UNIVERSITI PUTRA MALAYSIA

FACTORS ASSOCIATED WITH INTENTION TO USE MENU LABELLING AMONG UNIVERSITY STUDENTS IN SELECTED PRIVATE UNIVERSITY IN SELANGOR

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

This project entitled "Factors Associated with Intention to Use Menu Labelling Among University Students in Selected Private University in Selangor" was prepared by Muhamad Ikram bin Halim and submitted to the Faculty of Medicine and Health Sciences as a partial fulfilment 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.

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Tables of Contents

LIST OF TABLES

LIST OF FIGURES

LIST OF APPENDICES

ABSTRACT

FACTORS ASSOCIATED WITH INTENTION TO USE MENU LABELLING AMONG UNIVERSITY STUDENTS IN SELECTED PRIVATE UNIVERSITY IN SELANGOR

Ikram Halim, Syafiqah Rahamat

Menu labelling policies has been implemented in many developed countries. In Malaysia, the government plans to implement it in the year 2025. This study aimed to determine the intention to use menu labelling among private university students in Klang Valley by using an extended theory of planned behaviour (TPB) questionnaire. A total of 94 respondents among private university students in the Klang Valley participated through an online-cross sectional survey using a snowball sampling. Questions used in the questionnaire were adapted from previous studies. The questionnaire consists of three sections: socioeconomic characteristics, social-demographics, and extended theory of planned behaviour construct questions. TPB include attitude (behavioural beliefs and outcome evaluations), subjective norms (normative beliefs and motivation to comply), perceived behavioural control (people's perception of the ease or difficulty of performing the behavior of interest). This is to determine the intention to use menu labelling among private universities student in Klang Valley. The respondent's age is ranging from 19 to 40 years old with mean and standard deviation (23.11 ± 3.078). Most of the respondents were female (n =62, 66.0%) and almost half of the participants were Chinese (n =44, 46.8%). Most of them were from B40 household groups (n =41, 43.6%). More than half of the participants were having normal weight (n =51, 54.3%) and a total of 30 respondents (31.9%) reported they eat out once in a week (n =30, 31.9%). All constructs from extended theory of planned behaviour were significantly influence respondents' intention to use menu labelling, except for perceived behaviour construct. As the results this study found that attitude was significant with (β=.545, p=.001), subjective norm (β=.215, p=.017) and health consciousness (β=.233, p=.005). In conclusion, the most significant factors that influence private university students' intention to use menu labelling in Klang Valley were attitude, subjective norm, and their health consciousness. Therefore, the health professional such as dietitian could focus on these factors to boost intention to use menu labelling among private university students.

ABSTRAK

FAKTOR YANG BERSAMA DENGAN INTENSI UNTUK MENGGUNAKAN MENU LABEL DI ATAS PELAJAR UNIVERSITI DI UNIVERSITI SWASTA TERPILIH DI SELANGOR

Ikram Halim, Syafiqah Rahamat

Dasar pelabelan menu telah dilaksanakan di banyak negara maju. Di Malaysia, pemerintah merancang untuk melaksanakannya pada tahun 2025. Kajian ini bertujuan untuk menentukan niat untuk menggunakan pelabelan menu di kalangan pelajar universiti swasta di Lembah Klang dengan menggunakan teori soal selidik tingkah laku terancang (TPB). Seramai 94 responden di kalangan pelajar universiti swasta bahagian melalui tinjauan keratan rentas dalam talian menggunakan persampelan bola salji. Soalan yang digunakan dalam soal selidik disesuaikan dari kajian sebelumnya. Soal selidik terdiri daripada tiga bahagian: ciri sosioekonomi, demografi sosial, dan teori lanjutan mengenai persoalan pembinaan tingkah laku yang dirancang. TPB merangkumi sikap (kepercayaan tingkah laku dan penilaian hasil), norma subjektif (kepercayaan normatif dan motivasi untuk mematuhi), kawalan tingkah laku yang dirasakan (persepsi orang tentang kemudahan atau kesukaran melakukan tingkah laku yang diminati). Ini Untuk menentukan niat untuk menggunakan pelabelan menu di kalangan pelajar universiti swasta di Lembah Klang. Umur responden berumur antara 19 hingga 40 tahun dengan sisihan min dan piawai (23.11 ± 3.078). Sebilangan besar responden adalah wanita (n = 62, 66.0%) dan hampir separuh daripada peserta adalah orang Cina (n = 44, 46.8%). Sebilangan besar dari mereka berasal dari kumpulan isi rumah B40 (n = 41, 43.6%). Lebih daripada separuh peserta mempunyai berat badan normal (n = 51, 54.3%) dan seramai 30 responden (31.9%) melaporkan mereka makan sekali dalam seminggu (n = 30, 31.9%). Semua konstruk dari teori tingkah laku terancang yang meluas mempengaruhi niat responden untuk menggunakan pelabelan menu, kecuali untuk konstruk tingkah laku yang dirasakan. Sebagai hasil kajian ini mendapati bahawa sikap itu signifikan dengan (β = .545, p = .001), norma subjektif (β = .215, p = .017) dan kesedaran kesihatan (β = .233, p = .005). Kesimpulannya, faktor terpenting yang mempengaruhi niat pelajar universiti swasta untuk menggunakan pelabelan menu di Lembah Klang adalah sikap, norma subjektif, dan kesedaran kesihatan mereka. Oleh itu, profesional kesihatan seperti pakar diet boleh menumpukan perhatian kepada faktor-faktor ini untuk meningkatkan niat untuk menggunakan pelabelan menu di kalangan pelajar universiti swasta.

CHAPTER 1

Introduction

1.1 Background of Study

Menu labelling is a list of calories, saturated fat, sodium and/or carbohydrates information posted on the menu (Ho et al., 2020). The aim of menu labelling is to assist customers make informed choices when eating out. The implementation of menu labelling could help the public to track and recognize healthy foods when eating outside the home; hence customers can make the healthier choices (Kiszko et al., 2014). There are many advantages of menu labelling implementation. Some studies reported menu labelling could be a tool to combat obesity although obesity it only gives a small effect on individuals but can have huge impact when it comes to population level (Storcksdieck genannt Bonsmann & Wills, 2012).

The other benefit of menu labelling is to encourage consumers to eat healthfully when eating out and it is one of the important ways toward improving the public's eating habits (Block & Roberto, 2014). Menu labelling also helps in menu reformulation of new menu items (Littlewood et al., 2016). Menu labelling defines differently across the globe as traffic light label, nutrient information etc. However for this study, menu labelling defines as calories information on menu board or display on online menu that provide the correct calories value of the food (Morley et al., 2013). In Malaysia, there were no menu labelling policies for the implementation; therefore, the Malaysia government plans to implement a menu labelling policy in 2025 based on National Plan of Action for Nutrition of Malaysia III (2016-2025) (National Coordinating Committee on Food and Nutrition, 2016).

1.2 Problem Statements

Obesity often results from the unhealthy eating pattern for years and sedentary lifestyle with less physical activity since at a younger age. This transition happens from adolescence to early adulthood which is a critical period for growth for humans (Nelson et al., 2009). Now, there is no single intervention that can fully solve the obesity epidemic, however by using menu labelling can be part of a systemic intervention to address this epidemic (Chan & Woo, 2010). In Malaysia, the prevalence of overweight among adults was 29.4% and 30.0%, while obesity prevalence was 15.1% and 17.7% respectively (Ganzfried, 2019; Suzana et al., 2012). World Health Organization (2018) reported that Malaysia has the highest rate of obesity and overweight among Asian countries with 64% of male and 65% of female population being either obese or overweight.

According to MOH (2018), Malaysia has the highest prevalence of obesity among adults in Southeast Asia. This is very crucial as obesity can contribute to obesity-related non-communicable diseases which is metabolic syndrome, diabetes and coronary heart diseases (Misra & Khurana, 2011).

Studies found the association between high consumption of outside food or eating out with obesity (Bezerra & Sichieri, 2009). This is because individuals tend to take high calories food. It is hard for consumers to determine their calorie consumption when eating out because no menu labelling is provided on the foodservice establishments menus (e.g. restaurants menus) (Kiszko et al., 2014) . In Malaysia, there is no menu labelling policies, while in other countries including Canada, United Kingdom, United States of America already implemented menu labelling policies as a step to prevent obesity (Sofía Rincón-Gallardo et al., 2020). Therefore, the proposed study examines factors that are associated

with individuals' intentions to use menu labelling. This study conducted among private university students because students tend to eat at restaurants or café
more compare to other groups (Sogari et al., 2018). The other reason is there is no known study conducted among private university students for factors associated with individuals' intentions to use menu labelling. Other than that, private university students commonly came from high demographic status family background which significantly related to high eating out behaviour (Hu et al., 2017). Although there are a previous study on the intention to use menu labelling in Malaysia, however, the study only conducted among fast food consumers and not private university students (Delvarani et al., 2013).

