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Investigating the Enrichment of Health Literacy Through Product Labeling : A Comprehensive Case

Study On Young Adults in Klang Valley, Malaysia

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**DECLARATION** 

I declare that the material contained in this paper is the end result of my own work and that due

acknowledgement has been given in the bibliography and references to ALL sources be they

printed, electronic or personal.

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Approval form

This research paper is attached here to, entitled 'Investigating the Enrichment of Health Literacy

Through Product Labeling: A Comprehensive Case Study On Young Adults in Klang Valley,

Malaysia' prepared and fully submitted by Keith Kittivongsak Vongsuthepin partial fulfillment

of the requirements for the Bachelor of Corporate Communication (HONS) is hereby accepted.

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PERMISSION SHEET

It is hereby certified that KEITH KITTIVONGSAK VONGSUTHEP (ID No:1904094) has

completed this final year project / dissertation / thesis\* entitled "Investigating the

Enrichment of Health Literacy Through Product Labeling: A Comprehensive Case Study On

Young Adults in Klang Valley, Malaysia" under the supervision of Raduan bin Sharif

(Supervisor) from the Department of Media, Faculty of Creative and Industries.

I hereby give permission to the University to upload softcopy of my final year project /

dissertation / thesis\* in pdf format into UTAR Institutional Repository, which may be made

accessible to UTAR community and public.

Yours truly,

KEITH KITTIVONGSAK VONGSUTHEP

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#### **ABSTRACT**

Health literacy has emerged as a progressively significant issue in the field of public health today. The term "Health literacy" is the degree to which individuals can obtain, process, and understand basic health information and services needed to make appropriate health decisions. Therefore, Health literacy is essential for everyone because, at some point in our lives, we all need to be able to find, understand, and use health information and services. Meanwhile, the term product labeling refers to the displaying of product information on its packaging. The label on a product lets the customers or consumers know what is in the food or product they use. It also lets the consumer know how healthy or unhealthy the product is. According to the survey conducted by the International Food Information Council (IFIC) Foundation and the American Heart Association, almost all Americans (95 per cent) report that they always or sometimes look for healthy options when food shopping. Consumers say they are more likely to consult food labels for healthfulness when buying a product for the first time. A small indication that product labeling contributes to promoting health literacy. Overall, Health literacy has proven to help us to prevent health problems, protect our health, and better manage health problems when they arise. The methodology that can be used is Qualitative research, collection and analysis of non-numerical data. For example, researchers can carry out interviews to obtain information or spoken word from the public to know whether they agree or disagree on whether product labeling on products can promote health literacy in local society. In short, at the end of this research study, one of the barriers of reaching health literacy through product labeling and was also found able and the effectiveness of product labeling in promoting health literacy were also examined. According to the data analysis in this research study, one of the barriers that hinders young adults from private universities within the Klang Valley health literacy in the context of product labeling is that reading nutrition labels takes too much time. Moreover, in this research study, it was discovered that the product labeling is effective in promoting health literacy among them as the majority of the respondents strongly agreed that they are concerned about their health and they try their best to only choose products that provide them detailed health information.

#### CHAPTER 1

#### INTRODUCTION

#### 1.0 Introduction

Chapter 1 will entirely cover the background of the study, identifying the problem statement and research by learning from past research papers. On top of that, it will also touch on research objectives and research questions to further enhance the purpose of this study. In addition, the significance of the study will also be clearly stated to inform confident readers of how it can benefit them, especially if they wish to explore this area.

### 1.1 Background

Product labeling, otherwise known as food labeling, is vital in providing information regarding food or products to consumers (Perumal et al., 2022). Food product labeling helps consumers to understand and grasp all the necessary information on whether it is nutritional composition, safety and quality of the food. In simple words, the product labels provide information on the ingredient used, their nutritional value and the storage of food goods (Sajdakowska et al., 2022).

On the other hand, the World Health Organization (2023) mentioned that health literacy is critical as it acts as the cornerstone to enable citizens to actively participate in improving their health, engage successfully in community action for health, and pressure governments to fulfill their obligations in addressing health and health inequalities throughout the populations.

Reducing inequalities in health and other areas will advance more quickly if the needs of the most marginalized and underprivileged societies are met. The 2030 Agenda for Sustainable Development's social, economic, and environmental goals will only be fully realized if efforts increase health literacy (World Health Organization, 2023).

Hence, the main question to be answered in this research study is whether product labeling can promote health literacy in the setting of local society.

#### 1.2 Problem statement

In recent years, nutrition deficiency has become part of the issue that many adolescents face. Sadly, it is known that many young people, whether male or female, are unnourished, making them vulnerable to all types of sickness and diseases and even death (World Health Organization, 2023).

In 2019, iron deficiency anemia was the second most common factor in young people aged 10 to 19 who lost healthy years of life owing to impairment. Supplements high in iron and folic acid are one way to support teenage health. Regular deworming is advised to avoid micronutrient (including iron) deficits in regions where intestinal helminths like hookworm are prevalent (World Health Organization, 2023).

Therefore it is vital to tackle this issue by examining whether product labeling promotes health literacy in the local society and helps overcome these issues.

1.3 Research Gap

A research gap is a question or a problem that has yet to be answered by existing studies or

research within the field. Sometimes, a research gap exists when a concept or new idea has yet to

be studied.

In recent years, numerous studies on health literacy have discussed the importance of health

literacy. However, most studies only focus on explaining the general health literacy and do not

precisely discuss the effectiveness of product labeling in promoting health literacy. On top of

that, there are limited research studies that identify and specify the barriers towards promoting

health literacy based on product labeling. Therefore, there is clearly a research gap on this topic

"Do product labeling promote health literacy in local society? A case study amongst young

adults in Klang Valley". Therefore, the purpose of conducting this research is to explore and fill

up those gaps.

1.4 Research Objectives (RO)

The research study is being conducted to determine whether product labeling promotes health

literacy in the local society. Therefore the objectives that are desired to be achieved are:

RO1: To examine the effectiveness of product labeling in promoting health literacy.

RO2: To identify the barriers towards health literacy in the context of product labeling.

