, convenience, sensory appeal, natural content, price, weight control, familiarity, and ethical concern. Lindeman & Vännen (2000) expanded the original FCQ to include other factors related to ecology, religion, and politics.

Many researchers find that prominent food choice motives are different in different countries. For example, Japanese consumers care about price most, while the sensory appeal is the prominent factor affecting New Zealanders (Prescott et al., 2002) and convenience is the main driver for Spanish consumers choices (Carrillo et al., 2011). Health and weight control also play

important roles in some European, Asian, and American countries (Januszewska et al., 2011; Espinoza-Ortega et al., 2016).

The increased prevalence of obesity has led to many countries implementing strategies to encourage healthy eating, such as labeling nutrition tables and delivering health messages through social media. As result, individuals are increasingly aware of the importance of weight control (Malik, et al., 2012). On the other hand, compared to other counties, people from Asian countries care more about weight, and both females and males show more willingness to lose weight (Wardle et al., 2005; Noh et al., 2018).

It is believed that when consumers have more concerns about weight control, they are more likely to have more negative attitudes toward food that is unhealthy. Therefore, the following hypothesis is offered:

**H1a: If the audience has more concerns about weight control, they will have more negative attitudes towards the video when the food is unhealthy.**

**H1b: If the audience has more concerns about weight control, they have more negative attitudes towards the vlogger when the food is unhealthy.**

Convenience has a huge impact on today's consumers' food choice: when the food is less convenient to purchase or to prepare, it is less preferable (Wales, 2009 Spring). Therefore, it is reasonable to believe that there might be a positive relationship between convenience and the audience's attitude.

**H1c: The more convenient it is for the audience to purchase or to eat the food product, the more positive attitude they will feel towards the video.**

**H1d: The more convenient it is for the audience to purchase or to eat the food product, the more positive attitude they will feel towards the vlogger.**

Lots of existing research show that mood is related to food consumption. Food intake becomes a way for individuals to cope with their negative emotions, such as stress, anxiety, depression, fear, etc. (Cardi et al., 2015; Gardner et al., 2014; Macht, 2008). It is reasonable to believe that the mood, as a food choice motive, has an impact on the audience's attitude.

Therefore, the hypothesis is stated as:

**H1e: If the audience eats the food to cope with negative moods, they will have a more positive attitude towards the video.**

**H1f: If the audience eats the food to cope with negative moods, they will have a more positive attitude towards the vlogger.**

## **5.2 Attitude and Purchase intention**

The relationship between attitude and behavioral intention is deeply discussed in the TPB. Attitude has a strong influence on individuals' behaviors because it is a combination of individuals' beliefs, feelings, and behavioral tendencies towards a particular object, person, thing, or event (Hogg & Vaughan, 2005). It is believed that if an individual have a positive attitude towards certain behaviors, the people surrounding them also have a positive attitude towards the behavior (subjective norms), they have the intention to perform such behaviors (Ajzen 1985).

Behavioral intentions, according to Fishbein & Ajzen (1975), is a key factor in explaining customer behavior and refers to the subjective probability that someone will perform a behavior. In marketing research, researchers investigate consumers' purchase intention to see how likely the customer will purchase a certain product. A strong purchase intention has a higher probability of purchase behavior.

Instead of only focusing on the attitude towards purchasing the food product in the video, this research also aims to figure out whether the audience's attitudes towards the video and the vlogger have impacts on the purchase intention. Therefore, two hypotheses are made here:

**H2a: Positive attitudes towards the video will have a positive impact on the audience's purchase intention.**

**H2b: Positive attitudes towards the vlogger will have a positive impact on the audience's purchase intention.**

### **5.3 Food neophobia**

Researchers found that food neophobia negatively impacts food choice and food consumption for both familiar and unfamiliar foods (Tuorila & Hartmann, 2020; Huang et al., 2019; Jaeger et al., 2017; Siegrist et al., 2015; Choe & Cho, 2011).

Many studies show that eating behavior is influenced by food neophobia. Individuals who have a high level of food neophobia will have lower food intake frequency and preferences (Siegrist et al., 2015; Jaeger et al., 2017). Other studies have found that food neophobia does not

influence individuals' attitudes or purchase intention directly but moderates the relationships between them and their antecedents (Eertmans et al., 2005; Chen, 2007; Huang, L. et al., 2019).

In this research, the audience with a high level of food neophobia may be unfamiliar with the food shown in the video. They may be more reluctant to try or to purchase the food product, and their attitudes towards the video and the vlogger may also be influenced. As previous studies suggest that food neophobia may play a moderating role, all the hypothetical relationships mentioned above may be strengthened or weakened after introducing the food neophobia into the model. Thus, the hypothesis is as follows:

**H3a: Food neophobia has significant impacts on consumers' purchase intention by moderating food choice motives and consumer's attitude towards the video.**

**H3b: Food neophobia has significant impacts on consumers' purchase intention by moderating food choice motives, and consumer's attitude towards the vlogger.**

#### **5.4 Sensitivity of visual food cues (external eating)**

Food cues can be regarded as the conditioned stimulus that result in food-related reactions and subsequent food intake (Wadhera & Capaldi-Phillips, 2014; Martin-Soelch et al., 2007).

Individuals increase the tendency of consuming when they are exposed to environmental foods and food cues, such as the sight and smell of food (Catherine et al., 2017).

Previous research also found that visual food cues can reduce the reluctance of new food and increase the acceptance of new foods (Wadhera & Capaldi-Phillips, 2014; Jansen et al., 2010; Houston-Price et al., 2009;).



This research supposes that the food eating videos, as visual food cues, will impact consumers' purchase intention by moderating other factors. The more sensitive the audience is to visual food cues, the more they will be impacted. Therefore, a hypothesis is made:

**H4a: Sensitivity of visual food cues significantly impacts consumers' purchase intention by moderating food choice motives and the attitude towards the video.**

**H4b: Sensitivity of visual food cues significantly impacts on consumers' purchase intention by moderating food choice motives and the attitude towards the vlogger.**

## **6. Methodology and measurements**

### **6.1 Stages of research**

A two-stage study was designed to address the proposed research questions. Content analysis, as a qualitative research method, was used in Part 1 to uncover certain words, topics, or concepts applicable to this research. The results could be used to describe individuals' attitudes and behavioral responses, determine individuals' emotions, and help researchers pretest and improve their questionnaires (Columbia Public Health, n.d.). A content analysis software reviewed the comments for 16 food eating videos from Chinese social media for word frequency analysis, emotional analysis, and collocation analysis.

An experimental design is necessary to determine if viewers will have different attitudes towards the video and the vlogger if different foods are eaten on the videos and if these attitudes impact the audiences' purchase intention. Moreover, content analysis is insufficient to test whether food neophobia and sensitivity of visual food cues have moderating effects on the

proposed model. Therefore, the second part of this study was designed as an experiment.

Participants were randomly assigned to two groups and received a pretest questionnaire with a healthy or unhealthy food eating video. Participants received a post-test 24 hours after they finished the pretest. The questionnaires asked about participants' food eating habits, food choice motives, food neophobia, sensitivity to visual food cues, attitudes, and purchase intention.

## **6.2 Part 1**

As food eating videos are a new phenomenon, qualitative research was used to develop the key ideas for this study. ROST NAT is a content analysis software that analyzes qualitative texts from word segmentation, word frequencies, emotion, and collocation. It is well accepted by social science researchers. The current study used this software to analyze the comments on food eating videos.

Firstly, a Chinese searching engine (Baidu) was used to find the most popular Chinese food eating vloggers. The numbers of followers of these vloggers were then checked on Weibo. In total, six vloggers with more than 5 million followers were chosen. Each vlogger had 12.38 million followers on average. Videos with more than 2,000 comments and 500,000 views were selected from these vloggers' previously uploaded videos. Both unhealthy and healthy food eating videos were chosen. In total, 16 videos were selected, including 10 unhealthy food eating videos and 6 healthy food videos (Table 1). The average views of 16 videos are 13.285 million, and the average number of comments per video is 16,334. The subjects of these videos include four instant foods, three street foods, two snacks, three drinks, and four homemade foods.

