

## EXAMINING THE INFLUENCING FACTORS OF CONSUMER PURCHASE INTENTION TOWARD FAST FOOD WITH HEALTH CONCERNS AS A MODERATOR

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### Abstract

This study aims to investigate the key factors that influence consumers' intention to purchase fast food. In specific, this study intends to examine the relationship between attitude, subjective norms, perceived behavioural control and consumer purchase intention toward fast food. Additionally, this study also examines health concerns as a moderator between independent variables and consumer purchase intention toward fast food. The data was collected via an online and face-to-face survey amongst the young generation in Malaysia, and quantitative analysis was used to test the hypotheses. A total of 473 respondents who have experienced consuming fast food participated in this survey, and the data was statistically analysed via SPSS/PLS-SEM. The findings of this study show that attitude and subjective norms were found to positively and significantly influence consumer purchase intention toward fast food, while perceived behavioural control was found to be insignificant. The findings of this study also revealed that health concerns weakened the relationship between attitude and consumer purchase intention toward fast food, whereas health concerns strengthen the relationship between subjective norms and consumer purchase intention toward fast food. Meanwhile, health concern has no moderation effect in the relationship between perceived behavioural control and consumer purchase intention toward fast food. This is one of the few studies examining the health concern as a moderator in the study of consumer purchase intention toward fast food in an emerging market such as Malaysia. The findings help fast-food restaurateurs and marketers in understanding consumer behaviour and could help marketers as well as organisations to effectively adapt these factors in their marketing strategies, especially toward young consumers with a high health concern.

### Research paper

**Keywords:** Health Concern; Fast food; Purchase Intention; Attitude; Subjective Norms; Perceived Behavioural Control

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## **Introduction**

There is a growing trend of obesity due to rising incomes and urbanisation amongst the ASEAN countries. In Southeast Asia particularly, Malaysia has seen a rise in the number of obese adults at 27% between 2010 and 2014 (The Asean Post, 2020; The Star Online, 2016). Malaysia has been reported to have the highest prevalence of obesity among youths aged five and 19 years old that stands at around 12.3% of Malaysian children in this age group. It can be seen that almost half of the Malaysian population are either overweight or obese (Subramaniam, 2016). According to the World Health Organisation (WHO), besides the rising costs of healthy food and food scarcity, cultural and social norms are among the contributing factors to obesity. The lifestyle changes due to the improving economic standards in the regions have led to a shift to more unhealthy diets that lead people to adopt a diet of fast food that is low in cost and low in nutritional value (The Asean Post, 2020).

Malaysian habit of eating out increases the risk of eating unhealthy food. There is a trend among young consumers to do less cooking at home and often eating out, and this has increased fast food consumption (Anand, 2011). Fast food is purposely designed for the food to be readily available for consumption, and the convenience factor has since turned it to be the fastest-growing industry in the world today (Anand, 2011). Besides that, fast food contains high sugar, high calories and high fat (Tepper, 2013). Malaysians have been observed to be led toward fast food (The Asean Post, 2020; Kasbia, 2005; Ali & Abdullah, 2012). Although processed food and fast food can

cause obesity, consumers tend to choose fast food based on bad eating habits; instead of eating what they should (healthy food), they prefer eating what they like (delicious fat), which unfortunately can cause them to be obese (Frank, 2012; Clarke, 2016). Obesity is found as the cause of colon, breast (post-menopausal), endometrial, kidney and esophageal cancer (Chandler, 2006). It can increase mortality and chronic diseases such as coronary heart disease, hypertension, diabetes mellitus and gallstones (Sjostrom, 1993). On average, obesity can reduce a person's life span by as much as nine years (Lowell, 2004). Although the government has conducted numerous awareness campaigns to ensure Malaysians have healthy eating habits such as, the healthy cafeteria program (food operators to offer more fruits and greens) and the National Plan of Action on Nutrition Malaysia III to reduce the amount of obesity and to encourage people to be more calorie-conscious about foods that they consume (Scawen, 2016), consumers in Malaysia still like to eat fast foods. This is among the reason for the increased number of fast-food restaurants in the country (Verma et al., 2013). Consumers love fast-food restaurants as these restaurants serve food to consumers with little or no waiting time (Dittmer, 2002).

Totally, Generation Y spends \$33 million on restaurant foods every month, and there is an increasing number of generation Y who eat outside and buy takeaway food to eat at home (Holloway, 2017). The previous research found that Generation Y has more access to unhealthy food and convenient fast foods compared to another generation (Xiao et al., 2019). Young con-

sumers, in particular, are cooking less at home and eating out more that increases their fast-food consumption behaviour (Anand, 2011). For their busy life, fast food consumption may be the only option because of its accessibility, availability and affordability (Abdullah et al., 2014; Shipman, 2020). In Malaysia, Generation Y accounts for 12.67 million people, which is 40% of Malaysia's population (Malaysian Population, 2018).

Several factors have been found that affect consumer purchase intention toward fast food consumption, such as price and nutritional information (Montandon & Colli, 2016), restaurant environment (Xiao et al., 2019), quick preparation, alternatives to home-cooked food (Habib et al., 2011), frequent television viewing (Kobayashi, 2010) and food quality and service quality (Xiao et al., 2019; Qin & Prybutok, 2009). Among those factors, price and nutritional information are among the most important factors that affect consumer choice toward fast food (Montandon & Colli, 2016). However, several important factors such as attitude, subjective norms and perceived behavioural control toward consumer purchase intention toward fast food have been largely ignored in the fast-food context. Although fast food is quickly prepared, and cheap and tasty, some previous studies claimed that it is still considered a junk food choice (Anderson & Miroso, 2014). Thus, it is important to examine consumer health concern toward fast food consumption that has not yet been studied so far, especially the role how it plays in the relationship between consumer attitude, subjective norms and perceived behavioural control and purchase intention in the context of fast food consumption. Therefore, it is crucial to investigate the key factors that influence consumer purchase

intention toward fast food among young consumers in Malaysia and to examine whether these factors influence positively and significantly consumer purchase intention toward fast food. Additionally, this study also aims to examine how health concerns moderates the relationship between attitude, subjective norms, perceived behavioural control and consumer purchase intention toward fast food.

To arrive at a conclusive result, the survey method was used for the purpose of data collection. The data were gathered through a three-month survey accomplished in February 2020. Respondents consisted of 437 consumers. This paper is structured as follows. Subsequent to this introduction, Section 2 continues with a review of related literature in streams of research on attitude, subjective norms, perceived behavioural control, health concern and purchase intention toward fast food. Section 3 briefly explains the method and data used, while Section 4 explains the empirical results as well as discusses the relevant implications and marketing consequences. The final section concludes the study.