### 1.5 Research Question (RQ)

In order to achieve the research objectives from the previous section, these are the following research question:

RQ 1: How does the clarity, content, and format of product labeling influence the health literacy of young adults from private universities within the Klang valley, and what are the key factors that contribute to or hinder the effectiveness of product labeling in promoting health literacy?

RQ 2: What are the barriers towards young adults from private universities within the Klang valley health literacy in the context of product labeling.

### 1.6 Scope of study

The scope of this study basically covers the research objectives to examine the effectiveness of product labeling in promoting health literacy among young adults in the local society and to identify the barriers of health literacy based on product labeling. Therefore, the expected outcomes for this study includes gaining insights on the effectiveness of product labeling in health literacy amongst young adults in Klang Valley as well as to identify the barriers towards health literacy based on product labeling.

## 1.7 Significance

The significance of this study basically lies in its ability to answer the gap that is left unanswered in previous literature regarding the topic of health literacy. Although previous studies have discussed health literacy in general, the main purpose of this current research examines the effectiveness of product labeling in promoting health literacy among young adults in the local society "Klang Valley" as well as to identify the barriers of health literacy in context of product labeling. Thereby, it can be a contribution and provide valuable insights that can be applied in the health literacy field by other researchers in the future. All in all this research is relevant to those who are interested in promoting health literacy and has the potential to impact the level of health literacy in a society.

# CHAPTER 2 LITERATURE REVIEW

### 2.1 Downfall of product labeling

Zainol et al. (2018), from Malaysia highlighted that the Ministry of Health Malaysia (MOH) has made a revision towards the food regulations 1985 in the year of 2013. And In 2009, MOH declared that nutrition labels on products to be mandatory. Hence, all producers in Malaysia are required to give out nutritional information (benefits) on their food products. Although most food producers in Malaysia have taken steps to offer accurate, transparent, and pertinent details regarding nutritional aspects of food, which addresses consumers' entitlement to well-informed decisions, there has been contention that consumers, in turn, have not effectively exercised their own right especially by neglecting to utilize nutritional labels when making healthier dietary selections (Zainol et al., 2018).

#### 2.1.2 Main issue

According to Zainol et al. (2018), Due to the ample availability of processed food in the market and the fast-paced nature of contemporary lifestyles, it becomes unavoidable for society to entirely evade the consumption of processed food. It was also highlighted that the main causes of death and mobility in Latin America are due to non communicable disease and obesity (Meza, 2019). Concerning that, another researcher also stated that the leading cause of obesity and non-communicable diseases (NCDs) is bad decisions in terms of diets, including food with extreme sodium, sugar and high in fats (Arellano et al., 2020). Most countries need the necessary nutrient information in food labeling. However, it was reported that most people still have

trouble understanding and using it, especially those with lower health literacy (Arellano et al., 2020).

Perumal et al. (2022), they also stated that the fast-paced routines and lifestyles have led individuals to seek easily accessible food, especially for meals, resulting in a heightened need for prepared foods that can be stored longer and require minimal preparation. To meet this requirement, grocery stores are progressively filling their shelves with processed and highly processed foods; however, the consumption of such items has been linked to rising rates of obesity and chronic non-communicable illnesses.

Therefore, Nutrition-related health issues, especially severe non-communicable diseases, have become increasingly common. It is predicted that 52 million people will die from these illnesses annually by 2030 (Ljubic ic et al., 2022). On top of that, according to Ale et al. (2022), Cardiovascular disease (CVD) is becoming more prevalent in Sub-Saharan African (SSA) nations. The Consumption of ultra-processed foods with high salt, fat, and glycemic load has increased significantly during the past 50 years.

Hence it is crucial for one to have the necessary knowledge and education to overcome those diseases and sicknesses. According to Ljubičić et al. (2022), they mentioned that raising understanding in this area is critical in order for individuals to recognise the necessity of a healthy and balanced diet with qualitatively and quantitatively balanced intakes of macro and micronutrients can help to overcome all sorts of diseases. Concerning that, the need for product labeling in every product is necessary. According to Ale et al. (2022), they also mentioned that

product labeling or otherwise known as Front Pack Labeling (FOPL), plays a vital role in steering consumers towards healthier diets and, eventually, contributing to the reduction of diet-related adverse health outcomes such as cardiovascular disease (CVD).

### 2.1.3 Different types of product labels "Front Of Pack Labeling" (FOPL).

According to Meza (2019), the different types of FOPLs also can be found globally are such as the Mexican Guideline Daily Amount, Ecuador's Multiple Traffic Light, Chile's Warning labels, French five color nutrition label, the straightforward version of Australian Health Star Rating and lastly the international Healthy Choice Label.

Beside that, other researchers also highlighted different types of product labeling. According to Holleman and partners (2021), they highlighted Precautionary allergen labeling (PAL), which is known to be a voluntary method of labeling foods by producers to warn consumers about the danger of unintentional allergen presence in products. However, even with ingredient declaration legislation and PAL in place, instances of allergic reactions to food products still remain common as proven by studies conducted over Canadian and Australian with the age of above 12 years old. It was stated also that a recent study among adults showed that almost half of them 41 % experienced allergic reactions from pre packaged food.

According to Ale and Noubiap (2022), FOPLs are classified into non-imperative and imperative. The non-imperative disseminates information on the nutritional contents of one or more nutrients, but it does not provide advice on the overall nutritional quality of the food product. On the contrary, the imperative system does not typically provide nutritional

information but provides an overall evaluation of the product's nutritional quality. It was further discussed that Warning labels (WL) are the most successful in the FOPL system.

### 2.1.4 Effects of Product/ Food Labeling

Franco-Arellano et al. (2020), studied and investigated the influence of various front-of-pack (FOP) labeling conditions on consumers' perceptions of product healthfulness and purchase intentions for healthier and less healthy drinks. Results showed that the healthier drinks with a health star rating and traffic light labeling were perceived as healthier than the ones without any symbol and the warning label condition. On the other hand, the less healthy drinks with all FOP symbols, including health star rating, warning label, and traffic light labeling, significantly lessened customers' perception of product healthfulness. Regarding purchase intentions, in healthier drinks, health star rating and traffic light labeling showed a trend towards increased purchase intentions compared to the control, but it did not reach statistical significance. Moreover, the warning label also showed a trend towards reducing purchase intentions compared to control. In less healthy drinks, all FOP symbols led to reduced purchase intentions.

