UNIVERSITI PUTRA MALAYSIA

FACTORS INFLUENCING INTENTIONS TO USE MENU LABELLING AMONG PUBLIC SECTOR WORKERS IN PUTRAJAYA

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BY

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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 at the Faculty of Medicine and Health Sciences, Universiti Putra Malaysia.

This project entitled "Factors Influencing Intentions to Use Menu Labelling Among Public Sector Workers in Putrajaya" was prepared by Siti Maryam Hazwani Binti Mohd Azlan 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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ABSTRACT

FACTORS INFLUENCING INTENTIONS TO USE MENU LABELLING AMONG PUBLIC SECTOR WORKERS IN PUTRAJAYA

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According to Malaysia National Health and Morbidity Survey (NHMS) 2019, diet related diseases such as obesity, diabetes mellitus, hypertension and cardiovascular disease are the common non-communicable diseases in Malaysia. National Health and Morbidity Survey (NHMS) 2015 has ranked Putrajaya as the highest number of people that are overweight and obese. However, no known research, nevertheless, have concentrated on exploring the importance, awareness, and expectation of it among public sector workers. A theory used in this study is Theory of Planned Behaviour (TPB) which includes attitudes, subjective norms, perceived behaviour control with newly added construct which is health consciousness. The purpose of this study is to determine the factors that influence public sector workers' intention to use menu labelling using four variables adapted from TPB. This study used an online quantitative cross-sectional survey study (Google form) and conducted among public sector workers that works in Wilayah Persekutuan Putrajaya. The TPB constructs with added health consciousness were evaluated by the beta coefficients values or R square value to determine which factors influence the public sector workers' intention to use menu labelling. A total sample of 76 (n=76) public sector workers participated in the study. Data analyses were done using Statistical Package for Social Science (SPSS) software version 25. The findings conclude that attitude ($\beta = .251$, $t = 2.146$, $p = .03$, $p < .05$) and perceived behaviour control ($\beta = .403$, $t = 3.395$, $p = 0.00$, $p < 0.01$) significantly influence public sector workers' intention to use menu labelling. Thus, the policy makers, health authorities, restaurateur and foodservice establishments owners could force to boost self-efficacy of public sector workers and develop positive image and perception towards menu labelling. This endeavor may increase the intention of people to use menu labelling if available in the future.

ABSTRAK

FAKTOR-FAKTOR YANG MEMPENGARUHI INTENSI UNTUK MENGGUNAKAN LABEL MENU DALAM KALANGAN PEKERJA SEKTOR AWAM DI PUTRAJAYA.

Siti Maryam Hazwani Binti Mohd Azlan

Menurut Malaysia National Health and Morbidity Survey (NHMS) 2019, penyakit yang berkaitan dengan diet seperti obesiti, diabetes mellitus, darah tinggi dan penyakit kardiovaskular adalah penyakit tidak berjangkit yang biasa di Malaysia. Tinjauan Kesihatan dan Morbiditi Nasional (NHMS) 2015 telah menjadikan Putrajaya sebagai jumlah orang yang berlebihan berat badan dan gemuk. Namun demikian, tidak ada penelitian yang diketahui, yang berkonsentrasi untuk meneroka kepentingan, kesedaran, dan harapan terhadapnya di kalangan pekerja sektor awam. Teori yang digunakan dalam kajian ini adalah Teori Perilaku Terancang (TPB) yang merangkumi sikap, norma subjektif, kawalan tingkah laku yang dirasakan dengan konstruk yang baru ditambahkan iaitu kesedaran kesihatan. Tujuan kajian ini adalah untuk menentukan faktor-faktor yang mempengaruhi niat pekerja sektor awam untuk menggunakan pelabelan menu menggunakan empat pemboleh ubah yang diadaptasi dari TPB. Kajian ini menggunakan kajian tinjauan keratan rentas kuantitatif dalam talian (borang Google) dan dilakukan di kalangan pekerja sektor awam yang bekerja di Wilayah Persekutuan Putrajaya. Konstruk TPB dengan peningkatan kesedaran kesihatan dinilai oleh nilai pekali beta atau nilai R persegi untuk menentukan faktor mana yang mempengaruhi niat pekerja sektor awam untuk menggunakan pelabelan menu. Sebanyak sampel 76 (n = 76) pekerja sektor awam mengambil bahagian dalam kajian ini. Analisis data dilakukan dengan menggunakan perisian Statistical Package for Social Science (SPSS) versi 25. Hasil kajian menyimpulkan bahawa sikap (β = .251, t = 2.146, p = .03, p <.05) dan kawalan tingkah laku yang dirasakan (β =. 403, t = 3.395, p = 0.00, p <0.01) secara signifikan mempengaruhi niat pekerja sektor awam untuk menggunakan pelabelan menu. Oleh itu, para pembuat dasar, pihak berkuasa kesihatan, pemilik restoran dan pemilik perkhidmatan makanan boleh memaksa untuk meningkatkan keberkesanan diri pekerja sektor awam dan mengembangkan imej dan persepsi positif terhadap pelabelan menu. Usaha ini dapat meningkatkan niat orang untuk menggunakan pelabelan menu jika tersedia pada masa akan dating.

CHAPTER 1

INTRODUCTION

Menu labelling is nutrition information for standard menu items that are displayed in on the menu or menu boards. It is also considered as a health education tool that can be used to pick on healthier choices of foods (Delaware Healthcare and Social Services, 2009). Menu labelling policies has implemented in many developed countries such as South Korea, Australia, Saudi Arabia, Taiwan, United Kingdom and United States. In Malaysia, there are still no mandatory menu labelling policies being enforce in the foodservice establishments (Zhou et al., 2020). Foodservice establishments that provide menu labelling shows positive feedback from the customers and has been shown as a way or two to act on diet related disease (Asma et al., 2020; Shawky, 2019). Some researchers have proven foodservice establishments that displaying their menu labels has help customers to choose healthier menu while dining at restaurants (Bleich et al., 2016; Radwan et al., 2017).

Diet related disease such as obesity, diabetes mellitus, hypertension and cardiovascular disease are recorded as the common non-communicable disease for people aged 18 and above in Malaysia (NHMS, 2019). NHMS (2019) reported that, one of every two adults in Malaysia were overweight and obese. In addition, the prevalence of diabetes mellitus has also increased in the duration of 10 years from 11.6% in 2006, to 17.5% in 2015.

As Malaysia aims to acquire developed nation status by 2020, many of the diseases mainly faced in fully developed nations are now experienced by the people. The National Health and Morbidity Survey (NHMS III) published in 2006 reports that overweight (body mass index [BMI] between 25.0 and 29.9) is around 29.7 percent of men and 28.6 percent of

women in the country, while the prevalence of obesity (BMI ≥ 30) is about 10.0 percent for men and 17.4 percent for women.

Data collected in NHMS (2015) stated that the government servants were found to be less active compared to private sector workers, self-employed and unemployed. Less active meaning low physical activity subsequently results in increase numbers of people to developed noncommunicable diseases. This sedentary behaviour also associates with huge dietary changes whereas consumption of high calorie food such as sugar and fat increased and contribute to a rise in noncommunicable diseases (Khor, 2012).

Urban population in Malaysia tend to consume higher caloric food compared to rural populations. Putrajaya is one of the urban cities and has been labelled as the 'fattest' city in Malaysia, NHMS (2015) reported that 25.8% people were obese, and 37% other were overweight. Putrajaya has the highest number of public sector workers because all federal government ministries departments are located there, this indicate that, public sector workers are more likely to contribute to the percentage of noncommunicable diseases. National Plan of Action for Nutrition of Malaysia III (NPANM III, 2016-2025) highlighted some strategies to overcome these issues such as the development and promotion of the right portion sizes according to individual desires and nutritional needs, and menu labelling policy in foodservice establishments by the year 2025 (MOH, 2016). However, no known research has been done regarding menu labelling, nevertheless, have concentrated on exploring the importance, awareness, and expectation of it among public sector workers

Over the past few years, the statistics from NHMS 2019 has shown that there have been increased in prevalence of obesity and overweight among Malaysian people. This has been aligned with the increase in urban population lifestyles and rapid growing numbers of fast-food restaurants (Heng & Guan, 2007). Putrajaya is one of the largest urban cities in Malaysia (Musa

et al., 2016) and ranked as the highest population that are suffering with overweight and obesity (NHMS, 2015). In 2001, this city has become the new Federal Government Administrative Capital and since then, the population has increase into 80,000 with 254,000 people working in the ministry's offices (Aqmarul et. al., 2015). Department of Statistics Malaysia (DOSM) stated that Labour Force Participation Rates, LFPR (%) of Federal Territory of Putrajaya is 75.9% in 2019. This shows that there are high number of workers in this city as it lines up with Selangor that stood with a total of 5.79 million populations with LFPR of 76.0%. Therefore, this study is placed in Putrajaya to study the intention of public sector workers intention to use menu labelling.

The theory of planned behaviour offers a working theoretical framework to see how people's perceptions of menu labelling for it helps to describe the factors behind human behaviours (Ajzen, 1991). The theory of planned behaviour proposed that the most important cause of behaviour is intention; intention is, in turn, predicted on attitude, subjective norm, and perceived behavioural control (Ajzen, 1991). Attitude is an indicator of the degree to which a person favourably or unfavourably evaluates an action, meaning that when a person feels that reading menu labels will help them make better food decisions, that person is more likely to plan to read menu labels. Subjective norm represents the normative rules or the perceived social pressure to do or not doing a behaviour (Ajzen, 1991). In the theory of planned behaviour, behaviours are determined by intention as affected by attitude toward the behaviour, subjective norm, and perceived behavioural control. The subjective norm means that the beliefs of reference groups are related to the act, and that the incentive to act adapts to the beliefs of the reference group. Perceived behavioural control refers to the perceived convenience of implementing an action and is dictated by opportunities and possibilities (Ajzen, 1991). This research therefore explores the intention of using menu labelling among public sector workers in Putrajaya by applying the theory of planned behaviour.