The extended theory of planned behaviour (TPB) was used as an underpinning theory of the proposed study in which health consciousness construct was added in the TPB model (Shin et al., 2018). The study found that health consciousness also influences customers intention when it comes to healthy eating or buying organic menu items. This is because health consciousness has been found as significant influences on health behaviours including intention to use menu labelling (Patel, 2020). In today's world, people concern more with their health status due to the public advertisement to increase awareness, this might also influence their intention to use menu labelling. Other than that, the inclusion of health consciousness construct is to fill the gap from previous study on intention to use menu labelling which using TPB without this construct (Delvarani et al., 2013). Therefore, this study also examines to what extend health consciousness influence private university students to use menu labelling.

1.3 Significance of Study

Currently, in Malaysia providing calorie information and other nutrition information on the menu is not compulsory (Sofía Rincón-Gallardo et al., 2020), therefore, the actual behaviours such as the use of menu labelling and purchase behaviour cannot be assessed. As an alternative, in the proposed study, factors associated with intention to use menu labelling among university students in selected private university in Selangor will be assessed. Malaysia government plans to implement the menu labelling law in 2025. Thus, by knowing factors that influence individuals' intentions to use menu labelling may benefit cafeteria or restaurant management to better understand their consumer behaviours related to menu labelling. Next, the intention to use menu labelling data may help the policy maker to consider menu labelling implementation to all restaurants or cafeteria. It also can benefit public especially private university students as the menu labelling can be an education tool for those who want to start healthy eating habits and function as guidance when choosing food. On the other hand, it will benefit other researchers to conduct more specific study in the implementation of menu labelling in Malaysia by providing the data on intention of using menu labelling.

1.4 Objectives

1.4.1 General Objective

To identify factors that influence intentions to use menu labelling among private university students.

1.4.2 Specific Objectives

I. To examine the level of attitude influence private university student's intention to use menu labelling.

II. To examine the level of subjective norm influence private university student's intention to use menu labelling.

III. To examine the level of perceived behaviour control influence private university student's intention to use menu labelling.

IV. To examine the level of health consciousness influence private university student's intention to use menu labelling.

1.5 Conceptual Framework

The conceptual framework for the present study was demonstrated in Figure 1.0. One dependent variable (DV) was chosen which was intention. There were four independent variables (IV) consist of attitude, subjective norm, perceived behaviour control and health consciousness.

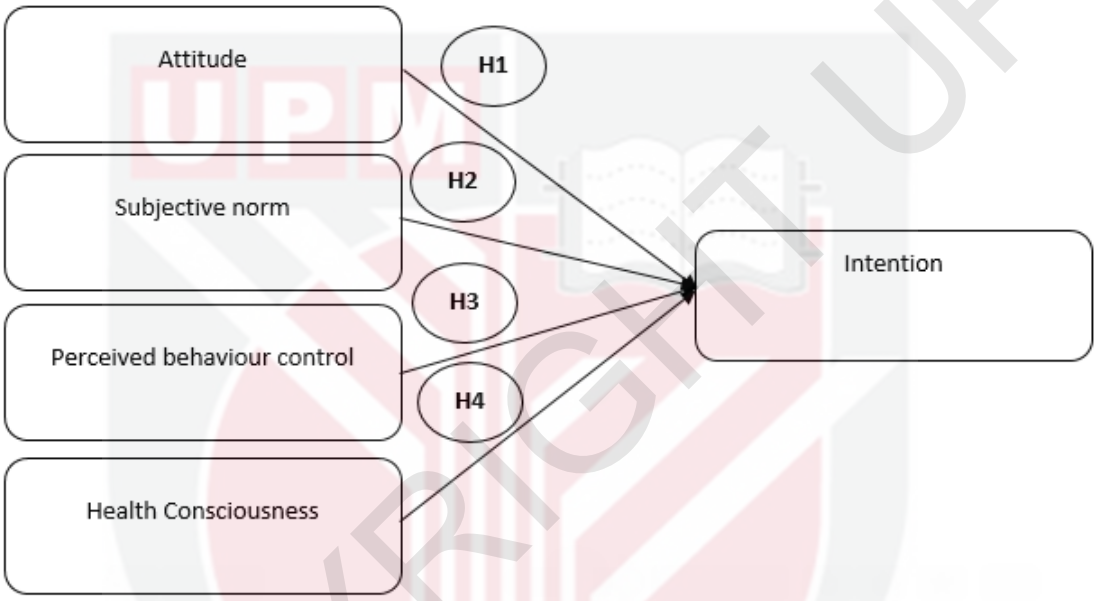

Figure 1. Conceptual framework of the extended theory of planned behaviour.

CHAPTER 2

Literature Review

2.1 Overweight, Obesity and Non-Communicable Diseases

According to WHO (2017), the double burden of malnutrition is defined as the problem of undernutrition related to overweight and obesity and with the coexistence of non-communicable diseases. These issues commonly happen in high-income countries, however nowadays most middle-income and low-income countries also have this problem (Min et al., 2018). One of the factors of this problem is ubiquitous access to convenient and inexpensive food also changed normative eating behaviour, with more people snacking, eating in restaurants, and spending less time preparing meals at home (Hall, 2018).

Eating out and food consumed at restaurants, compared to foods prepared at home, has higher calories, total fat, saturated fat, and cholesterol. The micronutrient includes dietary fibre, calcium, and iron, per calorie also less (Guthrie et al., 2002). This will lead to obesity which may cause others non-communicable diseases as obesity is associated with an elevated risk of several major non-communicable diseases, including type 2 diabetes, coronary heart disease, stroke, asthma, and several cancers (Nyberg et al., 2018).

2.2 Overweight and Non-Communicable Diseases in Malaysia

In Malaysia, according to National Health and Morbidity Survey (NHMS) in 2019, 50.1% of adults are overweight or obese (30.4% overweight and 19.7% obese). While the 52.6% of adults have abdominal obesity. It shows that Malaysia also one of the countries that have high risk to non-communicable diseases. One of the common types of obesity

in Malaysia is Abdominal Obesity AO which is related to other complications. It is the indicator of accumulation of triacylglycerol in the liver and muscle. Hence, it has been strongly linked to given common NCDs in particular: cardiovascular diseases (CVDs), diabetes, hypertension, cancer, kidney diseases and non-alcoholic fatty liver diseases (NAFLDs) (Dhawan & Sharma, 2020).

On the other hand, in Malaysia previous study has shown there are indicators to obesity among university students. There are several factors that cause high BMI among university students which is because of smoking, sleep quality and physical activities (Radzi et al., 2019). The increase in consumption of food-away-from-home may have a profound impact on consumers' health. While without neglecting other factors physical inactivity, overconsumption of calories and poor nutrition knowledge contributes to rise in consumption food-away-from-home, especially fast-food restaurants, and parallel the prevalence of overweight and obesity (Kim et al., 2013).

2.3 Eating Outside Among University Students

The culture of eating out has become a habit for the past few years, people prefer to dine out compared to dine in from their house (Min et al., 2018). This trend also happen among university students which living away from home (Serio et al., 2013). Other reason for them to eat out and visit restaurant frequently because they are hungry, and convenient for them (Fraikue, 2016). Students have freedom on their food choices when living away from home and this lead to unhealthy dietary habits (Serio et al., 2013). The other reason influence student to eat outside is demographic status as study found that private university students commonly came from high demographic status family background which significantly related to high eating out behaviour (Hu et al., 2017). There is a

problem when eating out frequently which is associated with health status due to less healthful food and less nutritious food choices in terms of whole grain, high calorie and high saturated fat same as to some minerals for example iron, calcium etc (Naidoo et al., 2017). Some studies agree that out-of-home food is unhealthy compared to home-cooked as they contain high fat and energy and less nutritional quality (Ju, 2020).