## **Literature Review**

This study adopted the Theory of planned behaviour (TPB) and added a moderator construct, health concerns, to predict consumer purchase intention toward fast food in Malaysia. TPB is a popularly applied theory in many past studies; some can be found on predicting human intention towards food and beverages such as on wine consumption (Agnoli et al., 2016), natural

functional food (Rezai et al., 2017) and soy-based dietary supplements (Chung et al., 2012). The TPB is the extension of the Theory of Reasoned Action, which demonstrates a person's intention is influenced by his/her attitudes and other people's perception (Veraldo & Ruihley, 2017). The TPB suggests that attitudes towards target behaviour, subjective norms and perceived behaviour control may influence a person's intention (George, 2004). In other words, a person will perform a certain behaviour if he/she has a favourable attitude towards the behaviour or other people want him/her to perform the behaviour or he/she feels capable of performing the behaviour (Grønhøj et al., 2012).

In this study, the importance of factors investigated, namely, purchase intention (PI), attitude toward a behaviour, subjective norm (SN) and perceived behavioural control (PBC) have been well acknowledged in the literature. Purchase intention, for example, is important in measuring future demand and forecasting future sales of a product (Morwitz, 2012); these have resulted in companies and researchers to spent billions of dollars trying to identify factors that can affect consumers' purchase decisions (Mirabi et al., 2015). In this study, the health concerns variable is added as the moderator to the TPB framework. This study intends to examine whether health concerns moderates the relationship between attitude, subjective norms and perceived behavioural control and consumer purchase intention toward fast food.

### ***Attitude toward fast food and purchase intention of fast food***

Ajzen (1991) describes the attitude towards behaviour using an individual who thinks about the consequences of performing an action; this is reflected on the positive or negative feelings he/she has about that behaviour (Ajzen, 1991). Consumer attitude toward fast food can be seen as consumer's belief that by consuming fast food, it can save their time which is always connected with less time and less effort (Wahlen, Horts, & Pothoff, 2016). Attitude toward eating fast food plays a significant role in understanding consumer behaviour. Attitude can be one of the decision-making components for the choice and intention to eat foods (Salamzadeh, 2015; Ghoochani et al., 2018; Moghadamzadeh et al., 2020). Past research has found that the sensory appeal of food is one of the factors that influence consumer attitude toward fast food. The fast-food taste, flavour, cooking method and colour of the products influence their consumption behaviour. Franchi (2012) reveals that the most important factor that influences consumer attitude toward consuming fast food is the food taste. Researchers found that a consumer with a busy lifestyle chooses fast food because it is fast to serve and consume (Xiao et al., 2019; Mat et al., 2016). Rezai et al. (2017) has stated that there is a direct relationship between attitudes toward eating foods and intention to purchase. Thus, hypothesis 1 is proposed as below:

**H1:** *There is a positive and significant relationship between consumer's attitude towards fast food and their purchase intention of fast food.*

### ***Subjective norms and purchase intention of fast food***

Subjective norms are social pressure that influences an individual to think about whether to perform or not to perform a behaviour (Ajzen & Fishbein, 1980; Nejati et al., 2011). When individuals are performing a certain behaviour, in addition to their own reasoning, they are influenced by family members, friends, colleagues and the media. For instance, Xiao et al. (2019) and Goyal and Singh (2007) found how consumers' reasons to visit fast food outlets were due to fun, need for a change, and entertaining their friends instead of substituting the homemade food. Another study identified parents and peer groups as important in determining their child's choice of food and on individual's intention to buy/use, respectively (Kulkarni & Nithyanand, 2012). Subjective norms have even been found to show the most substantial effect on green purchase behaviour (Joshi & Rahman, 2016). In India, subjective norms are important factors to determine a person's healthy food buying intention (Shamal & Mohan, 2017). Social influence has a direct effect on consumer intention to purchase natural functional foods (Rezai et al., 2017). Similarly, Shen and Chen (2020) found that subjective norms significantly affect purchase intention toward artificial meat. Meanwhile, Scalco et al. (2017) found that subjective norms significantly influence consumer purchase intention for organic foods. Therefore, this study speculates that consumers would be influenced by their relatives and friends in deciding whether to buy fast food. Thus, this study proposed hypothesis 2 as below:

**H2:** *There is a positive and significant relationship between consumer's subjective norms and their purchase intention of fast-food.*

### ***Perceived behavioral control and purchase intention of fast food***

Perceived behavioural control is the belief that an individual has on whether he/she is able to facilitate or impede a behaviour (Ajzen, 1991). In short, PBC considers some realistic barriers for people to perform a behaviour (Vabø & Hansen, 2016). Past studies have shown price and availability are the perceived barriers hindering organic food consumption (Al-Swidi et al., 2014), while the long wait before eating was the barrier for a student to stay in school to eat lunch (Beaulieu & Godin, 2011). Meanwhile, Xiao et al. (2019) stated that a lowered price has a positive influence on fast food purchase intention. PBC was also found as the strongest predictor of healthy food purchase intention (Grønhøj et al., 2012). Similarly, several past studies also found that PBC influences consumer intention positively and significantly toward consuming Dayak food (Ting et al., 2016) and purchasing soy-based supplements (Chung et al., 2012). Chang et al. (2019) also found that PBC significantly influences consumer purchase intention toward insect food. Therefore, this study proposed hypothesis 3 as below:

**H3:** *There is a positive and significant relationship between consumers' perceived behaviour control and their purchase intention of fast-food.*

### ***Health concerns as a moderator***

Health concerns is the consciousness an individual has on his personal health, physical appearance and general sense of wellbeing (Kim et al., 2013). Recently, there is an increasing number of consumers who are concerned with

health impacts because of foods, food safety and food poisoning (Rezai et al., 2017). Young parents whose age is less than 35 years old would likely to choose healthier food for their kids (Kellershohn et al., 2017). Moreover, a person who is concerned with his health is more likely to care about his food-related lifestyle (Choi, 2017). Consumers are concerned with the food, health risk and nutrition information while deciding what food to consume (Labrecque & Charlebois, 2011).

