



UNIVERSITI PUTRA MALAYSIA

***FACTORS INFLUENCING INTENTION TO USE MENU LABELLING
AMONG PUBLIC UNIVERSITY STUDENTS IN KLANG VALLEY***

ANIS ASHIQIN RODLI

**Ip
FPSK6 2021 6**



**FACTORS INFLUENCING INTENTION TO USE MENU LABELLING
AMONG PUBLIC UNIVERSITY STUDENTS IN KLANG VALLEY**

ANIS ASHIQIN RODLI

DEPARTMENT OF DIETETICS

FACULTY OF MEDICINE AND HEALTH SCIENCES

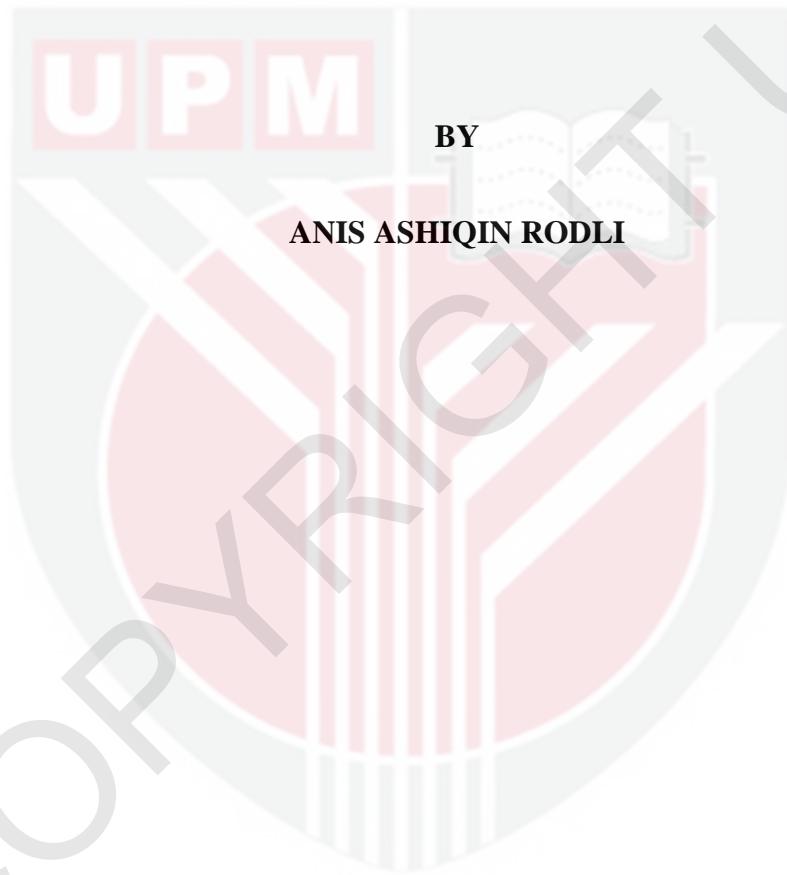
UNIVERSITI PUTRA MALAYSIA

2020 / 2021

**FACTORS INFLUENCING INTENTION TO USE MENU LABELLING
AMONG PUBLIC UNIVERSITY STUDENTS IN KLANG VALLEY**

BY

ANIS ASHIQIN RODLI



A project submitted as a partial fulfillment of the requirement for the degree of
Bachelor of Science in Dietetics with Honours at the Faculty of Medicine and Health
Sciences, Universiti Putra Malaysia

This project entitled “Factors influencing intention to use menu labelling among public university students in Klang Valley” was prepared by Anis Ashiqin Binti Rodli and submitted to the Faculty of Medicine and Health Sciences as a partial fulfillment of the requirement for the degree of Bachelor of Science in Dietetics with Honours from the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia.

Received and examined by:

(Name of supervisor)

Date: 04/10/2021

ACKNOWLEDGEMENTS

First and foremost, I would like to express special thanks to my supervisor, Dr Syafiqah Rahamat for all the help, valuable advices and endless support given to me in completing DTK 4959: Bachelor Dissertation. I would also like to thank my friends, specifically my teammates who always guide me, also be there for me whenever I need help. I also appreciate the support I received from my family, especially from my mother. It is impossible for me to complete my Final Year Project (FYP) without her support. Lastly, I would like to thank everyone who has helped me in finishing this FYP.

TABLE OF CONTENTS

| | |
|---|--------|
| TITLE PAGE | i |
| SUPERVISOR'S SIGNATURE | ii |
| ACKNOWLEDGEMENTS | iii |
| TABLE OF CONTENTS | iv - v |
| LIST OF TABLES | vi |
| LIST OF FIGURES | vii |
| LIST OF APPENDICES | viii |
| ABSTRACT | ix |
| ABSTRAK | x-xi |
| CHAPTER 1.0: INTRODUCTION | 1-4 |
| 1.1 Problem statements | 1-3 |
| 1.2 Significance of study | 3-4 |
| 1.3 Objectives | 4 |
| 1.3.1 General objective | 4 |
| 1.3.2 Specific objectives | 4 |
| 1.4 Hypotheses | 4 |
| CHAPTER 2.0: LITERATURE REVIEW | 5-16 |
| 2.1 Overweight, obesity and non-communicable disease (NCDs) | 5-6 |
| 2.1.1 Prevalence of obesity and non-communicable diseases among university students | 6-7 |
| 2.2 Eating out | 7-8 |
| 2.2.1 Eating out among university students | 8-9 |
| 2.3 Menu labelling | 9-10 |
| 2.3.1 Studies on menu labelling | 10-11 |
| 2.4 Theory of planned behaviour | 11 |
| 2.4.1 Intention | 11-12 |
| 2.4.2 Attitude | 12 |
| 2.4.3 Subjective norm | 12 |
| 2.4.4 Perceived behavioural control | 13 |
| 2.4.5 Studies of menu labelling with the application of theory of planned behaviour (TPB) | 13-14 |

| | |
|---|-------|
| 2.5 Health consciousness | 14-16 |
| 2.6 Conceptual framework | 16 |
| CHAPTER 3.0: METHODOLOGY | 17-24 |
| 3.1 Subject | 17-18 |
| 3.1.1 Sample size | 19-20 |
| 3.2 Instrument | 20-21 |
| 3.2.1 Validity | 22 |
| 3.2.2 Pre-test | 22 |
| 3.3 Procedure | 22-23 |
| 3.4 Design and analysis | 23 |
| 3.4.1 Assumption tests | 23-24 |
| CHAPTER 4.0: RESULTS AND DISCUSSION | 25-35 |
| 4.1 Sociodemographic and characteristics | 25-26 |
| 4.2 Descriptive results of extended theory of planned behaviour | 26-30 |
| 4.3 Multiple regression results of extended theory of planned behaviour | 30-35 |
| CHAPTER 5.0: CONCLUSIONS, LIMITATION AND FUTURE RECOMMENDATION | 36-38 |
| REFERENCES | 39-44 |
| APPENDICES | 45-67 |

LIST OF TABLES

| Table | Title | Page |
|-----------|--|-------|
| Table 3.1 | Inclusion and exclusion criteria of subject | 18 |
| Table 3.2 | Sample size determination for multiple regression studies: significance test for beta coefficient at the .05 level ($t = 2$) | 19-20 |
| Table 3.3 | R^2 value of previous study | 20 |
| Table 4.1 | Sociodemographic and characteristics of respondents (n=100) | 26 |
| Table 4.2 | Descriptive results of extended theory of planned behaviour (Attitudes) | 27 |
| Table 4.3 | Descriptive results of extended theory of planned behaviour (Subjective norms) | 28 |
| Table 4.4 | Descriptive results of extended theory of planned behaviour (Perceived behavioural controls) | 28-29 |
| Table 4.5 | Descriptive results of extended theory of planned behaviour (Health consciousness) | 29 |
| Table 4.6 | Descriptive results of extended theory of planned behaviour (Intentions) | 30 |
| Table 4.7 | Multiple regression analysis of extended theory of planned behaviour | 34 |

LIST OF FIGURES

| Figure | Title | Page |
|------------|--|------|
| Figure 2.1 | Extended model theory of planned behaviour | 16 |
| Figure 4.1 | Multiple regression analysis of extended theory of planned behaviour | 35 |



LIST OF APPENDICES

| Appendix | Title | Page |
|------------|--|-------|
| APPENDIX A | Approval from JKEUPM | 45-46 |
| APPENDIX B | Respondent's Information Sheet and Consent Form (English Version) | 47-50 |
| APPENDIX C | Respondent's Information Sheet and Consent Form (Malay Version) | 51-54 |
| APPENDIX D | Questionnaire | 55-65 |
| APPENDIX E | Normal P-P Plot | 66 |
| APPENDIX F | Turnitin Report | 67 |

ABSTRACT

FACTORS INFLUENCING INTENTION TO USE MENU LABELLING AMONG PUBLIC UNIVERSITY STUDENTS IN KLANG VALLEY

Anis Ashiqin Binti Rodli

Malaysia has recorded the highest prevalence of obesity in Asia and it contributed to the high rate of non-communicable diseases such as diabetes and high blood pressure in Malaysia. The problems occurred might be due to the trend of eating out among Malaysians, whereby the foods are mainly high in calorie. Therefore, in overcoming the problems, Malaysia has planned to implement mandatory menu labelling law by 2025 to assist consumers to purchase healthier food when eating out. Only a few studies related to menu labelling have been conducted in Malaysia and in filling the gap of available studies, this study has been conducted among public university students who examined the factors that influence their intentions to use menu labelling by applying theory of planned behaviour. A 7-point Likert scale online questionnaire that assessed attitudes, subjective norms, perceived behavioural controls, health consciousness and intentions was distributed to 100 public university students via snowball method. Results indicated that attitudes significantly influenced the intentions to use menu labelling and it is the most influential factor on the intention ($\beta = .437, p = < .001$). Health consciousness also significantly influenced the students' intentions to use menu labelling ($\beta = .377, p = < .001$). However, subjective norms and perceived behavioural controls was not significantly influenced the intentions to use menu labelling. This study contributes to the literature by offering insights on the influence of health consciousness on the intention, also it contributes to the practice whereby it helps foodservice establishments to plan strategies to encourage consumers to use menu labelling.

ABSTRAK

FAKTOR YANG MEMPENGARUHI KEINGINAN UNTUK MENGGUNAKAN PELABELAN MENU DI KALANGAN PELAJAR UNIVERSITI AWAM DI LEMBAH KLANG

Anis Ashiqin Binti Rodli

Malaysia mencatat kadar obesiti tertinggi di Asia dan ini menyumbang kepada tingginya kadar penyakit tidak berjangkit seperti diabetes dan tekanan darah tinggi di Malaysia. Hal ini mungkin disebabkan oleh kecenderungan makan di luar di kalangan rakyat Malaysia, di mana makanannya tinggi kalori. Oleh itu, dalam mengatasi masalah tersebut, Malaysia telah merancang untuk melaksanakan undang-undang pelabelan menu pada tahun 2025 agar dapat membantu pengguna membeli makanan yang lebih sihat ketika makan di luar. Hanya beberapa kajian mengenai pelabelan menu telah dilakukan di Malaysia dan dalam mengisi jurang kajian tersebut, kajian ini telah dilakukan di kalangan pelajar universiti awam yang meneliti faktor-faktor yang mempengaruhi keinginan mereka untuk menggunakan pelabelan menu dengan menggunakan teori tingkah laku terancang. Soal selidik dalam talian dengan skala Likert 7 mata yang menilai tingkahlaku, norma subjektif, kawalan tingkah laku yang dirasakan, kesedaran kesihatan dan keinginan telah diedarkan kepada 100 pelajar universiti awam melalui kaedah *snowball*. Hasil kajian menunjukkan bahawa tingkahlaku telah mempengaruhi keinginan untuk menggunakan pelabelan menu dan ini merupakan faktor yang paling berpengaruh terhadap keinginan tersebut ($\beta = .437, p = <.001$). Kesedaran kesihatan juga mempengaruhi keinginan pelajar untuk menggunakan pelabelan menu ($\beta = .377, p = <.001$). Walau bagaimanapun, norma subjektif dan kawalan tingkah laku yang dirasakan tidak banyak mempengaruhi keinginan untuk menggunakan pelabelan menu. Kajian ini menyumbang kepada literatur dengan memberikan pandangan tentang pengaruh kesedaran kesihatan

terhadap keinginan, juga menyumbang kepada praktik di mana ia membantu organisasi perkhidmatan makanan untuk merancang strategi untuk mendorong pengguna menggunakan pelabelan menu.



CHAPTER 1.0: INTRODUCTION

The pattern of eating out is rising year by year across the country. Most of the outside food, mainly produced by the restaurants, is high in energy, and frequent consumption of the foods can lead to obesity and non-communicable diseases (Urban et al., 2016). These two health problems are a major concern in every country. Therefore, some countries have provided menu labelling in restaurants to aid consumers in choosing lower energy food. This is part of the preventive actions to lower the percentage of obesity and non-communicable disease in the country. Studies related to menu labelling have been conducted by several researchers in several countries. Hence, this chapter covers the problem statement, the significance of study, hypotheses and objectives of the study.

1.1 Problem statements

Overweight, obesity and non-communicable disease (NCD) are the health issues faced by every country, including Malaysia. World Health Organization (WHO) (2019) reported Malaysia has the highest prevalence of obesity in Asia. Obesity is one of the factors that lead to an increase in diabetes and hypertension rates. About 20% of university students in Malaysia were overweight and obese (Radzi et al., 2019). A study related to NCDs conducted among university students found 23% of 96 students had more than three NCDs risk factors (Yasmin et al., 2019). Furthermore, a study has been conducted among public university students in Malaysia related to the frequency of eating out. Most of the students reported eating out at least once in a week (Vijayakumaran & Nur Amalina, 2018). This could be one of the factors to the increased rate of morbidity among university students as outside foods are mostly high in energy and fat (Urban et al., 2016).