On the other hand, according to Ale and partners (2022), the food labeling or otherwise known as front of pack labeling do provide information, quality and content of nutrition to assist consumers to make a fast informed decision on deciding among the wide range of products at their disposal to select healthier options for their diet. Therefore it was stated that food labeling reduced consumer energy intake by 6.6%, total fat intake by 10.6%, and other bad dietary options by 13.0% and also managed to increase the consumer vegetables intake by up to 13.5%. On top of that, compared to no label, the amount of sugar and calories in the purchased goods

was dramatically reduced to 4.43 calories and 0.67 g sugar per 100 g and lessened the sodium intake.

#### 2.1.5 Frequency of product label use and purchasing for Food group across New Zealand

Researchers conducted a test over a four week period of time to examine the frequency or percentage of the product label used by different food groups. It was stated by the researcher that the food groups for which consumers examined labels the most frequently were dairy which conclude a 17.3% total views, bread and bakery with a percentage of 16.3%, packaged fruit and vegetables at 13.1%, cereals 11.9%, and the least were sauces and spreads which only had a 8.2% (Mhurchu et al., 2020). Interestingly, researcher's also found that the buying of food groups has some sort of the same percentage and connection with the pattern of label viewing. For instance, it was highlighted that Dairy had 17.2% of total purchases, bread and bakery (15.5%), packaged fruit and vegetables (13.8%), cereals (11.3%), and sauces and spreads (8.1%). It shows a clear connection between the label viewing and the purchasing decision.

#### 2.1.6 More excellent product label comprehension scores.

According to Ljubičić et al. (2022), consumers who consume more veggies are more capable and better at understanding product labels. Consumers who have never taken the initiative to understand or seek health-related information have a significantly small amount of fruit and vegetable intake and are more likely to suffer from all types of diseases. It was also stated that people with lesser knowledge and who do not have a healthy diet intake are less likely to read the labels of food or products.

### 2.1.7 Barriers towards product labeling in promoting health literacy.

The Food and Drug Administration (FDA) has made some adjustments and changes to assist consumers to make a better purchasing decision to support their overall health. The revisions encompassed enhancing the prominence of calorie content and serving dimensions through the use of larger typefaces, as well as augmenting the details present on the complete packaging concerning vitamin D and potassium. This entails providing information about serving size, calories, and nutrients specific to a single serving (Perumal et al., 2020).

However, according to Hakim et al. (2020), it was highlighted that a significant number of consumers who recognized the symbol also encountered challenges in comprehending both the symbol itself and the overall labeling, affecting their decision-making process for purchasing. Same goes as well for Precautionary allergen labeling (PAL), reading the labels alone does not help to stop allergic reactions because often times uncommon types of wording is being used on products, lack of clarity which causes consumer to ignore completely on reading the label and just to make a decision to purchase the particular product based on their past positive or negative experienced towards it (Holleman et al., 2021).

Perumal et al. (2022), stated that most consumers only read nutritional labels when buying certain types of products. It was stated because nutritional labels are often hard to read and to be understood, therefore there is always a misinterpretation and understanding towards the product. Those who are affected by the misinterpretation and understanding towards the product nutritional label are especially the individual who suffers from serious illness and requires a specific type of diet.

### 2.2 Theoretical framework

#### Individual **Modifying Factors** Likelihood of Action Perceptions Gender, age, ethnicity Personality **Perceived Benefits** Perceived Socioeconomics Susceptibility Knowledge **Perceived Barriers** Perceived Threat Perceived Severity Taking Cues to Action **Health Action** Education Symptoms Media

### **HEALTH BELIEF MODEL (HBM)**

### 2.2.1 Explanation of HBM model

In general, the Health Belief Model explains that individuals' beliefs have an impact on how people act or behave in relation to their health. According to Boskey (2023), it was highlighted that the Health Belief Model is a tool that is mainly used by scientists to access and predict health behaviors. It was crafted by a group of social psychologists namely Godfey Hochbaum, Irwin Rosenstock, and Rosenstock and Kirscht. According to Boskey (2023), this model explains that one's personal beliefs regarding health and health conditions can have an influence on one's own behaviors related to health. Therefore, there are several critical factors that are able to impact one's perspective on health such as the components below.

### 2.2.2 Perceived susceptibility

Perceived susceptibility refers to an individual's perception of their likelihood of acquiring a specific health condition. In order for someone to take a proactive measure, it was explained that they will first need to perceive a sense of vulnerability towards all types of diseases, illnesses and adverse health outcomes. For example, when an individual perceives having a potential risk of contracting a disease, they will then be more inclined in taking the proactive and preventative actions. In contrast, if individuals themselves perceive that having a low or no risk, they are more likely to ignore the adaptation of health-conscious behavior (Washburn, 2020).

#### 2.2.3 Perceived severity

For perceived severity, researchers explained that is an individual's viewpoint concerning the weight and seriousness of a particular disease. The perception can be influenced by medical outcomes such as mortality or disability, as well as personal convictions regarding how the disease or condition might impact their life (Washburn, 2020). In the journal, the researcher also gave an example of how perceived severity works. For instance, there are individuals who refuse to receive the flu shot even when it was advised by the public health council. They believe that having a flu is not something that is severe. However there are certain groups of people including older adults and individuals with asthma and those who are self-employed might experience an elevated sense of perceived severity, given that a week of missed work translates to decreased earnings. Therefore, when perceived susceptibility and perceived severity are amplified, individuals will only then be more inclined to take proactive measures to safeguard their health (Washburn, 2020).

### 2.2.4 Perceived benefits

Perceived benefits is an individual's assessment of whether it is worthwhile adopting a nobel behavior in reducing the likelihood of a disease. For transformation to take place, it was explained that individuals must have a sense of conviction that such a change will yield favorable outcomes in terms of health. Any undertaking actions that will result in advantageous outcomes will increase the likelihood of an individual to engage in that action. However, on occasion the benefits from altering one's behavior might be lacking and causes them not to bring a change, even if the individuals understand and fully realize the vulnerability of them towards diseases and sickness. This can happen when perceived barriers have the edge over perceived benefits (Washburn, 2020).