This study proposed health concern as a moderating variable between the determinants (attitude, SN, PBC) and the dependent variable (PI) mainly because the literature shows limited findings on the role HC plays in the fast food consumption studies. Several studies examined health concerns moderating effects on consumers food choice, however, most of the studies have focused on healthy food choices. Limited studies examined health concerns effects on fast food consumption. In specific, studies on how health concerns influence the relationship between consumer attitude, subjective norms and perceived behavioural control, and purchase intention of fast food remained unknown. Ahadzadeh et al. (2017) found that health consciousness moderates a positive attitude toward using the internet for seeking health information. Chen (2011) also found that health consciousness moderates consumer attitude and buying intention toward functional food in Taiwan. Zigmont and Bulmer (2015) found that students who know about the calories content of their food choice are likely to decrease the likelihood to repurchase the fast food, while students who are not aware about the calories content will likely to purchase the fast food. High nutritional value in food is an important factor

to increase consumer purchase intention (Darian & Tucci, 2011). Health concern was found to directly influence consumer buying intention (Jin et al., 2017). Previous studies found that health concerns moderate the relationship between attitudes and calories content of the food choice, subjective norms and healthier food choice as well as perceived behavioural control and nutritional value in food choice (Kellershohn et al., 2017; Zigmont & Bulmer, 2015; Darian & Tucci, 2011). Thus, this study intends to examine the moderating effect of health concerns in the relationship between attitude, subjective norms, perceived behavioural control and purchase intention of fast food. Hence, hypotheses 4, 5 and 6 are proposed as below:

**H4:** *Consumer's health concern weakens the relationship between consumer attitude towards fast food and his purchase intention of fast-food.*

**H5:** *Consumer's health concern weakens the relationship between subjective norms towards fast food and his purchase intention of fast-food.*

**H6:** *Consumer's health concern weakens the relationship between perceived behaviour control towards fast food and his purchase intention of fast-food.*

## **Theoretical Framework**

Figure 1 shows the study's framework with TPB as the underlying theory. The model shows the relationships that are proposed amongst determinants and purchase intention as well as the moderator in the IV-DV rela-

tionships. Attitude towards fast food, subjective norm, and perceived behaviour control are proposed as the independent variables, while consumers purchase intention of fast food is the dependent variable. Health concern serves as a moderator in the relationship between attitude and purchase intention toward fast food, subjective norms and purchase intention toward fast food, and perceived behavioural control and purchase intention toward fast food.

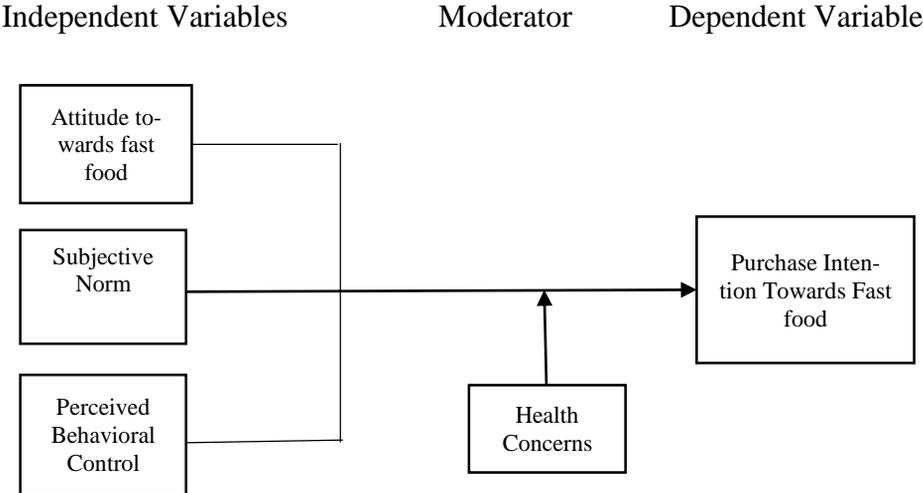


Figure 1. Theoretical Framework

**Research Methodology**

A quantitative study was conducted to examine the relationship between the independent variables/IV (attitude towards fast food, subjective norm, perceived behaviour control towards fast-food) and dependent variable/DV (purchase intention of fast-food) of the Gen Y samples. This method

is also suitable to examine the moderating role of health concerns on the relationships of the IV-DV described. The unit of analysis in this study is consumers. This study focuses on consumers who have purchased fast food and fall under the Gen Y category that is aged between 20-35 years old (Lyons, 2017) from Penang, Malaysia. The population of this study is Gen Y, who is residing in Penang. In Penang, there are many factories established in here that cause many Gen Y that is originated from Penang or outside Penang to choose Penang as their working place. Leading high-technology brands like Intel, Agilent, Advanced Micro Devices (AMD), Robert Bosch, Osram and Motorola have been operating in Penang all these years (Ooi, 2010). It is found in the past study that young consumers with a busy lifestyle choose fast food because it is fast to serve and consume (Mat et al., 2016). Therefore, this study is targeted at Gen Y, who is residing and working in Penang and have purchased fast food previously through purposive sampling. Purposive sampling is a method of selecting samples based on the characteristic of the population and the objective of the study (Cole, 2017). Thus, only Gen Y who have consumed fast food and are residing in Penang will be chosen.

The sample size for PLS-SEM needs ten times the largest numbers of the structural path, which directed toward a latent construct in the model (Hair, 2011; Salamzadeh et al., 2019). Thus, this study needs at least 50 respondents as there are only five variables available (3 independent variables, 1 moderating variable, and 1 dependent variable). However, another researcher argues that sample sizes larger than 30 and less than 500 are appropriate for most research (Sekaran, 2003). Therefore, in this study, more than

500 sample size is chosen, and this study distributes the survey to 600 respondents through an online and face-to-face survey.

This study collected data via email and face-to-face self-administered questionnaires using a Google survey and printed questionnaire on respondents who buy and eat fast food in fast-food restaurants. Respondents were informed that their responses were strictly confidential, and the purpose of the survey was only for academic research. The questionnaire begins with the screening question of whether respondents ever eat at fast food restaurants and followed by source-demographic data of the study participants. During the screening question, if the respondent has never eaten at fast food restaurants such as KFC, pizza hut, McDonald's and others, the respondent can just stop to answer the questionnaire. In the next part, after screening questions and source demographic data, respondents will answer about the variables measured. Collected data were analysed using Statistical Packages for Social Science (SPSS) and Smart Partial Least Square (PLS) tools.

The survey items were adapted from previous research, and some changes were applied to items to reflect the fast-food context. Nine items to measure attitude toward fast food were adapted from Giampietri et al. (2016) and Rahman et al. (2013); an example of the statement is: "I think fast food taste is good". Subjective norm was measured using four items adapted from Suki's (2013) study; an example of the statement is: "The pressure from friends and family is likely to influence me to consume fast food". Six items adapted from Al-Swidi et al. (2014) were applied to measure perceived behavioural control; an example of the statement is: "I can make the decision

independently to buy fast food”. For the moderating factor, health concern was measured with a four-item scale (e.g., “Concerns about my health prevent me from purchasing fast food”) adapted from Jin et al. (2017). Finally, intention to purchase was measured using a five-item scale that was adapted from Gakobo and Jere (2016); an example of the item statement is: “I intend to consume fast foods in future”. A 5-point Likert scale ranged from 1=Strongly disagree to 5=Strongly agree was used in the questionnaire to measure responses from respondents on the variables measured in the study.