**Table 1. Information of Selected Food Eating Videos**

| Videos | Subjects                         | Number of Comments | Number of Views (in thousands) |
|--------|----------------------------------|--------------------|--------------------------------|
| #1     | Peach and homemade food          | 71834              | 60250                          |
| #2     | Healthy snacks                   | 8150               | 6500                           |
| #3     | Homemade food made by corns      | 55249              | 35640                          |
| #4     | Tomatos and homemade ketchup     | 41558              | 57530                          |
| #5     | Eel cooked in Japanese style     | 10854              | 5120                           |
| #6     | Herbal drinks                    | 3468               | 999                            |
| #7     | Instant hot pot                  | 13394              | 7040                           |
| #8     | Fried chicken and instant noodle | 3920               | 5550                           |
| #9     | Chinese Barbecue buffet          | 9139               | 6650                           |
| #10    | Spicy noodles cooked by hot pot  | 13054              | 6820                           |
| #11    | Northest style Chinese barbecue  | 2081               | 1040                           |
| #12    | Instant stinky rice noodle       | 7383               | 3070                           |
| #13    | Multiple drinks                  | 5427               | 3300                           |
| #14    | Sugary juice                     | 2301               | 2430                           |
| #15    | Japanese desert                  | 10211              | 4780                           |
| #16    | Fried Chicken from KFC           | 3305               | 5840                           |
|        | Mean                             | 16333              | 13285                          |

There are two reasons why these videos were chosen. Firstly, the videos uploaded by the popular vloggers had more comments and views than videos from unpopular vloggers because popular vloggers had more exposure to social media users. Thus, the comments of these selected videos could provide enough information for the content analysis. Second, it is important to find out whether or not the comments are different if the vloggers eat different foods in their videos, because this research seeks to determine if food eating videos can help individuals establish healthy eating habits. Therefore, both healthy food and unhealthy food eating videos were chosen.

Comments of selected videos were downloaded through Python and were analyzed by ROST NAT. All the comments were segmented into short phrases and words by the software. The word frequencies were analyzed and listed from high frequency to low frequency. Then, collocations were checked, showing how words and phrases co-occur and how many times these

combinations collocate in the comments. Lastly, emotional analyses were conducted. The underlying emotion of all comments were categorized into positive emotion, neutral emotion, and negative emotion. The comments' emotional intensity was analyzed and categorized from high to low intensity. The comments were analyzed in Chinese, and the results were translated into English by referring to the Chinese-English dictionary.

### **6.3 Preliminary findings**

The results of the frequency analysis show that audiences frequently discuss their feelings in comments. They often use “like it”, “funny”, “happy”, “distressed” and “upset” to express their feelings. The results also show that positive words appear more frequently in healthy food eating videos, while the negative words appear more frequently in unhealthy food eating videos. From the overall word frequency output, “hungry”, “eager to eat”, “greedy for food” and “expect to eat” were commented in a high frequency and expressed a desire to eat. The results also show that audiences share their eating experiences in the comments. Many comments described the tastes of the foods by using “delicious”, “tasty”, “on average”, “not bad”, and “disgusting”. In these videos, especially the videos of healthy foods, many comments mentioned “healthy” and “unhealthy”, “lose weight”, and “health condition”. On the other hand, “sodium intake”, “greasy”, “gain weight”, and “calories” appear frequently in the comments of unhealthy food eating videos. This shows that viewers were considering health issues when watching these videos. More importantly, in the comments of selected videos, words and phrases that are related to purchase, such as “just ordered”, “will place an order”, and “order now” appear very

frequently. By comparing healthy and unhealthy food eating videos, healthy food eating videos have more comments related to purchase than unhealthy food eating videos.

Since the frequency analysis could only show how many times certain words or phrases appear in the comments, a collocation analysis was conducted to find out how words and phrases co-occurred in the comments. The output resulted in well-defined patterns for the viewers. For example, some of them commented “feel delighted” and “would like to purchase the food product” after watching, but some of them talk about “health concerns” and express their worries of “excessive food intake and sodium intake”. To better understanding whether the audiences have different attitudes, consumption patterns, and eating habits, an exploratory typology was developed to identify and describe different types of audiences. As results, three types of audiences are identified: the psychological pleasure seeker, the common points seeker, and the eating desire eliminator (Table 2).

**Table 2. Audience Typology and Characteristics**

| <b>Types of the Audiences</b>           | <b>Charateristics</b>   |
|---|---|
| <b>1. Psychological Pleasure Seeker</b> | No related eating experience but enjoy watching these videos.           |
| 1.1 Easily Persuaded Consumer           | Enjoys watching and then buys the food product rapidly.                 |
| 1.2 Consumer Curious Discoverer         | Curious about unaffordable foods, would like to save money to try them. |
| 1.3 Critical Onlooker                   | Obtain comfort from the videos, but are critical of the content.        |
| <b>2. Common Points Seeker</b>          | Look for common points with their previous food eating experience.      |
| <b>3. Eating Desire Eliminator</b>      | Have health concerns and want to restrain their appetite.               |

The psychological pleasure seekers do not have related eating experience but derive enjoyment and satisfaction from watching food eating videos. They express a strong willingness to eat the food shown in the video. They use strong and positive language to express their feelings and willingness of eating. Psychological pleasure seeker has three sub-types: the easily persuaded consumer, the curiosity discover and the critical onlooker. Some psychological pleasure seekers appear to be easily persuaded and able to afford the food product. In the collocation analysis, it is common to find that “decide to place an order” co-occur with “feel happy”, “hungry”, “eager to eat”, and “looks tasty”. Curiosity discoverers express interest in apparently unaffordable foods. Even though they comment that the food is unaffordable, some of them indicate that they would like to save money for the food. The third sub-type audience are critical onlookers. They mention wanting to comfort themselves through food eating videos but remain critical and skeptical about the content. In their comments, “look tasty” and “watch for the foods” are found to collocate with “advertising placement”, “gimmicks”, and “celebrity endorsement”.

Common point seekers appear to know the food before watching or have related food eating experience. They use “have eaten” to show that they have had similar experiences, and use adjectives, such as “tasty”, “delicious”, “on average” and “disgusting”, to describe their feelings of the food product. When vloggers eat a food product that they think delicious, this type of consumer recommend it others by using strong phrases such as “must have” and “recommend it”.

Eating desire eliminators display health concerns, such as diet, eating disorders, and pregnancy. They watch these videos might because they have strict dietary restrictions. They may have established a concept of a healthy diet of low fat, low sugar, and low salt. They use “greasy”, “salty”, “irritating”, and “high in calories” to describe unhealthy foods and use words or phrases like “healthy” and “fresh” to describe healthy foods. Meanwhile, since they discussed some potential diseases, such as “cardiovascular disease”, when they watch vloggers eating unhealthy foods, they seem to know the side effects of an unhealthy diet, such as overweight and serious chronic diseases.

**Table 3. Results of Collocation Analysis**

| <b>Types of Audiences</b> | <b>Words and Phrases Co-occurred in Comments</b>  |
|---------------------------|---|
| Easily Persuaded Consumer | feel delighted & will buy it<br>eager to eat & hungry<br>looks tasty & want it  |
| Curiosity Discover        | like the food & expensive / unaffordable<br>would like to try & save money for it   |
| Critical Onlooker.        | advertisements & gimmicks<br>celebrity endorsement & sponsorships<br>watch for the foods & looks tasty                              |
| Common Points Seeker      | ate before & recommend to others<br>tasted delicious & must-have product<br>dislike/ like it & disagree/agree with the vlogger      |
| Eating Desire Eliminator  | eating snack & getting fat;<br>stomachache & irritating<br>on diet & high in calories<br>too much salt and oil & potential diseases |

The results of the emotional analysis suggest that audiences may have different attitudes towards these videos (Table 4). For example, in an instant hot pot video, 65.89% of comments

show negative emotions. Conversely, in the video of herbal drinks, the negative comments only arrive 41.88%. However, due to lack of context, the emotions under the comments may not be understood as literal meanings. For example, in a video where the vlogger eats a lot of unhealthy food, some audiences indeed produced negative emotions, but it is also possible that the seemingly negative comments were an affirmation of the exaggerated video content in that situation. Therefore, the speculation that the audiences respond more positively to healthy food eating videos than unhealthy food eating videos could not be generated.

