

## Research Proposal for Fruits and Vegetable Consumption and Intention to Consume: Attitude as a Mediator

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### ABSTRACT

*In Malaysia, the number of fruits and vegetable consumption is still below the exact recommendation by the Ministry of Health. YouTube is one of the social media platforms that has received minimal research related to consumer consumption behaviour. So far, there are limited studies can be found to measure YouTube advertising towards the intention to consume fruits and vegetables in Malaysia. Hence, this conceptual paper aims to identify the factors that affect consumers attitude to consume fruit and vegetables in YouTube advertising. Perceived credibility, perceived usefulness, perceived video characteristics, number of likes, views, comments and replies, and attitude towards consumers are predicted to have an impact on attitude towards consumers to eat fruit and vegetables. Tripartite Attitude Model is used to develop in the conceptual framework and is prepared in this study. This study hopes to contribute to the YouTube literature by identifying the factors that influencing fruit and vegetable consumption advertising and health marketing.*

### INTRODUCTION

Fruits and vegetables provide give nutrients, mineral and great wellspring of dietary fibre for the human body. It was demonstrated by adequate consumption of fruits and vegetables may diminish the danger of 31% of ischemic coronary illness, 20% of oesophagal

malignant growth 19% of ischemic stroke 19% gastric disease and 12% of lung disease (Lock, Pomerleau, Causer, Altmann, & McKee, 2005). Malaysian Adult Nutrition Survey, 2003 uncovered that fruits and vegetables are still low among Malaysian (Norimah et al., 2008). The World Health Organization (WHO) prescribes in 400 g of fruits and vegetables every day and national intakes are neither near or over this objective. To date, researchers from Europe and North America demonstrate that most kids and youthful grown-ups neglect to follow recommendations.

Information from the Federal Agriculture Marketing Authority of Malaysia (FAMA) showed the expanding per capita consumption for fruits from 57.4 kg in 2016 to 63 kg in 2018 (Ministry of Agriculture, Malaysia, 2018). In the meantime, for vegetable products, per capita utilization per individual shows diminishing from 54.7 kg in 2010 to 27.8 kg in 2016. Hall, Moore, Harper and Lynch (2009) revealed the fruits and vegetables consumption worldwide among grown-ups from the 52 nations is low including Malaysia. As indicated by Hall et al. (2009), 78 per cent of complete respondents do not take the suggested five day by day servings of fruits and vegetables. To a great extent, 77.6 per cent of men and 78.4 per cent of ladies devoured less than the base prescribed dimension. As stated in concentrates by Blanck, Gillespie, Kimmons, Seymour, and Serdula (2008), 75.3 per cent which incorporates 81.1 per cent of men and 71.1 per cent of ladies in United State native expended under five serving of fruits and vegetables.

Kempen Suku-Suku Separuh in Malaysia has been launched by the Ministry of Health Malaysia to educate the public to consume healthy foods such as fruits and vegetables and to reduce their fats and calories intake. The campaign was introduced in 2017 to reduce the number of obesities particularly among children in Malaysia. The Economic Intelligence Unit's in its report on tackling

obesity in ASEAN revealed that Malaysia has the highest obesity prevalence in South East Asia (Farezza, 2017). Also, in 2012, a school-based nutrition survey was conducted and found that 93.7% of teenagers aged 13 – 17 years old do not follow the recommendation vegetables serving intake i.e. 3 servings per day and 51.7% do not follow the fruits recommendation serving intake i.e. 2 times per day (Nor Khalilah, 2017). Unhealthy food intake not only leads to obesity problems but also can result in chronic diseases such as heart problems, hypertension, diabetes, etc.

A standout amongst the most mainstream video sharing destinations is YouTube, which was established in 2005. YouTube has achieved incredible growth in the number of users and videos, and Time magazine proclaimed it as the creation of 2006 (Jarrett, 2008). YouTube advertising has been used tremendously in profit settings (Waters & Jones, 2011; Ramanadhan, Kao & Viswanath, 2013) and has been induced to be effective in encouraging purchase intention (Cheong & Morrison, 2013; Paek, Kim Hove, & Jung, 2013; Ramanadhan, Kao, & Viswanath, 2013). In the context fruits and vegetable consumption, previous studies are dominated in profit setting to measure the effectiveness of YouTube advertising (Anthony & Thomas, 2010; Gu, Tang, & Whinston, 2012; Carryer & Nandamuri, 2014; Burgess & Green, 2018).