## **Results**

A total of 437 usable responses were analysed. All of them were from Gen Y living in Penang as purposely targeted for this study. Table 1 explains the profile of the respondents. The majority of the respondents were Malaysian (97.3 per cent) and were found to be in the age category of 21-30 years old (90.7 per cent), male (52 per cent), single (54.8 per cent), from the Chinese ethnic group (63.6 per cent), possessed a Bachelor’s degree (47.1 per cent) and are working (72.1 per cent). The reason why the Chinese ethnic group possesses the larger portion of the ethnicity is that the Chinese population comprise almost half of the Penang population, which is 39.4% (Metro News, 2018).

**Table 1.** Respondent Profile

<b>Characteristics</b>	<b>Categories</b>	<b>Frequency</b>	<b>%</b>
Nationality	Non-Malaysian	13	2.7
	Malaysian	460	97.3
Age	21-30 years old	429	90.7
	31-40 years old	44	9.3
Gender	Male	246	52.0
	Female	227	48.0
Marital Status	Single	259	54.8
	Married	204	43.1
	Divorced	4	0.8
	Widowed	6	1.3
Ethnicity	Sino Kadazan	1	0.2
	Chinese	301	63.6
	Indian	58	12.3
	Malay	113	23.9
Education	Certificate/Diploma	167	35.3
	Bachelor's degree	223	47.1
	Master's degree	81	17.1
	Phd/Doctorate	2	0.4
Occupation	Student	88	18.6
	Employed	341	72.1
	Self-Employed	42	8.9
	Others	2	0.4

**Note:**  $n = 304$

### ***Reliability Analysis***

Table 2 describes the results of the measurement model. The consistency of the measurement items can be tested by using Cronbach's Alpha. This study conducts a reliability test to ensure that each item is consistent with the variables of this study. A Cronbach's Alpha value above 0.70 is considered as good where the value between 0.5 – 0.7 is considered as fair, and the value below 0.5 is not accepted. The result of this study shows that the

Cronbach Alpha value is more than 0.7. Thus, the measurement items are reliable and valid for this study.

**Table 2.** PLS results of reliability test

<b>Model Construct</b>	<b>Measurement Item</b>	<b>Loading</b>	<b>Cronbach Alpha</b>
Attitude toward fast food	I think fast food is simple	0.874	0.963
	I think fast food is easy	0.882	
	I think fast food is fast	0.898	
	I think fast food is convenient	0.879	
	I think fast food taste good	0.904	
	I think fast food smells nice	0.91	
	I think fast food has a pleasant structure	0.889	
Subjective Norms	I think fast food looks nice	0.887	0.920
	The pressure from friends and family is likely to influence me to consume fast food	0.889	
Perceived behavioral control	It is important that my friends like the fast food I want to eat	0.891	0.946
	I would visit fast food restaurant if it helped me fit in with my social group better	0.907	
	I would be open to be persuaded into consuming fast food if I had low self-esteem	0.903	
Health concern	I can take the decision independently to buy fast food	0.885	0.969
	I have the financial capability to buy fast food	0.888	
	I have the time to go for buying fast food	0.888	
	I have complete information and awareness regarding where to buy fast food	0.89	
	Fast food is readily available in the location where I reside	0.891	
	I can handle any difficulties (money, time, information related) associated with my buying decision	0.887	
Purchase Intention	Concern about my personal health prevents me from purchasing fast food	0.955	0.959
	My physical appearance or concern about my weight prevents me from purchasing fast food	0.948	
	Threat of food-related disease prevents me from purchasing fast food	0.953	
Purchase Intention	Self-consciousness about my health prevents me to choosing fast food	0.966	0.959
	I would wish to consume fast foods	0.921	
	I intend to consume fast foods in future	0.934	
	I plan to consume fast foods in the future	0.932	
Purchase Intention	I want to consume fast foods given an opportunity	0.93	0.959
	I will consume fast foods if they are available	0.918	

### ***Analysis of Goodness-of-Fit (GoF)***

From the smart PLS result, the coefficient of determination which is the R<sup>2</sup> value of purchase intention, is 0.436. This means that the four latent variables, which are attitudes towards fast food (AFF), subjective norms (SN), health concern (HC) and purchase intention (PI) explained 43.6 per cent of the variance in purchase intention (PI). A cutoff value below 0.1 indicated poor-fit, while a cutoff value above 0.36 implies good faith. The value of GOF is 0.602, which is more than 0.36. Therefore, the GOF of 0.602 validates the research model and its significance level.

### ***Hypothesis testing***

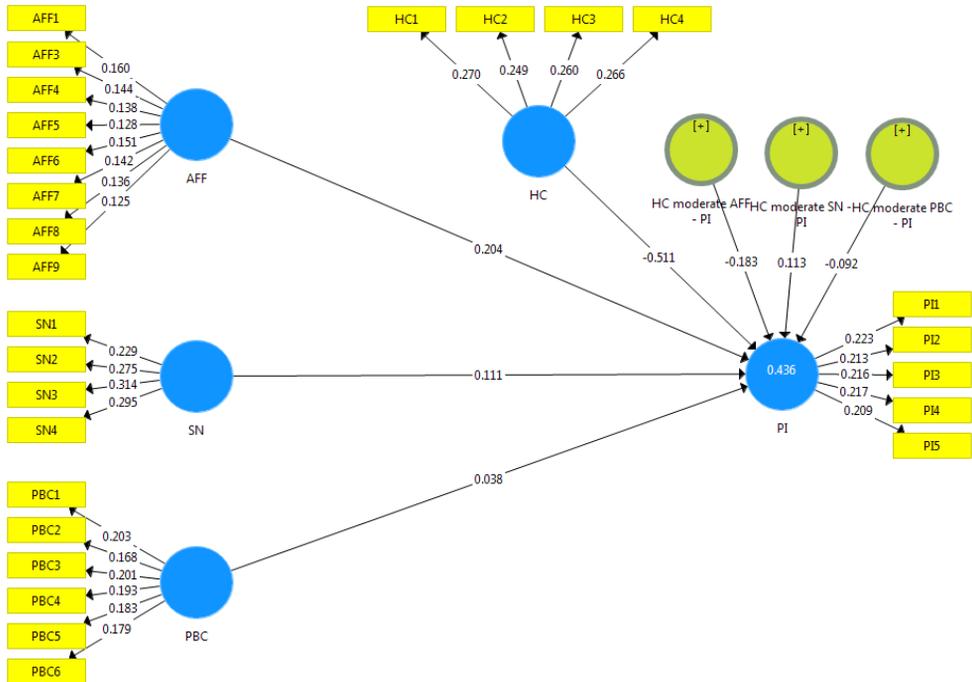
There are six hypotheses constructed in this study. The constructs were tested and validated by using a structural/ hypothesis model, while the hypotheses were tested using path analysis (Radović-Marković et al., 2019). This study tested other data analyses first before proceeding to the hypothesis testing. Table 3 shows that the findings of H1, H2 and H4 are supported, while H3, H5 and H6 are found to be unsupported.