Menu labelling policies have been implemented in many countries such as the United States of America and South Korea to tackle the obesity and NCDs problems. Certain

restaurants display calorie and nutrition information on their menus and menu boards (World Cancer Research Fund International 2018). Menu labelling lists nutrition information such as total calories, total fat, saturated fat, trans fat, cholesterol, sodium, total carbohydrate, dietary fibre, sugars and protein posted on foodservice operations' menus and menu boards. The purpose of menu labelling is to assist consumers to choose healthier choices when eating out, hence overweight, obesity and NCDs problems can be overcome (Food and Drug Administration, 2018). Many studies have proved that menu labelling leads consumers to a healthier behaviour (Krieger et al., 2013; Pulos & Leng, 2010; Roberto et al., 2010). However, studies found no behavioural changes among consumers that use menu labelling (Schornack & Rozensher, 2014; Tandon et al., 2011; Vadiveloo et al., 2011). Some researchers have conducted studies examining consumers' intentions to use menu labelling by using the theory of planned behaviour. The theory consists of attitude, subjective norm and perceived behavioural control as the constructs in predicting an individual's intention. Researchers have found that the three constructs do have an influence on the consumers' intentions to use menu labelling (Delvarani et al., 2013; Shawky, 2019).

At present time, Malaysia has no mandatory policy regarding the use of menu labelling in foodservice establishments, even though eating out trends are increasing in Malaysia (Rezai et al., 2013) and obesity rate is high (WHO, 2019). Therefore, not many studies on menu labelling are conducted in Malaysia. There is a limited study related to menu labelling that has been conducted in Malaysia assessing consumers' intention to use menu labelling (Delvarani et al., 2013). The available study used the theory of planned behaviour; attitude, subjective norm and perceived behavioural control as the constructs in assessing the consumers' intention and it was found that consumers are intended to use menu labelling if it is available in Malaysian restaurants. As there are only a few studies in Malaysia related to intention to use menu labelling, this present study will be assessing the factors that influence Malaysian consumers'

intentions to use menu labelling. This study will be applying the theory of planned behaviour (i.e., attitude, subjective norm, perceived behavioural control constructs) as the theory have successfully predicted and explained individual intentions in health behaviour studies, including menu labelling studies (Delvarani et al., 2013; Kim et al., 2013; Shawky, 2019), however health consciousness construct is not added in the framework. Patel (2020) has found that health consciousness has an influence on an individual's intention. Therefore, this study will add health consciousness in the theory of planned behaviour as the additional construct to examine the consumer's intention to use menu labelling. There are no known studies on menu labelling conducted among university students, therefore the present menu labelling study will be focusing on university students. As this study is filling in the gap of previous menu labelling studies, the findings could be useful and assist the government in making the menu labelling policy, which they plan to have by the year 2025.

1.2 Significance of study

Currently, Malaysia does not have a menu labelling policy in which it is impossible to examine the actual behaviour (use or not use menu labelling). Therefore, the present study will determine the factor that influences consumers' intentions to use menu labelling. The findings of the proposed study could help policymakers understand the intention of Malaysian university students to use menu labelling. Furthermore, knowing the factors, it will help to determine which factors that most significantly influence intention to use menu labelling. For example, if the constructs (i.e., attitude, subjective norm, perceived behavioural control and health consciousness) are positively significant with the intention to use menu labelling, policy makers can develop various strategies and interventions to boost that significant factors to increase the consumers' intention to use menu labelling by focusing on those constructs. As consumers' intention to use menu labelling increases, they are more likely to engage the behaviour (e.g., use menu labelling) (Ajzen, 1991). Based on the findings from this study,

foodservice operators such as the university cafeterias and restaurants could be able to create good and effective strategies to increase university students' intentions to use menu labelling and further utilize menu labelling at the operations when it is available.

1.3 Objectives

1.3.1 General objective

To assess factors that influence public university students in Klang Valley intentions to use menu labelling.

1.3.2 Specific objectives

1. To determine the sociodemographic and individual characteristics of the public university students.
2. To examine the degree of attitudes, subjective norms, perceived behavioural controls and health consciousness influence on the intentions to use menu labelling among public university students.

1.4 Hypotheses

H1: Public university students' attitudes towards menu labelling influence their significantly intentions to use menu labelling.

H2: Public university students' subjective norms towards menu labelling significantly influence their intentions to use menu labelling.

H3: Public university students' perceived behavioural controls towards menu labelling significantly influence their intentions to use menu labelling.

H4: Public university students' health consciousness towards menu labelling significantly influence their intentions to use menu labelling.

CHAPTER 2.0: LITERATURE REVIEW

This chapter has six sections. The first section covers overweight, obesity and non-communicable diseases (NCDs); the definition, types of NCDs, the prevalence of overweight, obesity and NCDs generally and among university students, and the risk factors of overweight, obesity, and NCDs. Next section reviews about eating out, while in third section reviews about menu labelling; the definition, purpose of menu labelling, menu labelling policies and research on menu labelling. The fourth section covers the theory of planned behaviour (TPB); the overview, explanation of each construct and studies on menu labelling with the application of TPB. Next section reviews the health consciousness; definition and studies related to health consciousness. Last section covers the conceptual framework.

2.1 Overweight, obesity and non-communicable disease (NCDs)

Overweight and obesity is as an excessive fat accumulation that may weaken wellbeing (WHO, 2020). Overweight and obesity can be categorized through body mass index (BMI). The BMI of 25-29.9 for overweight, while BMI 30 and greater for obesity. Overweight and obesity are part of the contributors to non-communicable diseases (NCDs). NCDs are also known as chronic diseases that do not spread from person to person and last for a long time. NCDs can be caused by genetic, physiology, environmental and behaviour (WHO, 2018). Diabetes, cardiovascular diseases, hypertension, stroke and cancers are examples of NCDs.

Overweight, obesity and NCDs are the main issues in both develop and developing countries. In 2016, about 1.9 billion adults were overweight and among all, more than 650 million adults were obese. It also reported that more deaths of overweight and obesity than underweight (WHO, 2020). In addition, almost 50 million individuals were killed due to NCDs per year, and statistic shows that most of the deaths are because of cardiovascular diseases,

followed by cancers, respiratory diseases and diabetes. These diseases contribute to over 80% of all premature NCD deaths (WHO, 2018).

Malaysia is one of the countries that face a serious overweight and obesity and NCDs problems. Malaysia has the highest rate of overweight and obesity in Asia with over 50% of the population are being obese or overweight. This leads to the increasement of diabetes prevalence and maintaining the high rate of hypertension in Malaysia (WHO, 2019). Furthermore, the rate of hypercholesterolemia in Malaysia also increased, from 20.7% in 2006 to 47.7% in 2015 (Institute for Public Health, 2006; 2015).

All the statistics represent the general population that having overweight, obesity and NCDs problems. These problems occur to anyone, regardless the age, gender, education level or even social status. Therefore, some researchers have conducted a study in identifying the prevalence of overweight, obesity and NCDs among university students.

2.1.1 Prevalence of obesity and non-communicable diseases among university students

Many cases related to overweight and obesity occur among children and adolescents, however, it is more serious among adults. Similar with NCDs, which it is dominantly occurring among adults (WHO, 2018; 2020). Therefore, most previous research was done among adults to identify the prevalence and the association with lifestyle, and there were several research focuses only on university students (Radzi et al., 2019; Yasmin et al., 2019).

Radzi and colleagues (2019) analysed obesity among public university students in Malaysia. Researchers have reported about 21.2% and 16.3% of students were overweight and obese, respectively. In addition, a study on NCDs found 22 out of 96 students had more than three NCDs risk factors and nearly 5% of students were early diabetic, more than 10% had borderline risk and 4.5% high risk for blood cholesterol. Researchers also found that almost 10% of students had a high risk of blood triglyceride (Yasmin et al., 2019). The studies were

conducted in different countries and it can be concluded that the rate of overweight, obesity and NCDs among university students is quite alarming (Radzi et al., 2019; Yasmin et al., 2019) which need attention.

Unhealthy diet, physical inactivity, tobacco use and the harmful use of alcohol are some of the risk factors of overweight, obesity and NCDs. These factors can increase blood pressure and blood glucose, elevate blood lipids, and increase body weight (WHO, 2018). Furthermore, Nishida et al., (2004) stated that practising an unhealthy diet by consuming energy-dense and high fat food, also living a sedentary lifestyle eventually lead to the health problems. Eating out at restaurants is part of the contributor to the overweight, obesity, also NCDs as restaurants usually serve foods high in calorie (Urban et al., 2016). Therefore, slowing down the pattern of eating out in Malaysia should be done as to lower the percentage of illness among Malaysians.

2.2 Eating out

Eating out is where an individual consume food that were not prepared at home such as at restaurants and convenience store (Llanaj et al., 2018). The trend of eating out is happening globally, including in Malaysia. This trend can be seen clearly as the percentage of consumption expenditure on restaurants increases, from 10.9% in 2009 to 13.9% in 2019 (Department of Statistics Malaysia, 2015; 2020). Changes in sociodemographic, education level, income, and family size are the reasons for the change of Malaysian consumers' food behaviour, from eating at home to eating out. Furthermore, convenience about the food such as the quality and reasonable price, also the fast services by the restaurants influence Malaysians to eat out (Rezai et al., 2013). According to Ghaffar et al., (2020), Malaysians who live in urban area are eating out more oftenly than those who live in rural areas. In addition, researchers have found that limited time to prepare food due to parents busy with their work,

food preferences, increase the bonding time among family and the availability and accessibility of various food outlets were the factors of eating out among Malaysians. Urban et al., (2016) have stated, foods that are not prepared at home are mostly high in calories which could contribute to the increase rate of overweight, obesity and NCDs. Eating out trend in Malaysia are parallel with the rises in prevalence of obesity and NCDs, which has proven through the statistics reported by WHO in 2019. There were many studies looking into the factors of eating out among Malaysians and there were also few studies conducted to observe the trend of eating out among college students.

2.2.1 Eating out among university students

Radzi et al., (2019) and Yasmin et al., (2019) have reported that the rate of overweight, obesity and NCDs among university students are quite alarming which need serious control and monitoring. This might be due to students are frequently consuming food from outside. In order to clarify that, few researchers have done studies related to it which identify the frequency and factors of eating out among university students (Lee & Yoon, 2014; Vijayakumaran & Nur Amalina, 2018).

Lee and Yoon (2014) have conducted a study that observed dietary habits and eating-out behaviour of South Koreans college students in the Cheongju area. From the study, it was reported that most of the students lived in their own home. Despite that, it was reported that students still often eating out in general restaurant, especially during lunch. Several reasons of eating out were listed: to have meal (43.7%); to be with their friends, colleague and family (37.3%); to experience the new and various foods or atmosphere (11.4%); refreshing (5.7%); and to commemorate a special day (1.3%). In addition, most of them were eating out with friends, seniors and juniors (60.8%).

Vijayakumaran and Nur Amalina conducted another similar study in 2018. However, this study was done in Malaysia. They found that majority of students are eating out at least once a week and usually during weekends (84.3%). When purchasing food from outside, most of the students bought it from hawker stalls, followed by fast food restaurants.

Both studies showed that the frequency of eating out among university students are not that high, but it still needs control as the trend of eating out could be increasing, also the rate of overweight, obesity and NCDs among students are rising year by year. Following the trend of eating out in Malaysia, menu labelling could be a potential tool to improve individuals' health status, as it is usually provided at restaurants and can be used by many individuals.

2.3 Menu labelling

Menu labelling is a list of calories and/or nutrition information (e.g. fat, sodium, and sugar) that displayed on menus and menu boards of foodservice establishments. The reasons for having menu labelling in foodservice operations are to notify consumers on the nutrients of menu items and guide them in choosing healthier choices when dining out (Food and Drug Administration, 2018).

Menu labelling is not a new thing for certain countries. In the United States of America (USA), they have implemented a menu labelling policy which requires all chain restaurants with 20 or more establishments to post calorie information of menu items in their menus. Alongside the USA, South Korea also has implemented menu labelling policy where all chain restaurants with 100 or more establishments need to post nutrient information on the menus (World Cancer Research Fund International, 2018).

On the other hand, in Taiwan, convenience stores, drink vendor chains and fast food restaurants must label the calorie, sugar and caffeine content of freshly-prepared beverages such as coffee, tea, fruit and vegetable juices. In Australia, restaurant chains such as fast food

restaurants and ice cream shops with 20 or more outlets in the state or 50 or more across Australia need to post the kilojoule of their menu items on the menu boards (World Cancer Research Fund International, 2018).

However, in Malaysia there is no mandatory policy on menu labelling. The Guidelines of Advertisement and Nutrition Labelling for Fast Food Restaurants has only encouraged the fast food chains to post nutrient information such as calorie, carbohydrates, protein, fat, sugar and sodium for each menu item (World Cancer Research Fund International, 2018). Currently, the government has created the National Plan of Action for Nutrition of Malaysia III (2016 – 2025), which focuses on overcoming the nutrition-related problems in Malaysia. One of the plans is, by 2025, there will be a mandatory menu labelling law in food operations (Ministry of Health, 2016). Therefore, reviewing and conducting study on menu labelling is beneficial as it could assist in making a menu labelling policy.

2.3.1 Studies on menu labelling

There are many studies related to menu labelling have been conducted in various countries. Some researchers investigated the influence of menu labelling on consumers' behaviours (Krieger et al., 2013; Pulos & Leng, 2010; Roberto et al., 2010; Schornack & Rozensher, 2014; Tandon et al., 2011; Vadiveloo et al., 2011) and some examined consumers' intentions to use menu labelling (Delvarani et al., 2013; Kim et al., 2013; Shawky, 2019). The studies have been conducted in various settings such as in fast food chains, coffee shops and full-service restaurants (Delvarani et al., 2013; Krieger et al., 2013; Pulos & Leng, 2010). Some studies found menu labelling does influence consumers' behaviour (Krieger et al., 2013; Pulos & Leng, 2010; Roberto et al., 2010). In terms of studies on intention to use menu labelling, researchers found that attitude, subjective norm, and perceived behavioural control influence the consumer's intention to use menu labelling (Delvarani et al., 2013; Shawky, 2019). Most

of menu labelling studies were conducted in countries that have implemented the menu labelling policy, such as in USA and South Korea, however there were very limited studies related to menu labelling conducted in Malaysia.