**Table 4. Emotional Analysis Results (1)**

|                                    | Positive emotions (%) | Neutral emotions (%) | Negative emotions (%) |
|------------------------------------|-----------------------|----------------------|-----------------------|
| <b>Healthy food eating videos</b>  |                       |                      |                       |
| Eel cooked in Japanese style       | 45.99                 | 1.70                 | 52.31                 |
| Healthy snacks                     | 48.94                 | 2.35                 | 48.70                 |
| Herbal drinks                      | 56.25                 | 1.88                 | 41.88                 |
| Homemade food made from corn       | 44.20                 | 2.31                 | 53.48                 |
| Peach and homemade food            | 53.18                 | 1.75                 | 45.07                 |
| Tomatoes and homemade ketchup      | 44.08                 | 2.48                 | 53.45                 |
| <b>Unhealth food eating videos</b> |                       |                      |                       |
| Chinese barbecue buffet            | 48.12                 | 1.57                 | 50.31                 |
| Fried chicken and instant noodles  | 39.93                 | 2.91                 | 57.16                 |
| Fried Chicken from KFC             | 52.51                 | 1.32                 | 46.10                 |
| Instant hot pot                    | 32.22                 | 1.89                 | 65.89                 |
| Instant stinky rice noodles        | 36.97                 | 1.16                 | 61.87                 |
| Japanese desert                    | 32.70                 | 2.29                 | 65.01                 |
| Multiple drinks                    | 53.66                 | 1.16                 | 45.17                 |
| Northeast-style Chinese barbecue   | 38.96                 | 4.01                 | 57.03                 |
| Spicy noodles cooked by hot pot    | 33.81                 | 1.96                 | 64.23                 |
| Sugary juice                       | 52.23                 | 2.16                 | 45.61                 |

However, the research found that audiences have different emotional intensity towards these videos (Table 5). In some videos, there is no significant differences in the percentage of positive and negative comments, but the emotional intensities of the comments are quite different. Healthy food eating videos may have the same number of positive comments and



negative comments, but the overall degree of positive emotional intensity is much higher than the degree of negative emotional intensity. For example, in a healthy snack eating video, the percentages of positive and negative comments are almost at the same level—48.94% and 48.70% respectively. However, there are 697 mid-high level positive comments and only 56 mid-high level negative comments.

**Table 5. Emotional Analysis Results (2)**

|                                    | Comments with middle-high level of positive emotions | Comments with middle-high level of negative emotions |
|------------------------------------|--|--|
| <b>Healthy food eating videos</b>  |  |  |
| Eel cooked in Japanese style       | 257  | 61   |
| Healthy snacks                     | 697  | 56   |
| Herbal drinks                      | 270  | 142  |
| Homemade food made from corn       | 7636   | 1548   |
| Peach and homemade food            | 13239  | 2311   |
| Tomatoes and homemade ketchup      | 5704   | 1837   |
| <b>Unhealth food eating videos</b> |  |  |
| Chinese barbecue buffet            | 488  | 434  |
| Fried chicken and instant noodles  | 448  | 597  |
| Fried Chicken from KFC             | 70   | 175  |
| Instant hot pot                    | 403  | 500  |
| Instant stinky rice noodles        | 131  | 193  |
| Japanese desert                    | 223  | 226  |
| Multiple drinks                    | 205  | 343  |
| Northest-style Chinese barbecue    | 157  | 149  |
| Spicy noodles cooked by hot pot    | 441  | 600  |
| Sugary juice                       | 90   | 196  |

## 6.4 Discussion of Part 1

The findings of Part 1 address some research questions discussed in the previous section. The findings identify three types of audiences of food eating videos and speculate that different types audiences have different attitudes, eating habits, and consumption patterns. The main reason for watching the videos is inferred to look for psychological pleasure, seeking for common points, and eliminating eating desire.

The findings of collocation analysis show that there might be a relationship between purchase and positive attitude because purchase-related phrases frequently co-occur with positive attitude-related phrases, such as “feel delighted”. A speculation could be made: if the viewer has a more positive attitudes, he/she is more likely to exhibit relevant purchase behaviors and purchase intention. Although the findings are not enough to show the causal relationship between purchase intention and positive attitude, it suggests that positive attitudes towards the video will have a positive impact on the audience’s purchase intention (H2a) and positive attitudes towards the vlogger will have a positive impact on the audience’s purchase intention (H2b).

The findings of the emotional analysis suggest that eating healthy or unhealthy foods in the videos will result in different attitudes. However, due to lack of context, the emotions under the comments may not be taken literally. It is difficult to generate a conclusion that watching healthy food eating videos will result in more positive attitudes than unhealthy food eating videos.

Therefore, the third research question is not responded well.

The qualitative study offers a broad understanding of the audiences’ thoughts and reactions to the videos and the vloggers and hints at the potential logical sequences between attitudes and purchase intention. Since the findings uncover issues with food choice motives, attitudes, and purchase intention, the content analysis provides the confirmation of the main variables of the research model. However, the content analysis did not reveal whether the audiences indeed had different attitudes towards different video content and whether food neophobia and sensitivity to

visual food cues had a moderating effect on other variables. The questions in Part 2 measured the main variables and moderators.

The potential relationships between the variables found in the content analysis will be confirmed in Part 2. The content analysis can also provide insight into the experiment findings. The experiment findings provide a general conclusion of the causal relationship between variables, but it cannot show how different audiences are influenced by food eating videos. The content analysis findings can inform our understanding of audience-type aspects and audience-type influenceability.

In general, the preliminary findings of the content analysis confirmed the main variables of the research model and provided the foundation for Part 2.

## **6.5 Part 2**

As discussed in the previous section, Part 1 provided conceptual foundations to empirically test the proposed research questions. In order to interpret the emerging phenomenon more comprehensively, a real-time manipulation was used in this research in lieu of a laboratory manipulation to avoid possible bias resulting from unnatural behaviors, demand characteristics, and experimental effects.

An independent measures design was used to examine the proposed model and hypotheses. This design attempts to avoid potential order effects, such as fatigue and practice effects, from a repeated measures design. An experimental group (Group 1) and a control group (Group 2) were set, and participants were randomly assigned to one of the two groups. Participants in the two

groups received self-reported online questionnaires prefaced with a brief and neutral description of the “food habits questionnaire”, asking about food eating habits, food choice motives, food neophobia, sensitivity to visual food cues, attitudes, and purchase intention. A healthy food eating video and an unhealthy food eating video were selected from the most popular Chinese social media Weibo and were inserted in the questionnaire. To minimize potential confounds from the vlogger’s personalities, hosting and editing style, table manners, dressing style, and makeup, videos were 5-minutes long and selected from the same vlogger on Weibo.

Participants were randomly assigned to either Group 1 or Group 2 through a link given by the online survey company. Participants in Group 1 answered the questionnaire with a healthy food eating video of mixed fresh fruits (Appendix A.1), and participants in Group 2 answered the questionnaire with an unhealthy food eating video of potato chips (Appendix A.2). Twenty-four hours later, participants received a post-test without food eating videos, but with questions asking about food consumption in the past twenty-four hours, attitudes towards the video, attitudes towards the vlogger, and purchase intention. The post-test was intended to determine if the attitude towards the video, the attitude towards the vlogger, and the purchase intention change after a short amount of time has elapsed. Participants received compensation from the online survey company after they finished the pretest and the post-test.

All target participants were Chinese between 18 to 25 years old since this age group is the majority of the audiences of food eating videos (CAASDATA. 2018). Demographic information, such as gender, age, weight, height, monthly income, educational level, and occupation, were

collected for classification. The final number of valid responses of the pretest for Group 1 and Group 2 was 129 and 140 respectively. The final number of valid responses of the post-test for Group 1 and Group 2 was 104 and 95 respectively.

## 6.6 Measures

For this study, the measurement scales and indicators that related to all constructs are validated by previous research (Table 6).

**Table 6. Measures**

| <b>Variables</b>               | <b>Scale</b>                              | <b>Cronbach's alpha</b> |
|--------------------------------|---|-------------------------|
| Mood                           | Step toe et al (1995)                     | 0.809                   |
| Convenience                    | Step toe et al (1995)                     | 0.769                   |
| Weight Control                 | Step toe et al (1995)                     | 0.867                   |
| Attitude towards the video     | Paek et al (2011)                         | 0.805                   |
| Attitude towards the vlogger   | Dimofte et al (2003)                      | 0.732                   |
| Purchase intention             | Bredahl (2001)                            | 0.84                    |
| Sensitivity of visual food cue | Single item from Van Strien et al (1986)  | /                       |
| Food neophobia                 | Pliner & Hobden (1992) and Bredahl (2001) | 0.717                   |

*Food choice motives.* The measurements for food choice motives come from the Food Choice Questionnaire developed by Steptoe et al (1995). Three scales were used to measure mood (Cronbach's alpha=0.809), convenience (Cronbach's alpha=0.769), and weight control (Cronbach's alpha=0.867). All items are revised as "The food I eat... (e.g. is low in calories)". All items are measured by a 7-point Likert scale, where 1=extremely unimportant and 7=extremely important.