### 2.2.5 Perceived barriers

The primary determinant of behavior change lies in the perception barrier. It is also the individual's perspective on the hindrances that prevents the adoption of new behaviors. Barriers can be either tangible or intangible. For example, tangible barriers can be such as financial constraints, transportation issues. On the other hand, intangible barriers may manifest as psychological concerns such as discomfort, humiliation, or difficulty. In order for a new behavior to happen, individuals will need to be fully convinced that the new behavior will offer them more benefits in return compared to their old one. If not, changes will not occur (Washburn, 2020).

#### 2.2.6 Cues to action

Cues for action encompass occurrences, individuals, or elements that prompt individuals to modify their behaviors. These cues can materialize through external sources like guidance from peers, the health setbacks of family members, or the influence of social media (Washburn, 2020).

### 2.2.7 Self efficacy

Self-efficacy basically explains the sense of confidence and conviction of an individual in their own capacity to engage in specific actions or execution in particular behavior. Normally, individuals are hesitant to change their old behavior unless they hold the belief in themselves that they are capable of doing so. When a person recognizes the potential advantages of altering their behavior (perceived benefit) but remains uncertain about their capability to effect the change, they are less inclined to undertake modifications in their lifestyle. In simpler terms, even if an individual acknowledges the considerable benefits of adopting healthier behaviors, they are unlikely to shift from their current behaviors if they harbor doubts about their ability to overcome the obstacles to change (Washburn, 2020).

#### 2.2.8 Correlation of theory and research topic

The Health Belief Model (HBM) can be linked to the current research topic. It can be seen that the HBM theory clearly states that individuals' perception of the severity of a health issue and their susceptibility to it influences their health-related behavior. Therefore, when it comes to product labeling and health literacy, customers will definitely feel that health-related information on product labels is vital as it relates to their susceptibility to health risks. For

example, if the product label provides information about the potential health risk associated with the product for instance it has high fat content, consumers then will perceive themselves as susceptible to health problems related to high fat consumption and they will more likely pay attention towards it and understand such given information.

Moving on, the HBM theory can be linked with research topics as well as they emphasize that individuals weigh the perceived benefits of taking a particular health action against the perceived barriers to that action. In the context of product labeling, the way health information is presented and the ease with which consumers can understand it can influence their perception of the benefits of making healthier choices (e.g., choosing products with lower sugar content) and the barriers to doing so. Clear and comprehensible product labels can reduce perceived barriers to making healthier choices.

On top of that, HBM theory includes cues to action, which are factors that prompt individuals to take a particular health-related action. Product labeling can serve as a cue to action. If product labels effectively convey health information and motivate consumers to make healthier choices (e.g., by highlighting nutritional facts or health warnings), they can play a role in promoting health literacy and influencing behavior. This can be interconnected with the research objective which is to examine the effectiveness of product labeling in promoting health literacy. For instance, if product labeling has the ability to effectively convey health information and motivate consumers to make healthier choices, then it can be classified and identified on the effectiveness of the product labeling. Furthermore, the cues can be materialized through external sources like guidance from peers, the health setbacks of family members, or the influence of social media and

this can indirectly help to answer the research objective which is to identify the type of barriers that are causing the stop towards health literacy in context of product labeling.

Lastly, Self-efficacy in the Health Belief Model refers to an individual's belief in their ability to take a recommended health action. In the context of product labeling and health literacy, clear and understandable labels can enhance consumers' self-efficacy by making it easier for them to understand health information and make informed choices.

Hence, if consumers are more well aware, understand and are able to incorporate the principles of the Health Belief Model especially when it comes to viewing the product label, consumers will be able to make the right decision to reach their potential health goal and make the right health decision, In another words, the more the Health Belief Model is understood, the more possibility for health literacy will occur. Also, the beauty of the Health Belief Model is its ability to promote health literacy through comprehension and understanding of people's attitudes, drives, and reactions to health-related communications and to take up health literacy initiatives to successfully engage, inform, and empower people to make healthy decisions by addressing the important aspects of the model.

#### **CHAPTER 3**

#### **METHODOLOGY**

#### 3.0 Introduction

In Chapter 3, it provides a comprehensive outline of the research methodology. This includes a detailed description of the research approach, covering aspects such as research type, target population, sample size, survey development, and, notably, the data collection instrument. These details are presented contextually and are integrated into the questionnaire. Moreover, the chapter explains the research procedure, scoring method, and analysis plan, ensuring a professional and systematic analysis of the research findings. The ethical approval of the questionnaire design is also articulated and justified to underscore the research questionnaire's qualifications prior to its distribution to the intended audiences which is towards the young adults. According to Cambridge Dictionary (n.d.), The definition of young adults are those individuals who are in their late teenage years or can be in their early twenties.

#### 3.1 Research type

These research studies use a quantitative research method of approaches to gather data from targeted audiences.

#### 3.2 Population

The research was directed toward a specific group of individuals, namely, young adults which are students that are currently attending private universities in the Klang Valley region of Malaysia, within the age range of 18 to 26 years old according to NIH, 2023. Eligibility for participation extended to all registered students that are pursuing their Foundations, Diplomas, Bachelor's Degrees, Master's Degrees, and PhDs at private universities.

This group of populations has been approached due to the fact that there is an insignificant amount of data available towards their health literacy. Therefore, prediction with logical calculation had been implemented in this process.

The missing database and the solution to find out the statistics:

Table 3.1

Missing database for this study and respective solution

Missing database	Solution				
2023 Education statistic	Use the 2021 database to be this paper's benchmark as it is the reference within five years.				
Total No. of Klang Valley, Malaysia Private University Student's population 2023	Use overall education statistics and calculate the private university database.				
Total No. of Population in Klang Valley, Malaysia 2023	Use total Malaysia 2023 population statistics to calculate population in Klang Valley, Malaysia 2023 by using the way of ratio and percentage.				