1.1 Problem Statements

Menu labelling is one of the aids for people making healthier food decisions in the restaurants. Many western research studies have proven that menu labelling could increase the awareness of healthy eating habit and psychosocial influences (Abdul Latiff et al., 2016; Delvarani et al., 2013; Shawky, 2019; & Fouad, 2019; Zhou et al., 2020). Most of the developed country that has done innumerable studies about menu labelling already implemented the menu labelling policy in their country (Zhou et al., 2020). However, there are not legislations that are enforced to the restaurants in Malaysia.

Many studies from developed country examine the effectiveness of menu labelling in various foodservice establishments, country such as South Korea, Taiwan and Australia has already enforced the menu labelling policy within their food facilities (Fouad & Intention, 2019; Harnack et al., 2008; Jun & Arendt, 2016; Stran et al., 2013; Tandon et al., 2010; Zhou et al., 2020). Hence, Malaysia can utilise menu labelling in restaurants or other eateries in the country to improve people's health and nutrition status.

Among developed country such as United States, United Kingdom, Australia and Korea, menu labelling has been widely known in their country (Shawky, 2019). Malaysia has no policies on menu labelling; thus, most Malaysians were not familiar with menu labelling in foodservice establishments. According to MOH, 2016, NPANM III has a plan to requisite the law on menu labelling in few food services that operates in Malaysia by the year 2025, however no laws have yet been executed until now.

Other than that, it also has been a drive in the restaurants chain to fight the diet-related disease (Asma et al., 2020) by providing menu labelling. People are felt like they are being assist on choosing what kind of food they are about to consume, upon the assistance, they are more confident and aware of what kind of nutrition they get from the food or how much calories

does the food on the menu will they consume (Shawky, 2019, Asma et al., 2020). Based on research by Abd Latif et al., (2013), Glanz et al., (1998), Shawky, (2019), menu labelling can teach customers the importance of daily calories intake and educate people on how to use menu labelling accurately as well as being course of action in health awareness in choosing the right food for them (Delvarani et al., 2013; Asma et al, 2020; Din et al., 2017; Zul Ariff et al., 2016).

However, out of all the research that have been done on menu labelling, there hardly any research about intention of menu labelling among public sector workers. Thus, with insubstantial amount of research on menu labelling, the policy can be a challenging task for the government. In attempt to fill in the gap, this research aims to examine the relationship between theory of planned behaviour and public sector workers' intentions to use menu labelling.

1.2 Significance of Study

Therefore, this study can assist the policy makers in Malaysia determine which factor significantly influence the intentions of public sector worker to use menu labelling. The findings of this study also help foodservice establishments to provide healthier options in the menu to improve customer experiences. The constructs of this study which consist of the factors that influenced the intention to use menu labelling can benefit foodservice establishments by providing the actual construct that they need to tackle on to increase the intention of the customer to use the menu labelling.

This study also may benefit the health professionals in the intervention part of their patients/client by providing them a way to healthy eating habits and improve their overall nutritional status, even though they are enjoying meals from takeaway foods or dining in the restaurants.

1.3 Hypotheses

H1: The public sector workers' attitudes influence their intentions to use menu labelling.

H2: The public sector workers' subjective norms influence their intentions to use menu labelling.

H3: The public sector workers perceived behavioural controls influence their intentions to use menu labelling.

H4: The public sector workers' health consciousness influences their intentions to use menu labelling

1.4 General objective

To determine the factors that influence public sector workers' intentions to use menu labelling.

1.4.1 Specific objectives

1. To examine the influence of intention on attitudes, subjective norms, perceived behavioural control and health consciousness of public sector workers on the use of menu labelling.

2. To examine the level of intention of using menu labelling among public sector workers.

Conceptual framework

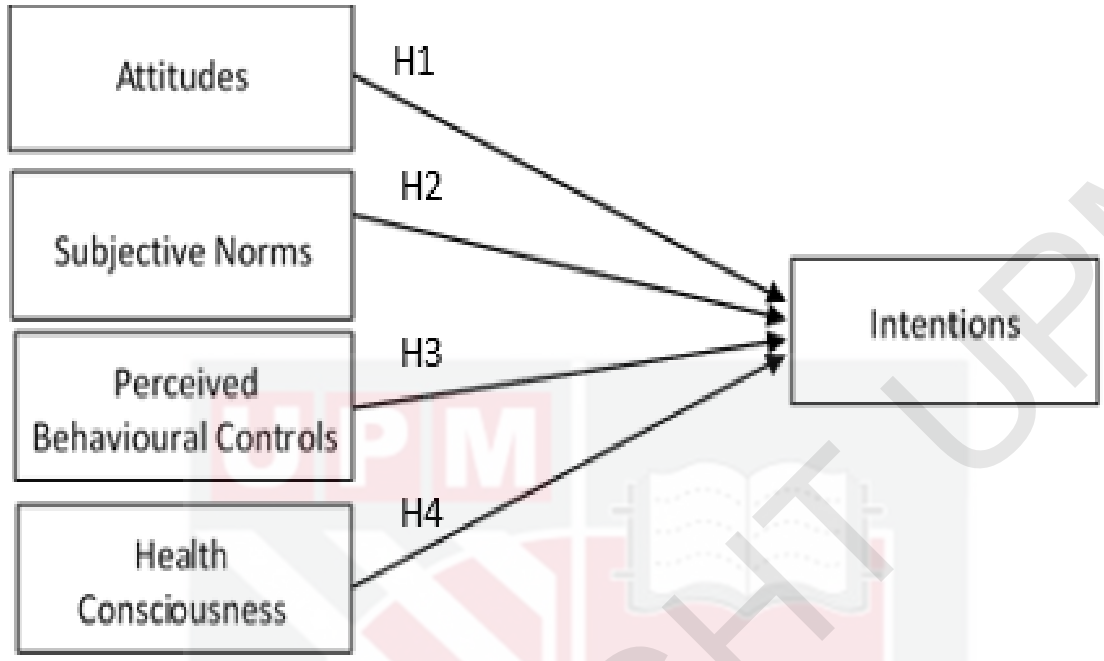

Figure 1.1 Extended Model of Theory of Planned Behaviour

CHAPTER 2

LITERATURE REVIEW

2.1 Non-communicable diseases and the burden for the future

Non-communicable diseases (NCDs) known as chronic diseases that cannot be transferred by human-to-human interaction. World Health Organisation (WHO) listed chronic diseases that considered as NCDs include stroke, diabetes, cancer, chronic lung disease and heart disease. Rising of NCDs causes a huge burden socially and economically in low-and middle-income countries. Over 80% of death globally causes by NCDs especially among people living in developing countries. According to report from WHO 2020, there are over five risk factors towards person that have NCDs poses life threatening.

These include high level of blood pressure, high level of cholesterols, heavy smoker, alcoholic and being overweight or obesity. Reducing these five risk factors can help to reduce the morbidity and mortality. Besides that, reducing the rates of NCDs may result in better healthcare system in the future. In Malaysia, one of the highest diet-related problems is obesity. According to the National Health and Morbidity Survey (NHMS), 2015, almost half of Malaysian has now are overweight and obese. Malaysia is listed as the country with the highest rate of overweight and obesity among Southeast Asian countries (Chan et al., 2017). The prevalence of obesity in Malaysia has increased number in three times since 1996.

Due this matter, in National Plan of Action for Nutrition of Malaysia III (NPANM III), 2016-2025, government of Malaysia has collaborated with other federal agencies to come out with numerous of plans and campaigns to combat this health issues that are expected to be run before 2025. There are tons of proof supports the argument that obesity related to chronic diseases is an urgent intervention in the face of the rising burden of developed countries,

(Magnusson, 2007). Rising number of obesities can also contribute to higher number of non-communicable diseases.

2.2 Unhealthy eating and takeaway foods

Previous study has shown that increasing number of non-communicable disases are majority among the country that are undergoing nutrition transitions with high influence of westernized lifestyles (Misra & Khurana, 2011). Growing numbers of takeaway foods has resulted in cooperatively increased the prevalence of obesity (Asma et al., 2020). Consumption of takeaway food has lead to poor quality of diet which include high intake of saturated fat, sodium and carbonated soft drinks (Smith et al., 2009). Takeaway habits and behaviour of eating out has shown to be a negative health implications such as overeating due to big portion of food, unbalanced diet, and promotes midnight eating habits that leads to people having major health issues in Malaysia. Besides that, takeaway foods also has encourage people to consume unhealthy food, because the most ctitical factor for people nowadays is to choose a meal that have pleasant taste (Ali, Noraziah Abdullah, 2012).

2.3 Menu labelling

Developed country such as United States, Australia, South Korea are some of the nations that has strong menu labelling law (Shawky, 2019) that requires restaurants to disclose calories on menus. In 2006, New York City became the first U.S. city that urge eateries to post calorie counts on menus. Menu must place the calories or any nutrition information so that customers can view it easily while ordering their food. (Delaware Health and Social Services, 2009).

There are numerous of previous studies on menu labelling. One of the findings stated that menu labelling can be one of the acts to elevate the strategy of marketing restaurants (Shawky, 2019), by providing the menu labelling, it portrays the restaurants concerns about the

health of customers. Understanding customer's need can gain customer's trust, that contribute to satisfaction and loyalty. Other findings show people intend to use menu labelling when they are eating out (Stran et al., 2013). Additionally, menu labelling has effect on switching their menu choices to healthier and lower calories (Tandon et al., 2010), shows positive impact of menu labelling towards people in choosing healthier meals in their daily life. Moreover, menu labelling also lay out as one of the education tools for the customers , that are proven to lift customers knowledge on menu labels (Abdul Latiff et al., 2014).

2.4 Theory of Planned Behaviour

Theory of planned behavior serves as the theoretical framework for this study. The theory of planned behavior provides a structure that examines the factors that influence individual behavioral outcomes. According to this theory, three independent factors determine a person's behavior—these include attitude, subjective norms, and perceived behavioural control (Ajzen, 1991).