Although the benefits of consuming fruits and vegetables are widely known, university students face problems to maintain a healthy lifestyle when living away from home. The Malaysian government has utilized many tools to promote healthy eating and to encourage the consumption of fruits and vegetable. The tools are roadshows, posters, talks and social media like YouTube. In the literature, most of the studies have investigated the role of YouTube advertising in the profit settings, and lack of discussion in the health context particularly in fruits and vegetable consumption. Hence, the purpose

of this study is to explore the factors that could influence the consumption of fruits and vegetable intakes among university students.

### **Why Students?**

University students, mostly, live away from their family home and become independent young adults. They take the full responsibility to determine their eating habits (Chourdakis, Tzellos, Papazisi, Toulis, & Kouvelas, 2010; El Ansari, Stock, & Mikolajczyk, 2012; Hilger, Loerbroks, & Dihel, 2017; Porto-Arias et al., 2017). In the literature, young adults were reported to have lacked nutritional education and experience in making healthy food choices (Papadaki, Hondros, Scott, & Kapsokefalou, 2007; El Ansari, Suominen, & Samara, 2015). Also, the demanding class schedule has influenced their eating habits (El Ansari et al., 2012; Porto Arias et al., 2017). Furthermore, socioeconomic challenges possibly also influence the adoption of poor diet and lifestyle patterns among university students (Porto et al., 2017). Evidence from past studies in Western countries examining youth and their diet intakes has revealed high consumption of fast food, snacks and meats and low intakes of fruits and vegetables among university students (Chourdakis et al., 2010; Brown, et al., 2011; Breitembach et al., 2016). Also, poor lifestyle such as smoking, alcohol consumption and no physical activities were reported among university students in Western countries (Brunt & Rhee, 2008; Varela-Mato, Cancela, Ayan, Martin, & Molina, 2012).

In Malaysia, previous studies were conducted to examine meal intakes among university students. Gan, Mohd, Zalilah and Hazizi (2011) reported that only 19% of university students eat vegetables more than three times per week. However, in another report by Gunasekaran et al. (2012), most of their respondents were found to eat vegetables and legumes frequently. Gunasekaran et al. (2012) revealed that 48.5% of their respondents consumed fruits at least three

times per week. Nevertheless, it is difficult to generalize the findings by Gunasekaran et al. (2012) as their sample of the study is medical students and it can be assumed that most of the medical students have known the risk of taking unhealthy food.

### **Methodology**

A systematic literature review is performed to meet the objective of this paper. The search term was developed using the keywords of "YouTube advertising" and "fruits and vegetables" in Google Scholar from all period until 18 January 2019. The inclusion criterion in this review is that the papers need to discuss the fruits and vegetable consumption among young adults. In the end, sixteen articles obtained and included in this review. The discussion of the papers is developed in the next sections.

### **Intention to Consume Fruits and Vegetables**

Early conceptualization of the YouTube advertisement is proposed by Yuksel (2016) which included perceived credibility, perceived usefulness, perceived video characteristics, number of views, likes, comments and replies. However, most of the literature by scholars, such as See-To (2014), Gunawan and Huarng (2015), Lee and Watkins (2016) and Deghani, Niaki, Ramezani and Sali (2016) are mostly investigated the study of YouTube studies towards purchase intention in profit settings. Despite that, the scales used to measure credibility in the studies are lack of reliability and validity and hence, making it is impossible to compare findings and generate a conclusion.

In general, the credibility of a source can be characterized as the positive highlights of the source that impact the recipient to acknowledge the message (Ohanian, 1990). Credibility is an idea which is characterized by the judgment of the reader (Freeman & Spyridakis, 2004) and studies in the literature show that as opposed to being a source,

stage or message highlight, it relies upon the receiver's perceptions (Akhondan, Johnson-Carroll, & Rabolt, 2008). Perceived credibility is the trust measurement that influences the appropriation of a message positively or negatively and it can get changes customers' attitudes (Bouhleb et al., 2010). The reception of information as per the source credibility is also applicable for online environments (Cheung, Sia, & Kuan, 2009).