Thus, this study aims to identify factors that influence university students' intentions to use menu labelling in Malaysia. There were only few studies related to menu labelling were conducted in Malaysia. The available menu labelling studies examines consumers' perception on menu labelling (Din et al., 2017; Samsudin et al., 2011) and only one study examines consumers' intention to use the labelling (Delvarani et al., 2013). Delvarani et al. (2013) used theory of planned behaviour as an underpinning theory and found attitude, subjective norms and perceived behavioural control does influence consumers' intentions to use menu labelling in restaurants.

2.4 Theory of planned behaviour

Theory of planned behaviour (TPB) is a theory that predicts human intention to perform a behaviour in specified contexts. It is an extension of theory of reasoned action (TRA). TPB consists of all TRA components such as attitude and subjective norms along with an additional determinant of intentions which is perceived behavioural control. The strongest factor that influences the behaviour is the intention and it is determined by three factors: attitude, subjective norm and perceived behavioural control (Ajzen, 1991). The intention to perform a behaviour have been used a proxy for that behaviour. In other words, intention is the predictor for individual behaviour.

2.4.1 Intention

Intention is the willingness of a person to engage in a behaviour and it is the greatest predictor for an individual's behaviour. According to Ajzen (1991), the stronger the intention, the more likely an individual to perform the behaviour. An individual's intention can be

predicted and formed with the attitude, subjective norm and perceived behavioural control. Previous studies have proved that the three factors: attitude, subjective norm and perceived behavioural control does influence an individual's intention (Delvarani et al., 2013; Shawky, 2019).

2.4.2 Attitude

Attitude is the degree to which an individual has a favourable or unfavourable behavioural appraisal and the behavioural beliefs often determine it. Each of the outcome is seen either as positive or negative (Ajzen,1991). Ajzen has stated that a positive attitude will probably lead an individual to act on a behaviour. For example, when the individual views dieting is beneficial, the individual will probably engage in dieting. Previous studies have shown that attitude influences an individual's intention (Delvarani et al., 2013; Kim et al., 2013; Shawky, 2019). Delvarani et al., (2013) and Kim et al., (2013) found that attitude has the greatest impact on behavioural intention. Therefore, this present study included attitude as the factor in assessing an individual's intention.

2.4.3 Subjective norm

Subjective norm is an individual's belief that people who are important to them think they should or should not engage in a behaviour. An individual most probably act on a behaviour when they believe the social will approve and support of their performing the behaviour (Ajzen, 1991). For example, when the family members support the individual taking Biology class, most probably the individual will take the class. Delvarani et al., (2013) and Shawky (2019) found that subjective norm and intention have a positive relationship. This present study used subjective norm as the determinant of intention as previous studies proved that subjective norm is the strongest influence on the intention.

2.4.4 Perceived behavioural control

Perceived behavioural control refers to an individual's belief of their capability in engaging a behaviour. Individuals are more likely to perform a specific behaviour when available resources and opportunities (Ajzen,1991). For example, when the individual is confident able to do muscle building exercise as the equipment is available, the individual is more likely to do the exercise. Several studies found that perceived behavioural control was significantly and positively correlated to intention (Delvarani et al., 2013; Kim et al., 2013; Shawky, 2019). As a result, this present study used perceived behavioural control in examining the individual's intention.

2.4.5 Studies of menu labelling with the application of theory of planned behaviour (TPB)

Theory of planned behaviour (TPB) has been used by many researchers in various research area across various countries, to investigate individual's intention. There are few researchers that conducted a food-related behavior study, which was about the consumers' intention to use menu labelling by applying the theory of planned behaviour (TPB) (Delvarani et al., 2013; Kim et al., 2013; Shawky, 2019).

Delvarani and colleagues (2013) have conducted a cross-sectional study in Malaysia and use the theory of planned behaviour to identify factors that influence consumers' intention to use menu labelling in fast food restaurants. Nutritional knowledge is added to the theory as an additional predictor. Researchers found a significant positive relationship between attitude, subjective norms and perceived behavioural control to use menu labelling. On the other hand, researchers found that the nutritional knowledge of consumers does not have an impact on consumer's intention to use menu labelling.

Another study related to menu labelling using TPB was conducted by Kim et al. (2013), which determined the factors that influence consumers' behavioural intentions to read

nutritional labelling at casual-dining restaurants in South Korea. Results show that attitude and perceived behavioural control have a positive relationship with behavioural intention. However, no relationship was found between subjective norms and intention. Further findings indicate that attitude has a greater effect on behavioural intention than the subjective norm or perceived behavioural control.

Shawky (2019) has done a cross-sectional study at stand-alone and hotels' restaurants in Alexandria, Egypt to examine the factors affecting customers' intention to read menu labels in restaurants. The researcher has found that the three factors: attitude, subjective norms and perceived behavioural control were significantly and positively correlated to the intention to read menu labels. On the other hand, the researcher found no significant relationship between attitude, subjective norms, and perceived behavioural control with the behaviour of reading the menu label.

Overall, most of the studies have proved that the factors: attitude, subjective norm and perceived behavioural control have an influence on the behavioural intention. Therefore, this study added attitude, subjective norms and perceived behavioural control as the construct to examine the intention to use menu labelling among public university students. Ajzen (1991) has stated that in predicting intention, the relative importance of attitude, subjective norm, and perceived behavioural control differ across behaviours and contexts. Furthermore, additional constructs such as health consciousness can be added in the theoretical model in predicting the intention of a behaviour.

2.5 Health consciousness

Health consciousness is where the individuals are attentive on their wellbeing. In achieving good health and avoiding being sick, the individuals adopt healthy behaviours and are aware of their health condition (Michaelidou & Hassan, 2008). Health consciousness has

been used as a predictor or factor in assessing an individual's healthy behaviour in several previous studies (Chen, 2011; Hsu et al., 2016).

Chen (2011) has conducted a research in Taiwan to assess whether health consciousness and healthy lifestyle have an impact on consumers' willingness to use functional foods. Researcher found that consumers' health consciousness has a positive effect on the consumer's willingness to use functional foods.

Another study related to health consciousness has been conducted by Hsu and colleagues (2016). They did a cross-sectional study in Taiwan which determined factors that influence consumers' attitude towards organic food and purchase intentions. From the findings, it shows that health consciousness has a negative effect on attitude towards organic food, however, it has a positive impact towards purchase intention. Researchers also found that health consciousness have a direct impact on the purchase intentions.

On the other hand, Patel (2020) has conducted a study to measure the intention to purchase organic food products by using theory of planned behaviour with an additional construct, which is health consciousness. Results have shown that health consciousness has a significant positive relationship with purchase intention, also attitude.

Imani et al., (2021) have conducted a similar study with Patel (2020), which looking into the intention to purchase organic food products, used the theory of planned behaviour and added health consciousness construct in the model. However, Imani et al., (2021) conducted the study among students. This study also has similar results as Patel (2020) where health consciousness has a positive relationship with purchase intention and students' attitude towards organic products. In addition, researchers found that health consciousness was the most influential factor on the students' intention to purchase organic products.

Studies by Chen (2011) and (2016) have shown that health consciousness positively leads consumers to practice healthy behaviours, such as willingly to use functional foods and purchase organic foods. Study by Patel (2020) and Imani et al. (2021) have proved that adding health consciousness in the theory of planned behaviour model benefits the study as more information can be obtained. Both studies showed that the additional construct, health consciousness has positive relationship and influence on the intention. Therefore, health consciousness was added in this present study together with other TPB constructs to determine whether health consciousness influences the public university students' intentions to use menu labelling.

2.6 Conceptual framework

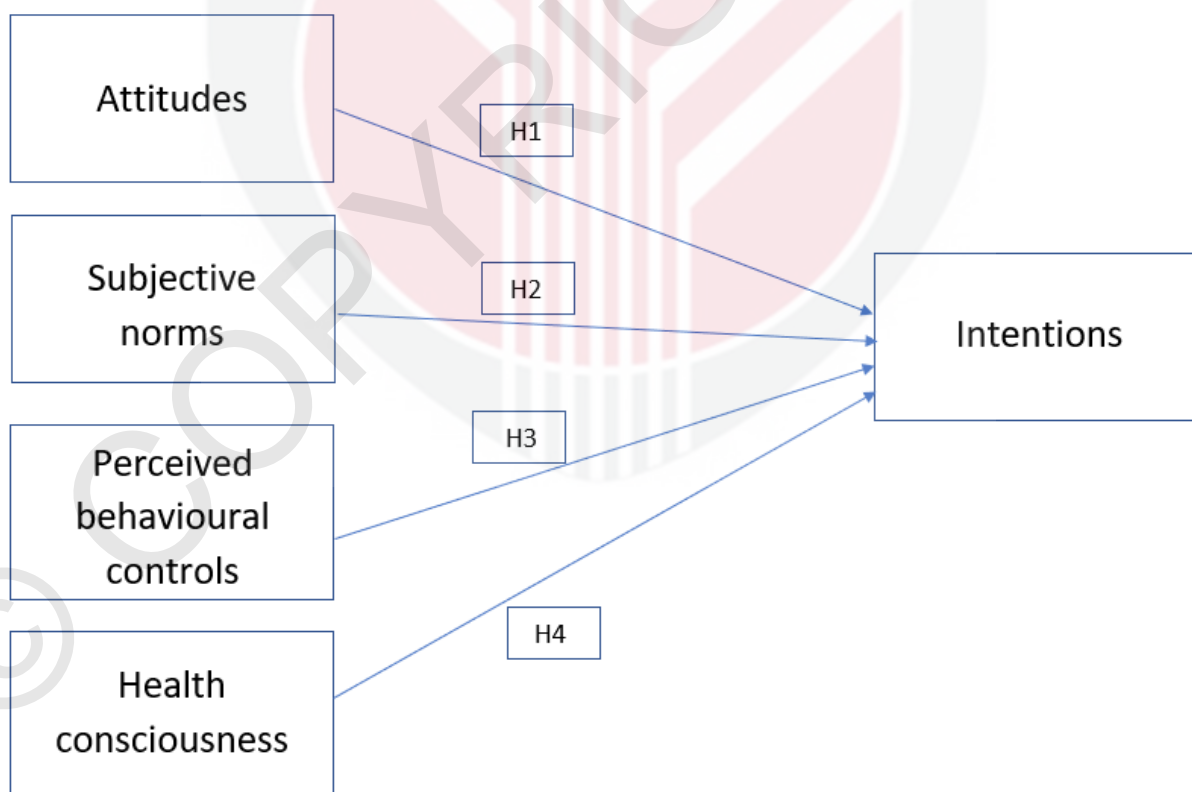


Figure 2.1. Extended model theory of planned behaviour

CHAPTER 3.0: METHODOLOGY

There are four sections in this chapter. The first section covers subject such as the study population, location, sampling method and sample size. Next section is about the instrument used, which also includes the validity and reliability. The third section covers the procedure of conducting the research and the last section reviews the data analysis.

3.1 Subject

This is a cross-sectional survey study which aims to examine factors that influence public university students' intentions to use menu labelling. This study was conducted online due to the pandemic of COVID-19. Conditional Movement Control Order (CMCO) is done in Klang Valley by setting up roadblocks across the area as to reduce the number of COVID-19 cases (Mahpar, 2020). This has restricted the movement from one place to another, making it difficult for researchers to collect data physically. Furthermore, most of the students were not in their universities due to the pandemic, therefore the most effective way to collect data was through online. Furthermore, the method of collecting data online was on par with the Industrial Revolution 4.0 era. Various field of studies have conducted online survey including educational and health field (Lin et al., 2020; Ramjan & Fogarty, 2019; Schlenz et al., 2020).

This study was conducted among public university students in Klang Valley area. Klang Valley was chosen for the study location because almost half of the public universities in Malaysia, seven out of 20, located in this area. Universiti Putra Malaysia (UPM), Universiti Kebangsaan Malaysia (UKM), Universiti Islam Antarabangsa (UIA), Universiti Teknologi Malaysia (UTM), Universiti Teknologi MARA (UiTM), Universiti Malaya (UM) and Universiti Pertahanan Nasional Malaysia (UPNM) are the public universities situated in Klang Valley area (Education Malaysia Global Services, n.d.).

A total of seven public universities located in Klang Valley and it is quite challenging to obtain public university students from various universities as the respondents. Hence, the best method in recruiting the students is through a non-probability sampling, which is snowball sampling. The sampling method is used because the process is simple which it eased the researcher to reach the targeted populations, also it reduced the time consumption in obtaining the respondents. Furthermore, several quantitative studies have used the snowball sampling in obtaining the subjects (Chilwarwar & Sriram, 2019). Therefore, this study used the snowball method to recruit subjects by contacting several students from each public university in Klang Valley and asking them to answer the questionnaire. Then, the students distribute the questionnaire to other students as recruitment of subject. All subjects (public university students) must meet certain criteria to participate in this study (Table 3.1).

Table 3.1: Inclusion and exclusion criteria of subject

| Inclusion criteria | Exclusion criteria |
|--|---|
| Male and female | Private university students |
| Age 18 and above | Public university students outside Klang Valley area |
| Public university students in Klang Valley area (UPM, UKM, UTM, UIA, UITM, UM, UPNM) | Lecturer and university staff |
| Foundation, diploma, undergraduate and postgraduate students. | Students from faculty of medicine and health sciences |

3.1.1 Sample size

A sample size calculation formula for multiple regression by Milton (1986) was used in obtaining the number of respondents for this study (Table 3.2). From the calculation, it shows about 64 respondents needed in this study.