# 3.2.1 Total No. of Population of Private University Students in Malaysia 2021-2022

According to the Ministry of Higher Education Malaysia official website, it shows that there are 517,580 in total of students in the private higher education institution (by course) in Malaysia as of 2021.

No of Malaysian students in private higher education institutions by course, 2021.

Course	Male	Female	Total
Education	6,025	35,775	41,800
Arts and Humanities	22,787	23,920	46,707
Social Sciences, Business & Law	88,142	118,920	207,062
Science, Mathematics and Computing	35,731	14,146	49,877
Engineering, Manufacturing & Construction	39,821	14,510	54,331
Agriculture & Veterinary	566	351	917
Health & Welfare	11,314	34,077	45,391
Services	22,359	18,842	41,201
General Programme	14,873	15,421	30,294
Grand Total	241,618	275,962	517,580

<sup>\*\*\*</sup>Data above adopted from official website of MOHE (MOHE - 2021, 2022)

# 3.2.2 Malaysia's 2023 No of Population

According to Statista, the estimation of Malaysia's 2023 population as of July is 33.38 million.

Table 3.3

Malaysia's no of population by state, 2023

Malaysia's No. of population by State, 2023					
State	No. of population (Million)				
Selangor	7.21				
Johor	4.10				
Sabah	3.59				
Perak	2.54				
Sarawak	2.51				
Kedah	2.19				
W.P. Kuala Lumpur	2.00				
Kelantan	1.86				
Pulau Pinang	1.77				
Pahang	1.64				
Negeri Sembilan	1.22				
Terengganu	1.21				
Melaka	1.03				
Perlis	0.29				
W.P. Putrajaya	0.12				
W.P. Labuan	0.10				

<sup>\*\*\*</sup> Data above adopted from (Malaysia: Population by State 2023 | Statista, 2023)

# 3.2.3 Total No. of Population in Klang Valley, Malaysia 2023

Because this study will be only focusing towards the Klang Valley area, therefore this study adopted the sum up population of Selangor and Wilayah Persekutuan which is also known as "Federal Territory", Kuala Lumpur only. Hence, the total population for Klang Valley is 9.33 million.

Table 3.4

Klang Valley's no. of population by state 2023

Klang Valley State	No. of population in (million)
Selangor	7.21
Wilayah Persekutuan known as Federal Territory/ Kuala Lumpur	2.12
Grand Total	9.33

# 3.2.4 Study Population - Total No of Students in Private Higher Education Instituition, Klang Valley 2023

According to ratio,

Klang Valley's No.of: Population by state, 2023	Malaysia's No of Population = by State, 2023	No.of students in : Private Higher Education Institution, 2023	No of Students in Private Higher Education Institution by Course, Malaysia, 2021 - 2022
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Set No. of Students in Private Higher Education Institution, Klang Valley 2023 as unknown figure (x).

9.3 million :	33.38 million	=	X	:	517, 580

[(9.3\*1,000,000) / (33.38\*1,000,000)]\*517,580 = x

x = 144,202.935

x = 144,203

Based on the calculation, there are 144,203 students in private higher education in Klang

Valley 2023. Therefore, this figure will be the targeted population for this study.

3.3 Sampling size

In order to extend the applicability of the study's findings to the studied population, it was vital

to determine the study's statistical power and select an optimal sample size. This approach

enabled a more precise and efficient generalization of the study's outcomes. To derive the

required sample size, we employed a computerized calculator tool provided by The Research

Advisor (n.d), by inputting the figures as described below in the tool. The reason why a

confidence level of 70% were selected is due to the fact that there is a time constraint to

difficulty in finding legitimate respondents or participants virtually.

Confidence level: 70 %

Population size: 144,203

Margin of error: 5%

42

		fr	-	Sample Sesearch Ad				
	Confid	dence =	Confid	lence =	5.0%			
Population Size	Degree	of Accuracy	/Margin of E	rror	Degree	of Accurac	y/Margin of	Error
	0.05	0.035	0.025	0.01	0.05	0.035	0.025	0.01
10	9	10	10	10	0	1	1	5
20	17	18	19	20	0	1	2	7
30	24	26	28	30	0	1	2	8
50	34	41	45	49	0	1	2	8
<i>7</i> 5	44	56	64	73	0	1	2	9
100	52	69	81	96	0	1	2	9
150	63	89	111	142	0	1	2	9
200	70	105	137	186	0	1	2	9
250	75	117	158	229	0	1	2	9
300	79	127	177	270	0	1	2	10
400	85	142	207	348	0	1	2	10
500	89	153	231	422	0	1	2	10
600	91	161	251	491	0	1	2	10
700	93	167	266	555	0	1	2	10
800	95	172	280	617	0	1	2	10
900	96	176	291	674	0	1	2	10
1,000	97	180	301	729	0	1	2	10
1,200	99	185	317	830	0	1	2	10
1,500	100	191	334	963	0	1	2	10
2,000	102	198	354	1147	0	1	2	10
2,500	103	202	367	1295	0	1	2	10
3,500	104	206	383	1520	0	1	2	10
5,000	105	210	396	1747	0	1	2	10
7,500	106	213	406	1978	0	1	2	10
10,000	106	215	412	2117	0	1	2	10
25,000	107	217	422	2425	0	1	2	10
50,000	107	218	426	2549	0	1	2	10
75,000	107	219	427 429	2593	0	1	2	10
144,230 250,000	107 107	219 219	428 429	2636 2657	0	1 1	2 2	10 10
500,000	107	219	429 429	2657 2671	0	1	2	10
1,000,000	107	219	429 429	2678	0	1	2	10
2,500,000	107	219	430	2683	0	1	2	10
10,000,000	107	219	430	2685	0	1	2	10
100,000,000	107	219	430	2685	0	1	2	10
264,000,000		219	430	2685	0	1	2	10
	t, The Resear				1	1	2	10

Figure 3.1 Sampling size calculator & references table

Table 3.5
Sampling size and responses breakdown

Title	Responses
Targeted Effective Responses (Sampling size)	107
Total Responses Collected ( $\sum n$ )	109
Ineffective Responses	1
Effective Responses (n)	108

#### 3.5 Distribution of Channel

The distribution channel for this research relies on the help of social media's platform. For example, Facebook messenger, Whatsapp messages, Instagram and through emailing. The reason why social media's platform was used as the distribution channel is because of the ease of use and reaching capabilities.