2.4.1 Attitude

Definition of Attitude (Ajzen, 1991), attitude derives from a mix of more basic, influential, behavioural principles that replicate observed effects associated with the targeted actions (Shawky, 2019). It is the behavioural values that impair mental attitudes. This represent the predicted positive or negative effects of the actions in question being carried out (Murnaghana et al., 2010)

2.4.2 Subjective Norms

Subjective norms represent a person's perception of social pressure to engage in the behaviour (Conner et al., 2007). The surroundings pressure that is viewed as doing or not doing the behaviour (Ajzen, 1991). A perceived health behaviour that is tolerated in a person's personal life or disapproved by others (Stran et al., 2013). Subjective norms refer to whether the individual feels that important people in his or her life approve of the behavior (Stran et al., 2013).

2.4.3 Perceived Behavioural Control

The illusion of human being able to regulate behavioural output. As well as impacting behaviour by behavioural goals. It is also suspected to exert a strong effect on actions, looking into the motives of actions (Murnaghana et al., 2010).

2.5 Health Consciousness

Health consciousness is a person's tendency to focus on health (Kusumaningsih et al., 2019). Some studies describe that health consciousness are related to fitness in the everyday activities of an individual's life. It represents the ability of the participant to follow a healthier habit, diet, and lifestyle (Mamun et al., 2020). While other study shown that health consciousness is determined by a person who will greatly influence have the desire to consume nutritious foods (Hoque et al., 2018).

2.6 Theory of Planned Behavior in Menu Labeling Study

One of the studies reported that the relationship between food labelling and the behaviour of the customers is the role of contact in establishing the purpose of purchasing food items is one of the main findings (Abdul Latiff et al., 2016). In weight loss and participation in healthy lifestyle, knowledge and mindset, attitude play an important part. To encourage healthy eating options for citizens, menu labelling is seen as a path in educating them (Asma et al., 2020). Attitudes reflection on menu labelling have a positive effect on its used (Jeong & Ham, 2018). The perceived behavioural control has been measured by seeking the confidence of consumers to be able to read the menu labels to make healthier choices (Stran et al., 2013).

CHAPTER 3

METHODOLOGY

3.1. Study Design

This was an online quantitative cross-sectional survey study to investigate the factors that influence public sector workers' intention to use menu labelling. The type of survey used is online google form.

3.2. Study Location

This study was conducted among public sector workers that works in Wilayah Persekutuan Putrajaya. National Health and Morbidity Survey (NHMS) 2015 has ranked Putrajaya as the highest number of people that are overweight and obese. Based on World Atlas Data on Labour Force Participation Rates, Putrajaya has the highest percentage which is 77.6% in the year of 2016. Hence, this study was done at Wilayah Persekutuan Putrajaya among public sector workers who works in the federal ministry departments and agency.

3.3. Subjects

The participants for this study were public sector workers who works at Putrajaya. The public sector worker those who met the inclusion criteria were eligible to participate (Refer to Table 3.1).

Table 3.1

Inclusion and exclusion criteria of the subject

Inclusion criteria	Exclusion criteria
Public sector worker who works at Putrajaya 18 years old and above	Eat or order food from restaurants less than 4 times per month

3.4. Sample Size Determination

A sample size estimation was done by using multiple regression formula by Milton (1986). This formula was used to get the minimum number of respondents for this study. A minimum 37 total of respondent**s** needed in this study.

Sample size calculation using (Milton, 1986) formula:

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

where

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 $p<0.05$, t=3 for $p<0.01$)

Δr^2 = a minimum addition to r^2 (has to be decided by researcher, 0.01)

Table 3.2

Sample Size Determination for Multiple Regression Studies: Significance Test for Beta Coefficients at the .05 Level (t = 2)

		$r^2 \Delta$				
		.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
R^2	**.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. Table is adapted and reconstructed from Milton, S. (1986). A Sample Size Formula for Multiple Regression Studies. *The Public Opinion Quarterly, 50*(1), 112-118. Retrieved December 29, 2020, from http://www.jstor.org/stable/2748974.

R^2 value is determined from the previous study (Stran, et al., 2016), **R^2 = 0.62**.

Estimation $R^2 = 0.62$; $k = 4$; $\Delta r^2 = 0.05$

- Calculation (t=2): $n = 33 + k$

  $= 33 + 4$

  $= 37$

  - Minimum sample size: **37 participants**

This study was conducted online due to the pandemic. Previous study on TPB constructs to assess the use of menu labelling wad conducted physically (Jeong & Ham, 2018), has a low response rate (32.8%). Thus, to ensure the consequences of missing data or low response rate, half of the sample size value was added to the actual minimum sample size. Given that a minimum total of sample size was 56 participants.

3.5. Sampling Design

This study used voluntary response sampling method, whereby the federal departments or agencies that voluntarily agree to participate in the study. Since this study is conducted in Wilayah Persekutuan Putrajaya, that is the known ground hole of all the ministries department of Malaysia, more than 50 % of workers are public sector workers (Department of Statistics Malaysia, 2020). The platform used to approach federal departments and agencies were sent out an official email to conduct the research directly to the General Secretary of The Ministry or Chief of Service and Malaysian Government Call Centre.

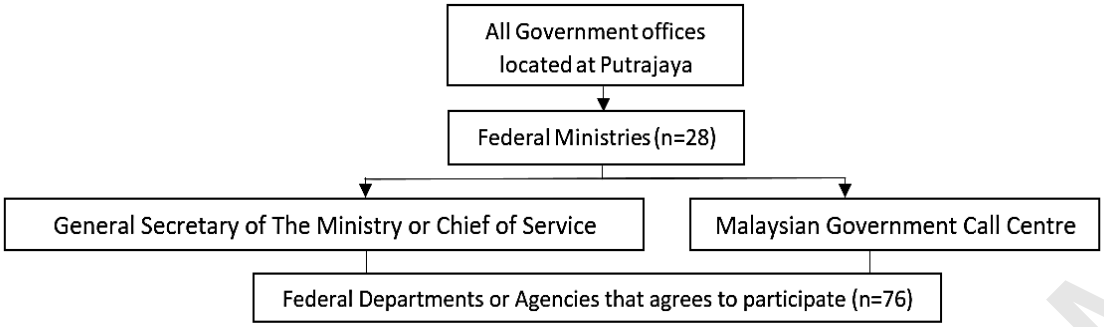

Figure 3.1 Flowchart of Sampling Design

3.5.1. Subject recruitment

A snowball sampling method was used in this study to recruit the participants. After federal departments or agencies in Putrajaya has agreed to participate in the study, an email was sent to the person from the federal departments or agencies, that included the consent form and the online survey link. Then, the person in charge must send the links to the other workers through email or any preferred work platform that were desired. Refer to Figure 3.1 below for the flowchart of the sampling method.

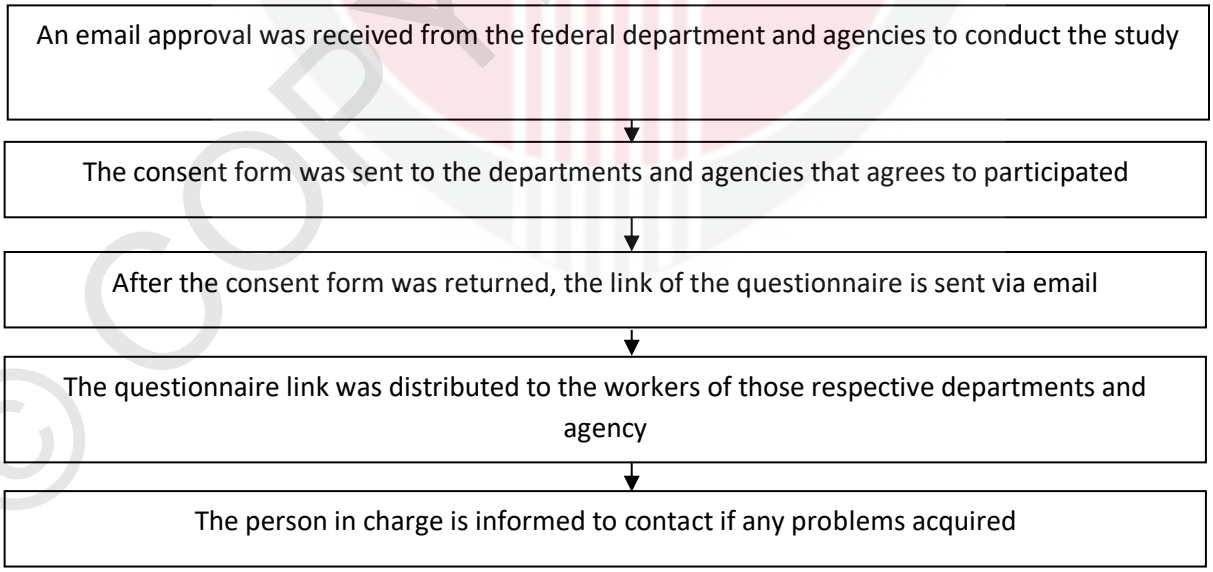

Figure 3.2 Flowchart of snowball sampling method

3.6. Research Tools/Instruments

This study used self-administrated questionnaire that consist of six sections: socio-demographic, attitude on menu labelling, subjective norm on menu labelling, perceived behaviour control on menu labelling, intention on menu labelling and health consciousness. Refer to Table 3.3. Since there are no standard questionnaire for TPB, the development of questionnaire was based on published research (Kim et al., 2013; Kim & Hwang, 2020; Mai & Hoffman, 2012; Stran et al., 2016; Xu et al., 2020). The questionnaires also have undergo face validity by the four researchers with the same topics to test the reliability and validity of the questions in the previous studies. The Cronbach's alpha was presented in Table 3.4.

Table 3.3

List of the items for each construct

Items	Scale range
Attitudes	
I think using menu labelling would be…	1-Very difficult to 7-Very easy
I think using menu labelling would be...	1-Very inconvenient to 7-Very convenient
I think using menu labelling would be...	
Restaurants that have calorie and nutrition information on their menus are...	1-Very unhelpful to 7-Very helpful
Restaurants that have calorie and nutrition information on their menus are...	1-Very unhelpful to 7-Very helpful
	1-Very bad to 7-Very good
Subjective norms	
Closed people think I should use menu labelling.	1-Strongly disagree to 7-Strongly agree
Friends think I should use menu labelling.	1-Strongly disagree to 7-Strongly agree
Closed people expected me to use menu labelling.	