Formula: $n = k + 1 + \frac{t^2(1 - R^2)}{\Delta r^2}$ (Milton, 1986)

- n = the calculated sample size
- k = number of independent variables in the model
- R^2 = variance explained by the whole model
- t = desired level of statistical significance
- Δr^2 = a minimum addition to r^2

Table 3.2: Sample size determination for multiple regression studies: significance test for beta coefficient at the .05 level ($t = 2$)

| | | Δr^2 | | | | |
|-------|-----|--------------|-----------|-----------|-----------|----------|
| | | .001 | .005 | .01 | .02 | .05 |
| R^2 | .10 | $3601 + k$ | $721 + k$ | $361 + k$ | $181 + k$ | $73 + k$ |
| | .20 | $3201 + k$ | $641 + k$ | $321 + k$ | $161 + k$ | $65 + k$ |
| | .30 | $2801 + k$ | $561 + k$ | $281 + k$ | $141 + k$ | $57 + k$ |
| | .40 | $2401 + k$ | $481 + k$ | $241 + k$ | $121 + k$ | $49 + k$ |
| | .50 | $2001 + k$ | $401 + k$ | $201 + k$ | $101 + k$ | $41 + k$ |
| | .60 | $1601 + k$ | $321 + k$ | $161 + k$ | $81 + k$ | $33 + k$ |
| | .70 | $1201 + k$ | $241 + k$ | $121 + k$ | $61 + k$ | $25 + k$ |
| | .80 | $801 + k$ | $161 + k$ | $81 + k$ | $41 + k$ | $17 + k$ |
| | .90 | $401 + k$ | $81 + k$ | $41 + k$ | $21 + k$ | $9 + k$ |

Note.

1. Provide an estimate of the overall R^2 of the model.
2. Choose Δr^2 which, if contributed by a given variable when entered last, will guarantee that the beta for that variable be twice its standard error ($t = 2$).

3. Find the appropriate number at the intersection in the table.
4. To that number, add the number of independent variables (k) in the final model to determine minimum sample size.

Table 3.3: R^2 value of previous study

| Previous study | R^2 |
|--------------------------|-------|
| Delvarani et al., (2013) | 0.410 |
| Stran et al., (2016) | 0.63 |
| Verma & Chandra (2018) | 0.421 |
| Ibrahim et al., (2017) | 0.321 |

- Average $R^2 = \frac{0.410 + 0.63 + 0.421 + 0.321}{4}$
= 0.44
- Calculation: $n = 49 + k$
= $49 + 4$
= 53 subjects
- Sample size: $n = [53 \times (\frac{20}{100})] + 53$
= $11 + 53$
= 64 subjects

3.2 Instrument

A seven-point Likert scale questionnaire (Appendix D) was used to measure the constructs of the study: attitudes, subjective norms, perceived behavioural controls, intentions and health consciousness. The questions were adapted from peer-reviewed published studies that are related to menu labelling, used seven-point Likert scale, applied theory of planned behaviour (i.e., attitude, subjective norm, perceived behavioural control) and health consciousness (Kim et al., 2013; Kim & Hwang, 2020; Mai & Hoffmann, 2012; Stran et al., 2016; Xu et al., 2020). The questionnaire consisted of six parts: attitudes, subjective norms,

perceived behavioural controls, intentions to use menu labelling, health consciousness and sociodemographic and individual characteristics.

The first section was about the sociodemographic and individual characteristics. Information of respondents such as age, sex, education, sponsorship, weight, height and frequency eating outside were asked.

The second section consisted of five statements related to the attitudes towards menu labelling. All statements were anchored to the 7-point scales. For example, 'I think using calorie information that posted on menu when eating at restaurant would be', 1 = difficult and 7 indicates easy.

In the third section, subjective norm was measured with five questions such as 'My friends think I should use calorie information that posted on menu labelling when eating at restaurant if it is available' with seven-point Likert scale (1= Totally disagree, 7= Totally agree).

The fourth section consisted of five questions to measure perceived behavioural controls. 'What factors or circumstances would enable you to use menu labelling in a hospital cafeteria before placing an order?: having good eating habits' is an example of question will be asked and a seven-point Likert scale will be used (1= Totally disagree, 7= Totally agree).

The fifth section measured health consciousness construct. Six questions were asked and 'I think I am conscious of my health' with seven-point Likert scale (1= Totally disagree, 7= Totally agree) was an example of the questions.

Intentions to use menu labelling was measured in the last section. Five questions were asked in the section and one of the questions was 'I intend to use calorie information that posted on menu when eating at restaurant if it is available'. In measuring the construct, a seven-point Likert scale was used with 1 indicates totally disagree while 7 indicates totally agree.

3.2.1 Validity

Face validity has been done for this study prior to data collection. Face validity is where the instrument is validated through discussion with experts (Leedy & Ormrod, 2015). Questions from previous studies were reviewed and selected by the experts to ensure the questions were suitable, also appropriate for this study. The instrument also has been validated in peer-reviewed published studies (Kim et al., 2013; Kim & Hwang, 2020; Mai & Hoffmann, 2012; Stran et al., 2016; Xu et al., 2020).

3.2.2 Pre-test

Pre-test were conducted as to identify the weaknesses of instrument used. A total of 40 university students from Faculty of Medicine and Health Sciences, UPM were participated in the study's pre-test. The targeted number of respondents for pre-test was at least 30 respondents (minimum) to examine the questions' degree of understanding (Perneger et al., 2015). The questionnaire was distributed and answered by the students via online. Feedbacks obtained from them regarding the questionnaire were considered and amendments were done accordingly after the pre-testing, to ensure the research can be done smoothly and obtain good results (Lancaster et al., 2004).

3.3 Procedure

Data were collected online via Google form. Name, address and telephone number were not collected from respondents to protect their privacy. This research was conducted after received an ethics approval from UPM ethics committee (JKEUPM). The data were collected from the beginning of April 2021 until the beginning of May 2021. The questionnaire was distributed for five weeks through online by using a snowball method. Firstly, the researcher gave a questionnaire link to several students from different public universities in the Klang Valley area through the mobile application Whatsapp. The students answered all the questions

and submitted it via the platform. Next, the students shared the questionnaire link to other public university students to answer the questionnaire. After answering the questionnaire, they forwarded the link to other students.

3.4 Design and analysis

After data collection, all data were coded and were analysed using IBM SPSS version 25.0. Descriptive analyses such as percentage, mean, and standard deviations were performed to report the respondents' sociodemographic and characteristics. A multiple regression was conducted in assessing the degree of influence of attitudes, subjective norms, perceived behavioural controls and health consciousness on intentions to use menu labelling. Other than that, assumption tests such as multicollinearity, normality and reliability has been conducted before the regression analysis.

3.4.1 Assumption tests

There are few assumption tests that were conducted. First, sample size was checked to ensure the sample size is adequate as to obtain results that generalise with other samples. According to Tabachnick and Fidell (2013), formula of $N > 50 + 8m$, whereby m is the number of independent variables, can be used in calculating the sample size requirements. This present study has four independent variables ($m = 4$), therefore, the required sample size is more than 82 ($N > 82$). This study managed to obtain 100 respondents which achieve the required sample size. Thus, this study has enough sample size to represent public university students in Klang Valley.

Next, multicollinearity was checked to observe whether this study has a good regression model or not. Multicollinearity occur when the independent variables are highly correlated ($r \geq .9$). The multicollinearity can be checked through correlation matrix or variance inflation factor (VIF). The correlation matrix of this study indicates that there is no multicollinearity.

This is because the magnitude of the correlation coefficients among the independent variables are less than .80. For VIF, the values were lower than 10 which indicates no multicollinearity in this present study. As both values of correlation matrix and VIF represent absence of multicollinearity, hence, this study has a good regression model.

Other than that, the normality of data was assessed. According to the normal P-P plot (Appendix E), the data were normally distributed as the data formed a straight line along the diagonal. For homoscedasticity, the scatterplot was examined. The plot was randomly scattered, which indicates that the assumption is met.

Lastly, the reliability of each construct was analyzed and the values are exhibited in Table 4.2, 4.3, 4.4, 4.5 and 4.6. The Cronbach's alpha values of 0.768 to 0.939 indicates that all constructs have adequate reliability as the values are higher than 0.6 (Nunnally, 1978). The results of descriptive and regression analysis will be thoroughly discussed in the next chapter.

CHAPTER 4.0: RESULTS AND DISCUSSION

In this chapter, all the findings are present and discuss. First section reports the sociodemographic of respondents, followed by the assumption test. Results of an extended theory of planned behaviour constructs which used multiple regression analysis are exhibit in the end of the section.

4.1 Sociodemographic and individual characteristics

Sociodemographic and individual characteristics of respondents are presented in Table 4.1. There were 118 respondents participated in this study, however, only 100 response were valid. Hence, the response rate for this study is 84.7%. Out of 100 respondents, 77% were female (N=77). According to the statistic by Ministry of Higher Education Malaysia (2019), majority of the public university students were females, whereby about 61% of the public university students in Malaysia were females. The respondents' age was between 19 to 29 years old and the mean age was 22 years old. Majority of the respondents were bachelors' degree students (N= 91; 91%) and almost half of the participants reported that they were self-sponsored (N=45; 45%). Respondents' self-reported weight and height were collected as to calculate their body mass index (BMI). More than half of the participants have a normal weight (N=63; 63%). For frequency of eating out, 31% of respondents reported eating out once a week (N=31). This frequency of eating out finding is similar to the outcome by Vijayakumaran and Nur Amalina (2018), whereby they found that most university students in Malaysia are eating out at least once a week. One possible reason for the low frequency of eating out among students is the price of food. The price of outside food is usually expensive. Hence, they eat at home or purchase food from the university cafeteria as to save up their money.

Table 4.1: Sociodemographic and individual characteristics of respondents (n=100)

| Variables | N | % | Mean \pm SD | Min-Max |
|------------------------------|----|----|------------------|---------|
| Age | | | 22.27 \pm 1.74 | 19 - 29 |
| Sex | | | | |
| Male | 23 | 23 | | |
| Female | 77 | 77 | | |
| Educational level | | | | |
| Foundation | 6 | 6 | | |
| Bachelors' degree | 91 | 91 | | |
| Master | 3 | 3 | | |
| Sponsorship | | | | |
| Self-sponsored | 45 | 45 | | |
| Scholarship | 18 | 18 | | |
| Study loan | 37 | 37 | | |
| BMI | | | | |
| Underweight | 11 | 11 | | |
| Normal weight | 63 | 63 | | |
| Overweight | 14 | 14 | | |
| Obese | 12 | 12 | | |
| Frequency of eating out | | | | |
| None | 13 | 13 | | |
| Once a week | 31 | 31 | | |
| Two times a week | 15 | 15 | | |
| Three times a week | 15 | 15 | | |
| Four times a week | 10 | 10 | | |
| Five times or more in a week | 16 | 16 | | |

4.2 Descriptive results of extended theory of planned behaviour

Before conducted the regression analysis, the descriptive test was also conducted for all items in the extended theory of planned behaviour model. The outcomes are presented in the Table 4.2, 4.3, 4.4, 4.5 and 4.6. All respondents answered the questions given for each construct: attitudes, subjective norms, perceived behavioural controls, health consciousness and intentions. Scale of 1 to 3 indicates a negative response, 4 indicates neutral while 5 to 7 presents a positive response. The table exhibited that on average, the public university students have positive attitudes ($M = 5.37$) towards menu labelling, whereby on average, the students perceived restaurants that have menu labelling are good ($M = 5.80$) (Table 4.2). For subjective norms, on average the students have positive subjective norms ($M = 4.73$) towards menu

labelling. On average, the students agree that they do not feel under social pressure to use menu labelling if it is available ($M = 5.52$) (Table 4.3).

Furthermore, on average, public university students have positive perceived behavioural controls ($M = 5.78$) towards menu labelling, which they agree that ability to understand calorie and nutrition information enable them to use menu labelling before placing an order ($M = 6.09$) (Table 4.4). For health consciousness, on average, students have positive health consciousness ($M = 5.35$) towards menu labelling. On average, the students agree that they are concerned about their health ($M = 5.62$) (Table 4.5). Lastly, on average, public university students have positive intentions ($M = 4.73$) towards menu labelling, whereby they slightly agree that they are willing to use menu labelling if it is available ($M = 5.06$) (Table 4.6).

Table 4.2: Descriptive results of extended theory of planned behaviour (Attitudes)

| Construct | Scale | Mean \pm SD | Cronbach's alpha |
|---|---|------------------|------------------|
| Attitudes: | | 5.37 \pm 1.101 | 0.860 |
| Using menu labelling would be: | 1-very difficult – 7-very easy | 4.86 \pm 1.498 | |
| Using menu labelling would be: | 1-very inconvenient – 7-very convenient | 5.05 \pm 1.381 | |
| Using menu labelling would be: | 1-very unhelpful – 7-very helpful | 5.51 \pm 1.275 | |
| Restaurants that have menu labelling are: | 1-very unhelpful – 7-very helpful | 5.63 \pm 1.338 | |
| Restaurants that have menu labelling are: | 1-very bad – 7-very good | 5.80 \pm 1.378 | |

Table 4.3: Descriptive results of extended theory of planned behaviour (Subjective norms)

| Construct | Scale | Mean ± SD | Cronbach's alpha |
|--|--|--------------|------------------|
| Subjective norms: | 1-Strongly disagree - 7-Strongly agree | 4.73 ± 1.261 | 0.891 |
| Those who close to me think I should use menu labelling if they are available | | 4.79 ± 1.520 | |
| My friends think that I should use menu labelling if they are available | | 4.48 ± 1.514 | |
| People close to me expected me to use menu labelling if they are available | | 4.41 ± 1.621 | |
| I don't feel under social pressure to use menu labelling if they are available | | 5.52 ± 1.382 | |
| Most people who are important to me think that I should use menu labelling when ordering foods if they are available | | 4.44 ± 1.506 | |

Table 4.4: Descriptive results of extended theory of planned behaviour (Perceived behavioural controls)

| Construct | Scale | Mean ± SD | Cronbach's alpha |
|---|--|--------------|------------------|
| Perceived behavioural controls: | 1-Strongly disagree - 7-Strongly agree | 5.78 ± 0.771 | 0.768 |
| What factors or circumstances would enable you to use menu labelling before placing an order? | | | |
| Having good eating habits | | 5.81 ± 1.051 | |

| | |
|---|--------------|
| Time and effort | 5.65 ± 0.978 |
| Ability to understand calorie and nutrition information | 6.09 ± 0.911 |
| Format of menu labelling (For examples: font size, colour, design) | 5.57 ± 1.139 |
| Type of information posted on menus (For examples: calorie only / nutrition information only / calorie information with daily recommendation) | 5.78 ± 1.244 |

Table 4.5: Descriptive results of extended theory of planned behaviour (Health consciousness)

| Construct | Scale | Mean ± SD | Cronbach's alpha |
|---|--|--------------|------------------|
| Health consciousness: | 1-Strongly disagree - 7-Strongly agree | 5.35 ± 1.006 | 0.870 |
| Reflect on my health | | 5.44 ± 1.358 | |
| Concerned about my health | | 5.62 ± 1.204 | |
| Aware of my health status | | 5.60 ± 1.206 | |
| Check my health | | 4.49 ± 1.467 | |
| Conscious of my health | | 5.49 ± 1.078 | |
| Think about the diet-related disease (eg: diabetes, hypertension) | | 5.43 ± 1.394 | |

Table 4.6: Descriptive results of extended theory of planned behaviour (Intentions)

| Construct | Scale | Mean ± SD | Cronbach's alpha |
|---|--|--------------|------------------|
| Intentions: | 1-Strongly disagree - 7-Strongly agree | 4.73 ± 1.440 | 0.939 |
| Expect to use menu labelling if they are available | | 4.36 ± 1.636 | |
| Want to use menu labelling if they are available | | 4.74 ± 1.661 | |
| Intend to use menu labelling if they are available | | 4.90 ± 1.605 | |
| Always use menu labelling if they are available | | 4.60 ± 1.621 | |
| Willing to use menu labelling if they are available | | 5.06 ± 1.496 | |

4.3 Multiple regression results of extended theory of planned behaviour

Proposed model of extended theory of planned behaviour was used to examine the degree of influence of each construct: attitudes, subjective norms, perceived behavioural controls and health consciousness, to public university students' intentions to use menu labelling. Multiple regression analysis was used to analyze the data. The outcome indicated that the independent variables contributed approximately 59.8% ($R^2 = .598$) to public university students' intention to use menu labelling.