#### 3.6 Data Collection Instrument

Due to the fact that this research approached the quantitative method, therefore the data that is gathered will be collected through statistics. For quantitative research, data are collected via polls, surveys or even questionnaires. However, the data collected for this research will be gathered and collected from an online survey form. The data collection instruments were backed up by Google form as these platforms have the capabilities to reach a wide range of respondents from all around the Klang Valley region.

#### 3.7 Reliability test

For the reliability test, there will be no need to perform any reliability test as the questionnaire was adopted from an established local University "Universiti Kebangsaan Malaysia" produced by Professor Dr. Ruzita Abd. Talib from the faculty of health sciences titled after "

Pemerkasaan literasi label pemakanan golongan remaja melalui Program Pendidikan

InfoNutriteen® di Instagram" with project reference no :UKM-TR2022-12.

#### 3.8 Questionnaire design

The questionnaire consisted of 4 sections, The first section will be focusing on demographics matters. The second, third and fourth section of the questionnaire will be entirely focusing on research related questions.

Throughout section A, question that will be asked from respondents were such as Gender, Age, Race, Student status, Level of study pursuing, Parents/Guardian marital status, Parents education level and Guardians occupation.

In order to make sure the authenticity and legibility of the respondents, questions regarding the name of their institution, level of study that they are currently pursuing. Once again, these groups of respondents were approached via social media's platform such as Facebook messenger, Whatsapp messages, Instagram and through emailing.

In section B, C and D, there were a total of 40 questions to answer the research objectives of this study. All of them were distributed under three sections, such as 10 questions for Food Label Practice, 11 questions for Skills In Understanding And Interpreting Food Label and 10 questions in total for Skills In Using Food Label.

Once again, this questionnaire was adopted from an established local University "Universiti Kebangsaan Malaysia" produced by Professor Dr. Ruzita Abd. Talib from the faculty of health sciences. Beside being the fact that the questionnaire was from and established local University, the other reason why the questionnaire was adopted is mainly because of the lack of the latest questionnaire regarding this research topic, moreover after going through the set of questionnaire, it is very much related to the research topic and it is foresee that it has the elements to answer the research objective. Hence, this questionnaire was adopted.

Before answering the related questions, respondents are instructed to answer according to the most appropriate level of agreement towards the situation given. The scoring scale will be Based on the scale from 1 to 7 (1=Strongly Disagree to 7=Strongly Agree),

#### 3.9 Analysis Plan

The data that is collected through the questionnaire "Google form" and will be analyzed with the help of a software known as IBM SPSS Statistics 29.

# 3.10 Ethical Approval

This research questionnaire was submitted to the supervisor and was checked and fully approved by the University Scientific and Ethical Review Community of Universiti Tunku Abdul Rahman Sg Long.

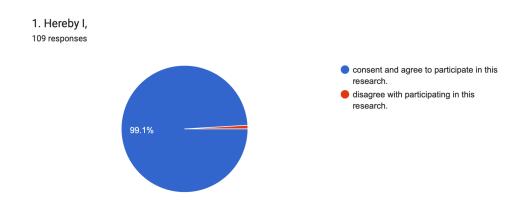
#### **CHAPTER IV**

#### FINDINGS & ANALYSIS

#### 4.0 Introduction

Throughout chapter 4, the collected raw data went through SPSS Statistics to do a basic analysis. The date is presented in the form figure, chart or table form. The questionnaire that was passed out was designed with the help of Google form and was distributed online. A total of 109 responses were collected starting from 15 November 2023 to 1st of December 2023, a total of 16 days. 108 respondents were used for this research while 1 respondents were filtered out

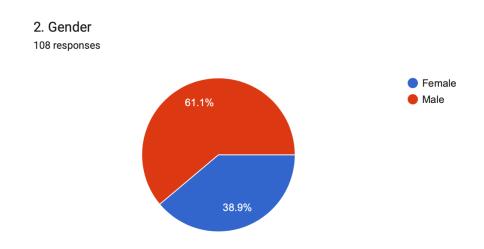
#### 4.1 Consent



Graph 4.0 Percentage of consent that collected from respondent to participate in study

A total of 109 responses were gathered through Google form questionnaires for this study. (99.1%) of them ( $\sum n = 108$ ) gave their consent and agreement to participate in this research study. However, (0.9%) of respondent ( $\sum n = 1$ ) disagreed with participation to this research.

#### 4.1.2 Gender

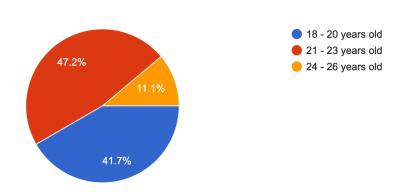


Graph 4.1 Percentage of respondent's gender

To sum up, based on the total of 108 respondents, it was recorded that 61.1% (n= 66) were male while 38.9% (n= 42) were female.

# 4.1.3 Age Group

# 3. Age Group 108 responses

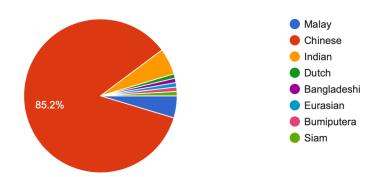


Graph 4.2 Percentage of respondents age group

For the age group, the majority of respondents with a percentage of 47.2% (n= 51) are the age between 21 - 23 years old. Meanwhile, 41.7% (n= 45%) are aged between 18 - 20 years old and only 11.1% (n=12) are aged between 24 - 26 years old.

# 4.1.4 *Race*





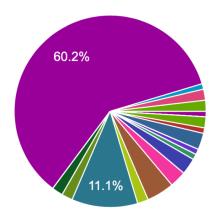
Graph 4.3 Percentage of respondents race

A total of 85.2% of respondents (n= 92) are Chinese based race; 5.6% (n= 6) were Indian based race respondents; 4.6% (n= 5) respondents were Malay based race while 0.9% (n= 1) stood for Dutch, 0.9% (n=1) for Bangladeshi, 0.9% (n=1) for Eurasian, 0.9% (n=1) for Bumiputera and 0.9% (n=1) for Siam race.