The other factors that lead to high consumption of outside food is that fast food restaurant typically found near to education institution (university and school) which selling high calories food with poor nutritional quality (Llanaj, Adany, et al., 2018). The consumption of outside food influence in high energy intake due miscalculation of the calories (Bezerra & Sichieri, 2009). Other than that, there also a study that found when student eating outside, the food choice is always lower intake of fruit and vegetables and high in calories and sugars intake (Llanaj, Adany, et al., 2018). This is the reason why menu labelling or calories information will be better to be present in the restaurant rather than not at all, as it might benefit different people with different situations (Fernandes et al., 2015)

2.4 Menu Labelling

There are some perceptions on menu labelling among students which they considered that menu labelling on the menus is not enough to influence food choices (Fernandes et al., 2015). While other study found that menu labelling is one of the alternatives, as caloric labelling is proposed as an innovative approach that will change the food environment, and increases customers' awareness of calories, which may in turn, help to lower the costs of the obesity epidemic (Sisnowski et al., 2017). However, there are a few students mentioned that they use the menu labelling to control their food intake

and body weight (Fernandes et al., 2015). In Malaysia, the habit of eating out almost every day of the week depending on budget and choice. Their choice is many from full-services restaurants to fast food restaurants and hawker stalls (Boo et al., 2008). Study shows that 90% consumers ordering from restaurants underestimate the amount of energy within meals by as much as 600 kcal (Radwan et al., 2017). The introduction of menu labelling will help as an attempt to educate consumers more about nutrition value through it (Delvarani et al., 2013).

In other countries, several menu laws have already been implemented across several countries, such as the Menu Education and Labelling (MEAL) bill and Truth-in-Menu law in the United States (Shawky, 2019). These laws being implemented since 2010 for all the people across the country will have calories count on menus at all chain restaurants and other foodservice establishments by May 2018. This law helps as an informed choice to assist consumer to choose healthier food choices. Extended Theory of Planned Behaviour wherein the individual's behavior is best predicted by one's intentions; intentions are, in turn, predicted by attitudes about the behavior, the subjective norms (a person's perception of important others' beliefs that he or she should or should not perform the behavior) encasing the execution of the behavior and perceived behavioral control which people's perception of the ease or difficulty of performing the behavior of interest.

2.5 Extended Theory of Planned Behaviour

Theory of Planned Behaviour (TPB), first described in 1985, the TPB is today one of the most popular social-phycological models for understanding and predicting human behaviour (Ajzen, 2019). It is an approach or method to predict and measure human intention towards something by considering their attitude, subjective norms, and perceived behaviour control. In this study, the theory of planned behaviour is added with health consciousness construct. This additional construct will include in the TPB and make it extended TPB. Health consciousness is when an individual has great concern to health, caring to health and engaging to search health information. There are also study that use extended theory of planned behaviour and they found that this construct give significant impact on consumers intention (Patel, 2020).

2.5.1 Attitude

For Attitude, it is defined as the way people react to something and how they feel about it. This attitude can be either negative or positive (Teo & Beng Lee, 2010). For example, the support and attitudes of teachers participating are critical to the success of any endeavour to integrate technology into an educational programme. According to the TPB, attitude has a positive impact on intention (Popovic et al., 2019). Previous study also defined attitude as the degree to which a person has favourable or unfavourable evaluation or appraisal of the behaviour question (Vamvaka et al., 2020). Other than that, several empirical studies attempted to provide evidence that attitudes play a role in affecting behavioural intentions to read nutrition labelling (Feldman et al., 2015). Previous study also found a relation between attitude and intention in which the study about consumers who express their good attitudes and intentions to act in an environmentally friendly

manner do not follow through on their words (ElHaffar et al., 2020). In term attitude may predict individual behaviour, a study found consumers' attitude towards online grocery shopping was the most important predictor of behaviour in online grocery shopping.

Other studies focussed on using apps to purchase food also highlight the importance of attitude to explaining behaviour; and they found that attitude positively influences the behavioural intention (Troise et al., 2021). Attitude also can be influence by other factors for example subjective norm, previous research on TPB found that attitude playing the most important role in predicting purchase intentions because it influence that subjects environments and community (Liu et al., 2020). In this study both intentions to use menu labelling presented on the menu and also online menu been observed. In the context of website usage studies, several studies have discovered a beneficial impact of attitude on the intention to use a website (Sumaedi et al., 2020).

2.5.2 Subjective Norm

Subjective norms are used to test an individual perception about the behaviour, it is influenced by judgment of significant others (Richard Cooke et al., 2016). Subjective norm also defined as one's perception of whether people important to the individual that the action should be performed (Teo & Beng Lee, 2010). For example, the schoolteacher feel that is compulsory to use the technology as it already been provided because the mandate given by the school. It is more likely for other person to agree or disagree with a person's behaviour and action. This is to show how individual decision affected by others influence compare when they do it themselves. However there finding came out with hypothesis that subjective norm is the main determinant for attitude. Because when

individual found that most of their important person practice one particular behaviour it tent to influence as well as the individual attitude (Troise et al., 2021).

As the result they found the finding was unlikely and different from the hypothesis, that subjective norm really has stronger effect on individual behavioural intention than attitude (Troise et al., 2021). In term of individual purchasing behaviour, previous study using extended TPB by including moral norms found that moral norms appear to be a mediator of the relationship between the original concept of subjective norms and purchase intentions, with attitude playing the most important role in predicting purchase intentions. Moral norms are found to be the fundamental mechanism of the link between subjective norms and attitude (Liu et al., 2020). Since this study also observed on the intention to use menu labelling that presented on the menu board and online menu. Study on the intention of using online Covid-19 website with TPB sonstruct that has been conducted in Indonesia found the intention to use website Covid-19 mostly influence by the subjective norms which mean important person around them think that the individual should use the website Covid-19 (Sumaedi et al., 2020).

2.5.3 Perceived Behaviour Control

Perceived behaviour control, it is assumed that perceived behavioural control is determined by the total set of accessibilities control beliefs (Glanz et al., 2002). It is when individuals to take it easily or difficult when making decision or to act to certain action. It is shown that all decisions are dependent on individuals to make it simple or hard for them. Interestingly, previous study define PBC in two unique components should be present in PBC. One is self-efficacy, which refers to a person's perceived confidence and comfort in performing a specific action. Another factor is controllability, which refers to a person's

impression of whether or not his or her behaviour is completely under control. People are more likely to engage in behaviours that they believe are simpler to carry out than behaviours that they believe are difficult and over which they have less control (Liu et al., 2020).

Previous study that using TPB mostly found that perceived behaviour control not significantly influence the intention. For example the study about intention to use technology among students and teachers found that only attitude and subjective norm significantly influence their intention; while perceived behaviour control was not significantly influence their intention (Teo & Beng Lee, 2010). There are also study that found PBC significantly influence intention which is the study about intention to use Covid-19 website conducted in Indonesia found that PBC significantly influence intention to use Covid-19 website However, perceived behaviour control may influence behaviour and subjective norm; various studies confirm that perceived behaviour control is relevant factor in determining behaviour (Troise et al., 2021).

2.6 Health Consciousness

The extended construct is health consciousness, health consciousness was not one of the TPB construct and in this study health consciousness is extended construct. Health consciousness is defined when individuals start to take healthy action (Hoque et al., 2018) and other study defined health consciousness into 4 elements including greater concerns to health, focus on health, curious for any health information and evaluate healthy condition (Glanz et al., 2002). Other than that, health consciousness also influences individuals on eating healthy and fresh food.

The study conducted in Vietnam on health consciousness toward purchase decision found that customer do not care about marketing mix variables, but they do care about service quality and health awareness. As a result, health awareness and service quality serve as effective mediators (Tran et al., 2020). Apart from that, study on relation between home-based exercise during pandemics and health consciousness came out with significant finding; Home-based exercise benefits significantly when people are aware of their health. Perceived behavioural control serves as a link between health awareness and at-home exercise. Through health life objectives and perceived behavioural control, health consciousness can drive home-based exercise (Pu et al., 2020). Therefore, consumers' health consciousness will influence their food intake as well as intention to use menu labelling.

CHAPTER 3

Methodology

3.1 Study Design

The design of this study was as online-quantitative survey study. The questionnaire was based on established theory planned behaviour (TPB) model by (Ajzen, 2015). It covers from attitude, subjective norms, perceived behaviour, and intention. Health conscious was added to the model to study subject health-conscious level. This study was a cross-sectional study where the data were collected online during the semester break in January 2021. All the data collected online using in online platform, Google form. Respondent's consent was included before they start answering the questionnaires, the questionnaire is divided into three sections, section A was self-reported by the respondent which is the screening questions that includes participant age, sex, and ethnicity. Section B was the health status and socio-demographic questions includes weight, height, BMI, non-communicable diseases, Monthly household income and frequency having outside foods. The last section is section C include the five main elements includes attitude (behavioural beliefs and outcome evaluations), subjective norms (normative beliefs and motivation to comply), perceived behaviour (people's perception of the ease or difficulty of performing the behaviour of interest), intention, and health consciousness. All the data collected are confidential and only for research purposes. Other data for example, name, address, telephone number and specific income were not collected from respondents to protect their privacy.