*Attitude towards the video.* The attitude towards the video is measured by the scale proposed by Paek et al (2011). The items express whether the participants like or dislike the video, or whether the participants perceive the video is interesting or uninteresting. Statements

such as “the vlogger is enjoying/is not enjoying the food” and “I enjoy/ do not enjoy the vlogger enjoying her food” were included. Items are measured by a 5-point semantic differential scale (Cronbach’s alpha=0.805).

*Attitude towards the vlogger.* The attitudes towards the vlogger are measured by using the scale from Dimofte et al (2003). The items express whether the participants perceive the vlogger as likable/unlikeable, warm/cold, sincere/insincere, and friendly/unfriendly. Questions asking whether the vlogger is knowledgeable and trustworthy were included. Items are measured by a 5-point Likert scale (Cronbach’s alpha=0.732).

*Purchase intention.* Purchase intention is measured by asking “how likely are you to buy this food product on your next trip to the grocery store?”, “is purchasing this food product a(an) enjoyable experience?”, and “are you in favor of buying this food product?” (Bredahl, 2001). Items are measured by a 5-point Likert scale, with 1=extremely unlikely and 5=extremely likely (Cronbach’s alpha=0.835).

*Sensitivity to visual food cue.* The measurement for the sensitivity to visual food cue comes from the scale of the sensitivity of external eating from DEBQ (Van Strien et al., 1986). Only one item related to visual experiences and eating desire is kept. A 5-point Likert scale is used to measure the frequency of given behaviors, where 1 indicates “never” and 5 indicates “always”.

*Food neophobia.* The measurement for food neophobia comes from Pliner & Hobden (1992) and Bredahl (2001). Seven-point Likert scales were used where 1 indicates strong disagreement and 7 indicates strong agreement (Cronbach’s alpha=0.717).

## **7. Results**

### **7.1 Sample composition**

In total, 269 subjects (129 females and 140 males) were recruited in this research. The average age was 21.90 and the average BMI was 20.5 (average weight 58.30 kilogram and average height 168.46 centimeters). 236 subjects had bachelor's degrees, 13 subjects had graduate degrees, and 20 subjects had high school diplomas or under. 125 subjects were students and the remaining subjects came from different industries, such as banking and manufacturing, etc. Subjects mostly had low and medium monthly incomes: 125 had low incomes (<600 CAD), 106 subjects had medium incomes (600-2000 CAD), and 40 subjects had high incomes (>2000 CAD).

### **7.2 Descriptive statistics**

The descriptive statistics (Table 7) show that subjects had positive attitudes towards the video (mean=3.725) and positive attitudes towards the vlogger (mean=3.821). The subjects had a strong positive purchase intention after watching these videos (mean=4.140). Mood is a more important motivator for subjects to eat (mean=4.932) than with weight control (mean=3.888) and convenience (mean=4.349). The subjects were not reluctant to eat new food and they showed some willingness to eat unfamiliar food (mean=4.626). However, the subjects were not very sensitive to the visual food cues (mean=3.560).

**Table 7. Descriptive Statistics**

| <b>Variable</b>                | <b>N</b> | <b>Minimum</b> | <b>Maximum</b> | <b>Mean</b> | <b>Std. Deviation</b> |
|--------------------------------|----------|----------------|----------------|-------------|-----------------------|
| Attitude towards the video     | 269      | 1.667          | 5.000          | 3.725       | 0.662                 |
| Attitude towards the vlogger   | 269      | 2.286          | 5.000          | 3.821       | 0.412                 |
| Weight control                 | 269      | 1.000          | 7.000          | 3.888       | 1.400                 |
| Mood                           | 269      | 1.667          | 7.000          | 4.932       | 1.021                 |
| Convenience                    | 269      | 1.400          | 6.800          | 4.349       | 1.114                 |
| Purchase intention             | 269      | 1.000          | 5.000          | 4.140       | 0.813                 |
| Food neophobia                 | 269      | 2.000          | 7.000          | 4.626       | 1.020                 |
| Sensitivity of visual food cue | 269      | 1.000          | 5.000          | 3.560       | 0.943                 |
| Valid N (listwise)             | 269      |                |                |             |                       |

### 7.3 Data reduction

The data from the pretest was used to conduct exploratory factor analysis (EFA) to test how many factors should be kept based on the eigenvalues and the scree plot. KMO and Bartlett's Test were used to ensure that the collected data is suitable for factor analysis. The results show that the KMO is .727, which is higher than the suggested minimum value of .60. In Bartlett's Test, the P-value is .000, thus the null hypothesis that the correlation matrix is an identity matrix is rejected. Therefore, the data was suitable for EFA. In the initial model, there were 24 factors with eigenvalues greater than 1, explaining 68.709% of the total variance. The scree plot orders the eigenvalues from largest to smallest, and its ideal shape starts from a steep curve, followed by a bend, and finally a straight line. In the scree plot (Figure 2), only the first six factors were in the steep curve. Adding more variables may not significantly increase the explained variance, thus 6 factors were kept in the proposed model, explaining 26.59% of total variance (Table 8).



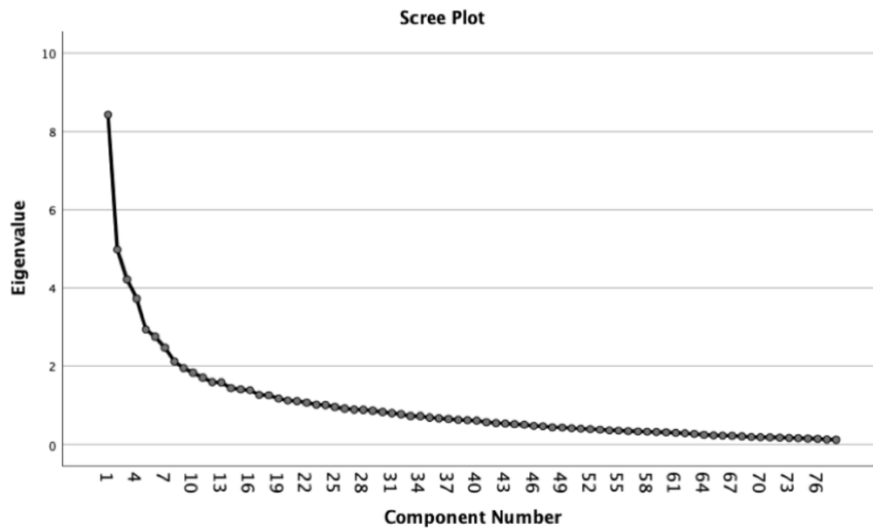


Fig 2. Scree Plot

**Table 8. Results of Exploratory Factor Analysis**

| <b>Factor</b> | <b>Initial Eigenvalues</b> | <b>Total variance explained (%)</b> |
|---------------|----------------------------|-------------------------------------|
| 1             | 10.795                     | 7.550                               |
| 2             | 6.386                      | 11.815                              |
| 3             | 5.415                      | 16.023                              |
| 4             | 4.774                      | 19.788                              |
| 5             | 3.763                      | 23.322                              |
| 6             | 3.531                      | 26.592                              |

In the initial results, 50 items were loading on 6 factors. Items in different scales loaded together. To test the results of the EFA, the data collected from the post-test was used to conduct a confirmatory factor analysis. Since average value explained (AVE) measures the average of the  $R^2$  for items within a factor, it should be greater than .50 to ensure the convergent validity. To guarantee the reliability of each factor, the composite reliability (CR) should be higher than .70. Therefore, items with low loadings were dropped from the initial factors. Then, items with high modification indices (MI) were dropped from the factors. These steps were repeated until AVE and CR were at acceptable level. Since items measuring the attitudes towards the video and the

attitudes towards the vlogger were loading on the first factor, they were divided to two factors.