# 4.1.5 Your University?

# 5. Your University

108 responses



- Al- Madinah International University (...
- Asia e University (AeU)
- Asia Metropolitan University
- Asia Pacific University of Technology...
- Asia School of Business
- Binary University of Management and...
- City University
- Help University

▲ 1/5 **▼** 

- Heriot- Watt University Malaysia
- Infrastructure University Kuala Lumpu...
- International Centre for Education in I...
- International Medical University (IMU)
- International University of Malaya-Wales
- Limkokwing University of Creative Tec...
- MAHSA University
- Malaysia Institute of Supply Chain Inn...
- **▲** 2/5 ▼
- Malaysia University of Science & Tech...
- Management and Science University (...
- Manipal GlobalNxt University
- Multimedia University (MMU) Cyberjaya
- Open University Malaysia (OUM)
- Perdana University
- Putra Business School
- SEGI University
- **▲** 3/5 ▼
- SUNWAY University
- TAR UMT
- Taylor's University
- UCSI University
- UNITAR International University
- Universiti Cyberjaya (UOC)
- Universiti Islam, Cyberjaya
- Universiti Selangor (UNISEL)
- **▲** 4/5 ▼
- Universiti Teknologi Petronas (UTP)
- Universiti Tenaga Nasional (UNITEN)
- Universiti Tunku Abdul Razak ( UniRAZAK)
- Universiti Tunku Abdul Rahman (UTAR)
- University Malaysia of Computer Scie...
- University of Nottingham Malaysia Ca...
- Xiamen University Malaysia
- ▲ 5/5 ▼

Graph 4.4 Respondents university

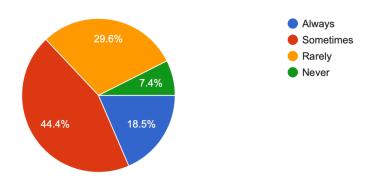
The highest number of respondents were from University Tunku Abdul Rahman (UTAR) with the percentage of 60.2 % (n= 65) respondents; 11.1 % (n= 12) respondents were from Taylor's University; 4.6% (n=5) respondents from Sunway University respectively; 2.8% (n=3) respondents from SEGI University; 2.8% (n= 3) from Multimedia University (MMU) Cyberjaya; 2.8% (n=3) from Infrastructure University Kuala Lumpur; 1.9% (n= 2) respondents from University of Cyberjaya; 1.9% (n=2) for UCSI University, 1.9% (n=2) for Tunku Abdul Rahman University of Management & Technology, 1.9% (n=2) for HELP University, 1.9% (n=2) for Xiamen University Malaysia, 1.9% (n=2) for University of Nottingham Malaysia; 0.9% (n=1) respondents Limkokwing University of Creative Technology, 0.9% (n=1) Heriot-Watt University Malaysia, 0.9% (n=1) Asia School of Business and 0.9% (n=1) University Malaysia of Computer Science and Technology and Management and 0.9% (n=1) for Science University (MSU).

The questionnaire question regarding "Your University" was designed with a dropdown option with a listing of all the private higher education institutions within the Klang Valley region. Therefore if let's say the participants choose "Others" meaning that they study outside from the Klang Valley region, they will come to the end of their participation and will not be able to proceed to the next questions. After filter out, the effective responses that were collected are 108 respondents with 1 participant disagreeing to give its consent to continue participating in the questionnaire.

#### 4. 2 Food label practice

#### 1. How frequent do you read nutrition labels when purchasing foods and beverages?

1. How frequent do you read nutrition labels when purchasing foods and beverages? 108 responses



Graph 4.5

B1- How frequent do you read nutrion labels when purchasing foods and beverages?

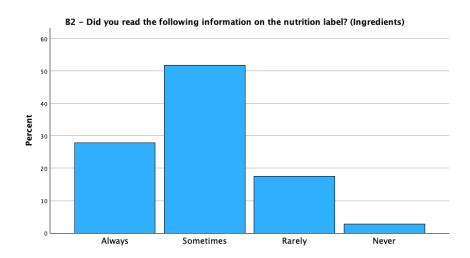
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	20	18.5	18.5	18.5
	Sometimes	48	44.4	44.4	63.0
	Rarely	32	29.6	29.6	92.6
	Never	8	7.4	7.4	100.0
	Total	108	100.0	100.0	

#### Table 4.1 Frequency table

Based on the graph 4.6 and table 4.1, most respondents with the frequency of 48, a percentage of 44.4% only sometimes read the nutrition labels when purchasing foods and beverages. 32 respondents with the frequency of 32 and 29.6% rarely read nutrition labels when purchasing foods and beverages. Meanwhile, 20 respondents with the percentage of 18.5% always read

nutrition labels when purchasing foods and beverages. 8 respondents with the percentage of 7.4 never read labels when purchasing food and beverages.

#### 4.2.2 Did you read the following information on the nutrition label? (Ingredients)



Graph 4.6

B2 - Did you read the following information on the nutrition label? (Ingredients)

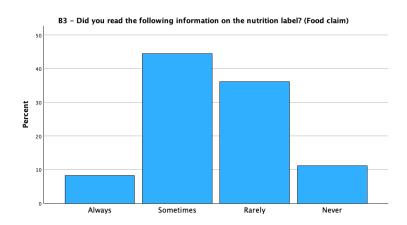
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	30	27.8	27.8	27.8
	Sometimes	56	51.9	51.9	79.6
	Rarely	19	17.6	17.6	97.2
	Never	3	2.8	2.8	100.0
	Total	108	100.0	100.0	

#### Table 4.2 Table

Based on the graph 4.7 and table 4.2, the most number of respondents with a frequency of 56 and the percentage of 51.9 % sometimes read the ingredients on the nutrition label. The second most respondents is with a frequency of 30 and with the percentage of 27.8 % always read the ingredients on the nutrition label. Meanwhile, 19 respondents with a percentage of 17.6% rarely

read the ingredients on nutrition labels. The least respondents which are 3 of them with a percentage of 2.8% never read ingredients on the nutrition labels.