3.2 Study Location

The study was conducted online due the COVID-19 pandemic. Movements from place to place are restricted to slow down the infection and that might affect the physical data collection process (Tang, 2020). Furthermore, this online system has a high tendency to reach more respondents compared to the physical data collection method (Nair et al., 2008). This online data collection method is also one of the current trends of collecting data in today's Industrial Revolution 4.0.

3.3 Sample Size Determination

The sample size was calculated using multiple regression formula (Milton, 1986) and obtained 64 respondents. Therefore, in this study, 64 is the sample size needed

3.3.1 Multiple regression formula: $n = k + 1 + \frac{t^2(1-R^2)}{r^2}$

- *n*= the calculated sample size.
- *K*= number of independent variables in the model
- R^2= variance explained by the whole model (from previous research results)
- T- desired level of statistical significance (t=2 for p<0.005, t=3 for p<0.01)
- r^2= a minimum addition to r^2 (must be decided by researcher ,0.01)

(Milton. 1986)

Table 1: Sample size determination for multiple regression

		Δr^2				
		.001	.005	.01	.02	.05
	.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*
R^2	.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*

Table 2: R^2 Value of previous study

Study	**R^2**
Delvarani et al., (2013) *(Conducted TPB to determine the intention to use menu labelling among fast food consumers)	0.410

- Value R^2 = 0.410
- Calculation: n = 49 + k
  = 49 + 4
  = 53 subjects
- Sample size: n = [53 x (20%)] + 53
  = 64 subjects
  64 respondents (Milton, 1986)

3.4 Sampling design

Snowball method was used for the sampling; the online questionnaire been distributed to the students' representative through the student affairs departments. Then, the representative distributed the questionnaire to other students. The selection of the universities was chosen among the best private university ranking in Klang Valley. This method was the most convenient method during the pandemic (Hanage et al., 2020). The reason was because snowball sampling method has been proven by the previous study which found that the use of snowball sampling allows increased access to individuals and groups that may inaccessible (Woodley et al., 2013). Therefore, this method has been chosen to conduct this study.

3.5 Subjects

All subjects in the study were selected based on the inclusion and exclusion criteria. Inclusion criteria included full time private university students, above 18 years old and all group of students (undergraduate or postgraduate). Subjects that excluded from the study were public university students, university staff and student with health science courses.

3.6 Pre-testing

The questionnaire has been delivered to 30 students in Faculty Medicine and Health Science Universiti Putra Malaysia via online. This is to test the validity of the questionnaire and improve any errors. There are only minor adjustments in term of the format of the questionnaire that be done based on the pre-testing results. Other than that,

the removal of BMI calculation formula from the questionnaire after considering the respondent's feedback and comments.

3.7 Data Analysis

Statistical Package for Social Science (SPSS) software version 25.0 was used for the data exploration and for the descriptive statistics includes percentage, mean and standard deviations. The questionnaire description explains in Table 3.

Table 3: TPB Questionnaire description

Constructs	Scale	Scale indicator
Attitude		
Using menu labelling posted on restaurant menus would be:	1-7	1 very difficult – 7 very easy.
Using menu labelling posted on restaurant menus would be:	1-7	1 very inconvenient – 7 very convenient.
Using menu labelling posted on restaurant menus would be:	1-7	1 very unhelpful – 7 very helpful.
Restaurants that have calorie and nutrition information on their menus are:	1-7	1 very unhelpful – 7 very helpful.
Restaurants that have calorie and nutrition information on their menus are:	1-7	1 very bad – 7 very good.
Subjective norm		
Those who close to me think I should use menu - Labelling posted on restaurant menus if they are available.	1-7	

- Labelling posted on restaurant menus if they are available.	1-7	
- Menu labelling posted on restaurant menus if they are available.	1-7	1- totally disagree to 7- totally agree.
- I do not feel under social pressure to use menu labelling are available.	1-7	
- Use menu labelling posted on restaurant menus if they are available.	1-7	
Perceived behaviour control		
Having good eating habits	1-7	
Time and effort	1-7	
Ability to understand calorie and nutrition information.	1-7	1- totally disagree to 7- totally agree.
Format of calorie and nutrition information on	1-7	
Type of information posted on restaurant menus	1-7	
Health consciousness		
Reflect on my health.	1-7	
Concerned about my health.	1-7	
Aware of my health status.	1-7	1- totally disagree to 7- totally agree.
Always check my health.	1-7	
Conscious of my health.	1-7	
Think about the diet-related disease (eg: diabetes, hypertension).	1-7	
Intention		
I expect to use menu labelling.	1-7	
I want to use menu labelling.	1-7	
I intend to use menu labelling.	1-7	1- totally disagree to 7- totally agree.
I will always use menu labelling.	1-7	
I am willing to use menu labelling.	1-7	

The multiple regression was used to test H1, H2, H3, and H4 of the proposed study.

H1: Private university students' attitude influence their intention to use menu labelling.

H2: Private university students' subjective norm influence their intentions to use menu labelling.

H3: Private university students perceived behavioural control influence their intentions to use menu labelling.

H4: Private university students' health consciousness influence their intentions to use menu labelling.

CHAPTER 4

Results and Discussion

4.1 Socioeconomics Characteristics

The age of the participants in this study ranged from 19 to 40 with a mean age of 23.11 ± 3.078 years. The percentage between male and female are (*n* =32, 34.0%) and (*n* =62, 66.0%) respectively which showed that almost half of the participants are female. Most of the participants were Chinese (46.8%). For household income groups, the distribution between B40 (< RM 4,849) and M40 (RM 4,850 – RM 10, 959) were almost balance with (*n* =41, 43.6%) and (*n* =37, 39.4%) respectively. The low percentage of household income of the participants were T20 (> RM 10,960) group with (*n* =16, 17.0%). The results reported in Table 4.

Table 4: Socioeconomics of participants (n=94)

Variables	**Participants**		**Mean ± SD**	**Min-Max**
	n	**(%)**		
Age groups				
19 – 23	75	79.8		
24 – 27	12	12.8	23.11 ± 3.078	19 - 40
28 – 32	6	6.4		
Over 40 years old	1	1.1		
TOTAL	**94**	**100%**		
Sex				
Male	32	34		
Female	62	66	1.66 ± 0.476	
TOTAL	**94**	**100%**		

Ethnicity			
Malay	36	38.3	
Chinese	44	46.8	
Indian	10	10.6	
Sino-native	1	1.1	1.85 ± 0.939
Sri Lankan	2	2.1	
Maldivian	1	1.1	
TOTAL	**94**	**100%**	
Household Income			
B40 (< RM 4,849)	41	43.6	
M40 (RM 4,850 – RM 10, 959)	37	39.4	1.73 ± 0.736
T20 (> RM 10,960)	16	17.0	
TOTAL	**94**	**100%**	

4.2 Individual Characteristics

The data for actual BMI were normal (54.3%). Eating out frequency among participants were vary from none a week to everyday. The highest eating out frequency is once a week with (*n* =30, 31.9%) and the lowest eating frequency is four times a week (*n* =6, 6.4%). The results reported in Table 5 below.

Table 5: Individual characteristics of participants (n=94)

Variables	Participants	
	n	**(%)**
BMI		
Underweight	11	11.7
Normal	51	54.3
Overweight	22	23.4
Obese	10	10.6
TOTAL	**94**	**100%**
Eating Out Frequency		
None	10	10.6
Once a week	30	31.9
Two times a week	17	18.1
Three times a week	20	21.3
Four times a week	6	6.4
More than five times a week	11	11.7

4.3 Extended Theory of Planned Behavior (TPB) Constructs

All the items in the extended TPB construct includes attitudes, subjective norms, perceived behaviour controls, health consciousness, and intentions were answered by all 94 participants (100%) responses rate. For internal consistency, the value of Cronbach's alpha coefficient for each construct were observed. The value for each construct which were attitude, perceived behaviour control, subjective norm, and health consciousness above (0.822) which indicate it have good reliability while intention have the highest Cronbach's alpha value with (0.916). Values above (0.700) is acceptable, (0.800) is preferred and above (0.900) is better (Cortina, 1993).