To keep the convergent validity and reliability, AVE and CR were test for these two factors

(Table 9). All factors' reliability was tested by Cronbach's alpha, and all the values were greater than 0.70.

**Table 9. Results of Confirmatory Factor Analysis**

| <b>Factor</b>                | <b>Items</b>   | <b>AVE</b> | <b>CR</b> | <b>Cronbach's alpha</b> |
|------------------------------|--|------------|-----------|-------------------------|
| Attitude towards the video   | I like/dislike this video.   | 0.711      | 0.831     | 0.769                   |
| Attitude towards the vlogger | I think this video is interesting/uninteresting.                       | 0.502      | 0.746     | 0.731                   |
|                              | I think this vlogger is likeable/unlikeable.                           |            |           |                         |
| Weight control               | I think this vlogger is sincere/insincere.                             | 0.688      | 0.868     | 0.867                   |
|                              | I think this vlogger is trustworthy/untrustworthy.                     |            |           |                         |
|                              | Low in calories  |            |           |                         |
| Mood                         | Control my weight  | 0.547      | 0.821     | 0.821                   |
|                              | Low in fat   |            |           |                         |
|                              | Deal with stress   |            |           |                         |
|                              | Face my life   |            |           |                         |
| Convenience                  | Makes me relax   | 0.531      | 0.772     | 0.768                   |
|                              | Wake me up   |            |           |                         |
|                              | Easy to prepare  |            |           |                         |
| Purchase intention           | Do not need time to prepare  | 0.538      | 0.775     | 0.835                   |
|                              | Easy to cook   |            |           |                         |
|                              | Purchasing this food product is a (an) pleasant/unpleasant experience. |            |           |                         |
| Food neophobia               | I am in favor of/against buying this food product.                     | 0.512      | 0.748     | 0.717                   |
|                              | How likely are you to buy this food product?                           |            |           |                         |
|                              | I do not trust new foods.  |            |           |                         |
|                              | If I do not know what is in a food, I won't try it.                    |            |           |                         |
|                              | I am afraid to eat things I have never had before.                     |            |           |                         |

Sensitivity to visual food cues was measured by only one item; therefore, it was not analyzed in CFA. However, sensitivity to visual cues is a key variable in this study since it may moderate with other variables. Therefore, the single item (do you have the desire to eat when you see others eating?) that measures the sensitivity of visual food cues was included in the model. This resulted in 8 uncovered factors (Table 9). Since the values of all the constructs' Cronbach's alpha were greater than 0.7, the mean values of the indicators used to measure the constructs

were taken to represent the constructs (Table 7). The results were used to test the main effects of the proposed model and the moderating effects.

#### 7.4 The main effects of the proposed model

The main effects are tested by regression analysis (Table 10).  $R^2$  is the proportion of variance in the dependent variable (purchase intention) and can be predicted from the independent variables. However,  $R^2$  comes overestimates when new variables are input. Therefore, the adjusted  $R^2$  is used. The overall adjusted  $R^2$  is .228 in this research.

**Table 10. The Results of the Main Effects in the Proposed Model.**

|                              | Attitude towards the video |          | Attitude towards the vlogger |       | Purchase intention |          |
|------------------------------|----------------------------|----------|------------------------------|-------|--------------------|----------|
|                              | b                          | p        | b                            | p     | b                  | p        |
| Mood                         | 0.148                      | <0.01*** | 0.044                        | 0.073 |                    |          |
| Convenience                  | 0.049                      | 0.175    | 0.04                         | 0.077 |                    |          |
| Weight control               | -0.006                     | 0.845    | 0.024                        | 0.174 |                    |          |
| Attitude towards the video   |                            |          |                              |       | 0.52               | <0.01*** |
| Attitude towards the vlogger |                            |          |                              |       | 0.138              | 0.351    |
| Adjusted R Square=0.228      |                            |          |                              |       |                    |          |
| ** p<0.05                    |                            |          |                              |       |                    |          |
| *** p<0.01                   |                            |          |                              |       |                    |          |

The results of regression analysis reveal that mood, as a food choice motive, has a significant impact on the subjects' attitude towards the video ( $b=0.228$ ,  $p=0.000$ ), but has no significant impact on the subjects' attitude towards the vlogger. This means that if the subjects are more concerned about coping with their negative moods when consuming foods, they will have a more positive attitude towards the video. Therefore, the H1e is supported and H1f is rejected. Convenience and weight control were found to have no significant impact on the subjects' attitude towards the video nor the attitude towards the vlogger. Therefore, H1a, H1b, H1c, and H1d are rejected.

Based on these results, purchase intention is influenced by the attitudes towards the video.

The standardized coefficient shows that if the audiences have more positive attitudes towards the video, they are more likely to have higher purchase intention ( $b=0.423$ ,  $p=0.000$ ). Therefore, H2a is supported. However, the attitude towards the vlogger does not significantly influence the purchase intention. Thus, H2b is rejected.

### 7.5 The moderating effects of individual traits

To test the moderating effects of the food neophobia and sensitivity to visual food cues, moderation regression analysis is used. Table 11 shows that food neophobia moderates the attitude towards the video ( $b=-0.179$ ,  $p=0.033<0.05$ ) and attitudes towards the vlogger ( $b=0.166$ ,  $p=0.046<0.05$ ).

**Table 11. The Results of the Moderating Effects in the Proposed Model.**

|   | b      | p                  |
|---|--------|--------------------|
| Mood * Food neophobia   | -0.012 | 0.788              |
| Convenience * Food neophobia                                  | -0.033 | 0.452              |
| Weight control * Food neophobia                               | -0.051 | 0.254              |
| Attitude towards the video * Food neophobia                   | -0.140 | <b>0.033**</b>     |
| Attitude towards the vlogger * Food neophobia                 | 0.125  | <b>0.046**</b>     |
| Mood * Sensitivity of visual food cue                         | -0.058 | 0.217              |
| Convenience * Sensitivity of visual food cue                  | 0.058  | 0.206              |
| Weight control * Sensitivity of visual food cue               | -0.037 | 0.368              |
| Attitude towards the video * Sensitivity of visual food cue   | 0.069  | 0.255              |
| Attitude towards the vlogger * Sensitivity of visual food cue | -0.098 | <b>0.069*</b>      |
| Mood  | 0.034  | 0.455              |
| Convenience   | -0.024 | 0.563              |
| Weight control  | -0.051 | 0.111              |
| Attitude towards the video                                    | 0.437  | <b>&lt;0.01***</b> |
| Attitude towards the vlogger                                  | 0.276  | <b>0.076*</b>      |

\*  $p<0.1$

\*\*  $p<0.05$

\*\*\*  $p<0.01$

The interaction term of food neophobia and the attitude towards the video means that subjects with a higher level of food neophobia are more likely to have lower purchase intention due to the attitudes towards the video. The subjects may suspect whether or not the video will

introduce unfamiliar foods. On the other hand, the interaction of food neophobia and the attitudes towards the vlogger means that subjects with a higher level of food neophobia are more likely to have higher purchase intention based on the attitude towards the vlogger. The vlogger demonstrates that certain unfamiliar foods are edible or delicious in the video which may reduce the fear of unfamiliar foods. Therefore, H3a is supported and H3b is rejected.