Do not feel under social pressure to use menu labelling.	1-Strongly disagree to 7-Strongly agree
Important people think I should use menu labelling.	1-Strongly disagree to 7-Strongly agree
	1-Strongly disagree to 7-Strongly agree
Perceived behavioural controls	
Having good eating habits	1-Strongly disagree to 7-Strongly agree
Time and effort	1-Strongly disagree to 7-Strongly agree
Ability to understand calorie and nutrition information	1-Strongly disagree to 7-Strongly agree
Format of calorie and nutrition information on restaurant menus (For examples: font size, colour, design)	1-Strongly disagree to 7-Strongly agree
Type of information posted on restaurant menus (For examples: calorie only / nutrition information only / calorie information with daily recommendation)	1-Strongly disagree to 7-Strongly agree

Health consciousness	
Reflect on health.	1-Strongly disagree to 7-Strongly agree
Concerned about health.	1-Strongly disagree to 7-Strongly agree
Aware of health status.	1-Strongly disagree to 7-Strongly agree
Check on health.	1-Strongly disagree to 7-Strongly agree
Conscious of health.	1-Strongly disagree to 7-Strongly agree
Think about the diet-related disease (eg: diabetes, hypertension).	1-Strongly disagree to 7-Strongly agree
Intentions	
Expect to use menu labelling if they are available**.**	1-Strongly disagree to 7-Strongly agree
Want to use menu labelling if they are available.	1-Strongly disagree to 7-Strongly agree

Intend to use menu labelling if they are available.	
Always use menu labelling.	1-Strongly disagree to 7-Strongly agree
Willing to use menu labelling if they are available.	1-Strongly disagree to 7-Strongly agree
	1-Strongly disagree to 7-Strongly agree

3.6.1. Sociodemographic

This section included eight items: age, sex, education level, occupation, income, weight, height, and frequency of eating out. Respondents require to answer all question in this section. In Malaysia there are 4 level of education: primary, secondary, pre-university and tertiary. The income classification consists of T20 (>RM10,000), M40 (>RM5,000 – RM10,000) and B40 (<RM4,800). Self-reported BMI was used in this section. The frequency of eating out options between once a week until seven times a week, or more than seven times a week.

3.6.2. Attitude on menu labelling

There are 5 items in this section. These items were extracted from previous studies and modified to suit this study (Stran et al., 2016). The subject has response to this section with a seven-point Likert Scale, inconvenient (1) to convenient (7) for questions such as 'I think using calorie information that posted on menu when eating at eating out would be' and seven-point Likert scale, worthless (1) to useful (7) to question 'I think using calorie information that posted on menu when eating out would be'.

3.6.3. Subjective norm on menu labelling

In subjective norm section, consist of 5 items derived from previous study (Stran et al. 2016). The subject has response with a seven-point Likert scale, totally agree (1) to disagree (7) to question such as 'My friends think I should use calorie information that posted on menu labelling when eating out if it is available' and 'I feel under social pressure to use calorie information posted on restaurant's menu, if it is available'.

3.6.4. Perceived behaviour control on menu labelling

Subject's perceived behaviour control of menu labelling included 5 items derived from previous study conducted by Kim et al. (2013) with main question 'What factors or circumstances would enable you to use menu labelling in a restaurant before placing an order?' and subject require to respond to sub-questions 'having good eating habits' and 'ability to understand nutritional labelling' with seven-point Likert scale, totally disagree (1) to totally agree (7).

3.6.5. Intention on menu labelling

In this section, there are 5 questions that are adopted from previous study (Kim et al., 2013; Stran et al., 2016) such as 'I intend to use calorie information that posted on menu when eating at restaurant if it is available' and subject require to respond on seven-point Likert scale of totally disagree (1) to totally agree (7).

3.5.6. Health consciousness among workers

This is the last section for the questionnaire that consist of 6 items. All items extracted from previous study (Mai et al., 2012; Xu et al., 2020) which one of the questions included 'I usually reflect about my health' and the subject will have to respond with seven-point Likert scale, totally disagree (1) to totally agree (7).

3.7. Scale Reliability

Four subsets of items were designed to measure the TPB construct with health consciousness. Table 3.4 shows the Cronbach's alpha projected scale of each construct with the minimum 0.70 (perceived behavioural control) and maximum 0.922 (attitude). Nunally (1978) recommended a minimum alpha 0.7 as indicator for basic research to be acceptable. Hence, the reliability of all TPB construct items with health consciousness was acceptable for this study.

Each participant's desire to use menu labelling was calculated based on the total of the 26 items divided into five different sections. Firstly, the intention score ranged from 5-35, with a higher number indicating a stronger desire to use menu labels when they were available. The attitudes score, which ranged from 5-35, was calculated by adding the replies to five items. Higher scores indicated that more favourable opinions regarding menu labelling. The subjective norms scale consisted of five items with a range of 5-35, with a higher score indicating stronger social pressure to utilise menu labelling. Five items in perceived behavioural control with a range of 5 to 35 was used to assess whether workers wanted to use menu labelling to make a healthy choice. The higher the scores indicate that the more in control the person felt. Lastly, the health consciousness construct with 6 items and range score of 6-42. The higher score indicated high level of personal health conscious that shows high desire of making healthier choices based on their own health condition.

Table 3.4

Descriptive Statistics and Reliability Tests. (N=76)

Variables	**No. of items**	**Range**	**Mean ± SD**	**Reliability (Cronbach's alpha)**
Attitude	5	5-35	6.12 ± .916	0.922
Subjective norm	5	5-35	5.44 ± 1.18	0.819
Perceived behavioural control	5	5-35	5.88 ± .712	0.70
Intention	5	5-35	5.64 ± 1.27	0.861
Health consciousness	6	6-42	6.04 ± .743	0.952

3.8. Pre-testing

Before the actual research being conducted, a pre-test is performed to assess the capability of the selected population to response towards TPB construct with health consciousness, in terms of unclear meaning of words or sentences and unfamiliar terms in the designated questionnaires A total of 30 respondents participated and each respondent spent around 15-20 minutes to answer all the questions. The feedback from the respondents were considered and the questionnaire were improvised as needed. For example, some respondents reported that there was missing question in the perceived behaviour control section, however in the section, the respondents required to refer the main question of the section. Therefore, to avoid the confusion of some respondents, the main question is added to each of the items in the section.

3.9. Procedure

The data collection for this study started around April 2021 and ended in July 2021. After receiving ethical approval from *Jawatan Kuasa Etika Universiti Putra Malaysia* (JKEUPM), the federal departments agencies in Putrajaya were contacted through emails and calls to get feedback whether they wanted to participate. Official email with the consent form then were sent to the respective department or agency that agreed to participate. After received the consent form is returned, an online questionnaire link (Google Form) was sent back and distributed among workers of the respective department or agency. The links then were passed on via emails or any desired platform of the person in charge for respective federal department or agency. Identification such as name, address and telephone number were not included in the survey form. All the information provided by the participants were kept as confidential.

3.10. Data analysis

This cross-sectional survey study used Statistical Package for Social Science (SPSS) software version 25.0 used to analyses descriptive analyses such as mean, standard deviation, percentage to obtain the sociodemographic data of respondents. Multiple linear regression was run to obtain the inferential statistics. Multiple linear regression analysis is a test to assess the strength of the relationship of dependent variable (intention) and other variables that were included (attitude, subjective norm, perceived behaviour control, health consciousness). Each of the variable's values will affect one another and will causes other variables values to be higher or lower. Assumption tests for MLR also were done before analysing the data. These include multicollinearity, outliers, normality, linearity, homoscedasticity and independence of residuals. The TPB constructs were evaluated by the beta coefficients values or R square value to determine which factors influence the public sector workers' intention to use menu labelling.

3.10.1. Assumption test for Multiple Linear Regression (MLR)

Assumption was tested by reaching the minimum sample size of 37 respondents. This study has a total of 76 respondents which indicate that the result is generalised. The sample size is accepted to resemble the population of public sector workers in Putrajaya.

Another assumption tested was the proximity of multicollinearity. The result of the construct (health consciousness, attitude, perceived behavioural control and subjective norm) correlated with intention (.318, .494, .536, .209). Each variable must have value lower than 0.7 to have a good regression model, therefore, all variables were strongly correlated.

The next thing to check on multicollinearity is the VIF value of each independent variable (health consciousness, attitude, perceived behavioural control and subjective norm)

which is (1.471, 1.527, 1.575 and 1.521) were below 10 that indicated as the assumption was met.

Lastly, the normal P-P plot show that all the data points were closed to the line resulted as normal distribution. Overall, all independent variables are strongly correlated with intention as all assumption test result were met.

CHAPTER 4

RESULT AND DISCUSSION

4.1. Sociodemographic profile of the respondents

Sociodemographic profile of the respondents is presented in Table 4.1. The age of the participants ranged from 18 to 69 years old, with a mean age of 34.49 ± 6.85 years, approximately 27.6% of them were male and 72.4% were female. Nearly all participants are Malay (98.7%). For educational level, majority of respondents study up to university level (90.8%) this aligned with World Data Atlas in 2017 stated that labour force with tertiary education in Putrajaya was 25,000 people. Most of respondents are working in Jabatan Sains & Kesihatan (42.1%) and besides that, 19.7% were from Jabatan Kastam Diraja.

As for the monthly income, most respondents were from M40 categories (53.9%). BMI were grouped into 4 categories, underweight (<18.5 kg/m^2), normal (18.5-24.9 kg/m^2), overweight (25-29.9 kg/m^2) and obese (>30 kg/m^2) following the BMI classification from Word Health Organisation for Asian cut off. Respondents self-reported BMI with 47.4% were at normal range, while 48.7% were overweight or obesity. Most respondents do not present with NCDs (84.2%), those were presence with NCDs mostly have diabetes mellitus (5.3%). Based on the National Health and Morbidity survey (2015) stated that Putrajaya has a high prevalence of diabetes mellitus (19.2%). Frequency of eating out, only 7.9% of respondents had takeaway foods seven times per week. Previous study found that over 43.6% of their respondents had their takeaway foods at least one or two meals per day (Salleh et al., 2021). Another study conducted in Australia stated that 18-30 years old respondents eat takeaway foods at least twice a week (Farinelli et al., 2019), aligned with the respondents in this study which is 75% are between aged 18 – 39 years old.