Outcomes of regression analysis are exhibited in Table 4.7. Results obtained proved that hypothesis 1 is significant; the public university students' attitudes significantly influence their intentions to use menu labelling. The beta coefficient value indicated that attitudes influence the most on students' intentions to use menu labelling as it is the highest beta

coefficient value compared to other constructs. For every increment in the attitude, it will influence the intention to use menu labelling ($\beta = .437, p = < .001$). The finding of this study is similar with previous studies conducted by Delvarani et al., (2013) and Kim et al., (2013), whereby attitude significantly influenced the intention to use menu labelling and it is the most influential factor on the intention. One of the possible reasons for the significant influence between attitudes and intentions to use menu labelling in this study is the education level of respondents. According to Raghupathi and Raghupathi (2020), adults who received tertiary education are more likely to live healthier and longer as the education creates a positive attitude in them, whereby it leads to practising a healthy lifestyle. This indicates that the higher the education level, the higher or positive the attitude. A positive attitude is more likely to lead an individual to act to the behaviour (Ajzen, 1991). Therefore, as the respondents of this study are university students which receive high education level (tertiary education), they have positive attitudes which influenced their intentions to use menu labelling.

For hypothesis 2, it was found that it is not significant whereby the public university students' subjective norms have no significant influence on their intentions to use menu labelling ($\beta = .143, p = .054$). This study has a contrasting finding with the past studies (Delvarani et al., 2013; Shawky, 2019). However, the outcome obtained is similar with Kim et al., (2013) and Yazdanpanah and Forouzani (2015) study, by which subjective norm has no impact on individual's intention. This means individuals who are close with the student does not influence their intentions to use menu labelling. Yazdanpanah and Forouzani (2015) have conducted a study that used TPB model to predict Iranian university students' intention to purchase organic food. The findings obtained indicate that the students' subjective norm does not influence the intention. The researcher stated that in a wide range of behaviours, it is common for people to be under attitudinal or normative control. Therefore, the respondents, which were the university students, also the behaviours could be the reasons for the

insignificant outcome of subjective norm in this present study. Other than that, based on the sociodemographic and characteristics statistics, it exhibits that students are not frequently eating out. This might be due to the family members or friends are also not regularly eating outside. Hence, the students think that their family and friends do not care about the menu labelling, also not care whether the students use the labelling at restaurants. Therefore, the subjective norms do not influence the students' intentions to use menu labelling.

Next, perceived behavioural controls also has no influence on students' intentions to use menu labelling ($\beta = .105$, $p = .159$), which means hypothesis 3 is not significant. The result indicated that perceived behavioural controls is not an important and strong factor in influencing the intention. This outcome is contrary with the outcome of several menu labelling studies (Delvarani et al., 2013; Kim et al., 2013; Shawky, 2019). The studies have found that perceived behavioural control positively impact the behavioural intention. Despite perceived behavioural control have influence on the intention to use menu labelling, Delvarani et al., (2013) have found that it is the weakest predictor of intention compared to other TPB constructs. This present study has obtained that the students' perceived behavioural controls does not impact the intentions to use menu labelling. This might be due to the type of respondents, which were university students. This is because study by Yazdanpanah and Forouzani (2015), which was done among university students also discovered that the perceived behavioural control was not significantly influence the intention to purchase organic foods. Aside from that, Yazdanpanah and Forouzani (2015) have stated that usually individual are under attitudinal or normative control in a large amount of behaviours. Hence, it may be leads to the insignificant influence of perceived behavioural control to the intention. According to the descriptive results of perceived behavioural controls construct, respondents have reported that able to understand the calorie and nutrition information will enable them to use menu labelling before placing an order ($M=6.09$). Therefore, the insignificant influence between perceived behavioural controls

and intentions to use menu labelling might be due to the respondents' lack of understanding the calorie and nutrition information.

Lastly, it was found that hypothesis 4 is significant. The students' health consciousness significantly influenced their intentions to use menu labelling. According to the beta coefficient value, for every increment in health consciousness, it will influence the intention ($\beta = .377$, $p = < .001$). Some of the previous studies that used TPB with additional health consciousness construct have also found a positive influence on the intention (Imani et al., 2021; Patel, 2020). Both, Imani et al., (2021) and Patel (2020) conducted health behaviour studies. They observed whether health consciousness influence the intention to purchase organic food products and both found that health consciousness significantly influence the intention. In Imani et al., (2021) study, their subjects were students which is similar with this present study. Both have the same outcome where the university students' health consciousness influenced the intention. One of the reasons is because university students have high education level. Based on a study, individual with higher levels of education such as tertiary education will have better health compared to low educated individual. This is because education increases individuals' health consciousness and it encourage them to adopt healthy behavioural practices (Raghupathi & Raghupathi, 2020). Therefore, university students have high health consciousness due to the high education level, which it influences their behavioural intention. Another factors that might lead to the significant result is the gender of the respondents. From the sociodemographic statistics, it shows majority of the respondents were female and based on Bärebring et al., (2020) study, it was found that females are more health conscious than males. Hence, high health consciousness among females leads to the significant influence of health consciousness with intention to use menu labelling. The findings of this study proved that health consciousness is also a good construct to the TPB model as to predict individual intention to use menu labelling, especially among students.

Overall, this present study has found that public university students attitudes and health consciousness have influence on their intentions to use menu labelling. Furthermore, it was found that attitudes is the most influential factor to the applied TPB model. On the other hand, subjective norms and perceived behavioural controls did not influence the students' intentions to use menu labelling. Thus, proposed hypothesis 2 and 3 are insignificant. The results were contradict with several past studies that found both constructs, subjectives norms and perceived behavioural controls influenced the intentions.

Table 4.7: Multiple regression analysis of extended theory of planned behaviour

| Variables | B | 95% CI | β | t | p-value |
|--------------------------------|--------|-------------------|---------|--------|---------|
| (Constant) | -3.137 | [-4.725 , -1.548] | | -3.920 | |
| Attitudes | .572 | [.377 , .766] | .437 | 5.830 | < .001 |
| Subjective norms | .163 | [-.003 , .329] | .143 | 1.951 | .054 |
| Perceived behavioural controls | .197 | [-.078 , .472] | .105 | 1.420 | .159 |
| Health consciousness | .540 | [.337 , .744] | .377 | 5.264 | < .001 |

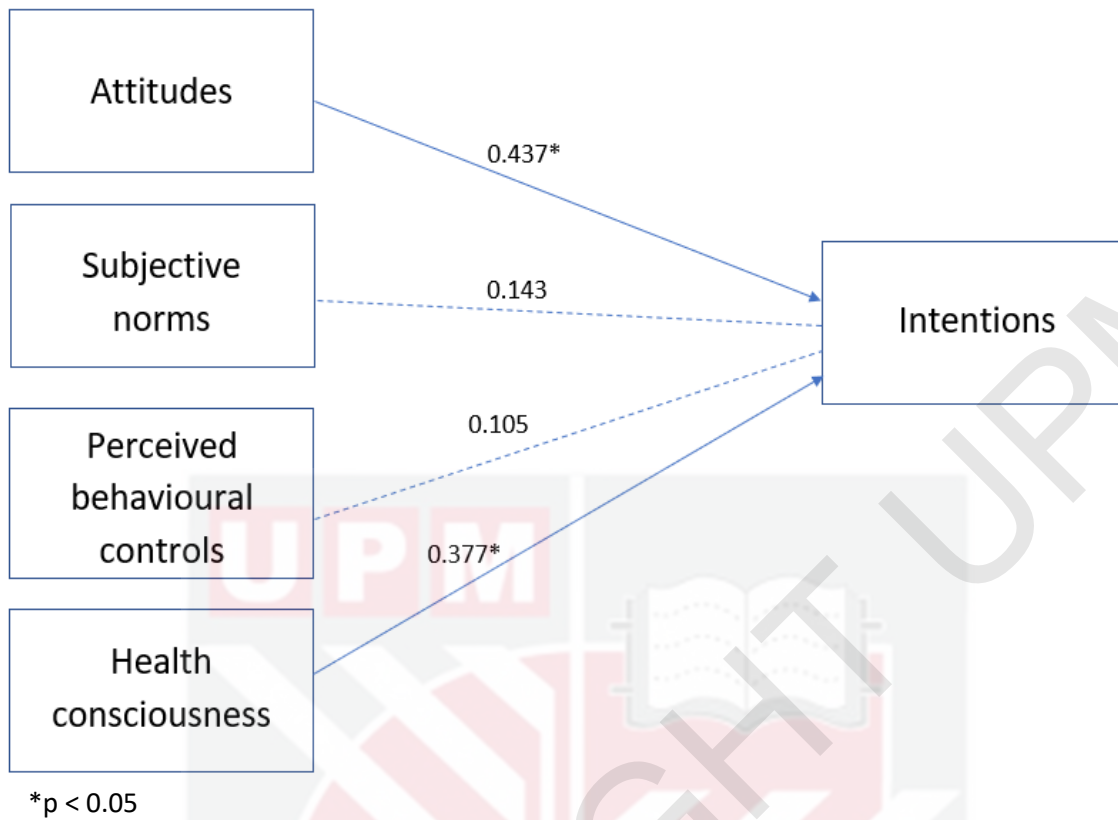


Figure 4.1. Multiple regression analysis of extended theory of planned behaviour

CHAPTER 5.0: CONCLUSIONS, LIMITATIONS AND FUTURE RECOMMENDATIONS

This research contributes to the literature in many ways. Firstly, this study assessed factors influencing intentions to use menu labelling in Malaysia by using an extended theory of planned behaviour model with health consciousness as the additional construct to predict whether it influences the intentions to use menu labelling. The theory of planned behaviour consist of attitude, subjective norm and perceived behavioural control constructs. This model has been used widely by researchers to assess health related behaviours (e.g. use of menu labelling; purchase of organic foods) through the intention. However, no known menu labelling studies include health consciousness to the theory of planned behaviour model, as an additional construct. The outcome of this study proved that health consciousness is one of the good predictors for behavioural intention. Thus, this finding gives a new insight to the researchers on adding health consciousness as the additional construct to the theory of planned behaviour model in predicting an individual behavioural intention. Secondly, this study was conducted among public university students to examine their intentions to use menu labelling in Malaysia. It is a unique study as there are no known studies of menu labelling, applying the theory of planned behaviour that focuses only on university students. Past studies were conducted among restaurant consumers.

This study also makes practical contributions. Firstly, the study's findings may help foodservice operators and health promoters create effective strategies to increase consumers' intentions to use menu labelling. For example, this study has found that attitude and health consciousness have an influence on students' intention to use menu labelling, therefore, the food operators such as university cafeteria operators and health promoters can promote the menu labelling via any programme or social media to boost the students' attitude. Aside from that, they can promote the menu labelling by posting healthy menus on the restaurant to attract

students with high health conscious to use the menu labelling. Next, as the menu labelling law is not established yet in Malaysia, public does not know menu labelling. Therefore, the outcomes of this present research could aid the policy makers to create an appropriate framework and materials for public regarding menu labelling: the purpose, importance and way of using the menu labelling. The policy makers could use various mediums to convey the information related to menu labelling to the public to boost consumers' intention to use menu labelling.

Although the findings of the study contributed to the literature and practical, present research also has several limitations. Firstly, the respondents were obtained through non-probability sampling, which was a snowball sampling. This sampling is the least preferable method as it leads to bias. Secondly, this study focuses only on university students that studies at public university in Klang Valley. However, present research is suitable for all individuals, despite different academic backgrounds, age groups, and race. Thirdly, this study used self-reported survey whereby all the questions are answered by the respondents on their own, without any supervision. Furthermore, in sociodemographic and characteristics section, the respondents self-reported their height and weight. These could lead to bias whereby the response and information given could be less accurate. Other limitations are that this study does not conduct a bivariate analysis and does not include negative questions in the questionnaire.

For future research, it is recommended to use probability sampling in obtaining the respondents as to avoid bias and to reflect the target population. Other than that, future study can include the construct of health consciousness to the theory of planned behaviour model as to increase literature and compare with present finding. Furthermore, other researchers are encouraged to conduct the study among other populations such as private university students and elderly in Malaysia. Aside from that, researchers are recommended to conduct a bivariate

analysis such as comparing the intention to use menu labelling between two groups: populations with normal BMI and populations with overweight/obese BMI or between male and female. Lastly, future research is encouraged to mix positive and negative questions in the questionnaire. This is to ensure respondents are attentive to each question and to avoid response bias.