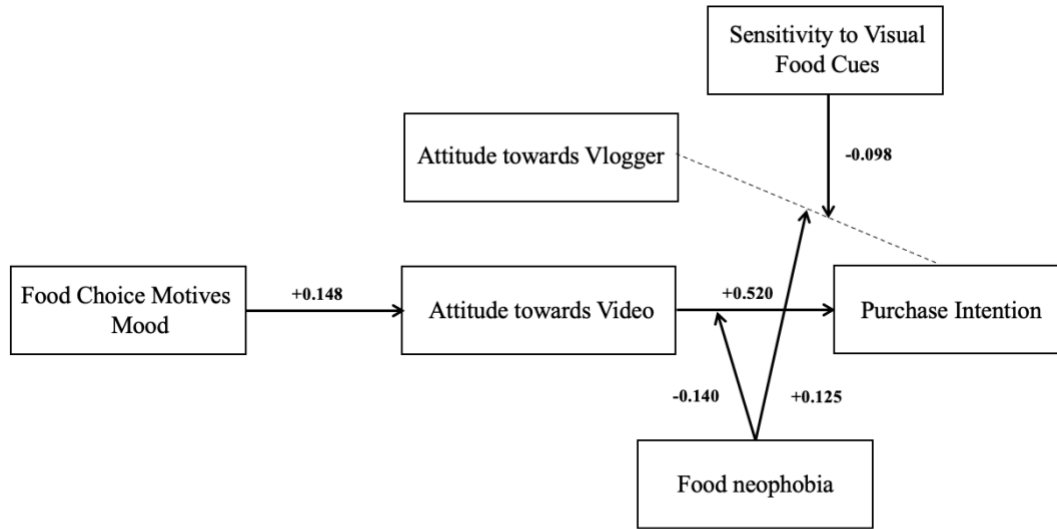
The results show that the interaction of sensitivity to visual food cues and the attitude towards the video does not have significant impact on the purchase intention ( $p=0.255$ ), thus H4a is rejected. However, a larger p-value does not mean there is no effect, but it shows a weaker effect (Amrhein et al, 2017). Therefore, the interaction of sensitivity of the visual food cue and the attitude towards the vlogger provides evidence of a weaker effect on purchase intention with a marginal p-value at 0.069. This interaction means that if the subjects have high level of sensitivity to visual food cues, their purchase intention may be reduced because of their attitudes towards the vlogger. Although the subjects are sensitive to food stimuli, their purchase intention may be reduced because they believe that the vlogger is insincere or untrustworthy when introducing and eating food products in the videos. Thus, H4b is moderately supported.

**Table 12. Acceptance and Rejections of Hypotheses**

|            |  |                             |
|------------|--|-----------------------------|
| <b>H1a</b> | If the audience has more concerns about weight control, they will have more negative attitudes towards the video when the food is unhealthy.                   | Rejected                    |
| <b>H1b</b> | If the audience has more concerns about weight control, they have more negative attitudes towards the vlogger when the food is unhealthy.                      | Rejected                    |
| <b>H1c</b> | The more convenient it is for the audience to purchase or to eat the food product, the more positive attitude they will feel towards the video.                | Rejected                    |
| <b>H1d</b> | The more convenient it is for the audience to purchase or to eat the food product, the more positive attitude they will feel towards the vlogger.              | Rejected                    |
| <b>H1e</b> | If the audience eats the food to cope with negative moods, they will have a more positive attitude towards the video.  | <i>Supported</i>            |
| <b>H1f</b> | If the audience eats the food to cope with negative moods, they will have a more positive attitude towards the vlogger.  | Rejected                    |
| <b>H2a</b> | Positive attitudes towards the video will have a positive impact on the audience's purchase intention.   | <i>Supported</i>            |
| <b>H2b</b> | Positive attitudes towards the vlogger will have a positive impact on the audience's purchase intention.   | Rejected                    |
| <b>H3a</b> | Food neophobia has significant impacts on consumers' purchase intention by moderating food choice motives and consumer's attitude towards the video.           | <i>Supported</i>            |
| <b>H3b</b> | Food neophobia has significant impacts on consumers' purchase intention by moderating food choice motives, and consumer's attitude towards the vlogger.        | <i>Supported</i>            |
| <b>H4a</b> | Sensitivity of visual food cues significantly impacts consumers' purchase intention by moderating food choice motives and the attitude towards the video.      | Rejected                    |
| <b>H4b</b> | Sensitivity of visual food cues significantly impacts on consumers' purchase intention by moderating food choice motives and the attitude towards the vlogger. | <i>Moderately Supported</i> |

## 7.6 Final model

In the final model, mood influences the attitude towards the video positively, and the attitude towards the video has a strong positive impact on purchase intention. Food neophobia moderates the relationship between attitudes towards the video and purchase intention, and the relationship between attitudes towards the vlogger and purchase intention. Sensitivity to visual food cues also moderate the relationship between attitudes towards vlogger and purchase intention, but the effect of this interaction is not very significant.



**Fig 3. Final Research Model for Food Purchase Intention**

If the audiences eat foods because of their moods, such as cope with stress or seek for relax, they will have a positive attitude towards food eating videos, and they will have high purchase intention of the food product. However, if the audiences would like to avoid unfamiliar or novel foods, they will have a lower purchase intention even though they have a positive attitude towards the food eating videos. The audiences' purchase intention does not depend on their attitude towards the vlogger. However, the attitude towards the vlogger could have an indirect impact on audiences' purchase intention if their fear of unfamiliar foods is reduced by the vlogger. Meanwhile, even though the audiences are sensitive to the food stimuli in the food eating videos, their purchase intention may still be decreased because of their negative attitudes towards the vlogger.

### 7.7 Other analyses

Other analyses were done by comparing the data of Group 1 and Group 2, and the pre- and

the post-test data (Table 13). Subjects of Group 1 have significantly more positive attitudes towards the video ( $p=0.000$ ), attitudes towards the vlogger ( $p=0.000$ ), and purchase intention ( $p=0.000$ ) than the subjects of Group 2. These results are consistent with the findings of Part 1, which found that many audiences have established concepts of healthy eating and know if the food shown in the video is beneficial for health. There is a significant difference in the pre-test and post-test attitudes towards the video ( $p=0.021$ ), but there is no significant difference in the attitudes towards the vlogger and purchase intention.

**Table 13. The Results of Other Analyses.**

|                              | Healthy food | Unhealthy food | p              | Pretest | Post-test | p             |
|------------------------------|--------------|----------------|----------------|---------|-----------|---------------|
|                              | mean         |                |                | mean    |           |               |
| Attitude towards the video   | 3.92         | 3.46           | <b>0.000**</b> | 3.66    | 3.84      | <b>0.021*</b> |
| Attitude towards the vlogger | 3.83         | 3.58           | <b>0.000**</b> | 3.70    | 3.75      | 0.386         |
| Purchase intention           | 4.43         | 3.86           | <b>0.000**</b> | 4.17    | 4.18      | 0.949         |

\*\*  $p<0.05$

\*\*\*  $p<0.01$

## 7.8 Discussion of Part 2

Part 2 was designed to examine the proposed model and hypotheses based on the conceptual foundation of Part 1. The findings of Part 2 show that purchase intention is positively affected by the attitude towards the food eating videos and that mood is the determinant of the attitude towards the video. Food neophobia moderates the relationship between the attitude towards the video and purchase intention, as well as the relationship between the attitude towards the vlogger and the purchase intention. The sensitivity to visual food cues was demonstrated to moderate with the attitude towards the vlogger.



Combining Part 1 with Part 2 may explain this phenomenon more deeply. In Part 1, purchase intention is inferred to be related to positive attitudes; therefore, it is unsurprising that the attitudes towards the video have a strong direct impact on the audiences' purchase intention in Part 2. Psychological pleasure seekers may be more likely to have positive attitudes towards the video, and they express a stronger purchase intention compared with common point seekers and eating desire eliminators. When the easily persuaded consumers (the sub-type of psychological pleasure seeker) have positive emotions, they are more likely to purchase the products. One possible explanation is that individuals who consume food to enhance positive emotions or reduce negative emotions may also obtain psychological pleasure when watching others eat.

Weight control does not appear to impact attitude towards the video and purchase intention. This finding is inconsistent with the findings of the Part 1 since eating desire eliminators discussed their health concerns and their worries that eating unhealthy food will result in weight increase and potential serious diseases. Therefore, their purchase intention should be lower than other audiences because of the more negative attitude towards the video.

Surprisingly, the attitudes towards the vlogger do not have a direct influence on purchase intention. In other words, the audiences may focus on the process of food eating rather than the vlogger. This finding is surprising and unexpected because there are thousands of food eating vloggers and millions of food eating videos online and the personality and the host style may be the key factors to differentiate between vloggers. However, the results show that if the audiences believe that the food eating videos' contents are interesting and likeable, they will have higher

purchase intention. Whether or not the vlogger is warm, friendly, sincere, and likeable, the audiences' purchase intention will not be directly influenced by vlogger's personality. This finding also suggests that vloggers should focus on creating interesting content with a more attractive process of food eating.

The audiences' attitudes towards the video are dependent on their food choice motives. Mood, as a food choice motive, has a significant positive effect on the audience's attitudes towards the video. Releasing the audiences' stress and coping with negative emotions become important factors when the audiences watch the video and make a purchase decision. Young Chinese currently experience significant work and academic pressure, but there is nowhere to vent their negative emotions. Thus, many audiences may improve their moods through these videos (Zhao & Jiang, 2020). It is not difficult to explain why audiences who have more concerns about mood food choice motives may have more positive about the attitudes towards the video.