Table 4.1

Sociodemographic profile of the respondents

Categories	Sub-categories	Frequency (n = 76)	Percentage (%)	SD ± Mean
Age	Between 18-29 years old	18	23.7	6.85 ± 34.49
	Between 30-39 years old	39	51.3	
	Between 40-49 years old	17	22.4	
	Between 50-59 years old	1	1.3	
	Between 60-69 years old	1	1.3	
Sex	Male	21	27.6	
	Female	55	72.4	
Ethnicity	Malay	75	98.7	
	Other	1	1.3	
Education Level	Secondary education	3	3.9	
	Pre-university	4	5.3	
	University	69	90.8	
Monthly Income	B40	21	27.6	
	M40	41	53.9	
	T20	14	18.4	
BMI	Underweight	3	3.9	

	Normal	36	47.4
	Overweight	23	30.3
	Obese	14	18.4
Presence of	Yes	12	15.8
NCDs*	No	64	84.2
	Diabetes	4	5.3
	Hypertension	1	1.3
	Obesity	2	2.6
	Asthma	2	2.6
	Others	2	2.6
Frequency	Once a week	28	36.8
of eating	Two times a week	12	15.8
out	Three times a week	12	15.8
	Four times a week	5	6.6
	Five times a week	9	11.8
	Seven times a week	6	7.9

4.2. Extended Theory of Planned Behaviour Constructs

Table 4.2 presents the mean scores and standard deviations of the constructs used in this study. Mean scores are presented based on seven-point Likert scale (1 strongly disagree – 7 strongly agree). In general, respondents' attitude was rated at 6.12, subjective norm at 5.44 and perceived behavioural control at 5.88, health consciousness at 6.04 and intention to use menu labelling at 5.64. Attitude was identified with the highest mean for score at 6.12, showing that majority of respondents had a positive attitude towards using menu labelling. The mean of intention to use menu labelling is considerably high (5.87) which is between disagree and strongly agree.

Table 4.2

Result of Theory of Planned Behaviour Constructs with Health Consciousness

Items	Scale range	Mean ± SD	Reliability
Attitudes		6.12 ± .916	0.922
I think using menu labelling would be…	1-Very difficult to 7-Very easy	5.90 ± 1.07	
I think using menu labelling would be...	1-Very inconvenient to 7-Very convenient	5.97 ± 1.02	
I think using menu labelling would be...	1-Very unhelpful to 7-Very helpful	6.16 ± 1.08	
Restaurants that have calorie and nutrition information on their menus are...	1-Very unhelpful to 7-Very helpful	6.18 ± 1.21	
Restaurants that have calorie and nutrition information on their menus are...	1-Very bad to 7-Very good	6.42 ± .840	

Subjective norms		5.44 ± 1.18	0.819
Closed people think I should use menu labelling.	1-Strongly disagree to 7-Strongly agree	5.21 ± 1.62	
Friends think I should use menu labelling.	1-Strongly disagree to 7-Strongly agree	5.21 ± 1.73	
Closed people expected me to use menu labelling.	1-Strongly disagree to 7-Strongly agree	5.29 ± 1.52	
Do not feel under social pressure to use menu labelling.	1-Strongly disagree to 7-Strongly agree	5.98 ± 1.33	
Important people think I should use menu labelling.	1-Strongly disagree to 7-Strongly agree	5.50 ± 1.52	
Perceived behavioral controls		5.88 ± .712	0.70
Having good eating habits	1-Strongly disagree to 7-Strongly agree	5.90 ± 1.06	
Time and effort	1-Strongly disagree to 7-Strongly agree	5.57 ± 1.35	
Ability to understand calorie and nutrition information	1-Strongly disagree to 7-Strongly agree	6.12 ± 1.02	
Format of calorie and nutrition information on restaurant menus			

(For examples: font size, colour, design)	1-Strongly disagree to 7-Strongly agree	6.00 ± 1.01	
Type of information posted on restaurant menus (For examples: calorie only / nutrition information only / calorie information with daily recommendation)	1-Strongly disagree to 7-Strongly agree	5.84 ± .817	
Health consciousness		6.04 ± .743	0.861
Reflect on health.	1-Strongly disagree to 7-Strongly agree	6.04 ± .930	
Concerned about health.	1-Strongly disagree to 7-Strongly agree	6.17 ± .790	
Aware of health status.	1-Strongly disagree to 7-Strongly agree	6.28 ± .759	
Check on health.	1-Strongly disagree to 7-Strongly agree	5.58 ± 1.27	
Conscious of health.	1-Strongly disagree to 7-Strongly agree	6.18 ± .933	
Think about the diet-related disease (eg: diabetes, hypertension).	1-Strongly disagree to 7-Strongly agree	6.01 ± 1.04	

Intentions		5.64 ± 1.27	0.952
Expect to use menu labelling if they are available**.**	1-Strongly disagree to 7-Strongly agree	5.44 ± 1.62	
Want to use menu labelling if they are available.	1-Strongly disagree to 7-Strongly agree	5.66 ± 1.40	
Intend to use menu labelling if they are available.	1-Strongly disagree to 7-Strongly agree	5.64 ± 1.35	
Always use menu labelling.	1-Strongly disagree to 7-Strongly agree	5.87 ± 1.35	
Willing to use menu labelling if they are available.	1-Strongly disagree to 7-Strongly agree	5.87 ± 1.17	

4.3. Multiple Regression Analysis of Factors that Influence Intention of Public Sector Workers to Use Menu Labelling

The main objective of this study was to determine the factors influencing the public sector workers' intention to use menu labelling in Putrajaya, Malaysia. There were five constructs tested which is attitudes, subjective norms, perceived behaviour control, intention, and health consciousness. The study findings show that the extended TPB model could explain 37 percent of the variance in the intentions to use menu labelling. The model was statistically significant, and the finding of this study also appears that the potency of some TPB construct (attitude, $\beta = .251$, $t = 2.146$, $p = .03$, $p < .05$) and perceived behaviour control, ($\beta = .403$, $t = 3.395$, $p = 0.00$, $p < 0.01$) does influence the intention of public sector workers to use menu labelling. Meanwhile, other TPB construct (subjective norm, $\beta = -.121$, $t = -1.035$, $p = .304$) and health consciousness, ($\beta = .163$, $t = .163$, $p = .159$) were not statistically significant, whereby it does not influence the intention of public sector workers to use menu labelling (Refer to Table 4.3). Meanwhile, Figure 4.1 show the value that represent beta coefficient (standardized) of each construct (attitude, subjective norm, perceived behaviour control and health consciousness).

Table 4.3

Result of Multiple Regression Analysis of Factors that Influence Intention of Public Sector Workers to Use Menu Labelling

Variables	R (R^2)	B	95% CI		β	t	p
			LL	UL			
(Constant)	.605 (0.366)	-1.684	-4.170	.802		-1.351	.181
Health consciousness		.278	-.112	.669	.163	1.422	.159
Attitude		.347	.025	.670	.251	2.146	.035
Perceived behavioral control		.718	.297	1.140	.403	3.395	.001
Subjective norm		-.130	-.380	.120	-.121	-1.035	.304

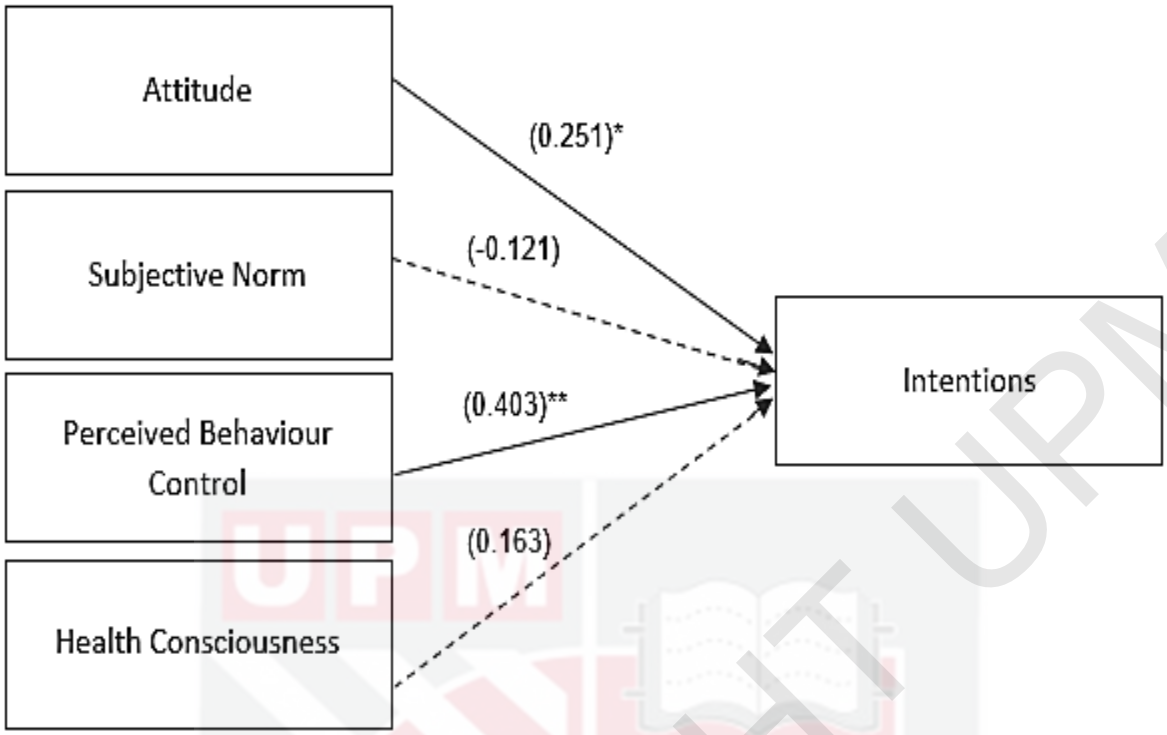

Figure 4.1 Results of Theory of Planned Behaviour with Health Consciousness Model

*Note: Values represent Beta coefficient (standardized) of the constructs. *p-value <0.05; **p-value <0.01.*

4.4. Hypothesis Testing Result

H1: The public sector workers' attitudes influence their intentions to use menu labelling.