Overall, the results of this study exhibited that attitudes and health consciousness significantly influence students' intentions to use menu labelling. Moreover, the outcome indicated that attitudes strongly influence public university students' intentions to use menu labelling. In addition, results revealed that students' subjective norms and perceived behavioural controls did not influence their intention to use menu labelling.

REFERENCES

- Ajzen, I. (1991). The theory of planned behavior organizational behavior and human decision processes. *Organizational Behavior and Human Decision Processes*, 50(2), 179–211.
- Bärebring, L., Palmqvist, M., Winkvist, A., & Augustin, H. (2020). Gender differences in perceived food healthiness and food avoidance in a Swedish population-based survey: a cross sectional study. *Nutrition Journal*, 19(1), 1–8. <https://doi.org/10.1186/s12937-020-00659-0>
- Chen, M. F. (2011). The joint moderating effect of health consciousness and healthy lifestyle on consumers' willingness to use functional foods in Taiwan. *Appetite*, 57(1), 253–262. <https://doi.org/10.1016/j.appet.2011.05.305>
- Chilwarwar, V., & Sriram, S. (2019). Exploring gender differences in choice of marriage partner among individuals with visual impairment. *Sexuality and Disability*, 37(1), 123–139. <https://doi.org/10.1007/s11195-018-9536-x>
- Delvarani, S., Ghazali, H., & Othman, M. (2013). Factors affecting fast food consumers' intention to use menu labeling in Klang Valley, Malaysia. *International Food Research Journal*, 20(4), 1799–1805.
- Department of Statistics Malaysia. (2015). *Report on household expenditure survey 2014*. [https:// www.dosm.gov.my](https://www.dosm.gov.my).
- Department of Statistics Malaysia. (2020). *Household expenditure survey report 2019*. <https://www.dosm.gov.my>.
- Din, N., Zahari, M. S. M., & Shariff, S. M. (2017). Nutritional labelling in Malaysian full-service restaurant menu. *Journal of ASIAN Behavioural Studies*, 2(2), 47-55. <https://doi.org/10.21834/jabs.v2i2.178>
- Education Malaysia Global Services. (n.d.). *Malaysia higher education in brief*. <https://educationmalaysia.gov.my/malaysia-higher-education-in-brief/>
- Food and Drug Administration. (2018). *Menu labeling rule key facts for industry general information*. <https://www.fda.gov/Food/GuidanceRegulation/GuidanceDocumentsRegulatoryInformation/LabelingN>
- Ghaffar, S. A., Talib, R. A., & Karim, N. A. (2020). Perspectives of Malaysian parents on eating out: A qualitative analysis. *Malaysian Journal of Nutrition*, 26(3), 379–388. <https://doi.org/10.31246/mjn-2019-0137>
- Hsu, S. Y., Chang, C. C., & Lin, T. T. (2016). An analysis of purchase intentions toward organic food on health consciousness and food safety with/under structural equation modeling. *British Food Journal*, 118(1), 200–216. <https://doi.org/10.1108/BFJ-11-2014-0376>

- Ibrahim, M. A., Fisol, W. N. M., & Haji-Othman, Y. (2017). Customer intention on Islamic home financing products: An application of theory of planned behavior (TPB). *Mediterranean Journal of Social Sciences*, 8(2), 77–86. <https://doi.org/10.5901/mjss.2017.v8n2p77>
- Imani, B., Allahyari, M. S., Bondori, A., Surujlal, J., & Sawicka, B. (2021). Determinants of organic food purchases intention: The application of an extended theory of planned behaviour. *Future of Food: Journal on Food, Agriculture and Society*, 9(1), 1–12. <https://doi.org/10.17170/kobra-202011192216>
- Institute for Public Health (2006). *The Third National Health and Morbidity Survey (NHMS III) 2006, Nutritional Status*. Ministry of Health Malaysia. <https://iku.moh.gov.my/>
- Institute for Public Health (2015). *National Health and Morbidity Survey 2015 (NHMS 2015). Vol. II: Non-Communicable Diseases, Risk Factors & Other Health Problems*. Ministry of Health Malaysia. <https://iku.moh.gov.my/>
- Kim, E., Ham, S., Yang, I. S., & Choi, J. G. (2013). The roles of attitude, subjective norm, and perceived behavioral control in the formation of consumers' behavioral intentions to read menu labels in the restaurant industry. *International Journal of Hospitality Management*, 35, 203–213. <https://doi.org/10.1016/j.ijhm.2013.06.008>
- Kim, J. J., & Hwang, J. (2020). Merging the norm activation model and the theory of planned behavior in the context of drone food delivery services: Does the level of product knowledge really matter? *Journal of Hospitality and Tourism Management*, 42, 1–11. <https://doi.org/10.1016/j.jhtm.2019.11.002>
- Krieger, J. W., Chan, N. L., Saelens, B. E., Ta, M. L., Solet, D., & Fleming, D. W. (2013). Menu labeling regulations and calories purchased at chain restaurants. *American Journal of Preventive Medicine*, 44(6), 595–604. <https://doi.org/10.1016/j.amepre.2013.01.031>
- Lancaster, G.A., Dodd, S. & Williamson, P.R. (2004). Design and analysis of pilot studies: Recommendations for good practice. *Journal of Evaluation in Clinical Practice*, 10(2), 307–12. doi: 10.1111/j..2002.384.doc.x.
- Lee, J. E., & Yoon, W. Y. (2014). A study of dietary habits and eating-out behavior of college students in Cheongju area. *Technology and Health Care*, 22(3), 435–442. <https://doi.org/10.3233/THC-140801>
- Leedy, P.D. & Ormrod, J.E. (2015). *Practical research: Planning and design*, (11th ed.). Pearson Education.
- Lin, X. J., Zhang, C. Y., Yang, S., Hsu, M. L., Cheng, H., Chen, J., & Yu, H. (2020). Stress and its association with academic performance among dental undergraduate students in Fujian, China: A cross-sectional online questionnaire survey. *BMC Medical Education*, 20(1), 1–10. <https://doi.org/10.1186/s12909-020-02095-4>

- Llanaj, E., Àdány, R., Lachat, C., & D'Haese, M. (2018). Examining food intake and eating out of home patterns among university students. *BioRxiv*, 1–14. <https://doi.org/10.1101/320325>
- Mahpar, N. (2020). *96 roadblocks set up across Klang Valley as CMCO takes effect*. Free Malaysia Today. <https://www.freemalaysiatoday.com/category/nation/2020/10/14/96-roadblocks-set-up-across-klang-valley-as-cmco-takes-effect/>
- Mai, R., & Hoffmann, S. (2012). Taste lovers versus nutrition fact seekers: How health consciousness and self-efficacy determine the way consumers choose food products. *Journal of Consumer Behaviour*, *11*(4), 316-328. <https://doi.org/10.1002/cb.1390>
- Michaelidou, N., & Hassan, L. M. (2008). The role of health consciousness, food safety concern and ethical identity on attitudes and intentions towards organic food. *International Journal of Consumer Studies*, *32*(2), 163–170. <https://doi.org/10.1111/j.1470-6431.2007.00619.x>
- Milton, S. (1986). A sample size formula for multiple regression studies. *Public Opinion Quarterly*, *50*, 112-118.
- Ministry of Health. (2016). *National Plan of Action for Nutrition of Malaysia III (2016 – 2025)*. http://nutrition.moh.gov.my/wpcontent/uploads/2016/12/NPANM_III.pdf
- Ministry of Higher Education Malaysia. (2019). *Statistics of higher education 2019*. <https://www.mohe.gov.my/muat-turun/statistik/stat-2019/235-statistik-pt-2019-04-bab-2-universiti-awam/file>
- Nishida, C., Shetty, P., & Uauy, R. (2004). Introduction. *Public Health Nutrition*, *7*(1a), 99–100. <https://doi.org/10.1079/phn2003591>
- Nunnally, J.C. (1978). *Psychometric theory*, (2nd ed.). McGraw-Hill.
- Patel, H. R. (2020). Evaluating the role of health consciousness in organic food product consumption: Mediating role of attitude. *GFJMR*, *20*(1), 12-22.
- Perneger, T. V., Courvoisier, D. S., Hudelson, P. M., & Gayet-Ageron, A. (2015). Sample size for pre-tests of questionnaires. *Quality of Life Research*, *24*(1), 147–151. <https://doi.org/10.1007/s11136-014-0752-2>
- Pulos, E., & Leng, K. (2010). Evaluation of a voluntary menu-labeling program in full-service restaurants. *American Journal of Public Health*, *100*(6), 1035–1039. <https://doi.org/10.2105/AJPH.2009.174839>

- Radzi, C. W. J. M., Jenatabadi, H. S., Alanzi, A. R. A., Mokhtar, M. I., Mamat, M. Z., & Abdullah, N. A. (2019). Analysis of obesity among Malaysian university students: A combination study with the application of Bayesian structural equation modelling and Pearson correlation. *International Journal of Environmental Research and Public Health*, 16(3). <https://doi.org/10.3390/ijerph16030492>
- Raghupathi, V., & Raghupathi, W. (2020). The influence of education on health: An empirical assessment of OECD countries for the period 1995-2015. *Archives of Public Health*, 78(1), 1–18. <https://doi.org/10.1186/s13690-020-00402-5>
- Ramjan, L. M., & Fogarty, S. (2019). Clients' perceptions of the therapeutic relationship in the treatment of anorexia nervosa: Qualitative findings from an online questionnaire. *Australian Journal of Primary Health*, 25(1), 37–42. <https://doi.org/10.1071/PY18032>
- Rezai, G., Mohamed, Z., Shamsudin, M. N., & Kit Teng, P. (2013). Convenient or trendy: Factors influencing consumption at Malaysian home-grown full-service restaurants. *Journal of International Food and Agribusiness Marketing*, 25(SUPPL1), 19–34. <https://doi.org/10.1080/08974438.2013.798753>
- Roberto, C. A., Larsen, P. D., Agnew, H., Baik, J., & Brownell, K. D. (2010). Evaluating the impact of menu labeling on food choices and intake. *American Journal of Public Health*, 100(2), 312–318. <https://doi.org/10.2105/AJPH.2009.160226>
- Samsudin, A., Jusoff, K., Zaini, Z. M. M., Musa, M., Khalid, K., Ngali, N., & Hamid, M. (2011). Customer's perception towards McDonald's icon-based nutritional labels. *World Applied Sciences Journal*, 12, 1-07.
- Schlenz, M. A., Schmidt, A., Wöstmann, B., Krämer, N., & Schulz-Weidner, N. (2020). Students' and lecturers' perspective on the implementation of online learning in dental education due to SARS-CoV-2 (COVID-19): A cross-sectional study. *BMC Medical Education*, 20(1), 1–8. <https://doi.org/10.1186/s12909-020-02266-3>
- Schornack, B., & Rozensher, S. (2014). The effects of menu calorie labeling on consumer food choice behavior. *American Journal of Health Sciences (AJHS)*, 5(1), 29–36. <https://doi.org/10.19030/ajhs.v5i1.8615>
- Shawky, I. (2019). Examining customers' intention and attitude towards reading restaurants' menu labels by using the theory of planned behaviour. *International Tourism and Hospitality Journal*, 2(4), 1–14.
- Stran, K. A., Knol, L. L., Severt, K., & Lawrence, J. C. (2016). College students' intentions to use calorie information on a restaurant menu: Application of the theory of planned behavior. *American Journal of Health Education*, 47(4), 215-223. <https://doi.org/10.1080/19325037.2016.1179142>
- Tabachnick, B.G. & Fidell, L.S. (2013). *Using multivariate statistics*, (6th ed.). Pearson Education

- Tandon, P. S., Zhou, C., Chan, N. L., Lozano, P., Couch, S. C., Glanz, K., Krieger, J., & Saelens, B. E. (2011). The impact of menu labeling on fast-food purchases for children and parents. *American Journal of Preventive Medicine*, 41(4), 434–438. <https://doi.org/10.1016/j.amepre.2011.06.033>
- Urban, L. E., Weber, J. L., Heyman, M. B., Schichtl, R. L., Verstraete, S., Lowery, N. S., Das, S. K., Schleicher, M. M., Rogers, G., Economos, C., Masters, W. A., & Roberts, S. B. (2016). Energy contents of frequently ordered restaurant meals and comparison with human energy requirements and US Department of Agriculture database information: A multisite randomized study. *Journal of the Academy of Nutrition and Dietetics*, 116(4), 590-598.e6. <https://doi.org/10.1016/j.jand.2015.11.009>
- Vadiveloo, M. K., Dixon, L. B., & Elbel, B. (2011). Consumer purchasing patterns in response to calorie labeling legislation in New York City. *International Journal of Behavioral Nutrition and Physical Activity*, 8(1), 1-9. <https://doi.org/10.1186/1479-5868-8-51>
- Verma, V. K., & Chandra, B. (2018). An application of theory of planned behavior to predict young Indian consumers' green hotel visit intention. *Journal of Cleaner Production*, 172(3), 1152–1162. <https://doi.org/10.1016/j.jclepro.2017.10.047>
- Vijayakumaran, R.K. & Nur Amalina, S. (2018). Influences of nutrition information on fast food consumption among undergraduates. *Food Research*, 2(3), 228 - 233. [https://doi.org/10.26656/fr.2017.2\(3\).288](https://doi.org/10.26656/fr.2017.2(3).288)
- World Cancer Research Fund International. (2018). *NOURISHING Framework. Nutrition label standards and regulations on the use of claims and implied claims on foods.* <https://www.wcrf.org/sites/default/files/Nutrition-labels.pdf>
- World Health Organization. (2018). *Noncommunicable diseases.* <https://www.who.int/news-room/fact-sheets/detail/noncommunicable-diseases>
- World Health Organization. (2019). *Malaysia and WHO call for more investment in primary healthcare the 21st century.* <https://www.who.int/malaysia/news/detail/08-04-2019-malaysia-and-who-call-for-more-investment-in-primary-health-care-the-21st-century>
- World Health Organization. (2020). *Obesity and overweight.* <https://www.who.int/news-room/fact-sheets/detail/obesity-and-overweight>
- Xu, X., Wang, S., & Yu, Y. (2020). Consumer's intention to purchase green furniture: Do health consciousness and environmental awareness matter? *Science of The Total Environment*, 704, 135275. <https://doi.org/10.1016/j.scitotenv.2019.135275>
- Yasmin, S., Panja, T. K., & Baur, B. (2019). A study on prevalence of risk factors of non-communicable diseases among undergraduate medical student. *International Journal Of Community Medicine And Public Health*, 6(7), 2816. <https://doi.org/10.18203/2394-6040.ijcmph20192610>

Yazdanpanah, M., & Forouzani, M. (2015). Application of the Theory of Planned Behaviour to predict Iranian students' intention to purchase organic food. *Journal of Cleaner Production*, 107, 342–352. <https://doi.org/10.1016/j.jclepro.2015.02.071>



Approval from JKEUPM

10/4/21, 7:58 PM

University Putra Malaysia Mail - NOTIFICATION OF ETHICAL APPROVAL FROM JKEUPM-(JKEUPM-2020-439)



ANIS ASHIQIN BINTI RODLI / UPM <197053@student.upm.edu.my>

NOTIFICATION OF ETHICAL APPROVAL FROM JKEUPM-(JKEUPM-2020-439)

Jawatankuasa Etika Universiti / UPM <jkeupm@upm.edu.my>

Fri, Feb 19, 2021 at 4:54 PM

To: SYAFIQAH BINTI RAHAMAT / MEDIC <syafiqahrahamat@upm.edu.my>

Cc: 197053@student.upm.edu.my, Abdul Hadi Abd Rashid <abdulhadi@upm.edu.my>


Dear Prof/Dr./Mr/Ms.,

Enclosed is the notification of ethical approval from the JKEUPM.