Table 6: Extended Theory of Planned Behavior (TPB) Constructs

Constructs	Scale	n (%)	Mean ± SD	Cronbach' alpha
Attitude				0.896
Using menu labelling posted on restaurant menus would be: very difficult – very easy.	1-7	94 (100%)	5.67 ± 0.129	
Using menu labelling posted on restaurant menus would be: very inconvenient – very convenient.	1-7	94 (100%)	5.49 ± 0.141	
Using menu labelling posted on restaurant menus would be: very unhelpful - very helpful.	1-7	94 (100%)	5.82 ± 0.126	
Restaurants that have calorie and nutrition information on their menus are: very unhelpful – very helpful.	1-7	94 (100%)	5.90 ± 0.111	
Restaurants that have calorie and nutrition information on their menus are: very bad – very good.	1-7	94 (100%)	5.90 ± 0.116	
Subjective norm				0.858
Those who close to me think I should use menu				
- Labelling posted on restaurant menus if they are available.	1-7	94 (100%)	5.15 ± 0.168	
- Labelling posted on restaurant menus if they are available.	1-7	94 (100%)	4.86 ± 0.17	

- Menu labelling posted on restaurant menus if they are available.	1-7	94 (100%)	4.79 ± 0.166	
- I do not feel under social pressure to use menu labelling are available.	1-7	94 (100%)	5.48 ± 0.146	
- Use menu labelling posted on restaurant menus if they are available.	1-7	94 (100%)	5.19 ± 0.157	
Perceived behaviour control				0.822
Having good eating habits	1-7	94 (100%)	5.81 ± 0.122	
Time and effort	1-7	94 (100%)	5.78 ± 0.115	
Ability to understand calorie and nutrition information.	1-7	94 (100%)	5.85 ± 0.119	
Format of calorie and nutrition information on	1-7	94 (100%)	5.71 ± 0.123	
Type of information posted on restaurant menus	1-7	94 (100%)	5.67 ± 0.118	
Health consciousness				0.842
Reflect on my health.	1-7	94 (100%)	5.60 ± 0.129	
Concerned about my health.	1-7	94 (100%)	5.69 ± 0.136	
Aware of my health status.	1-7	94 (100%)	5.66 ± 0.117	
Always check my health.	1-7	94 (100%)	5.34 ± 0.113	
Conscious of my health.	1-7	94 (100%)	5.50 ± 0.131	
Think about the diet-related disease (eg: diabetes, hypertension).	1-7	94 (100%)	5.56 ± 0.135	

Intention			0.916
I expect to use menu labelling.	1-7	94 (100%)	5.36 ± 0.153
I want to use menu labelling.	1-7	94 (100%)	5.45 ± 0.155
I intend to use menu labelling.	1-7	94 (100%)	5.57 ± 0.141
I will always use menu labelling.	1-7	94 (100%)	5.51 ± 0.142
I am willing to use menu labelling.	1-7	94 (100%)	5.69 ± 0.143

Note. The scale for this table is ranging from 1- totally disagree to 7- totally agree.

4.4 Extended Theory of Planned Behaviour with Hypothesis**.**

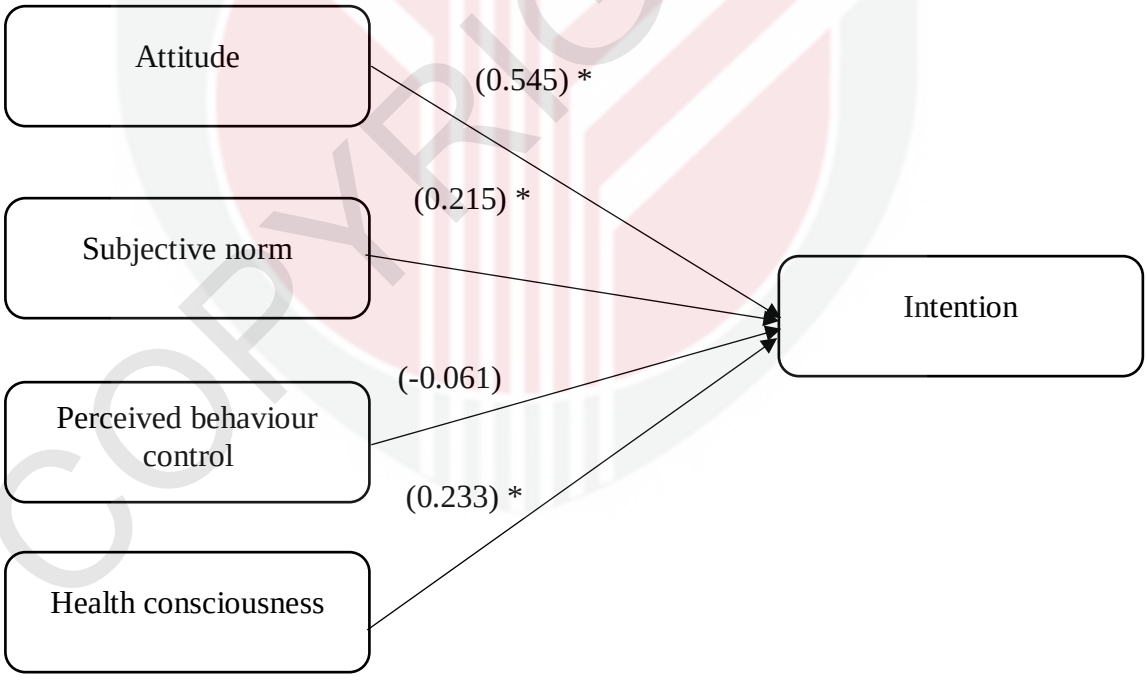

Figure 2. Result of Multiple Linear Regression Structural Model

Note. (*) indicate construct is significant.

Based on the results private university students' attitude significantly influenced the intentions to use menu labelling (β = 0.545, t = 5.948, p = 0.001). The additional construct, health consciousness among private university student had significant influence on the intentions to use menu labelling (β = 0.233, t = 2.884, p = 0.005). Furthermore, the subjective norm of using menu labelling among private university student also had a significant influence on students' intention to use menu labelling (β = 0.215, t = 2.425, p = 0.017). Otherwise, there were no significant for perceived behaviour control toward intention to use menu labelling among private university student (β = -0.061, t = -0.572, p = 0.569). Generally, based on the results indicated that attitude had the highest influence on private university students' intentions to use menu labelling followed by the extended construct health consciousness, and subjective norm. However, perceived behaviour control showed that no significant influence on their intention to use menu labelling. For the R squared value for this study is $R^2 = 0.530$ which means that this study has moderate R^2 value. R squared is the statistical measure of how close the data are to the fitted regression line (Cameron & Windmeijer, 1997).

Table 7: Regression of Factors Influencing Intention to Use Menu Labelling Among Private University Students

Variables	**Beta (β)**	t	**p-value**	**95% CI**
Attitude	0.545	5.948	0.001	(0.439, 0.879)
Subjective norm	0.215	2.425	0.017	(0.038, 0.385)
Perceived behaviour control	-0.061	-0.572	0.569	(-0.377, 0.209)
Health consciousness	0.233	2.884	0.005	(0.079, 0.428)

Based on Table 7, there are only three constructs that significantly influence private university students to use menu labelling which are attitude, subjective norm, and health consciousness. These significant constructs can be used by the health practitioner to force the usage of menu labelling when it has been implemented. For attitude construct, health practitioner can use this result to focus on infographics, posters, or advertisements related to benefits of using menu labelling and nutrition in public places for example bus station and cafeteria. Since private university students' attitude significantly influence their intention to use menu labelling. This alternative will indirectly boost their attitude and motivation to use menu labelling when it being implemented.

Other than that, subjective norm construct which related more on students' environment, family and circle also significantly influence their intention to use menu labelling. This result is important to be used by the health practitioner because students' environment and circle can encourage them to use menu labelling. Therefore, to fully optimize the menu labelling usage among private university students, health practitioner also needs to ensure that student have a very good circle by educate them holistically to increase the community awareness on the benefits of using menu labelling.

For health consciousness, this construct also significantly influences students' intention to use menu labelling. Due to that, health practitioner can increase health awareness program focusing on benefits of using menu labelling via online and social media. This can improve their health consciousness and at the same time create a community that really concern about health and nutrition.

4.5 Results and Discussion

4.5.1 Hypothesis 1

Private university students' attitude influences their intention to use menu labelling.

According to the regression test on Table 7, attitude was significantly influencing the intention to use menu labelling among private university students with ($P<0.05$). This study is parallel with previous study (Delvarani et al., 2013). It shows that students' intentions to utilise menu labelling tend to be influenced by their attitude, as those with strong positive attitudes appear to have more intentions to use menu labelling. Other than that, previous study found that students have greater nutrition knowledge and favourable attitude make them more likely to engage with healthy dietary (Rachel Cooke & Papadaki, 2014). This is might due to their high education increase their awareness about nutrition knowledge that improve their attitude toward using menu labelling. The other reason may because the government also introduce about healthy plate and updated food pyramid to improve public health awareness. This initiative give positive impact especially on student because they can easily understand the importance of good eating habits (Lee et al., 2020). Other than that, previous study also found that improving self-esteem and body image were the most crucial factors that lead student to have good attitude in their eating habits (O'Dea & Abraham, 2000). This might be because student thought that appearance and body image can increase their confidence and make friends. Others perception for example friends is very important for adolescence especially appearance and their body image. All these reasons assist their motivation and attitude to use menu labelling. Thus, the first hypothesis (H1), private university students' attitude influences their intention to use menu labelling is significantly influence intention to use menu labelling among private university students.