Attitude are found significant ($\beta = .251$, $t = 2.146$, $p = .03$, $p < .05$) in intention to use menu labeling in this study. The study showed that attitude has positive effect on intention to use menu labelling. Previous study showed that attitude was an important factor in predicting intention to use menu labelling (Delvarani et al., 2013; Kim et al., 2013). Previous study that used TPB also found that attitude was the strongest TPB predictor to perform certain behavior (Wang et el., 2021; Karimy et al., 2015; Jun et al., 2015).

Creating positive image and perception of menu labelling, may increase the intention of people to use menu labelling. Policy makers can utilize the communication channels such as television, broadcasting, magazines, pamphlets, or the social media platforms to further express their positive attitude on using the menu labelling.

H2: The public sector workers' subjective norms influence their intentions to use menu labelling.

Subjective norms are found not significant in intention to use menu labelling in this study. Subjective norms did not have positive influence towards food behavioural intention (Paul et al.,2016). This study is contradicting with the findings which revealed that subjective norm was significant in determining to use menu labelling (Delvarani et al., 2013; Kim et al., 2013). This can be explained through the sociodemographic characteristics of respondents in this study are majority between the age of 30-39 years old. Study found that this age group behaviour are not affected by peer pressure (Steinberg et al., 2007). This shows that the social influence (family, friends and colleagues) is not an impact factor intention to use menu labelling among public sector workers.

H3: The public sector workers perceived behavioural controls influence their intentions to use menu labelling.

Perceived behavioral control shows the greatest significant role in predicting public sector workers' intention to use menu labelling. This finding in line with previous study which revealed that behavioral control was important predictor on intention to use menu labelling (Kim et al., 2013; Kim et al., 2015; Lim et al., 2015). Ajzen (1991) explained that control could directly affect behavior by increasing effort to goal achievement. Furthermore, control factors such as format of nutritional labeling and type of information provided, or the lists of nutrients are important component of this constructs. Therefore, when providing menu labelling specialized information should be provided, this will allow the people to recognize them well and increase their intention to use menu labelling. If people receive more information related to nutrition of the food in the menu labelling, they have high perceived behavioral control, thus they have a greater intention to use the menu labelling.

H4: The public sector workers' health consciousness influences their intentions to use menu labelling.

Health consciousness are found not significant of intention to use menu labeling in this study. Findings of previous study which stated that positive health consciousness was important factor to influence the use of menu labelling (Burton et al., 2012; Hoque et al., 2018; Jun et al., 2016; Nguyen et al., 2018). Health consciousness associate with individual to consume healthier foods (Hoque et al., 2018). Poor dietary habits among people living in the urban area are increasing, especially in Putrajaya. This might be due to a lot of barriers to practice healthy eating habits.

CHAPTER 5

CONCLUSION, LIMITATION AND FUTURE RECOMMENDATIONS

5.1. Conclusion

Overall, it can be concluded that the respondents' (public sector workers) perceived behaviour control and attitude were significantly influenced the intention to use menu labelling. Perceived behaviour control was the strongest influenced among all the other three constructs. No significant influence of subjective norms and health consciousness on the intention to use menu labelling among public sector workers in Putrajaya, Malaysia.

The result from this study indicates that the TPB constructs is a useful tool to predict the intention of menu labelling among public sector workers in Malaysia. Findings from this study also showed that the greatest factor influencing intention of public sector workers' intention to use menu labelling is perceived behaviour control, which the control factor relates with self-motivation of the workers. Thus, these factors could increase their intention to use menu labelling. Another factor that influences public sector workers' intention to use menu labelling is attitude. Creating positive image and perception of menu labelling, may increase the intention of people to use menu labelling. Policy makers can utilize the communication channels such as television, broadcasting, magazines, pamphlets, or the social media platforms to further express their positive attitude on using the menu labelling.

5.2. Limitations and Future Recommendations

There are few limitations of this study. First, this study did not apply any bivariate analysis which compare the respondents and sociodemographic factors. Future research may benefit from the data collected from this study. This study is the initial step to explore the behavioural intention of public sector workers to use menu labelling in Malaysia. This study present findings of understanding and prediction of public sector workers' intention to use menu labelling, future research can be done to complete the findings.

This research study has measured the intention to use menu labelling among public sector workers in Putrajaya, which limits the outcome of the findings. In the future, the researchers can expand the area particularly in urban area such as Klang Valley and Penang. Other than that, this study uses online quantitative survey method which limits the behaviour analysis. Future research may use self-reported behaviour for measuring public sector worker's intention to use menu labelling. The researchers may consider actual behaviour using self-reported behaviour method which mainly involves asking a participant about their feelings, attitudes, beliefs when doing the behaviour that can be done either in observational or experimental study.

Furthermore, this study only gained 76 respondents among the public sector workers in Putrajaya. There was no response (email) from the respective public sector departments in Putrajaya on the application to conduct the research study although repetitive emails and reminder has been send to the respective departments officer. Future recommendations, researchers should allocate a one-month duration to reach human resource of respective public sector departments and used stratified sampling method. Gaining approval from the authorities may ease the distribution of online survey questionnaire among the workers and boost the percentage of response rates.

REFERENCES

Abdul Latiff, Z. A. Bin, Rezai, G., Mohamed, Z., & Amizi Ayob, M. (2016). Food Labels' Impact Assessment on Consumer Purchasing Behavior in Malaysia. *Journal of Food Products Marketing*, *22*(2), 137–146. https://doi.org/10.1080/10454446.2013.856053

Abd Latif, I., Mohamed, Z., Rezai, G., & Kamarulzaman, N. (2013). The impact of food labeling on purchasing behavior among Non-Muslim consumers in Klang Valley. *Australian Journal of Basic and Applied Sciences*, 7(1), 124–128.

Ajzen, I. (1991). The theory of planned behavior organizational behavior and human decision processes. *Organizational Behavior and Human Decision Processes*, *50*(2), 179–211.

Ajzen, I. (2006). Constructing a theory of planned behavior questionnaire. Retrieved from http://people.umass.edu/~aizen/pdf/tpb.measurement.pdf

Allman-Farinelli, M., Rahman, H., Nour, M., Wellard-Cole, L., & Watson, W. L. (2019). The Role of Supportive Food Environments to Enable Healthier Choices When Eating Meals Prepared Outside the Home: Findings from Focus Groups of 18 to 30-Year-Olds. Nutrients, 11(9), 2217. doi:10.3390/nu11092217

Ali, Noraziah Abdullah, M. (2012). The food consumption and eating behaviour of Malaysian urbanites: Issues and concerns. *Malaysian Journal of Society and Space*, 8(6), 157–165. http://202.185.40.50/geografia/images/upload/14.geografia-sept 2012-azlan-si-ppspp-ed am1.pdf

Asma, A., Wahab, A., & Shukri, W. Z. (2020). *attitudes , perception and their relationship with healthy food choices*. *4*(October), 1573–1581.

Azri Bin Azmi, M. A., & Romle, A. R. (2015). Sustainable Development: Development for a Sustainable Future. A Case of Putrajaya Green City. *Australian Journal of Basic and Applied Sciences*, 9(14), 30-34.

Bleich, B. S. N., Wolfson, J. A., Jarlenski, M. P., & Block, J. P. (2016). *Restaurants With Calories Displayed On Menus Had Lower Calorie Counts Compared To Restaurants Without Such Labels*. *November 2015*. https://doi.org/10.1377/hlthaff.2015.0512

Bolarinwa, O. (2015). Principles and methods of validity and reliability testing of questionnaires used in social and health science researches. *Nigerian Postgraduate Medical Journal*, 22(4), 195. https://doi.org/10.4103/1117-1936.173959

Carfora V., Cavallo C., Caso D., Del Giudice T., De Devitiis B., Viscecchia R., Nardone G., Cicia G., Explaining consumer purchase behavior for organic milk: Including trust and green self-identity within the theory of planned behavior, *Food Quality and Preference*, Volume 76, 2019, Pages 1-9, ISSN 0950-3293, https://doi.org/10.1016/j.foodqual.2019.03.006.

Chen, M.-F. (2009). Attitude toward organic foods among Taiwanese as related to health consciousness, environmental attitudes, and the mediating effects of a healthy lifestyle. Br. Food J. 111, 165–178. doi: 10.1108/00070700910931986

Chan, Y. Y., Lim, K. K., Lim, K. H., Teh, C. H., Kee, C. C., Cheong, S. M., Khoo, Y. Y., Baharudin, A., Ling, M. Y., Omar, M. A., & Ahmad, N. A. (2017). Physical activity and overweight/obesity among Malaysian adults: Findings from the 2015 National Health and morbidity survey (NHMS). *BMC Public Health*, *17*(1), 1–12. https://doi.org/10.1186/s12889-017-4772-z

Conner, M., Kirk, S. F. L., Cade, J. E., & Barrett, J. H. (2001). *Connor - 2001 - vit planned behavior*. *52*, 621–633.

Delaware Division of Public Health. Public Information on Menu Labelling http://www.dhss.delaware.gov/dhss/dph

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 Official Website. (2020) https://www.dosm.gov.my/v1/index.php?r=column/cone&menu_id=ZmVrN2FoYnBvZE05T1AzK0RLcEtiZz09

Din, N., Mohd Zahari, M. S., & Mohd Shariff, S. (2017). Nutritional Labelling in Malaysian Full Service Restaurant Menu. *Journal of ASIAN Behavioural Studies*, *2*(2), 47. https://doi.org/10.21834/jabs.v2i2.178

Fouad, A., & Intention, E. C. (2019). *Examining Customers ' Intention and Attitude Towards Reading Restaurants ' Examining Customers ' Intention and Attitude Towards Reading Restaurants ' Menu Labels by Using the Theory of Planned Behaviour*. *November*.