**Table 3.** Path Coefficients and hypotheses testing of the measurement items

<b>Relationship</b>	<b>STDEV</b>	<b>T Values</b>	<b>P Values</b>	<b>Decision</b>
<b>H1 AFF -&gt; PI</b>	0.080	2.539	0.006	Supported
<b>H2 SN -&gt; PI</b>	0.054	2.043	0.021	Supported
<b>H3 PBC -&gt; PI</b>	0.070	0.547	0.292	Not Supported
<b>H4 HC *AFF -&gt; PI</b>	-0.086	2.132	0.017	Supported
<b>H5 HC *SN -&gt; PI</b>	0.066	1.709	0.044	Not Supported
<b>H6 HC *PBC -&gt; PI</b>	-0.074	1.248	0.106	Not Supported

This study uses 5,000 bootstrap samples to conduct bootstrapping. Critical analysis for one-tailed T-test are 1.65 (significance level = 5%) and 2.33 (significance level = 1%) (Hair Jr et al., 2011). Table 3 shows that the relationship between attitude toward fast-food and consumer purchase intention towards fast food ( $t=2.539$ ,  $p<0.1$ ) is found to be significant, as well as the relationship between subjective norms and consumer purchase intention towards fast-food ( $t=2.043$ ,  $p<0.1$ ) is also significant. Meanwhile, the relationship between perceived behaviour control and consumer purchase intention towards fast-food ( $t=0.547$ ,  $p>0.1$ ) is found to be insignificant. For the moderator variable, health concern weakens the relationship between consumer attitude towards fast food and purchase intention toward fast-food restaurants ( $t=2.132$ ,  $p<0.1$ ). Meanwhile, health concerns strengthens the relationship between subjective norms and purchase intention toward fast-food ( $t=1.709$ ,  $p<0.1$ ), thus the hypothesis is not supported. Whereas the relationship between perceived behaviour control and purchase intention toward fast-food ( $t=1.248$ ,  $p>0.1$ ) is not related to health concerns. The complete results of the hypotheses testing are shown in Figure 2 and Figure 3 as below.

**Figure 2.** Result of Path Analysis

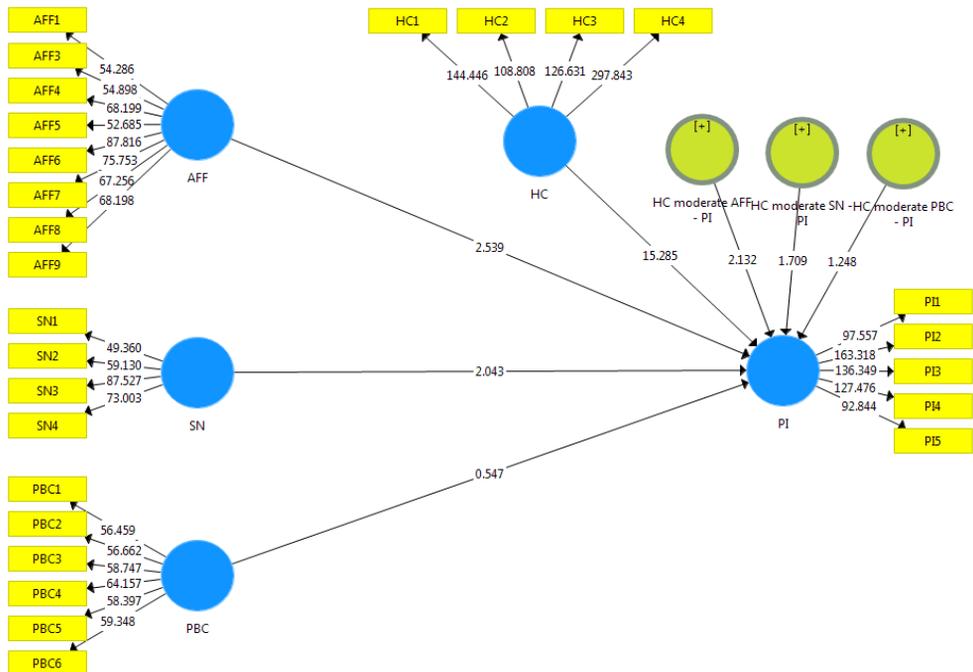


**Moderating Effect Assessment Using PLS**

The significance of the moderator's effect was analysed by using the bootstrapping that is shown in Figure 3. With referring to the bootstrapping results as shown in Figure 3, the t-value of the moderating effects between health concerns (HC), attitudes (AFF) and purchase intention (PI), as well as subjective norms (SN) and PI, are found to be significant (above cutoff T-value of 1.65 (p<0.1)). However, the results in Table 3 shows that health concerns weaken the relationship between attitude and purchase intention toward

fast food, whereas it strengthens the relationship between subjective norms and purchase intention toward fast food. Thus, it can be postulated that hypothesis 4 is supported while hypothesis 5 is rejected. Meanwhile, the t-value of the moderating effects between health concerns, perceived behaviour control (PBC) and PI fall below 1.65 ( $p > 0.1$ ). Thus, it was found to be insignificant. In other words, it can be confirmed that there are no moderating effects by health concern towards the relationship between PBC and purchase intention, but there are moderating effects by health concern on the relationship between attitudes towards fast food and subjective norms towards purchase intention.

**Figure 3.** Results of Bootstrapping



## **Discussion**

The main objective of this study is to study the factors that influence consumer purchase intention toward fast food. In specific, this study aims to examine the relationship between attitude, subjective norms and perceived behavioural control and purchase intention toward fast food. Moreover, this study also aims to evaluate whether health concerns strengthen the relationship between independent variables and purchase intention toward fast food. The findings of this study show that only three hypotheses, namely H1, H2 and H4, were supported while H3, H4 and H6 were not supported. The result of the R-square value is 0.436, which shows that 43.6% of the variance in consumer purchase intention toward fast food can be explained by attitude, subjective norms, perceived behavioural control and health concerns.