Surprisingly, although weight control is frequently discussed under each video's comments column, this food choice motive shows no impact on the attitudes towards the video. This is in contrast to the findings of both Part 1 and previous research. One possible explanation is that increasing number of young Chinese realize that losing weight through exercising regularly may be more effective than watching food eating videos to restrain their appetite. A report from China Daily says that nearly 60% young Chinese use their leisure time to go to gyms or run at night to keep in shape (Zhang, 2019). Thus, they may not have these negative attitudes when they are watching these videos.

Convenience, which was important in previous research on purchasing intention, does not have a significant relationship with the subjects' attitudes towards the video. China has a developed online shopping system where consumers may buy food products, including prepared or cooked foods, by simply using their mobile phones to place an order and then receive these products quickly, even in a matter of hours (Hong, 2019). Therefore, the convenience factor would not have a significant effect on the subjects' attitudes towards the video.

The findings suggest that food neophobia has two moderating effects on the attitudes towards the video and the vlogger in the proposed model. Previous research has demonstrated that consumers with a higher level of food neophobia will have a lower intention to attempt novel foods. Although food neophobia may result in higher purchase intention by moderating the attitude towards the vlogger, purchase intention may be lower due to the interaction of food neophobia and the attitudes towards the video. Subjects with a higher level of food neophobia are more likely to have lower purchase intention because they may suspect whether or not the video will introduce unfamiliar foods.

Sensitivity to visual food cues shows a moderating effect on the attitude towards the vlogger. This finding is consistent with the findings of Part 1, that the critical onlookers comfort themselves through food eating videos but remain critical of the content. This type of audiences is sensitive to visual food cues; they delight and comfort themselves by watching these food eating videos, but they do not often have high level of purchase intention because the content sometimes makes them believe the vlogger is unlikeable, insincere, or untrustworthy. On the

other hand, sensitivity to visual food cues does not moderate the relationship between attitude towards the video and purchase intention. One possible explanation for this phenomenon is that the audiences' main purpose of watching these videos is to pass time or seek out novel experiences (Chen, 2020).

The result for healthy food eating video and unhealthy food eating video showed significant differences in subjects' attitude towards the video, attitude towards the vlogger and purchase intention. Although healthy and unhealthy food eating videos could both result in positive attitudes and contribute to purchase intention, subjects responded more positively to healthy food eating videos than unhealthy food eating videos. This finding answers the last research question on the impact of the food healthiness on audience attitudes and purchase intention. This finding suggests that food eating videos could be a good platform to promote foods to viewers and that promoting healthy foods may have better results than unhealthy foods.

Finally, the results show that there was no significant difference between the pretest and the post-test attitude towards the vlogger and purchase intention, but the attitude towards the video became more positive in the post-test. Subjects' attitudes towards the video change in a short time, but these changes will not significantly change purchase intention. This finding could suggest that first impression of the food eating video is most important since the purchase intention will not change within a short time. Marketers should pay more attention to the video content that could positively impact the audiences' attitude towards the video.

## **8. General Discussion**

This research is an attempt to introduce new variables to the TPB in food marketing. Inspired by the research on organic food products (Chen, 2007), this research hypothesizes the potential moderating effects of two individual traits, food neophobia and the sensitivity to visual food cues. As food eating videos as a new form of digital marketing strategy, the attitudes towards the video and the attitudes towards the vlogger are included in the model when investigating how food eating videos impact the audience's purchase intention. The findings show that food neophobia has a moderating effect on the relationship between the attitude towards the video and purchase intention, as well as the relationship between the attitude towards the vlogger and the purchase intention. The sensitivity to visual food cues also moderates the relationship between purchase intention and the attitude towards the vlogger. The results suggest that purchase intention is positively affected by the attitude towards the food eating videos. Moreover, this study found that healthy and unhealthy food eating videos resulted in different attitude towards the video, attitude towards the vlogger, and purchase intention.

As food neophobia has a moderating effect to the model, finding ways to decrease the audience's fear of new food and increase their purchase will be an important hurdle for marketers seeking to advertise through food eating videos. This is especially true for viewers with high food neophobia. Marketers may consider encouraging vloggers to give a more detailed introduction on certain food products, such as the taste, the texture, and the cooking method, then link the food products with well-known foods in China.

The sensitivity to visual food cues is found to have a mild moderating effect to the model.

To increase the audiences', especially the critical onlookers', purchase intention, it is important to convince them that the vlogger is sincere and trustworthy and does not create these videos for sponsorships. Therefore, vloggers who have real, natural, and non-exaggerated reactions to the foods may be more attractive to audiences. Moreover, it is critical for both vloggers and marketers to consider setting up more covert advertisements in the video.

The findings also suggest enhancing the audiences' enjoyment and pleasure by creating interesting content with a more attractive food eating process has positive impact on purchase intention. The attitude towards the vlogger does not impact purchase intention. As discussed, the psychological pleasure seekers who enjoy watching are more likely to have positive attitudes towards the video and stronger purchase intention compared with the common point seeker and the eating desire eliminator. It is important to provide an interesting and enjoyable watching experience to help the audiences develop a positive attitude towards the video and have a higher level of purchase intention of the food products.

Meanwhile, the finding shows that healthy and unhealthy food eating videos could both result in positive attitudes and contribute to purchase intention, but audiences respond more positively to healthy food eating videos. Marketer should know that eating healthy foods in the videos may grow their products and boost their sales.

## **9. Implications for researchers and practitioners**

This research contributes to the literature in the following ways. Firstly, the focus of this study is on food eating videos rather than mukbang. Instead of applying the findings of mukbang-

related studies to this new trend in China, the findings of this study will allow researchers to better understand this unique phenomenon among young Chinese.

Secondly, the focus of mood, which is one of the food choices motives, is a novel perspective for this work. Existing research studied on whether food eating videos can change personal moods and how the viewers' mood is altered by watching, but few of them have considered whether individuals who have different food motivations will have different responses to the same video.

More importantly, this research provides empirical evidence to support previous statements that food eating videos impact individuals' food eating behaviors. Content analysis and an independent measure designed experiment were used in this research, filling the gap between theory and practice by examining the effects of food eating videos on food product purchase intention of young Chinese.

Then, since previous research has studied the antecedents of food eating videos and the reasons for watching these videos, this study focuses on the marketing aspect of the videos to address the lack of studies on how marketers might maximize their profit through these videos. The findings could be important and valuable references for the future researchers.

Lastly, the TPB is used to explore the influence of the food eating video on purchase intention. The introduction of personal traits, such as food choice motives, food neophobia, and sensitivity to visual food cues, is an attempt to expand the TPB in food marketing. Previous studies of mukbang and food-related shows were mainly based on the counteractive-control

theory and focused on the self-regulation process and food intake after exposure to food stimuli.

This study's use of the TPB is an attempt to consider the impacts of food eating videos on the purchase intention in the context of Chinese food eating videos. The findings of this research provide new directions for future research.

This research is an attempt to address a new method of digital marketing by studying current trends among young people, and it has several practical implications for marketers, policy makers, and health organizations. Firstly, this research provides a new way for marketers to promote their products. In the past, marketers focused more on promoting the flavors, packaging and discounts of food products, but few marketers paid attention to the process of "consuming". It will be a novel way for marketers to reconsider their content of advertising.

On the other hand, by analyzing subjects' responses to healthy and unhealthy food eating videos, marketers have a deeper understanding of the audiences' preferences and attitudes. Marketers could customize corresponding marketing strategies, such as choosing specific video content, using relaxing and cheerful background music, and introducing more information about food products. This may help the potential consumers, especially the customers with a high level of food neophobia, become familiar with the products, reduce their reluctance or fear of unfamiliar foods, and increase their purchase intention.

Moreover, food companies might consider increasing their expenditures in making healthy food eating videos rather than unhealthy food eating videos because audiences have more positive attitudes after watching a healthy food eating video. Even though the audiences still



show a positive purchase intention after watching unhealthy food eating videos, the results are not be as good as those of healthy food eating videos.

Finally, policymakers and health organizations may adopt new guidelines or regulations for video content. They could introduce limits on the promotion of unhealthy food eating videos and encourage vloggers to create healthy food eating videos. By advocating healthy eating behaviors in these videos, the audiences may realize the importance of healthy eating and establish their own healthy eating habits.