Glanz, K., Basil, M., Maibach, E., Goldberg, J., & Snyder, D. (1998). Why Americans eat what they do: Taste, nutrition, cost, convenience, and weight control concerns as influences on food consumption. *In Journal of the American Dietetic Association* (Vol. 98, Issue 10, pp. 1118–1126). https://doi.org/10.1016/S0002-8223(98)00260-0

Justin Paul, Ashwin Modi, Jayesh Patel, Predicting green product consumption using theory of planned behavior and reasoned action, Journal of Retailing and Consumer Services,

Volume 29, 2016, Pages 123-134, ISSN 0969-6989, https://doi.org/10.1016/j.jretconser.2015.11.006.

J. C. Nunally and H. B. Ira, Psychometric Theory, 2nd ed. New York: McGraw-Hill, Inc., 1978, pp.245.

Harnack, L. J., French, S. A., Michael, J. M., Story, M. T., Jeffery, R. W., & Rydell, S. A. (2008). Effects of calorie labeling and value size pricing on fast food meal choices: Results from an experimental trial. *International Journal of Behavioral Nutrition and Physical Activity*, 5, 1–13. https://doi.org/10.1186/1479-5868-5-63

Hoque, M. Z., Alam, M. N., & Nahid, K. A. (2018). Health Consciousness and Its Effect on Perceived Knowledge, and Belief in the Purchase Intent of Liquid Milk: Consumer Insights from an Emerging Market. Foods (Basel, Switzerland), 7(9), 150. https://doi.org/10.3390/foods7090150

Heng, H. L. S., & Guan, A. T. K. (2007). Examining Malaysian Household Expenditure Patterns on Food-Away-From-Home. *Asian Journal of Agriculture and Development*, *4*(January 2007), 11–24.

Institute for Public Health (2015). National Health and Morbidity Survey 2015 (NHMS 2015). Vol. II: Non-Communicable Diseases, Risk Factors & Other Health Problems. Kuala Lumpur: Ministry of Health Malaysia.

Institute for Public Health (2019). National Health and Morbidity Survey 2015 (NHMS 2019). National Institutes of Health, Ministry of Health Malaysia.

Jeong J.-Y. & Ham S., Application of the Health Belief Model to customers' use of menu labels in restaurants, *Appetite* (2018), doi: 10.1016/j.appet.2017.12.012.

Jun, J., & Arendt, S. W. (2016). Understanding healthy eating behaviors at casual dining restaurants using the extended theory of planned behavior. *International Journal of Hospitality Management*, *53*, 106–115. https://doi.org/10.1016/j.ijhm.2015.12.002

Karimy, M., Zareban, I., Araban, M., & Montazeri, A. (2015). An Extended Theory of Planned Behavior (TPB) Used to Predict Smoking Behavior Among a Sample of Iranian Medical Students. International journal of high risk behaviors & addiction, 4(3), e24715. https://doi.org/10.5812/ijhrba.24715

Khor, G. L. (2012). Food availability and the rising obesity prevalence in Malaysia. International e-Journal of Science, Medicine and Education, 6(supp1), S61-S68.

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(June 2019), 1–11. https://doi.org/10.1016/j.jhtm.2019.11.002

Kline, R. B. (1998). Software Review: Software Programs for Structural Equation Modeling: Amos, EQS, and LISREL. *Journal of Psychoeducational Assessment*, 16(4), 343–364. https://doi.org/10.1177/073428299801600407

Kusumaningsih, D., Irianto, H., & Antriyandarti, E. (2019). Effects of health consciousness and environmental attitude on intention towards organic food purchase. *IOP Conference Series: Materials Science and Engineering*, *633*(1). https://doi.org/10.1088/1757-899X/633/1/012052

Levin, K. Study design III: Cross-sectional studies. Evid Based Dent 7, 24–25 (2006). https://doi.org/10.1038/sj.ebd.6400375

Magnusson, R. S. (2007). Non-communicable diseases and global health governance: Enhancing global processes to improve health development. *Globalization and Health*, *3*, 1–16. https://doi.org/10.1186/1744-8603-3-2

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

Mamun, A. Al, Hayat, N., & Zainol, N. R. B. (2020). Healthy Eating Determinants: A Study among Malaysian Young Adults. *Foods*, *9*(8), 974. https://doi.org/10.3390/foods9080974

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). Retrieved from http://nutrition.moh.gov.my/wpcontent/uploads/2016/12/ NPANM_III.pdf

Misra, A., & Khurana, L. (2011). Obesity-related non-communicable diseases: South Asians vs White Caucasians. *International Journal of Obesity*, *35*(2), 167–187. https://doi.org/10.1038/ijo.2010.135

Murnaghana, D. A., Blanchard, C. M., Rodgers, W. M., LaRosa, J. N., MacQuarrie, C. R., MacLellan, D. L., & Gray, B. J. (2010). Predictors of physical activity, healthy eating and being smoke-free in teens: A theory of planned behaviour approach. *Psychology and Health*, *25*(8), 925–941. https://doi.org/10.1080/08870440902866894

Musa, H. D., Yacob, M. R., Abdullah, A. M., & Ishak, M. Y. (2016). Sustainable City: Assessing the Community Happiness of Residents in Putrajaya Municipality Malaysia. *Review of European Studies*, *9*(1), 31. https://doi.org/10.5539/res.v9n1p31

Radwan, H., Faroukh, E. M., & Obaid, R. S. (2017). Menu labeling implementation in dine-in restaurants: The Public's knowledge, attitude and practices. *Archives of Public Health*, 75(1), 1–7. https://doi.org/10.1186/s13690-017-0177-9

Robert Wood Johnson Foundation. (2013). *2013 Assessment Report*.

Salleh, R., Ganapathy, S.S., Ibrahim Wong, N. et al. Is socio-demographic status, body mass index, and consumption of food away from home associated with high sodium intake among adults in Malaysia?: findings from the Malaysian Community Salt Survey (MyCoSS). J Health Popul Nutr 40, 12 (2021). https://doi.org/10.1186/s41043-021-00236-z

Shawky, I., El Enen, M. A., & Fouad, A. (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.

Smith, K. J., McNaughton, S. A., Gall, S. L., Blizzard, L., Dwyer, T., & Venn, A. J. (2009). Takeaway food consumption and its associations with diet quality and abdominal obesity: A cross-sectional study of young adults. *International Journal of Behavioral Nutrition and Physical Activity*, 6, 1–13. https://doi.org/10.1186/1479-5868-6-29

Steinberg, L., & Monahan, K. C. (2007). Age differences in resistance to peer influence. Developmental psychology, 43(6), 1531–1543. https://doi.org/10.1037/0012-1649.43.6.1531

Stran, K. A. N. N., Turner, L. W., Co-chair, C., Lawrence, J. C., & Mccallum, D. M. (2013). *an Evaluation of the Intention of College Students To Utilize*.

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

Rambalak Yadav, Govind S. Pathak, Determinants of Consumers' Green Purchase Behavior in a Developing Nation: Applying and Extending the Theory of Planned Behavior, *Ecological Economics*, Volume 134, 2017, Pages 114-122, ISSN 0921-8009, https://doi.org/10.1016/j.ecolecon.2016.12.019.

Tandon, P. S., Wright, J., Zhou, C., Rogers, C. B., & Christakis, D. A. (2010). Nutrition menu labeling may lead to lower-calorie restaurant meal choices for children. *Pediatrics*, 125(2), 244–248. https://doi.org/10.1542/peds.2009-1117

United States Food & Drug Administration. (2020). Menu Labeling Requirements. Retrieved from: https://www.fda.gov/food/food-labeling-nutrition/menu-labeling-requirements

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

WHO and FAO. (2003). Diet, Nutrition, and the Prevention of Chronic Diseases (Report of a joint WHO and FAO Expert Consulation). *WHO Technical Report Series*, *916*. https://apps.who.int/iris/bitstream/handle/10665/42665/WHO_TRS_916.pdf?sequence=1

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/https://doi.org/10.1016/j.scitotenv.2019.135275

Zhou, M., Lemaire, R., Hedrick, V., Serrano, E., & Kraak, V. I. (2020). *Nutrients Effects of Menu Labeling Policies on Transnational Restaurant Chains to Promote a Healthy Diet : A Scoping Review to Inform Policy and Research*. 1–27.

Zul Ariff Bin Abdul Latiff, Golnaz Rezai, Zainalabidin Mohamed & Mohamad Amizi Ayob (2016) Food Labels' Impact Assessment on Consumer Purchasing Behavior in Malaysia, *Journal of Food Products Marketing*, 22:2, 137-146, DOI: 10.1080/10454446.2013.856053

Appendix B: Subject's Information Sheet and Consent (English)

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 public sector workers' intentions to use menu labelling using theory of planned behaviour with health conscious in Putrajaya..

2. INTRODUCTION:

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

The purpose of this study is to examine the factors influence intentions to use menu labelling among public sector workers. 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. You 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) individual aged 18 years old below, (b) private sector workers, (c) public sector workers outside Putrajaya area.

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 responsibly 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

ADDITIONAL QUESTIONS DURING THE COURSE OF THE RESEARCH?

If you have any questions during the course of the research, please contact the researcher of this study, Siti Maryam Hazwani Binti Mohd Azlan, 198213@student.upm.edu.my; or principal investigator of this study, Dr Syafiqah Binti Rahamat, 03-97692465, syafiqahrahamat@upm.edu.my.

Appendix C: Subject's Information Sheet and Consent (Malay)

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 pekerja sektor awam untuk menggunakan pelabelan menu menggunakan teori tingkah laku terancang dengan tahap kesihatan di Putrajaya.

2. PENGENALAN

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

Tujuan kajian ini adalah untuk mengkaji faktor-faktor yang mempengaruhi niat untuk menggunakan pelabelan menu di kalangan pekerja sektor awam. Data dari kajian ini akan digunakan oleh penyelidik untuk 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 akan berlangsung lebih kurang 10 hingga 15 minit.

4. SIAPA YANG TIDAK BOLEH MENYERTAI KAJIAN INI?

Anda TIDAK boleh mengambil bahagian dalam kajian ini sekiranya anda: (a) individu berumur 18 tahun ke bawah, (b) pekerja sektor swasta, (c) pekerja sektor awam di luar kawasan Putrajaya.