The finding of H1 shows that consumer's attitude towards fast food has a positive and significant relationship toward consumer purchase intention toward fast food. Thus, hypothesis 1 is supported. The finding of this study is consistent with the previous studies, which found that consumers with more positive attitudes toward healthy eating will have stronger intentions to eat a healthy diet (Brouwer & Mosack, 2015). Attitude is also found as the most important factor in influencing consumer purchase intention towards food products (Alam & Sayuti, 2011). In this study, Generation Y in Penang feel that fast food is tasty and convenient, thus they prefer to consume fast food, especially those who are working as executives in companies that have a short break for lunchtime. Moreover, fast food is easy to access and readily

available. Finocchio and Dewes (2015) have stated that youngsters choose easy to access and convenience food as responses to their busy lifestyle.

The finding of H2 shows subjective norm has a direct positive and significant impact on Gen Y's purchase intention of fast food. Thus, hypothesis 2 is supported. The finding of this study is consistent with past studies, which found when subjective norms increase, the purchase intention will increase too (Al-Swidi et al., 2014). Past studies mentioned that subjective norms have a direct impact on buying intentions. The influence by friends and family may increase consumer purchase intention toward food choice (Rezai et al., 2017; Shen & Chen, 2020; Scalco et al., 2017). In this study, it is possible to say that Gen Y feels that the pressure by friends and family is likely to influence them to consume fast food. For instance, peers will influence their colleagues who work in the same department to buy fast food. Another example is the influence of important people in their family, for example, children may also influence the young parents' decision making to buy fast food.

Meanwhile, the finding of H3 shows that perceived behaviour control did not affect consumer purchase intention of fast-food. Thus, H3 is not supported. The finding of this study is contradicted with previous studies that found perceived behavioural control influence positively and significantly consumer purchase intention toward food choice (Ting et al., 2016; Chang et al., 2019). However, the finding of this study is found to be similar to previous studies that found perceived behavioural control has an insignificant relationship with purchase intention. According to Ko and Jin (2017), money and

time are not related to consumer purchase intention. Thus, it is possible to say that Gen Y in this study found that financial capability, information and awareness regarding where to buy fast food are not related to their purchase intention as well as money and time. Previous studies found that most of Gen Y are familiar with eating outside and take away, especially on fast food. Therefore, it is possible to say that their purchase intention toward fast food is not affected by their perceived behavioural control because buying fast food is quite normal for this segment.

Furthermore, the finding of H4 shows that health concern weakens the relationship between attitude towards fast food and fast-food purchase intention. Thus, H4 is supported. This finding is in line with previous studies that found consumer who knows about the calories content of the fast food are likely to decrease their repurchase of the fast food, while the consumer who is not aware of the calories content will likely to purchase the fast food (Zigmont & Bulmer, 2015). It is possible to say that a consumer who concerned with his personal health, physical appearance and weight, threat of food-related disease decreases their positive attitude toward fast food and that prevents him from purchasing fast food. Although consumers feel that fast food is convenient and tasty, the consumer still feels that health is the most important factor in choosing food to consume. Thus, it shows that health concerns weaken the relationship between consumer attitude and their purchase intention toward fast-food.

The finding of H5 indicates that health concern strengthens the relationship between subjective norms and purchase intention toward fast food.

Thus, H5 is not supported. The finding of this study contradicts previous studies that found health concerns weaken the relationship between subjective norms and purchase intention toward fast food. It is possible to say that the influences by family members and friends toward purchasing fast food are not weakened by individual's health concerns. It is in line with the report by the WHO that found cultural and social norms are among the contributing factors toward unhealthy lifestyles. Some consumers already know about the nutritional aspects of fast food; but they often ignore these aspects in practice (Goyal & Singh, 2007). The reason for this might be that the culture of eating fast food among the young generation is acceptable, and most of them now are consuming fast food and have ignored the negative effects of fast food.

Finally, the finding of H6 shows that health concerns did not relate to the relationship between perceived behavioural control and consumer purchase intention towards fast food. Thus, H6 is supported. This study is in line with the previous study that stated consumers might choose to reduce the frequency to consume fast food even though they have a good perception of the price and the convenience of fast food (Labrecque & Charlebois, 2011). It is possible to say that the respondents of this study are concerned about their health and the negative effects of fast food. If they have the choice not to have fast food, they will opt not to eat them.

### ***Implications of the study***

This study has both theoretical and practical implications. Theoretically, this study is focused on the factors that influence consumer purchase

intention toward fast food among Gen Y in Malaysia by adopting the Theory of Planned Behavioural to explain the framework model. The finding of this study strengthens the TPB model that shows attitude and subjective norms influence positively and significantly consumer purchase intention. This study also added health concerns as the moderator variable to the TPB framework, and it shows that health concerns weaken the relationship between attitude and purchase intention.

Practically, the outcome of this study will be significant to facilitate the marketers and fast-food industry to attract Gen Y and to improve consumer lifestyle. Marketers may take the factors from this study and consumer health concerns into consideration in their marketing programme and decision-making process.

## **Conclusion**

In conclusion, the study found that proposed variables, namely, attitude toward fast food and subjective norm to be determinants of Gen Y's intention to purchase fast food in Penang while perceived behavioural control is not. The study also found that health concerns weaken the relationship between attitudes towards fast food but strengthen the relationship between subjective norms and purchase intention toward fast food, while there is no moderating effect between perceived behavioural control and purchase intentions. The current study has some limitations that can be furthered research by future researchers. First, the measurement items of this research may not be

sufficient as there are many other factors that could affect Gen Y purchase intention towards fast food. Thus, for future research, this study suggests examining several important factors in this area of research, such as positive emotion or negative emotion toward fast food consumption. This is because, based on the previous literature, consumer emotion may influence their decision-making process, including fast food consumption. Based on the finding of this study, marketers and the fast-food industry may adopt two key factors that drive consumer purchase intention toward fast food, such as attitudes and subjective norms in their marketing strategies. Marketers and the fast-food industry may also consider consumer health concerns in their marketing programme and decision-making process in order to improve society lifestyle and serve society better.