The previous study by Davis (1989) perceived usefulness is characterized as "how much an individual trust that using a system would upgrade his or her activity execution", and it is identified with the desires that an individual plan to get at last (McKnight, & Kacmar, 2007). Pavlou, & Fygenson (2006) defined perceived usefulness from sites as the conviction that that data will upgrade productivity in acquiring item data. An investigation identified with web journals (Bouhleb, Mzoughi, Ghachem, & Negra, 2010) uncovers that perceived usefulness is related with the benefits of web sites and these points of interest can be preventing the waste of time and accessing extra information and different perspectives about products. As per the Technology Acceptance Model (TAM), perceived usefulness influences attitudes (Mir & Rehman, 2013). Bouhleb et al. (2010) underpin this theory for blogs by showing attitudes affects perceived usefulness. Hsu, Wang and Lin (2013) additionally discovered that the usefulness of blog suggestions directly affects attitudes and indirect purchase intention. In an investigation of web benefit acceptance, Yang et al. (2010) demonstrated that perceived usefulness has both a direct effect on usage intention and indirect effect on the purchase intention. In the present study, perceived usefulness of the information in the videos is identified as the perception of consumers that viewing YouTube videos that will influence consumption.

Explicit highlights of YouTube videos may impact purchase intention. In the first place, the nature of the video is a factor that impacts buying choices (Woods, Satgunam, Bronstad

and Peli, 2010) and high-quality videos increase user commitment (Dobrian, Awan, Joseph, Ganjam, Zhan, Sekar and Zhang, 2013). Furthermore, the recognition of the length of the video may become one of the effectiveness of the influence on YouTube advertising factors. The result of an analysis on generally shared Top 50 YouTube recordings uncover that the normal length for advertising videos is 3-3.5 minutes; however, the desire to share depends more on the quality of feelings that the video inspires from the viewers (Jarboe, 2012). In this way, not the exact length of the video but rather its impression might be a factor that influences attitudes and purchase intentions. Furthermore, the preparation and presentation of the substance are influential to consumer purchase intentions. This can influence the dimension of information the consumers acquire and lead to attitude development.

Moreover, several views, likes, comments and replies are consumers' perceptions about content can be influenced by interactions of other users. Comments on the online content about a product may be perceived as a sign of product popularity and can affect purchase intention (Lee and Shin, 2009). For consumers who find online information credible, some comments increase the credibility of that information (O'Reilly & Marx, 2011). YouTube users who seek user-generated content also consider the comments and the number of comments increase the credibility and usefulness of the videos (Mir & Rehman, 2013). Ratings are also important for evaluating the credibility of online contents (Jocevar, Flanagan & Metzher, 2011). While some likes affect the credibility of contents in forums (O'Reilly & Marx, 2011); this effect also applies to YouTube videos and the number of likes increases the popularity of videos leading to increased credibility and usefulness (Mir & Rehman, 2013). Firstly, as proposed by Mir and Rehman (2013) the number of views the content on YouTube is important towards the perception of credibility and usefulness. Therefore, it is interesting to purpose that the

number of replies to the comments by the video owner may also affect the perception of credibility and usefulness of the information given in the video.

The above-mentioned dimensions are so far, never been tested simultaneously in a study and the ability to know which dimensions are significant is unknown. Hence, there is a knowledge gap necessary to address. Besides, the act of consuming fruits and vegetables are the basic needs; therefore, it will be noteworthy to know is the YouTube Advertising has a significant effect towards attitudinal change and behavioural intention in the context of consuming fruits and vegetables. Based on the discussion above, the hypotheses and research framework for this study is purposed as follows:

H<sub>1</sub>: There is a positive relationship between perceived credibility and attitude towards fruits and vegetables.

H<sub>2</sub>: There is a positive relationship between perceived usefulness and attitude towards fruits and vegetables.