## **10. Limitations**

This study has some limitations that could be improved in future studies. Firstly, since real-time manipulation was used in this research, the videos may confound some of the final results. To minimize the confounds (e.g. hosting and editing style, table manners, dressing, and makeups), videos were selected from the same vlogger. It is difficult to eliminate these confounds without conducting a laboratory experiment. However, laboratory experiments may result in unnatural behaviors, demand characteristics, or experimenter effects which may affect the results.

Control of eating and all factors related to eating are extremely complicated. This research did not capture all the antecedents of eating, and it may explain why some hypotheses were not supported. For future research, the Palatable Eating Motives Scale (Burgess et al., 2014) can be used to capture more antecedents of eating.

Another potential reason as to why some of the hypotheses were not supported might be because the consumption of “food consumption” videos are, at least for part of the sample,

viewed for entertainment reasons. Hence, it is reasonable to expect that these participants had not watched food consumption videos in the past with any intent to purchase the products displayed. This might have introduced noise in the sample and hindered the creation of a strong effect. To address this issue in future research, researchers may ask participants to read a scenario that would put them in the situation where the researchers expect them to buy the products displayed.

In previous studies, researchers found that subjective norms, perceived behavioral control, and perceived difficulties impact consumers' purchase intention. These variables were eliminated in the process of data reduction because they did not significantly improve the total explained variance. The moderators may have more interaction terms and produce a stronger result if these variables were added to the model.

Another limitation is the measure of sensitivity to visual food cues. The measure comes from the Dutch Eating Behavior Questionnaire (Van Strien et al., 1986), and four of the questions are to relate to this research. These questions brought several confounding variables when analyzing the data. Therefore, only one question that was the most relevant to the research was kept. For future research, instead of using one single item, the use of the entire "situational eating" sub-scale of the DEBQ (Van Strien et al., 1986) is suggested.

Finally, this research is based on young Chinese subjects. Participants may be affected by their eating cultures, such as representing social status, groups identifications, celebrating important events, symbolic meaning, etc. (Ma, G., 2015). Therefore, these findings are not generalizable to other populations.

## 11. Conclusion

This study investigates how food choice motives determine the audiences' attitudes towards online food eating videos and the vlogger, and how these attitudes influence their purchase intention of certain food products. Food neophobia and sensitivity of visual food cues, as potential individual food-related traits, are examined for their moderating effects. By collecting and analyzing the data, the attitude towards the video is found to positively relate to the audiences' purchase intention. Food neophobia moderates the relationship between the purchase intention and the attitudes towards the video, as well as the relationship between the purchase intention and the attitudes towards the vlogger. Sensitivity to visual food cues moderates the relationship between the attitudes towards the vlogger and the purchase intention.

This study has both academic and practical implications. The findings of empirical work fill the gap between theory and practice and provide several new research directions for other researchers. Meanwhile, the findings also provide some suggestions to digital marketers in the content of food eating videos. Findings can also provide guidance for health organizations and policymakers to encourage vloggers to eat more healthy foods in their videos, therefore improve young Chinese's eating habits.

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## Appendices

### Appendix A.1 Transcription of fruit eating video:

Hello everyone, I am Mi Zi Jun, today I am going to eat fruits. We should eat more fruits in summer.

Then, the outlook of this fruit is well-carved today. Do you see what it looks like?

Shark?

The vlogger's boyfriend: It's a frog!

Does frog have this? No, frogs don't have this. (Pinch the fin made of watermelon rind).

Let's start eating.

Then this one was made by my boyfriend. In fact, he wanted to make a fruit tower. I made this shark and it turned into a fruit platter in the end, eh.

Look at this watermelon, do you want to eat it?

(eat watermelon)

In fact, there are many types of watermelons. Which watermelon do you like best? I like all of them.

Wow, I found a fruit platter, I have a strawberry-flavored watermelon.

Strawberry!

(Eat fruit)

These fruits are so delicious, so sweet~ I can't stop at all.

Vlogger's boyfriend: Do you know how expensive these are? Do you know how much it cost to buy fruit?

Talking about money hurts feelings, eh, I'd better eat

(Eat fruit)

(laugh)

I'll take a seed to exchange for fruits with you, okay (reach out to the screen), seeds can plant many beautiful things, seeds can plant many...seeds (laughs) Seeds can plant many fruits! Want to exchange it?

(Eat fruit)

Dragon fruit! Do you spit seeds when you eat dragon fruit?

The Vlogger's boyfriend: Yep. You must spit seeds, otherwise the dragon fruit will sprout in your stomach!

Sprout in the belly! What about strawberries? You have to pick seeds for strawberries, right?

The Vlogger's boyfriend: Strawberries must be picked too!

Wow, your tongue is really amazing!

This is done by my boyfriend, and it turns out that rich people are different. This fruit platter...I know that the king of fruits is durian, and it seems that kiwi is also a king of something... but I don't know what king it is.

The Vlogger's boyfriend: Kiwi is the green hat king (a metaphor for a green hat, which means being cheated in Chinese)

Green (laugh)

Do you like small tomatoes? Do you know any celebrities who would rather die than eat tomatoes?

Vlogger's boyfriend: Me!

(laugh)

(Eat fruit)

If you eat grapes, do you peel them or just suck them? It's very convenient to suck

(Eat fruit)

What kind of fruit do you like the most?

My favorite is watermelon anyway

Vlogger's boyfriend: My favorite is watermelon rind

Really? Then I am not afraid that the shark will lose his home.

What kind of fruit do you think best represents summer?

Vlogger's boyfriend: ice cream

Ice cream is not a fruit!

Vlogger's boyfriend: fruit ice cream

(Eat fruit)

Alright, I have finished my fruit today, I will leave the watermelon rind for you, breeder (the

Vlogger's boyfriend)

Hey, wait a minute (pick two grapes and eat)

## **Appendix A. 2 Transcription of Potato chips eating video:**

Cartoon narration: I heard that there is a Big eater Mi Zi Jun who is as beautiful as a flower here.

If food can be loved by her, it can become Leonardo in the food world. Wow~

Welcome to my house as a guest.

Hello everyone, I'm Mi Zi Jun, today I'm going to eat Shuyuan Yuebo (a kind of potato chips).

Why is it called a wave, because it's wavy~

Let's eat!

(Eat potato chips)

I thought that the script I got was that the feeling of eating meat was just an advertisement, and it was just an exaggerated expression, but it tasted really like wagyu teppanyaki. There is some black pepper on the potato chips.

(Eat potato chips)

Not salty, but there is a taste of sweet barbecue.

(Eat potato chips)

Think about it, everyone, if there is no rice or potatoes in this world suddenly, what will we Chinese do?

Everyone becomes a breeder (blogger boyfriend) and eats nothing! Perform photosynthesis ~ absorb fresh sunlight every day, ah~ I'm full~

(Eat potato chips)

Do you know why potato chips have to become such a wavy shape?

Like this wavy shape, it can increase the taste and make it crisper

(Eat potato chips)

Nowadays, there are more and more flavors of potato chips and more and more shapes. Even potato chips are so motivated to survive and let us all buy them. Why we human beings do not work hard!

(Eat potato chips)

Narrator: Eat less, if you eat more potato chips, you will gain weight!

No, this is non-fried, so it's okay to eat more.

I think those who like to watch eat videos and live streaming should have known that there is ASMR recently. In fact, foods like potato chips are particularly suitable for this kind of show, which will make you have an Autonomous sensory meridian response (ASMR) every minute.

(Eat potato chips)

Get your headphones ready! Hi everyone, potato chips!

(Eat potato chips and drink cola)

(laugh)

Sure enough, if I'm not a diamond, I don't want to work on this porcelain (a Chinese saying, same as "bite off more than one can chew"), I'd better eat it!

(Eat potato chips)

How is it, it's actually pretty good!

If you like this form of performance, you can leave a comment and let me know! I will do it again in another video!

(laugh)

Did you see it, bonus! Our bonus this time is not a pack of chips, it's to give a box for free! Not too much, not too much, we send you a box!

(Eat potato chips

There are actually many ways to eat potato chips. Welcome everyone to innovate! Forward and comment on this video, we will select 5 little cuties to send out a box of potato chips!