## **References**

1. Abdullah, N. N., Mokhtar, M. M., Bakar, M. H., Al-Kubaisy, & Waqar. (2014). Trend on fast food consumption in relation to obesity among Selangor urban community. *ABRA International Conference on Quality of Life*, 505-513.
2. Agnoli, L., Capitello, R., & Begalli, D. (2016). Behind intention and behaviour: factors influencing wine consumption in a novice market. *British Food Journal*, 118(3), 660-678.
3. Ahadzadeh, A. S., Sharif, S. P., & Ong, F. S. (2017). Online Health Information Seeking among Women: The Moderating Role of Health Consciousness. *Online Information Review*, 42(1), 58-72.
4. Ajzen, I. (1991). The theory of planned behavior. *Organisational Behavior and Human Decision Processes*, 50(2), 179-211.
5. Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior*. Prentice-Hall: Englewood Cliffs, NJ.

6. Alam, S. S., & Sayuti, N. M. (2011). Applying the Theory of Planned Behavior (TPB) in halal food purchasing. *International Journal of Commerce and Management*, 21(1), 8-20.
7. Ali, N., & Abdullah, M. A. (2012). The food consumption and eating behaviour of Malaysian urbanites: Issues and concerns. *Malaysia Journal of Society and Space*, 8(6), 157-165.
8. Al-Swidi, A., Huque, S. M., Hafeez, M. H., & Shariff, M. N. (2014). The role of subjective norms in theory of planned behavior in the context of organic food consumption. *British Food Journal*, 116(10), 1561-1580.
9. Anand, R. (2011). A study of determinants impacting consumers food choice with reference to the fast food consumption in India. *Society and Business Review*, 6(2), 176-187.
10. Anderson, K., & Miroso, M. (2014). Revealing barriers to healthier fast food consumption choices. *British Food Journal*, 116(5), 821-831.
11. Beaulieu, D., & Godin, G. (2011). Factors predicting staying in school to eat lunch. *Health Education*, 111(1), 20-33.
12. Brouwer, A. M., & Mosack, K. E. (2015). Expanding the theory of planned behavior to predict healthy eating behaviors: Exploring a healthy eater identity. *Nutrition & Food Science*, 45(1), 39-53.
13. Chandler, B. (2006). Diet, obesity and cancer – is there a link? *Nutrition & Food Science*, 36(2), 111-117.
14. Chang, H.-P., Ma, C.-C., Chen, H.-S. (2019). Climate Change and Consumer's Attitude toward Insect Food. *Int. J. Environ. Res. Public Health*, 16, 1606.
15. Choi, J. (2016). Who cares for nutrition information at a restaurant? Food-related lifestyles and their association to nutrition information conscious behaviors. *British Food Journal*, 118(7), 1625-1640.
16. Chung, J.-E., Stoel, L., Xu, Y., & Ren, J. (2012). Predicting Chinese consumers' purchase intentions for imported soy-based dietary supplements. *British Food Journal*, 114(1), 143-161.
17. Clarke, N. (2016). Diseases Caused by Eating Too Much Fast Food. *Livestrong*.
18. Cole, N. L. (2017). *Understanding Purposive Sampling: An Overview of the Method and Its Applications*. ThoughtCo.
19. Darian, C. J., & Tucci, L. A. (2011). Perceived health benefits and food purchasing decisions. *Journal of Consumer Marketing*, 28(6), 421-428.
20. Dittmer, P. R. (2002). *Dimensions of the hospitality industry. An Introduction*, 3rd Edition. New York, NY: John Wiley & Sons.

21. Finocchio, C. P., & Dewes, H. (2015). Food away from home and obesity in Brazil. *Journal of Agribusiness in Developing and Emerging Economies*, 5(1), 44-56.
22. Franchi, M. (2012). Food choice: beyond the chemical content. *International Journal of Food Sciences and Nutrition*, 63(1), 17-28.
23. Frank, B. (2012). The formation of consumer attitudes and intentions towards fast food restaurants: How do teenagers differ from adults? *Managing Service Quality: An International Journal*, 22(3), 260-282.
24. Gakobo, T. W., & Jere, M. G. (2016). An application of the theory of planned behaviour to predict intention to consume African indigenous foods in Kenya. *British Food Journal*, 118(5), 1268-1280.
25. George, J. F. (2004). The theory of planned behavior and Internet purchasing. *Internet Research*, 14(3), 198-212.
26. Ghoochani, O.M., Torabi, R., Hojjati, M., Ghanian, M., Kitterlin, M. (2018). Factors influencing Iranian consumers' attitudes toward fast-food consumption. *British Food Journal*, 120, 409–423.
27. Giampietri, E., Finco, A., & Giudice, T. D. (2016). Exploring consumers' behaviour towards short food supply chains. *British Food Journal*, 118(3), 618-631.
28. Goyal, A., & Singh, N. (2007). Consumer perception about fast food in India: an exploratory study. *British Food Journal*, 109(2), 182-195.
29. Grønhoj, A., Bech-Larsen, T., Chan, K., & Tsang, L. (2012). Using theory of planned behavior to predict healthy eating among Danish adolescents. *Health Education*, 113(1), 2-29.
30. Habib, F. Q., Dardak, R. A., & Zakaria, S. (2011). Consumers' preference and consumption towards fast food: Evidence from Malaysia. *Business Management Quarterly Review*, 2(1), 14-27.
31. Hair, J. R. (2011). PLS-SEM: Indeed a silver bullet. *Journal of Marketing theory and Practice*, 19, 139-151
32. Holloway, C. (2017). Fish and chips are still top dog in New Zealand. *Insights*.
33. Jin, N. P., Line, N. D., & Lee, S.-M. (2017). The health-conscious restaurant consumer: Understanding the experiential and behavioral effects of health concern. *International Journal of Contemporary Hospitality Management*, 29(8), 2103-2120.
34. Joshi, Y., & Rahman, Z. (2016). Predictors of young consumer's green purchase behaviour. *Management of Environmental Quality: An International Journal*, 27(4), 452-472.
35. Kasbia, G. S. (2005). Functional foods and nutraceuticals in the management of obesity. *Nutrition & Food Science*, 35(5), 344-352.