4.5.2 Hypothesis 2

Private university students' subjective norm influences their intentions to use menu labelling.

According to the regression test on Table 7, subjective norm also significant to influence the intention to use menu labelling among private university students with ($p<0.05$). This result also in line with previous study which agree that their surroundings people influenced their subjective norm (Delvarani et al., 2013). Their environment was influenced by peers, family, and lecturers to practice balance diet hence increase intention to use menu labelling. During this phase as adolescence they have freedom on their food choices when living away from home (Serio et al., 2013). As adolescence they tend to follow the trending foods or meals that eaten by their friend. This show how important peers influence among adolescence and previous study also found that peers significantly influence adolescence identity developments also their action and decisions (Urberg et al., 2003). Therefore, student's behaviour and lifestyle are really affected by their peers or environment influences. Current study shows that subjective norm significantly influences student intention to use menu labelling; that is means they had a very good environment that promote healthy eating habits by using menu labelling. In addition, Asian culture practice healthy eating and tend to value both eating for pleasure and eating for health (Lim & van Dam, 2020). Based on this statement it shows that the culture itself promoting eating for health that being practice in their family is excellent. These data strengthen the fact that student have good and supportive environment to start using menu labelling. These factors might be the reason for subjective norm becoming very significant after attitude. Thus, the second hypothesis (H2), private university students' subjective norm is significantly influencing their intention to use menu labelling.

4.5.3 Hypothesis 3

Private university students perceived behavioural control influence their intentions to use menu labelling.

Otherwise, based on the regression results on Table 7, perceived behaviour control had no significant influence on the intention to use menu labelling among private university students with ($p = 0.569$) compared to other constructs. This result is contradict with the previous study which have significant influence on perceived behaviour control (Delvarani et al., 2013). Perceived behaviour control is defined as person's perception of the ease or difficulty of performing the behaviour of interest. Based on the definition of perceived behaviour control, personal perception on the difficulties of using menu labelling influence their intention of using it. They thought that it is difficult to use menu labelling when eating outside which are more options with variety of foods (Llanaj, Ádány, et al., 2018) make them neglecting the presence of menu labelling hence lowered their intention to use it. In addition, Bistros and Mamak restaurants were very famous and also the most favourites place to eat among students as it promotes affordable price (Othman et al., 2018). Since (43.6%) of the samples are from B40 (<RM 4,849) household group. This make them think that the usage of menu labelling is not important because they prioritized quantity over value as they can eat more and pay less. Other studies also agreed that personal perception are one of the biggest factors that affecting student intention to use menu labelling; student considered menu labelling is more important in school canteen or university café as a medium of education (Fernandes et al., 2015). Other than that, household income also one of the most important factors that affecting eating out frequency whereby previous study found that higher household income lead to high eating out frequency (Hu et al., 2017) and this lead to the next reason on why perceived

behaviour control had no significant on influencing student intention to use menu labelling. Therefore, the third hypothesis (H3), private university students' perceived behaviour control had no significant influences on their intention to use menu labelling.

4.5.4 Hypothesis 4

Private university students' health consciousness influences their intentions to use menu labelling.

According to the regression results on Table 7, health consciousness significantly influences the intention to use menu labelling among private university students with ($p<0.05$). This is in line with previous study on the intention to consume healthy foods which they found that health consciousness among public society in Malaysia significantly influence their intention to consume healthy foods especially in developing countries. This study also found that health consciousness among young Malaysian population is increasingly interested in having a healthy lifestyle and getting involved in healthy food consumption (Shaharudin et al., 2010). Based on this finding it shows that health consciousness is high, it also one of the reasons why health consciousness is significantly influencing their intention to use menu labelling. Other study also found that consumers with a greater level of education are more inclined to use the nutrition label since they comprehend it better (Barreiro-Hurlé et al., 2010). The level of education also contributes to their health consciousness. Thus, the fourth hypothesis (H4), private university students' health consciousness significantly influences their intention to use menu labelling.

CHAPTER 5

Conclusions, Limitations, and Future Recommendation

5.1 Conclusions

Overall, the results of this study revealed that not all constructs were significant to influence intention to use menu labelling among private university students. The result is very direct and logically to happen as two constructs from TPB which are attitude and subjective norm significantly influenced their intention to use menu labelling. Same goes to the extended construct, health consciousness that also have significant influence.

However, one construct from TPB which is perceived behaviour control was found not significant on influencing student intention to use menu labelling when eating out. This finding is more to personal and individual perception on the difficulties of doing something. This construct very depending on individual discipline and awareness on practicing good eating habits by using menu labelling. Therefore, if menu labelling implement in Malaysia in 2025, the policy maker can consider constructs that significantly influence private university students' intention to use menu labelling in Klang Valley which were attitude, subjective norm, and their health consciousness.

5.2 Limitation and Future recommendation

The limitation of the study was data low response rate. Other than that, online questionnaire also does not have negative questionnaire which affect the result and data analysis. This is because all the developed questions in the questionnaire were positive oriented. For example, "My family think that I should use menu labelling" instead of "My family think that I should not use menu labelling". Next, physically data collection is very recommended for future study to avoid any error and ease the analysis progress. Other

than that, the data collection was conducted during Movement Control Order (MCO) which public were prohibited to eat outside.

The data on eating outside was based on their previous experience. Future study can observe the actual eating out behaviour after MCO lift and how its affect their intention to use menu labelling because the finding might be different. Other than that, future study can study on how relation of household income and BMI affect their intention to use menu labelling. Lastly, future study can be conduct outside Klang Valley to study private university student intention to use menu labelling outside Klang Valley.

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APPENDIX A

(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.

9. **STUDY TITLE :** Factors Influence Private University Intentions to Use Menu Labelling: A Cross-sectional Study

2. INTRODUCTION:
The study is to measure the intention to use menu labelling among private university students in Klang Valley.Since in Malaysia there are no policy to implement menu labelling and Malaysia government plans to implement menu labelling law by 2025, while menu labelling already be implemented in others country including USA, Canada and United Kingdom. Therefore, this study will provide further information before Malaysia can implement the menu labelling and this study will help to measure the factors that influence the most intention to use menu labelling. Menu labelling will provide the information including carbohydrates, protein, fats, sodium and sugar. This study will be conducted using questionnaire There are 5 element will be measure which is attitude, subjective norms, perceived behaviour, intention and health consciousness. Total questions are 26 for all the elements that will distribute via online.

3. WHAT WILL YOU HAVE TO DO?
You will have to answer a few questionnaires for screening and you may proceed with other questionnaire.

4. WHO SHOULD NOT PARTICIPATE IN THE STUDY?
The participants must be above 18 years old, full time students, eat at cafeteria or restaurant regularly and the participant include postgraduate, undergraduate, diploma and foundation students

5. WHAT WILL BE THE BENEFITS OF THE STUDY:

(a) TO YOU AS THE SUBJECT?

The consumer will gain exposure about menu labelling and how its going to be implement in Menu labelling and the result will benefits the consumers to have healthier food choice when eating out in future.

(b) TO THE INVESTIGATOR?

The study will benefits the investigator to know the most influence factor for intention to use menu labelling.

6. WHAT ARE THE POSSIBLE RISKS?

No any possible risks as it is online questionnaire

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

There are no personal details required for this reseach (e.g. name, address, phone number). All the information will keep confidential and only for reseach purpose.

8. WHO SHOULD YOU CONTACT IF YOU HAVE ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

You should contact the researcher of this study , Khoo Lee Kim.