Thank you

Secretariat of JKEUPM
Unit of Ethics Research (Level 5)
Office of the Deputy Vice Chancellor (Research & Innovation)
Universiti Putra Malaysia

Tel: 03-97691605/1244

 **JKEUPM-2020-439.pdf**
64K

Ref. no: UPM/TNCPI/RMC/JKEUPM/1.4.18.2 (JKEUPM)

Date: 14 February 2021

Dear Prof./Dr./Mr./Ms.,

APPLICATION FOR JKEUPM ETHICAL CLEARANCE: APPROVED

With reference to the above, I am pleased to inform you that your application for ethical clearance for the research project entitled '**Factors Influencing Intentions to Use Menu Labelling among Public University Students in Klang Valley**' has been approved.

Please note that the official letter of approval will be issued as soon as possible. However, the ethical clearance is considered effective from the date of this email, and you may now proceed with your research.

Kindly remind the ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.

Researchers should also complete a Study Final Report upon study completion. The form can be obtained from the Ethics Committee for Research Involving Human Subjects (JKEUPM) website (<http://www.tncpi.upm.edu.my/faildokumen>).

If you have any enquiries, please contact Ms. Nurulhasanah Ishak (03-97691605) or Ms. Nor Ellia Abd Ajis (03-97691244).

Note: Please use this reference number for any transaction:-

JKEUPM-2020-439

Thank you.

Yours faithfully,

Prof. Dr. Zamberi Sekawi

Chair

Ethics Committee for Research Involving Human Subjects

Universiti Putra Malaysia

Respondent's Information Sheet and Consent Form
(English Version)



**JAWATANKUASA ETIKA UNIVERSITI UNTUK
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM SERDANG,
SELANGOR, MALAYSIA**

**FORM 2.4: RESPONDENT'S INFORMATION SHEET AND INFORMED CONSENT
FORM**

Please read the following information carefully and do not hesitate to discuss any questions you may have with the researcher.

1. STUDY TITLE :

Factors Influencing Intention to Use Menu Labelling Among Public University Students in Klang Valley.

2. INTRODUCTION:

You are invited to participate in a study. This electronic form has information to help to decide whether or not you wish to participate – please review it carefully. Research studies include only people who choose to take part – your participation is completely voluntary and you can stop at any time.

The purpose of this study is to examine the factors influence intention to use menu labelling among public university students. Data from these studies will be used by the investigator for academic purposes such as Bachelor Dissertation, conference proceedings, and journal articles.

3. WHAT WILL YOU HAVE TO DO?

If you agree to participate, you will be asked to complete an electronic questionnaire. Your participation will last approximately 10 to 15 minutes.

4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?

You should **NOT** participate in this study if you are: (a) under 18 years old, (b) a private

university student, (c) a public university student outside Klang Valley area, (d) a student from Faculty of Medicine and Health Sciences, (e) a lecturer, (f) a university staff.

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

If you decide to participate in this study, there will be no direct benefit to you.

(b) TO THE INVESTIGATOR?

It is hoped that the information gained in this study will help the policy makers to have a better understanding of consumer behaviour in promoting health eating.

Researchers plan to use information from this study for scholarly activities, such as research conference proceedings and journal articles.

Information collected, including your response during this study, may be shared with other researchers or used for future research studies. We will not obtain additional informed consent from you before sharing the de-identified data.

6. WHAT ARE THE POSSIBLE RISKS?

There are no any foreseeable discomforts or risks to the participants from taking part in this study.

7. WILL THE INFORMATION THAT YOU PROVIDE AND YOUR IDENTITY REMAIN CONFIDENTIAL?

Your participation will be anonymous. It is possible that other people and offices responsible for making sure research is done safely and will review your response. This includes auditing department of University Putra Malaysia, and *Jawatankuasa Etika University Putra Malaysia* (JKEUPM) – a committee that reviews and approves human subject research studies may inspect and/or copy study records for quality assurance and data analysis.

8. ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

If you have any questions during the course of the research, please contact Anis Ashiqin Binti Rodli, 017-6749771, 197053@student.upm.edu.my; Dr Syafiqah Binti Rahamat, 03-

97692465, syafiqahraamat@upm.edu.my.

YOUR CONSENT

By answering “Yes” to the next question, you are agreeing to participate in this study. Make sure you understand what the study involves before you agree. If you have questions about the study you could contact us via email: 197053@student.upm.edu.my OR syafiqahraamat@upm.edu.my.

I certify that I am **18 years old or over and agree** to participate in this research study.



Please initial here if you have read and understood the contents of this page_____

9. CONSENT

I Identity Card No.
address.....
.....hereby voluntarily agree to
take part in the research stated above *(clinical /drug trial/video recording/ focus
group/interview-based/ questionnaire-based).

I have been informed about the nature of the research in terms of methodology, possible
adverse
effects and complications (as written in the Respondent’s Information Sheet). I understand
that I have the right to withdraw from this research at any time without giving any reason
whatsoever. I also understand that this study is confidential and all information provided with
regard to my identity will remain private and confidential.

I* wish / do not wish to know the results related to my participation in the research

I agree/do not agree that the images/photos/video recordings/voice recordings related to me
be used in any form of publication or presentation (if applicable)

* delete where necessary

Signature Signature
(Respondent) (Witness)

Date : Name :

I/C No. :

I confirm that I have explained to the respondent the nature and purpose of the above-
mentioned research.

Date Signature
(Researcher)

Respondent's Information Sheet and Consent Form
(Malay Version)



**JAWATANKUASA ETIKA UNIVERSITI UNTUK
PENYELIDIKAN MELIBATKAN MANUSIA (JKEUPM)
UNIVERSITI PUTRA MALAYSIA, 43400 UPM
SERDANG,
SELANGOR, MALAYSIA**

BORANG 2.4: PENERANGAN DAN PERSETUJUAN RESPONDEN

Sila baca maklumat berikut dengan teliti. Sekiranya anda mempunyai sebarang pertanyaan, sila kemukakan kepada penyelidik.

1. TAJUK KAJIAN

Faktor yang mempengaruhi keinginan untuk menggunakan pelabelan menu di kalangan pelajar universiti awam di Lembah Klang.

2. PENGENALAN

Anda dijemput untuk mengambil bahagian dalam satu kajian. Borang elektronik ini mempunyai maklumat untuk membantu anda menentukan sama ada mahu atau tidak mengambil bahagian dalam kajian - sila semak dengan teliti. Kajian penyelidikan hanya merangkumi orang yang memilih untuk mengambil bahagian – penyertaan anda adalah secara sukarela dan anda boleh berhenti pada bila-bila masa.

Tujuan kajian ini adalah untuk mengkaji faktor yang mempengaruhi keinginan untuk menggunakan pelabelan menu dalam kalangan pelajar universiti awam. Data kajian ini akan digunakan oleh penyiasat atas tujuan akademik seperti Disertasi Sarjana Muda, prosiding persidangan, dan artikel jurnal.

3. APAKAH YANG PERLU ANDA LAKUKAN?

Sekiranya anda bersetuju untuk mengambil bahagian, anda akan diminta untuk melengkapkan soal selidik elektronik. Penyertaan anda memerlukan lebih kurang 10 hingga 15 minit.

4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Anda TIDAK boleh mengambil bahagian dalam kajian ini jika anda: (a) berumur di bawah 18 tahun, (b) ialah pelajar universiti swasta, (c) ialah pelajar universiti awam di luar kawasan Lembah Klang, (d) ialah pelajar dari Fakulti Perubatan dan Sains Kesihatan, (e) ialah pensyarah, (f) ialah kakitangan universiti.

5. APAKAH FAEDAH MENYERTAI KAJIAN INI?

a) KEPADA ANDA SEBAGAI PESERTA?

Sekiranya anda memutuskan untuk mengambil bahagian dalam kajian ini, tidak akan ada faedah langsung kepada anda.

b) KEPADA PENYELIDIK?

Diharapkan maklumat yang diperoleh dalam kajian ini dapat membantu pembuat dasar untuk memiliki pemahaman yang lebih baik mengenai tingkah laku pengguna dalam mempromosikan pemakanan kesihatan.

Penyelidik merancang untuk menggunakan maklumat daripada kajian ini untuk aktiviti ilmiah, seperti prosiding persidangan penyelidikan dan artikel jurnal.

Maklumat yang dikumpulkan, termasuk tindak balas anda semasa kajian ini, dapat dikongsi dengan penyelidik lain atau digunakan untuk kajian penyelidikan masa depan. Kami tidak akan mendapat persetujuan tambahan daripada anda sebelum berkongsi data yang tidak dikenal pasti.

6. ADAKAH IA BERISIKO?

Tidak ada ketidakselesaan atau risiko yang dapat diramalkan kepada peserta daripada mengambil bahagian dalam kajian ini.

7. ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Penyertaan anda tidak akan dikenali. Ada kemungkinan orang dan pejabat lain yang bertanggungjawab untuk memastikan penyelidikan dilakukan dengan selamat dan akan mengkaji tindak balas anda. Ini termasuk jabatan audit Universiti Putra Malaysia, dan Jawatankuasa Etika University Putra Malaysia (JKEUPM) - sebuah jawatankuasa yang

mengkaji dan meluluskan kajian penyelidikan subjek manusia boleh memeriksa dan / atau menyalin rekod kajian untuk jaminan kualiti dan analisis data.

8. SIAPA YANG SAYA PERLU HUBUNGI SEKIRANYA SAYA MEMPUNYAI SOALAN TAMBAHAN SEMASA MENGIKUTI PENYELIDIKAN INI?

Sekiranya anda mempunyai pertanyaan semasa menjalankan penyelidikan, sila hubungi Anis Ashiqin Binti Rodli, 017-6749771, 197053@student.upm.edu.my; Dr Syafiqah Binti Rahamat, 03-97692465, syafiqahrahatam@upm.edu.my.

PERSETUJUAN ANDA

Dengan menjawab "Ya" untuk pertanyaan berikutnya, anda setuju untuk mengambil bahagian dalam kajian ini. Pastikan anda memahami apa yang melibatkan kajian sebelum anda bersetuju. Sekiranya anda mempunyai pertanyaan mengenai kajian, anda boleh menghubungi kami melalui e-mel: 197053@student.upm.edu.my ATAU syafiqahrahatam@upm.edu.my.

Saya mengesahkan bahawa saya berumur 18 tahun atau lebih dan bersetuju untuk mengambil bahagian dalam kajian penyelidikan ini.

Sila tandatangan di sini sekiranya anda telah membaca dan memahami kandungan halaman ini _____

9. PERSETUJUAN

Saya No Kad Pengenalan.....
beralamat.....
.....dengan ini bersetuju untuk mengambil bahagian
secara sukarela dalam penyelidikan yang tersebut di atas *(kajian klinikal/percubaan ubat-
obatan/rakaman video/kumpulan sasaran/temuduga/ soal selidik).

Saya telah diberi penjelasan secara menyeluruh mengenai penyelidikan ini dari segi metodologi,
risiko dan komplikasi (seperti tertulis pada Helaian Penerangan Responden). Saya memahami
bahawa saya berhak menarik diri dari penyelidikan ini pada bila-bila masa tanpa memberi
sebarang alasan.Saya juga memahami bahawa sebarang maklumat yang berkaitan identiti saya
akan dirahsiakan.

Saya* berminat / tidak berminat untuk mengetahui keputusan kajian yang melibatkan saya.
Saya* bersetuju/tidak bersetuju untuk imei/gambar/rakaman video/ rakaman suara digunakan
dalam apa jua bentuk penerbitan atau pembentangan. (sekiranya berkaitan).

*potong yang tidak berkenaan

Tandatangan Tandatangan
(Responden) (Saksi)

Tarikh :..... Nama :.....

No. K/P:

Saya mengesahkan bahawa saya telah menerangkan kepada responden ini sifat dan tujuan
penyelidikan yang tersebut di atas.