H<sub>3</sub>: There is a positive relationship between perceived video of characteristics and attitude towards fruits and vegetables.

H<sub>4</sub>: There is a positive relationship between the number of views, likes, comments and replies and attitude towards fruits and vegetables.

H<sub>5</sub>: There is a positive relationship between attitude and intention to consume fruits and vegetables.

H<sub>6a</sub>: Attitude towards fruits and vegetable consumption mediates the relationship between perceived credibility and intention to consume fruits and vegetables.

H<sub>6b</sub>: Attitude towards fruits and vegetable consumption mediates the relationship between perceived usefulness and intention to consume fruits and vegetables.

H<sub>6c</sub>: Attitude towards fruits and vegetable consumption mediates the relationship between perceived video characteristics and intention to consume fruits and vegetables.

H<sub>6d</sub>: Attitude towards fruits and vegetable consumption mediates the relationship between the number of views, likes, comments and replies and intention to consume fruits and vegetables.

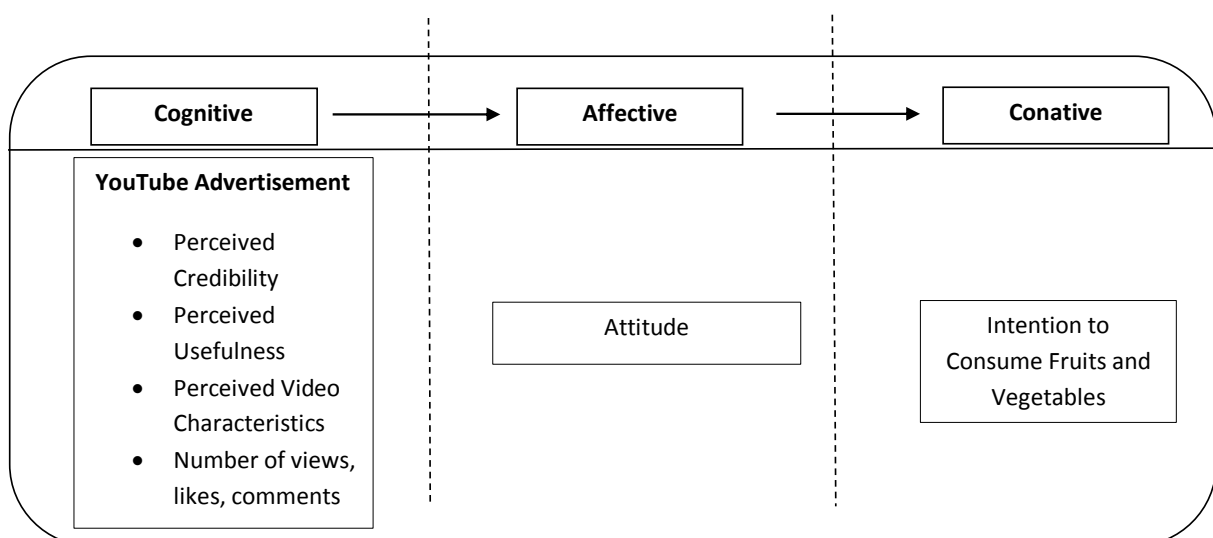


Figure 1 Proposed research framework

## CONCLUSION

From the review, it is concluded that YouTube advertising is an effective and efficient platform to raise awareness of fruits and vegetable consumption and to increase the number of consumers of eating fruits and vegetables. Targeting university especially university students are relevant as these groups have a strong influence within their social network and thus, can encourage others to become healthy. Nonetheless, before creating a video advertisement of fruits and vegetables, the Ministry of Health or the public must conduct situation analysis to identify the right method to run the campaign. To integrate fruits and vegetable awareness campaign in universities require thorough planning and budget. Because of this, there is a call for future research to measure the effectiveness of YouTube advertising in local universities and to determine which methods are the most appropriate to be executed in the Malaysian's context. To sum up, this review proposes that YouTube advertising as a hopeful intervention method to raise the number of fruits and vegetable consumption and to get people to stay healthy with the proposed research framework, the researchers intend to test the hypotheses in their future research.

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