Email : 197060@student.upm.edu.my

Phone number : 011-17902410

*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 ……..…… (Respondent)

Signature ……..……. (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)

APPENDIX B

(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-faktor yang Mempengaruhi Niat Universiti Swasta untuk Menggunakan Pelabelan Menu: Kajian Keratan Rentas

2. PENGENALAN
Kajian ini adalah untuk mengukur hasrat untuk menggunakan palabelan menu di kalangan pelajar universiti swasta di Lembah Klang. Oleh kerana di Malaysia tidak ada dasar untuk menlaksanakan pelabelan menu dan pemerintah Malaysia merancang untuk menerapkan undang-undang pelabelan menu pada tahun 20215, sementara pelabelan menu sudah dilaksanakan di pihak lain negara termasuk Amerika Syarikat, Kanada dan United Kingdom. Oleh itu, kajian ini akan memberikan maklumat lebih lanjut sebelum Malaysia dapat melaksanakan pelabelan menu dan kajian ini akan membantu mengukur faktor-faktor yang mempengaruhi niat paling banyak menggunakan pelabelan menu. Pelabelan menu akan memberikan maklumat termasuk karbohidrat, protein, lemak, natrium dan gula. Kajian ini akan dilakukan dengan menggunakan soal selidik. Terdapat 5 elemen yang akan menjadi ukuran iaitu sikap, norma subjektif, tingkah laku yang dirasakan, niat dan kesedaran kesihatan. Jumlah soalan adalah 26 untuk semua elemen yang diedarkan melalui dalam talian.

3. APAKAH YANG PERLU ANDA LAKUKAN?
Anda perlu menjawab beberapan soal selidik untuk disaring dan anda boleh meneruskan soal selidik yang lain

4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?
Peserta mestilah berumur 18 tahun keatas, pelajar sepenu masa, makan di kafeteria atau restoran dengan kerap dan peserta termasuk pelajar pascasiswazah, sarjana, diploma dan yayasan.

5. APAKAH FAEDAH MENYERTAI KAJIAN INI?

a) KEPADA ANDA SEBAGAI PESERTA?
Pengguna akan mendapat pendedahan mengenai pelabelan menu dan bagaimana penerapanya dalam pelabelan menu dan hasilnya akan memberi manfaat kepada pengguna untuk memiliki pilihan makanan yang lebih sihat ketika makan di luar pada masa hadapan

b) KEPADA PENYELIDIK?

Kajian ini akan memberi manfaat kepada penyelidik untuk mengetahui faktor yang paling mempengaruhi niat menggunakan pelabelan menu

6. ADAKAH IA BERISIKO?

Tiada ada risiko yang mungkin berlaku kerana ia adalah soal selidik dalam talian

7. ADAKAH MAKLUMAT DAN IDENTITI SAYA KEKAL RAHSIA?

Tidak ada butiran peribadi yang diperlukan untuk penyelidik ini (nama, alamat, nombor telefon). Semua maklumat akan dirahsiakan dan hanya untuk tujuan penyelidikan.

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

Anda harus menghubungi penyelidik kajian ini, Muhamad Ikram bin Halim

Email: 197060@student.upm.edu.my

Nombor Telefon : 011-17902410

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-ubatan/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.

I setuju/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*)

ETHICS COMMITTEE FOR RESEARCH INVOLVING HUMAN SUBJECTS (JKEUPM)
UNIVERSITI PUTRA MALAYSIA

Research title	:	**Factors Associated with Intention to Use Menu Labelling among University Students in Selected Private University in Selangor.**
Study Site	:	**Universiti Kuala Lumpur (Unikl), Universiti Tenaga Nasional (Uniten), Malaysia Multimedia University (MMU), Universiti Selangor (Unisel), and Management and Science University (MSU).**
JKEUPM Ref No.	:	**JKEUPM-2020-451**
Researcher	:	**Muhamad Ikram Bin Halim**
Supervisor	:	**Dr. Syafiqah Binti Rahamat**

Documents received and reviewed with reference to the above study:

1. Ethics Application Form, Version 2 dated 1/2/2021
2. Respondent Information Sheet & Consent (English), Version 2 dated 8/2/2021
3. Respondent Information Sheet & Consent (Malay), Version 2 dated 8/2/2021
4. Proposal (English), Version 3 dated 4/3/2021
5. Questionnaire/Interview (English), Version 2 dated 1/2/2021
6. Questionnaire/Interview (Malay), Version 2 dated 1/2/2021
7. Curriculum Vitae of:
    a. Dr. Syafiqah Binti Rahamat

The University Research Ethics Committee, Universiti Putra Malaysia (JKEUPM) operates in accordance to the ICH-GCP Guidelines.
Decision by JKEUPM:

[X] Approved

[X] **Permission MUST BE OBTAINED from the respective hospitals/ institutions before conducting the research**

[ ] Disapproved

Please note that the approval is **VALID UNTIL 12 MARCH 2022**

Researchers should comply with the following:

I. Complete a Study Final Report upon study completion (Form 3.2).

II. Ethical approval is required in the case of amendments/ changes to the study documents/ study sites/ study team.

III. Applicable for Clinical Trial Studies and Clinical interventional Studies only: Progress Report has to be submitted to JKEUPM at every 6 months from the date of approval (Form 3.1). Report occurrences of all Serious Adverse Events (SAEs), Suspected Unexpected Serious Adverse Reaction (SUSARs) and Protocol Deviation/ Violation at all JKEUPM approved sites to

APPENDIX D

FACULTY OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF NUTRITION AND DIETETICS

Questionnaire Form

Research Title:

Factors Associated with Intention to Use Menu Labelling Among University Students in Selected Private University in Selangor

Researcher : Muhamad Ikram bin Halim

Matric No. : 197060

Programme : Bachelor Science (Dietetics)

Supervisor : Dr. Syafiqah Binti Rahamat

Date:

Confidential and for research purpose only

Instruction:

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

SECTION A SCREENING QUESTIONS

1. Age: _____ years old

2. Sex:

( ) Male

( ) Female

3. Ethnicity:

( ) Malay

( ) Chinese

( ) Indian

( ) Others, please specify _____

SECTION B HEALTH STATUS & SOCIO-DEMOGRAPHIC

1. Current weight: _____ kg
2. Current height: _____m
3. BMI:

( ) Underweight (<18.5)

( ) Normal (18.5 – 22.9)

( ) Overweight (23 – 27.4)

( ) Obesity (>27.5)

4. Do you have / had any Non-Communicable Diseases (NCDs)?

( ) No

( ) Yes, please specify:

(Diabetes, Hypertension, Cancers, Asthma, Heart Attack, Stroke and etc.)

5. Monthly household income group:

( ) B40 (less than RM4,849)

( ) M40 (RM4,850 – RM10,959)

( ) T20 (more than RM10,960

6. In a week, how many times you having outside foods? _____

SECTION C (English)

Please chose the number that best indicate your feeling towards the statement.

No.	Statement	Rankings						
1.	I think using calorie and nutrition information posted on restaurant menus OR online menus would be...	Very Difficult	Difficult	Somewhat Difficult	Neutral	Somewhat Easy	Easy	Very Easy
		1	2	3	4	5	6	7
2.	I think using calorie and nutrition information posted on restaurant menus OR online menus would be...	Very Inconvenient	Inconvenient	Somewhat Inconvenient	Neutral	Somewhat Convenient	Convenient	Very Convenient
		1	2	3	4	5	6	7
3.	I think using calorie and nutrition information posted on restaurant menus OR online menus would be...	Very Unhelpful	Unhelpful	Somewhat Unhelpful	Neutral	Somewhat Helpful	Helpful	Very helpful
		1	2	3	4	5	6	7
4.	Restaurants that have calorie and nutrition information on their menus are	Very Unhelpful	Unhelpful	Somewhat Unhelpful	Neutral	Somewhat Helpful	Helpful	Very helpful
		1	2	3	4	5	6	7
5.	Restaurants that have calorie and nutrition information on their menus are	Very Bad	Bad	Somewhat Bad	Neutral	Somewhat Good	Good	Very Good
		1	2	3	4	5	6	7

6.	Those who close to me think I should use calorie and nutrition information posted on restaurant menus OR online menus if they are available.	Strongly Disagree	Very Disagree	Disagree	Moderate	Agree	Very Agree	Strongly Agree
		1	2	3	4	5	6	7
7.	My friends think that I should use calorie and nutrition information posted on restaurant menus OR online menus if they are available.	1	2	3	4	5	6	7
8.	People close to me expected me to use calorie and nutrition information posted on the restaurant menus OR online menus if they are available.	1	2	3	4	5	6	7
9.	I do not feel under social pressure to use calorie and nutrition information posted on restaurant menus OR online menus if they are available.	1	2	3	4	5	6	7
10.	Most people who are important to me think	1	2	3	4	5	6	7

	that I should use nutrition and calorie information posted on the restaurant menus OR online menus when ordering foods if they are available.							
11.	What factors or circumstances would enable you to use menu labelling in a restaurant before placing an order? • Having good eating habits	1	2	3	4	5	6	7
12.	What factors or circumstances would enable you to use menu labelling in a restaurant before placing an order? • Time and effort	1	2	3	4	5	6	7
13.	What factors or circumstances would enable you to use menu labelling in a restaurant before placing an order?	1	2	3	4	5	6	7