36. Kellershohn, J., Walley, K., & Vriesekoop, F. (2017). Healthier food choices for children through menu pricing. *British Food Journal*, 119(6), 1324-1336.
37. Kim, H. Y., & Chung, J.-E. (2011). Consumer purchase intention for organic personal care products. *Journal of Consumer Marketing*, 28(1), 40-47.
38. Ko, S. B., & Jin, B. (2017). Predictors of purchase intention toward green apparel products: A cross-cultural investigation in the USA and China. *Journal of Fashion Marketing and Management: An International Journal*, 21(1), 70-87.
39. Kobayashi, F. (2010). Television viewing and fast food intake of American and Japanese college students. *Nutrition & Food Science*, 40(2), 204-208.
40. Kulkarni, M., & Nithyanand, S. (2012). Social influence and job choice decisions. *Employee Relations*, 35(2), 139-156.
41. Labrecque, J., & Charlebois, S. (2011). Functional foods: An empirical study on perceived health benefits in relation to prepurchase purchase intentions. *Nutrition & Food Science*, 41(5), 308-318.
42. Lowell, J. (2004). The food industry and its impact upon increasing global obesity: a case study. *British Food Journal*, 106(3), 238-248.
43. Malaysia Population. 2018. Demographics of Malaysia 2018. Available online: <https://countrymeters.info/en/Malaysia>.
44. Mat, R. C., Zulqernain, N. S., & Zaid, N. A. (2016). Profiling of Malaysian Young Consumers Towards Fast Food Consumptions. *Journal of Applied Environmental and Biological Sciences*, 6(7s), 20-27.
45. Mirabi, V., Akbariyeh, H., & Tahmasebifard, H. (2015). A Study of Factors Affecting on Customers Purchase Intention . *Journal of Multidisciplinary Engineering Science and Technology (JMEST)*, 2(1), 267-273.
46. Moghadamzadeh, A., Ebrahimi, P., Radfard, S., Salamzadeh, A., & Khajeheian, D. (2020). Investigating the role of customer co-creation behavior on social media platforms in rendering innovative services. *Sustainability*, 12(17), 6926.
47. Montandon, A. C., & Colli, C. (2016). Effective nutrition labels for fast food consumers. *British Food Journal*, 118(10), 2534-2549.
48. Morwitz, V. (2012). Consumers' Purchase Intentions and their Behavior. *Foundations and Trends in Marketing*, 7(3), 181-230.

49. Nejati, M., Salamzadeh, Y., & Salamzadeh, A. (2011). Ecological purchase behaviour: insights from a Middle Eastern country. *International Journal of Environment and Sustainable Development*, 10(4), 417-432.
50. Ooi, A. (2010). A voice from the factories. *Penang Monthly*.
51. Qin, H., & Prybutok, V. R. (2009). Service quality, customer satisfaction, and behavioral intentions in fast-food restaurants. *International Journal of Quality and Service Sciences*, 1(1), 78-95.
52. Radović-Marković, M., Salamzadeh, A., & Vujičić, S. (2019). Selection of organization models and creation of competences of the employed people for the sake of competitiveness growth in global business environment. *International Review*, (1-2), 64-71.
53. Rahman, S. A., Khattak, M. M., & Mansor, N. R. (2013). Determinants of food choice among adults in an urban community: A highlight on risk perception. *Nutrition & Food Science*, 43(5), 413-421.
54. Rezai, G., Teng, P. K., Shamsudin, M. N., Mohamed, Z., Stanton, J. L., & et al. (2017). Effect of perceptual differences on consumer purchase intention of natural functional food. *Journal of Agribusiness in Developing and Emerging Economies*, 7(2), 153-173.
55. Salamzadeh, A. (2015). New venture creation: Controversial perspectives and theories. *Economic Analysis*, 48(3-4), 101-109.
56. Salamzadeh, A., Kawamorita Kesim, H., & Karami, M. (2019, March). Media business models: A holistic approach. In *Proceedings of the 2nd International Conference of Research in Innovation and Technology*.
57. Scalco, A., Noventa, S., Sartori, R., Ceschi, A. (2017). Predicting organic food consumption: A meta-analytic structural equation model based on the theory of planned behavior. *Appetite*, 112, 235–248.
58. Scawen, S. (2016). Obesity statistics ring alarm bells in Malaysia. *Aljazeera*. Available at: <https://www.aljazeera.com/news/2016/2/3/obesity-statistics-ring-alarm-bells-in-malaysia>
59. Shamal, S., & Mohan, B. C. (2017). Consumer behaviour in fortified food choice decisions in India. *Nutrition & Food Science*, 47(2), 229-239.
60. Shen, Y. C. & Chen, H. S. (2020). Exploring Consumers' Purchase Intention of an Innovation of the Agri-Food Industry: A Case of Artificial Meat. *Foods*, 9, 745.
61. Shipman, Z. D. (2020). Factors affecting food choices of Millennials: How they decide what to eat? *Journal of Tourismology*, 6(1), 1-14.

62. Sjostrom, L. (1993). Impacts of body weight, body composition, and adipose tissue distribution on morbidity and mortality. *Theory and Therapy*, Raven Press: New York.
63. Subramaniam, D. S. (2016). Nearly half Malaysia's population overweight or obese, Health Minister says. *Malay Mail Online*. Available at: <https://www.malaymail.com/news/malaysia/2016/02/03/nearly-half-malaysias-population-overweight-or-obese-health-minister-says/1053569>
64. Suki, N. M. (2013). Students' dependence on smart phones: The influence of social needs, social influences. *Campus-Wide Information Systems*, 30(2), 124-134.
65. The Asean Post (2020). Obesity on the rise in ASEAN. The Asean Post Team. Available at: <https://theaseanpost.com/article/obesity-rise-asean>.
66. The Star Online (2016). Subra: Obesity a big health problem among adults. The Star Online. Available at: <https://www.thestar.com.my/news/nation/2016/12/06/subra-obesity-a-big-health-problem-among-adults>
67. Ting, H., Run, E. C., Cheah, J.-H., & Chuah, F. (2016). Food neophobia and ethnic food consumption intention: An extension of the theory of planned behaviour. *British Food Journal*, 118(11), 2781-2797.
68. Vabø, M., & Hansen, H. (2016). Purchase intentions for domestic food: a moderated TPB-explanation. *British Food Journal*, 118(10), 2372-2387.
69. Veraldo, C. M., & Ruihley, B. J. (2017). Theory of planned behavior and women in senior-level athletic administration. *Sport, Business and Management: An International Journal*, 7(1), 21-37.
70. Verma, R. K., Chua, G., & David, S. R. (2013). Obesity and Overweight Management in Malaysia and Singapore: Progress on Right Track. *Journal of Clinical and Diagnostic Research*, 7(12), 3124-3125.
71. Wahlen, S., Horst, H. v., & Pothoff, R. (2016). How convenient!?! Adolescents' vistas on food competences in a convenience context. *British Food Journal*, 118(11), 2828-2838
72. Xiao, A., Yang, S., & Iqbal, Q. (2019). Factors affecting purchase intentions in Generation Y: An empirical evidence from fast food industry in Malaysia. *Administrative Science*, 9(4), 1-16.
73. Zigmont, V., & Bulmer, S. M. (2015). The Impact of Caloric Information on College Student's Fast Food Purchasing Intentions. *American Journal of Health Education*, 46(2), 70-78.

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