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 dari 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 bertanggungjawab akan menyemak respons 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 penyelidik kajian ini, Siti Maryam Hazwani Binti Mohd Azlan, 198213@student.upm.edu.my; atau penyelidik utama kajian ini, Dr Syafiqah Binti Rahamat, 03-97692465, syafiqahrahamat@upm.edu.my.

Appendix D: Questionnaire

FACULTY OF MEDICINE AND HEALTH SCIENCES

DEPARTMENT OF NUTRITION AND DIETETICS

Questionnaire Form/ *Soal selidik*

"Confidential"/ *"Sulit"*

Research Title/ *Tajuk penyelidikan*:

Factors Influencing Intentions To Use Menu Labelling Among Public Sector Workers In Putrajaya

(Faktor-Faktor Yang Mempengaruhi Intensi Untuk Menggunakan Label Menu Dalam Kalangan Pekerja Sektor Awam Di Putrajaya.)

Research's Name/ *Nama penyelidik*: Siti Maryam Hazwani Binti Mohd Azlan

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

Date of Collection/ *Tarikh koleksi data*:

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 infomasi akan disimpan secara sulit. Terima kasih atas kerjasama anda dalam menjawab soal selidik.

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

☐ Are you Malaysian? / *Adakah anda warganegara Malaysia?*

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

☐ Are you working in the public sector? / *Adakah anda bekerja di sektor awam?*

☐ 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 A SOCIO-DEMOGRAPHIC / *SEKSYEN A SOSIO-DEMOGRAFI*

1. Age: _____ years old / *Umur:* _____ *tahun*

2. Sex: / *Jantina:*

( ) Male / *Lelaki*

( ) Female / *Perempuan*

3. Ethnicity: / *Bangsa:*

( ) Malay / *Melayu*

( ) Chinese / Cina

( ) Indian / India

( ) Others / Lain-lain

4. Educational Level: / *Tahap Pendidikan:*

( ) No formal education / *Tidak ada pendidikan*

( ) Primary Education / *Sekolah rendah*

( ) Secondary Education / *Sekolah menengah*

( ) Pre-university / *Pra-universiti*

( ) University / *Universiti*

5. Occupation field: / *Bidang pekerjaan:*

( ) Science or Healthcare sector / *Sektor sains atau kesihatan*

Other sector: / *Lain-lain sektor:* _____

6. Monthly household income group: / *Kumpulan pendapatan isi rumah bulanan:*

( ) B40 (less than RM2500 – RM4849) / *(Kurang daripada RM2500 – RM4849)*

( ) M40 (RM4850 – RM10959) / *(RM4850 – RM10959)*

( ) T20 (RM10960 – more than RM15039) / (*RM10960 – Lebih daripada RM15039)*

SECTION B INDIVIDUAL CHARACTERISTICS / *SEKSYEN B CIRI-CIRI INDIVIDU*

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

   ( ) Underweight / *Sangat kurus*

   ( ) Normal / *Biasa*

   ( ) Overweight / *Sedikit gemuk*

   ( ) Obese / *Sangat gemuk*

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

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

4. Do you have any non-communicable diseases? / *Adakah anda menghidap penyakit tidak berjangkit?*

   For examples: Diabetes, Hypertension, Cancer, Heart attack, Stroke, and etc. / *Sebagai contoh: Diabetes, Hipertensi, Kanser, Asma, Serangan jantung, Strok, dan lain-lain.*

   ( ) No / *Tidak*

   ( ) Yes / *Ya*

5. If you have any non-communicable disease/s, please state the disease/s. / *Sekiranya anda menghidap penyakit tidak berjangkit, sila nyatakan jenis penyakit tersebut.*

   ( ) Diabetes / *Kencing manis*

   ( ) Hypertension / *Darah tinggi*

   ( ) Cancer / *Kanser*

   ( ) Heart attack / *Serangan jantung*

   ( ) Stroke / *Strok*

( ) Kidney disease / *Penyakit buah pinggang*

( ) Others / *Lain-lain*

6. 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?*

( ) 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*

( ) Seven times a week / *Tujuh 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.***

Sample of calorie and nutrition information on restaurant menus / ***Contoh maklumat kalori dan pemakanan pada menu restoran***

No.	Statements	Scales						
1	I think using calorie and nutrition information posted on restaurant menus would be… / *Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran adalah...*	Very difficult / *Sangat susah*	Difficult / *Susah*	Somewhat difficult / *Agak susah*	Neutral / *Neutral*	Somewhat easy / *Agak mudah*	Easy / *Mudah*	Very easy / *Sangat mudah*
		1	2	3	4	5	6	7
2	I think using calorie and nutrition information posted on restaurant menus would be… / *Saya rasa menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran adalah...*	Very inconvenient / *Sangat menyusahkan*	Inconvenient / *Menyusahkan*	Somewhat inconvenient / *Agak menyusahkan*	Neutral	Somewhat convenient / *Agak senang*	Convenient / *Senang*	Very convenient / *Sangat senang*
		1	2	3	4	5	6	7
3	I think using calorie and nutrition information posted on restaurant menus would be… / *Saya rasa menggunakan maklumat kalori*	Very unhelpful / *Sangat tidak membantu*	Unhelpful / *Tidak membantu*	Somewhat unhelpful / *Agak tidak membantu*	Neutral	Somewhat helpful / *Agak membantu*	Helpful / *Membantu*	Very helpful / *Sangat membantu*

	dan pemakanan yang dipaparkan pada menu restoran adalah...	1	2	3	4	5	6	7
4	Restaurants that have calorie and nutrition information on their menus are... / *Restoran yang mempunyai maklumat kalori dan pemakanan pada menu mereka adalah...*	Very unhelpful / *Sangat tidak membantu*	Unhelpful / *Tidak membantu*	Somewhat unhelpful / *Agak tidak membantu*	Neutral	Somewhat helpful / *Agak membantu*	Helpful / *Membantu*	Very helpful / *Sangat membantu*
		1	2	3	4	5	6	7
5	Restaurants that have calorie and nutrition information on their menus are... / *Restoran yang mempunyai maklumat kalori dan pemakanan pada menu mereka adalah...*	Very bad / *Sangat tidak baik*	Bad / *Tidak baik*	Somewhat bad / *Agak tidak baik*	Neutral	Somewhat good / *Agak baik*	Good / *Baik*	Very good / *Sangat baik*
		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 if they are available. /	Strongly disagree / *Sangat tidak setuju*	Disagree / *Tidak setuju*	Somewhat disagree / *Agak tidak setuju*	Neutral	Somewhat agree / *Agak setuju*	Agree / *Setuju*	Strongly agree / *Sangat setuju*

	Mereka yang rapat dengan saya berpendapat saya harus menggunakan maklumat kalori dan pemakanan pada menu restoran sekiranya ada.	1	2	3	4	5	6	7
7	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
8	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

9	I feel under social pressure to use calorie and nutrition information posted on restaurant menus if they are available. / *Saya rasa tertekan untuk menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran sekiranya ada.*	1	2	3	4	5	6	7
10	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. / *Kebanyakan orang yang penting bagi saya berpendapat saya harus menggunakan maklumat pemakanan dan kalori yang dipaparkan pada menu restoran semasa memesan makanan sekiranya ada.*	1	2	3	4	5	6	7

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?*								
11	Having good eating habits / *Mempunyai tabiat makan yang baik*	1	2	3	4	5	6	7
12	Time and effort / *Masa dan usaha*	1	2	3	4	5	6	7
13	Ability to understand calorie and nutrition information / *Keupayaan memahami maklumat kalori dan pemakanan*	1	2	3	4	5	6	7
14	Format of calorie and nutrition information on restaurant menus (For examples: font size, colour, design) / *Format maklumat kalori dan pemakanan pada menu restoran (Contohnya: saiz font, warna, reka bentuk)*	1	2	3	4	5	6	7

15	Type of information posted on restaurant menus (For examples: calorie only / nutrition information only / calorie information with daily recommendation) / *Jenis maklumat yang dipaparkan pada menu restoran (Contohnya: kalori sahaja / maklumat pemakanan sahaja / maklumat kalori dengan cadangan harian)*	1	2	3	4	5	6	7
16	I usually reflect on my health / *Saya biasanya memikirkan keadaan kesihatan saya.*	1	2	3	4	5	6	7
17	I am very concerned about my health. / *Saya sangat mementingkan kesihatan saya*	1	2	3	4	5	6	7
18	I am aware of my health status. / *Saya sedar akan status kesihatan saya*	1	2	3	4	5	6	7

19	I always check my health. */ Saya selalu memeriksa kesihatan saya.*	1	2	3	4	5	6	7
20	I think I am conscious of my health. / *Saya rasa saya sedar akan kesihatan saya.*	1	2	3	4	5	6	7
21	I often think about the diet-related disease (eg: diabetes, hypertension). / *Saya sering berfikir tentang penyakit yang berkaitan dengan diet (contohnya: diabetes, darah tinggi).*	1	2	3	4	5	6	7
22	I expect to use calorie and nutrition information posted on the restaurant menu if they are available. / *Saya menjangkakan akan menggunakan maklumat*	1	2	3	4	5	6	7

	kalori dan pemakanan pada menu restoran sekiranya ada.							
23	I want to use calorie and nutrition information posted on the restaurant menu if they are available. / *Saya ingin menggunakan maklumat kalori dan pemakanan pada menu restoran sekiranya ada.*	1	2	3	4	5	6	7
24	I intend to use calorie and nutrition information posted on the restaurant menu if they are available. / *Saya berhasrat untuk menggunakan maklumat kalori dan pemakanan pada menu restoran.*	1	2	3	4	5	6	7
25	If calorie and nutrition information is readily posted on the restaurant menu, I will always use it. / *Sekiranya maklumat kalori dan pemakanan*	1	2	3	4	5	6	7

	dipaparkan pada menu restoran, saya akan selalu menggunakannya.							
26	I am willing to use calorie and nutrition information posted on the restaurant menus if they are available. / *Saya bersedia menggunakan maklumat kalori dan pemakanan yang dipaparkan pada menu restoran sekiranya ada.*	1	2	3	4	5	6	7

Appendix E: Turnitin Originality Report