	• Ability to understand calorie and nutrition information.							
14.	What factors or circumstances would enable you to use menu labelling in a restaurant before placing an order? • Format of calorie and nutrition information on restaurant menus OR online menus (For examples: font size, colour, design)	1	2	3	4	5	6	7
15.	What factors or circumstances would enable you to use menu labelling in a restaurant before placing an order? • Type of information posted on restaurant menus OR online menus (For examples: calorie only / nutrition information only / calorie	1	2	3	4	5	6	7

	information with daily recommendation)							
16.	I usually reflect about my health.	1	2	3	4	5	6	7
17.	I am very concerned about my health.	1	2	3	4	5	6	7
18.	I am aware of my health status.	1	2	3	4	5	6	7
19.	I always check my health.	1	2	3	4	5	6	7
20.	I think I am conscious of my health.	1	2	3	4	5	6	7
21.	I often think about diet-related disease (eg: diabetes, hypertension)	1	2	3	4	5	6	7
22.	I expect to use calorie and nutrition information that posted on the restaurant menu OR online menu if they are available.	1	2	3	4	5	6	7
23.	I want to use calorie and nutrition information that posted on restaurant menu OR online menu if they are available.	1	2	3	4	5	6	7

24.	I intend to use calorie and nutrition information that posted on restaurant menu OR online menu if they are available.	1	2	3	4	5	6	7
25.	If calorie and nutrition information were readily posted on the restaurant menu OR online menu, I will always use it.	1	2	3	4	5	6	7
26.	I am willing to use calorie and nutrition information posted on the restaurant menus OR online menus if they are available.	1	2	3	4	5	6	7

**** THE END ****

Thank you for answering this questionnaire.

FAKULTI PERUBATAN DAN SAINS KESIHATAN

JABATAN DIETETIK

BORANG SOAL SELIDIK

Tajuk Kajian:

Faktor yang Berkaitan dengan Niat untuk Menggunakan Pelabelan Menu Di Kalangan Pelajar Universiti di Universiti Swasta Terpilih di Selangor

Penyelidik : Muhamad Ikram bin Halim

No. Matrik : 197060

Program : Bacelor Sains Dietitik

Penyelia : Dr. Syafiqah Binti Rahamat

Tarikh :

Sulit dan untuk kegunaan kajian sahaja

Arahan:

Borang soal selidik ini hanya untuk kegunaan akademik. Semua informasi yang dikumpul akan dijamin sulit. Penyertaan dan kerjasama anda amat dihargai.

SEKSYEN A SOALAN SARINGAN

1. 1. Umur: _____ tahun

2. Jantina:

( ) Lelaki

( ) Perempuan

3. Etnik:

( ) Melayu

( ) Cina

( ) India

( ) Yang lain, sila nyatakan _____

SEKSYEN B STATUS KESIHATAN & SOSIO-DEMOGRAFI

1. Berat semasa: _____ kg

2. Ketinggian semasa: _____m

3. BMI:

( ) Sangat kurus (<18.5)

( ) Biasa (18.5 - 22.9)

( ) Berat badan berlebihan (23 - 27.4)

( ) Obesiti (> 27.5)

4. Adakah anda mempunyai / menghidap Penyakit Tidak Berjangkit (NCD)?

( ) Tidak

( ) Ya, sila nyatakan:

(Diabetes, Hipertensi, Kanser, Asma, Serangan Jantung, Strok dan lain-lain)

5. Kumpulan pendapatan isi rumah bulanan:

( ) B40 (kurang dari RM4,849)

( ) M40 (RM4,850 - RM10,959)

( ) T20 (lebih daripada RM10,960

6. Dalam seminggu, berapa kali anda mempunyai makanan luar? _____

SEKSYEN C (Bahasa Malaysia)

Sila pilih nombor yang paling baik menggambarkan berapa kerapkah penyataan berikut dirasakan oleh anda semasa menjaga pesakit. Bulatakan jawapan anda di dalam kotak yang berkenaan.

No.	Penyataan	Rankings						
1.	Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran ATAU menu dalam talian adalah...	Sangat Susah	Susah	Agak Susah	Neutral	Agak Mudah	Mudah	Sangat Mudah
		1	2	3	4	5	6	7
2.	Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran ATAU menu dalam talian adalah...	Sangat Menyusahkan	Menyusahkan	Agak Menyusahkan	Neutral	Agak Senang	Senang	Sangat Senang
		1	2	3	4	5	6	7
3.	Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran ATAU menu dalam talian adalah...	Sangat Tidak Membantu	Tidak Membantu	Agak Tidak Membantu	Neutral	Agak Membantu	Membantu	Sangat Membantu
		1	2	3	4	5	6	7

4.	Restoran yang mempunyai maklumat kalori dan pemakanan pada menu mereka adalah...	Sangat Tidak Membantu	Tidak Membantu	Agak Tidak Membantu	Neutral	Agak Membantu	Membantu	Sangat Membantu
		1	2	3	4	5	6	7
5.	Restoran yang mempunyai maklumat kalori dan pemakanan pada menu mereka adalah...	Sangat Tidak Baik	Tidak Baik	Agak Tidak Baik	Neutral	Agak Baik	Baik	Sangat baik
		1	2	3	4	5	6	7
6.	Mereka yang rapat dengan saya berpendapat saya harus menggunakan maklumat kalori dan pemakanan pada menu restoran ATAU menu dalam talian sekiranya ada.	Paling tidak bersetuju	Sangat tidak bersetuju	Tidak bersetuju	Sederhana	Bersetuju	Sangat bersetuju	Paling bersetuju
		1	2	3	4	5	6	7
7.	Rakan-rakan saya berpendapat saya harus menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran ATAU menu dalam talian sekiranya ada.	1	2	3	4	5	6	7

8.	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
9.	Saya tidak rasa tertekan untuk menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran ATAU menu dalam talian sekiranya ada.	1	2	3	4	5	6	7
10.	Kebanyakan orang yang penting bagi saya berpendapat saya harus menggunakan maklumat pemakanan dan kalori yang dipaparkan pada menu restoran ATAU menu dalam talian semasa memesan makanan sekiranya ada.	1	2	3	4	5	6	7
11.	Apakah faktor atau keadaan yang	1	2	3	4	5	6	7

	membolehkan anda menggunakan pelabelan menu di restoran sebelum membuat pesanan? • Mempunyai tabiat makan yang baik							
12.	Apakah faktor atau keadaan yang membolehkan anda menggunakan pelabelan menu di restoran sebelum membuat pesanan? • Masa dan usaha	1	2	3	4	5	6	7
13.	Apakah faktor atau keadaan yang membolehkan anda menggunakan pelabelan menu di restoran sebelum membuat pesanan? • Keupayaan memahami maklumat kalori dan nutrisi	1	2	3	4	5	6	7

14.	Apakah faktor atau keadaan yang membolehkan anda menggunakan pelabelan menu di restoran sebelum membuat pesanan? • Format pelabelan menu	1	2	3	4	5	6	7
15.	Apakah faktor atau keadaan yang membolehkan anda menggunakan pelabelan menu di restoran sebelum membuat pesanan? • Senarai nutren yang banyak	1	2	3	4	5	6	7
16.	Saya biasanya memikirkan kesihatan saya.	1	2	3	4	5	6	7

17.	Saya sangat mementingkan kesihatan saya.	1	2	3	4	5	6	7
18.	Saya sedar akan status kesihatan saya.	1	2	3	4	5	6	7
19.	Saya selalu memeriksa kesihatan saya.	1	2	3	4	5	6	7
20.	Saya rasa saya sedar akan kesihatan saya.	1	2	3	4	5	6	7
21.	Saya sering berfikir tentang penyakit yang berkaitan dengan diet (contohnya: kencing manis, darah tinggi)	1	2	3	4	5	6	7
22.	Saya menjangkakan akan menggunakan maklumat kalori dan pemakanan pada menu restoran ATAU menu dalam talian sekiranya ada.	1	2	3	4	5	6	7
23.	Saya ingin menggunakan maklumat kalori dan pemakanan pada menu restoran ATAU menu	1	2	3	4	5	6	7

	dalam talian sekiranya ada.							
24.	Saya berhasrat untuk menggunakan maklumat kalori dan pemakanan pada menu restoran ATAU menu dalam talian sekiranya ada.	1	2	3	4	5	6	7
25.	Sekiranya maklumat kalori dan pemakanan dipaparkan pada menu restoran ATAU menu dalam talian, saya akan selalu menggunakannya	1	2	3	4	5	6	7
26.	Saya bersedia menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran ATAU menu dalam talian sekiranya ada	1	2	3	4	5	6	7

APPENDIX E