Tarikh Tandatangan
(Penyelidik)

Questionnaire



**DEPARTMENT OF DIETETICS
FACULTY OF MEDICINE AND HEALTH SCIENCES**

Questionnaire form/ *Borang soal selidik*

Research title/ *Tajuk penyelidikan:*

**Factors Influencing Intention to Use Menu Labelling Among Public University Students
in Klang Valley**

***(Faktor yang Mempengaruhi Keinginan untuk Menggunakan Pelabelan Menu di
Kalangan Pelajar Universiti Awam di Lembah Klang)***

Researcher's Name/ *Nama penyelidik:* Anis Ashiqin Binti Rodli

Matric number/ *Nombor matrik:* 197053

Supervisor's Name/ *Name pemantau:* Dr. Syafiqah Binti Rahamat

Instruction/ *Arahan:*

This study is conducted for academic purpose. All information will be kept private and confidential. Thank you for your cooperation in answering this questionnaire.

Penyelidikan ini hanya untuk kegunaan akademik sahaja. Sebarang maklumat akan disimpan secara sulit. Terima kasih atas kerjasama anda dalam menjawab soal selidik ini.

Kindly answer the question below before moving to the next section. / Sila jawab soalan berikut sebelum beralih ke bahagian seterusnya.

Are you 18 years old and above today? / Adakah anda berumur 18 tahun dan ke atas pada hari ini?

Are you a public university student? / Adakah anda seorang pelajar universiti awam?

Are you a student from faculty of medicine and health sciences? / Adakah anda seorang pelajar dari fakulti perubatan dan sains kesihatan?

I certify that I am 18 years old or over and voluntarily agree to participate in this research study. / Saya mengesahkan bahawa saya berumur 18 tahun ke atas dan secara sukarela bersetuju untuk mengambil bahagian dalam kajian penyelidikan ini.

SECTION / SEKSYEN 1

1. Age / Umur: _____

2. Sex / Jantina:

() Male / Lelaki

() Female / Perempuan

3. Education / Pendidikan:

() Foundation / Asasi

() Diploma

() Degree / Ijazah Sarjana Muda

() Master / Ijazah Sarjana

() PhD / Doktor Falsafah

4. Sponsorship / *Tajaan*:

- Self-sponsored / *Tajaan sendiri*
- Scholarship / *Biasiswa*
- Study loan / *Pinjaman pelajaran*

5. Which of the following you think yourselves belong to? / *Pada pendapat anda, anda rasa anda tergolong dalam golongan mana?*

- Underweight / *Kurang berat badan*
- Normal weight / *Berat badan normal*
- Overweight / *Berat badan berlebihan*
- Obese / *Obes*

6. Current weight (kg) / *Berat badan semasa (kg)*: _____

7. Current height (m) / *Ketinggian badan semasa (m)*: _____

8. In a week, how many times having meals at restaurants or ordering food online? / *Dalam seminggu, berapa kali anda makan di restoran atau memesan makanan secara dalam talian?*

- None / *Tiada*
- Once a week / *Sekali seminggu*
- Two times a week / *Dua kali seminggu*
- Three times a week / *Tiga kali seminggu*
- Four times a week / *Empat kali seminggu*
- Five times a week / *Lima kali seminggu*
- Six times a week / *Enam kali seminggu*
- Everyday / *Setiap hari*

The following statements are about calorie and nutrition information posted on restaurant menus. Please choose the number that best indicates your feeling towards the statements below. / *Pernyataan berikut adalah mengenai maklumat kalori dan pemakanan yang dipaparkan pada menu restoran. Sila pilih nombor yang paling menunjukkan perasaan anda terhadap pernyataan di bawah.*

| No. | Statements | Scales | | | | | | |
|----------------------------|--|---|-----------------------------------|---|---------|--|----------------------------|--|
| SECTION / SEKSYEN 2 | | | | | | | | |
| 1 | I think using calorie and nutrition information posted on restaurant menus would be... / <i>Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran adalah...</i> | Very difficult / <i>Sangat susah</i> | Difficult / <i>Susah</i> | Somewhat difficult / <i>Agak susah</i> | Neutral | Somewhat easy / <i>Agak mudah</i> | Easy / <i>Mudah</i> | Very easy / <i>Sangat mudah</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | I think using calorie and nutrition information posted on restaurant menus would be... / <i>Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran adalah...</i> | Very inconvenient / <i>Sangat menyusahkan</i> | Inconvenient / <i>Menyusahkan</i> | Somewhat inconvenient / <i>Agak menyusahkan</i> | Neutral | Somewhat convenient / <i>Agak senang</i> | Convenient / <i>Senang</i> | Very convenient / <i>Sangat senang</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----------------------------|--|---|-----------------------------------|---|---------|---|---------------------------|---------------------------------------|
| 3 | I think using calorie and nutrition information posted on restaurant menus would be... / <i>Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran adalah...</i> | Very unhelpful / <i>Sangat tidak membantu</i> | Unhelpful / <i>Tidak membantu</i> | Somewhat unhelpful / <i>Agak tidak membantu</i> | Neutral | Somewhat helpful / <i>Agak membantu</i> | Helpful / <i>Membantu</i> | Very helpful / <i>Sangat membantu</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | Restaurants that have calorie and nutrition information on their menus are... / <i>Restoran yang mempunyai maklumat kalori dan pemakanan pada menu mereka adalah...</i> | Very unhelpful / <i>Sangat tidak membantu</i> | Unhelpful / <i>Tidak membantu</i> | Somewhat unhelpful / <i>Agak tidak membantu</i> | Neutral | Somewhat helpful / <i>Agak membantu</i> | Helpful / <i>Membantu</i> | Very helpful / <i>Sangat membantu</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | Restaurants that have calorie and nutrition information on their menus are... / <i>Restoran yang mempunyai maklumat kalori dan pemakanan pada menu mereka adalah...</i> | Very bad / <i>Sangat tidak baik</i> | Bad / <i>Tidak baik</i> | Somewhat bad / <i>Agak tidak baik</i> | Neutral | Somewhat good / <i>Agak baik</i> | Good / <i>Baik</i> | Very good / <i>Sangat baik</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SECTION / SEKSYEN 3 | | | | | | | | |

| | | | | | | | | |
|---|--|---|-------------------------|---------------------------------------|---------|------------------------------|----------------|--------------------------------|
| 1 | Those who close to me think I should use calorie and nutrition information posted on restaurant menus if they are available. / Mereka yang rapat dengan saya berpendapat saya harus menggunakan maklumat kalori dan pemakanan pada menu restoran sekiranya ada. | Strongly disagree / Sangat tidak setuju | Disagree / Tidak setuju | Somewhat disagree / Agak tidak setuju | Neutral | Somewhat agree / Agak setuju | Agree / Setuju | Strongly agree / Sangat setuju |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | My friends think that I should use calorie and nutrition information posted on restaurant menus if they are available. / Rakan-rakan saya berpendapat saya harus menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran sekiranya ada. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | People close to me expected me to use calorie and nutrition information posted on the restaurant menus if they are available. / Orang yang dekat dengan saya menjangkakan saya menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran sekiranya ada. | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|--|---|---|---|---|---|---|---|
| 4 | I feel under social pressure to use calorie and nutrition information posted on restaurant menus if they are available. / <i>Saya rasa tertekan untuk menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran sekiranya ada.</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | Most people who are important to me think that I should use nutrition and calorie information posted on the restaurant menus when ordering foods if they are available. / <i>Kebanyakan orang yang penting bagi saya berpendapat saya harus menggunakan maklumat pemakanan dan kalori yang dipaparkan pada menu restoran semasa memesan makanan sekiranya ada.</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

SECTION / SEKSYEN 4

What factors or circumstances would enable you to use calorie and nutrition information on restaurant menus before placing an order? / *Faktor atau keadaan apa yang membolehkan anda menggunakan maklumat kalori dan pemakanan pada menu restoran sebelum membuat pesanan?*

| | | | | | | | | |
|---|---|---|-----------------------------------|---|---------|--|--------------------------|--|
| 1 | Having good eating habits / <i>Mempunyai tabiat makan yang baik</i> | Strongly disagree / <i>Sangat tidak setuju</i> | Disagree / <i>Tidak setuju</i> | Somewhat disagree / <i>Agak tidak setuju</i> | Neutral | Somewhat agree / <i>Agak setuju</i> | Agree / <i>Setuju</i> | Strongly agree / <i>Sangat setuju</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | Time and effort / <i>Masa dan usaha</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | Ability to understand calorie and nutrition information / <i>Keupayaan memahami maklumat kalori dan pemakanan</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | Format of calorie and nutrition information on restaurant menus (For examples: font size, colour, design) / <i>Format maklumat kalori dan pemakanan pada menu restoran (Contohnya: saiz font, warna, reka bentuk)</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | Type of information posted on restaurant menus (For examples: calorie only / nutrition information only / calorie information with daily recommendation) / <i>Jenis maklumat yang dipaparkan pada menu restoran</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

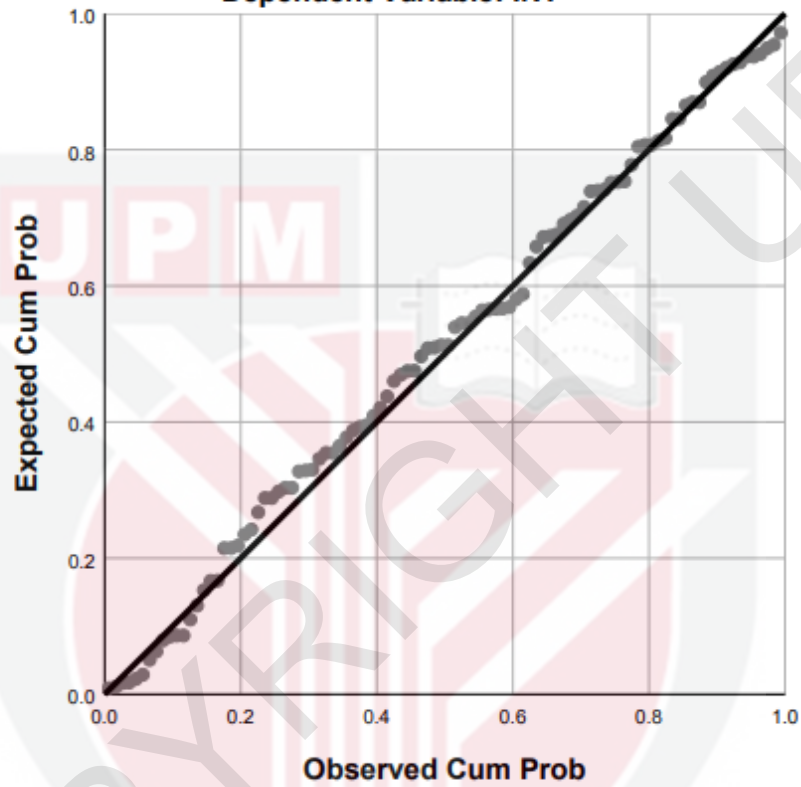
| | | | | | | | | |
|----------------------------|--|--|--------------------------------|--|---------|-------------------------------------|-----------------------|---------------------------------------|
| | <i>(Contohnya: kalori sahaja / maklumat pemakanan sahaja / maklumat kalori dengan cadangan harian)</i> | | | | | | | |
| SECTION / SEKSYEN 5 | | | | | | | | |
| 1 | I usually reflect on my health / <i>Saya biasanya memikirkan keadaan kesihatan saya.</i> | Strongly disagree / <i>Sangat tidak setuju</i> | Disagree / <i>Tidak setuju</i> | Somewhat disagree / <i>Agak tidak setuju</i> | Neutral | Somewhat agree / <i>Agak setuju</i> | Agree / <i>Setuju</i> | Strongly agree / <i>Sangat setuju</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | I am very concerned about my health. / <i>Saya sangat mementingkan kesihatan saya</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | I am aware of my health status. / <i>Saya sedar akan status kesihatan saya</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 4 | I always check my health. / <i>Saya selalu memeriksa kesihatan saya.</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | I think I am conscious of my health. / <i>Saya rasa saya sedar akan kesihatan saya.</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|----------------------------|--|--|--------------------------------|--|---------|-------------------------------------|-----------------------|---------------------------------------|
| 6 | I often think about the diet-related disease (eg: diabetes, hypertension). / <i>Saya sering berfikir tentang penyakit yang berkaitan dengan diet (contohnya: diabetes, darah tinggi).</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| SECTION / SEKSYEN 6 | | | | | | | | |
| 1 | I expect to use calorie and nutrition information posted on the restaurant menu if they are available. / <i>Saya menjangkakan akan menggunakan maklumat kalori dan pemakanan pada menu restoran sekiranya ada.</i> | Strongly disagree / <i>Sangat tidak setuju</i> | Disagree / <i>Tidak setuju</i> | Somewhat disagree / <i>Agak tidak setuju</i> | Neutral | Somewhat agree / <i>Agak setuju</i> | Agree / <i>Setuju</i> | Strongly agree / <i>Sangat setuju</i> |
| | | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 2 | I want to use calorie and nutrition information posted on the restaurant menu if they are available. / <i>Saya ingin menggunakan maklumat kalori dan pemakanan pada menu restoran sekiranya ada.</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 3 | I intend to use calorie and nutrition information posted on the restaurant menu if they are available. / <i>Saya berhasrat untuk menggunakan</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

| | | | | | | | | |
|---|--|---|---|---|---|---|---|---|
| | <i>maklumat kalori dan pemakanan pada menu restoran.</i> | | | | | | | |
| 4 | If calorie and nutrition information is readily posted on the restaurant menu, I will always use it. / <i>Sekiranya maklumat kalori dan pemakanan dipaparkan pada menu restoran, saya akan selalu menggunakannya.</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
| 5 | I am willing to use calorie and nutrition information posted on the restaurant menus if they are available. / <i>Saya bersedia menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran sekiranya ada.</i> | 1 | 2 | 3 | 4 | 5 | 6 | 7 |

Normal P-P Plot

Normal P-P Plot of Regression Standardized Residual
Dependent Variable: INT



Turnitin Report

FYP THESIS_ANIS ASHIQIN BINTI RODLI

ORIGINALITY REPORT

27 %
SIMILARITY INDEX

23 %
INTERNET SOURCES

10 %
PUBLICATIONS

14 %
STUDENT PAPERS