#### 4.2.3 Did you read the following information on the nutrition label? (Food claim)



Graph 4.7

B3 - Did you read the following information on the nutrition label? (Food claim)

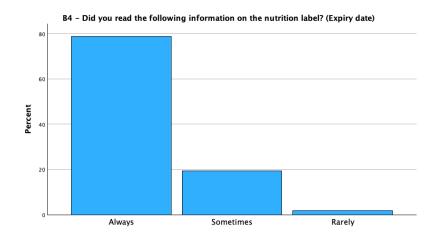
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	9	8.3	8.3	8.3
	Sometimes	48	44.4	44.4	52.8
	Rarely	39	36.1	36.1	88.9
	Never	12	11.1	11.1	100.0
	Total	108	100.0	100.0	

#### 4.3 Table

Based on the graph 4.8 and table 4.3, The most respondents with a frequency of 48 and with a percentage of 44.4%, sometimes read food claim information on the nutrition label. 39 respondents with a percentage of 36.1% rarely read food claim information on the nutrition label. Meanwhile, 12 respondents with a percentage of 11.1 never read food claim information on the

nutrition label. The least respondents, 9 respondents with a percentage of 8.3% always read food claim information on the nutrition label.

#### 4.2.4 Did you read the following information on the nutrition label? (Expiry date)



Graph 4.8

B4 - Did you read the following information on the nutrition label? (Expiry date)

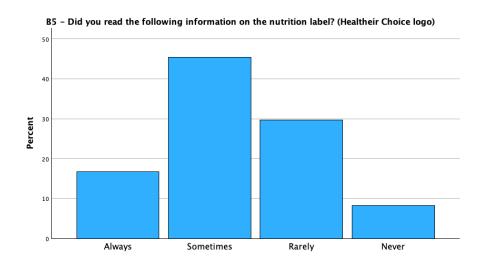
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	85	78.7	78.7	78.7
	Sometimes	21	19.4	19.4	98.1
	Rarely	2	1.9	1.9	100.0
	Total	108	100.0	100.0	

#### <u>Table 4.4</u>

Based on the graph 4.9 and table 4.4, the most respondents which 85 respondents with a percentage of 78.7% always read expiry date information on nutrition labels. 21 respondents with a percentage of 19.4 sometimes read expiry date information on nutrition labels. And only 2

respondents with the total percentage of 1.9% rarely read expiry date information on nutrition labels.

#### 4.2.5 Did you read the following information on the nutrition label? (Healthier Choice Logo)



Graph 4.9

B5 - Did you read the following information on the nutrition label? (Healtheir Choice logo)

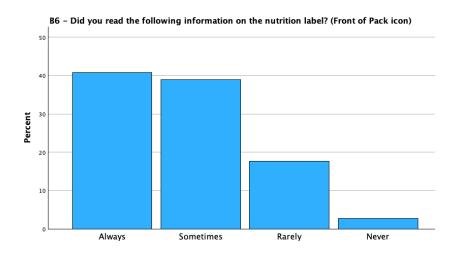
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	18	16.7	16.7	16.7
	Sometimes	49	45.4	45.4	62.0
	Rarely	32	29.6	29.6	91.7
	Never	9	8.3	8.3	100.0
	Total	108	100.0	100.0	

#### Table 4.5

Based on the graph 4.10 and table 4.5, the most respondent is 49 and with a total percentage of 45.4% sometimes read healthier choice logo information on the nutrition labels. Also 32 respondents with the percentage of 29.6% rarely read healthier choice logo information on the nutrition labels. Meanwhile, 18 respondents with 16.7 percent never read healthier choice logo

information on the nutrition labels. However, the least respondents of 9 respondents with a percentage of 8.3 % never read healthier choice logo information on the nutrition labels.

#### 4.2.6 Did you read the following information on the nutrition label? (Front of Pack icon)



Graph 4.10

B6 - Did you read the following information on the nutrition label? (Front of Pack icon)

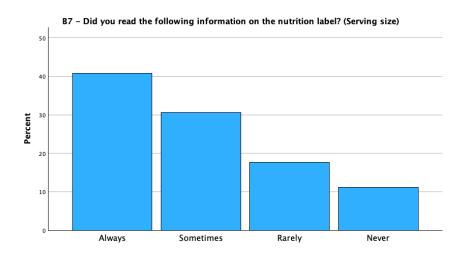
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	44	40.7	40.7	40.7
	Sometimes	42	38.9	38.9	79.6
	Rarely	19	17.6	17.6	97.2
	Never	3	2.8	2.8	100.0
	Total	108	100.0	100.0	

#### Table 4.6

Based on the graph 4.11 and table 4.6, the most number of respondents 44 with a percentage of 40.7 always read the front of pack icon on the nutrition label. 42 respondents with a percentage of 38.9 only sometimes read the front of pack icon on the nutrition label. Meanwhile 19 respondents with a percentage of 17.6 % rarely even read the front of pack icon on the nutrition

label. The least number of respondents 3, with a percentage of 2.8 % never ever read the front of pack icon on the nutrition label.

#### 4.2.7 Did you read the following information on the nutrition label? (Serving size)



Graph 4.11

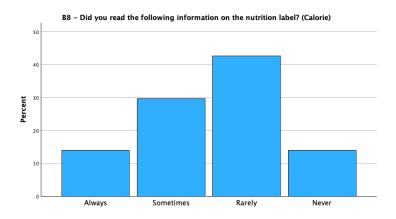
B7 - Did you read the following information on the nutrition label? (Serving size)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	44	40.7	40.7	40.7
	Sometimes	33	30.6	30.6	71.3
	Rarely	19	17.6	17.6	88.9
	Never	12	11.1	11.1	100.0
	Total	108	100.0	100.0	

Table 4.7

Based on the graph 4.12 and table 4.7, the most number of respondents 44 with a percentage of 40.7 always read the serving size on the nutrition label. 33 respondents with a percentage of 30.6 only sometimes read the serving size on the nutrition label. Meanwhile 19 respondents with a percentage of 17.6 % rarely even read the serving size on the nutrition label. 12 respondents with a percentage of 11.1 % never read the serving size on the nutrition label.

#### 4.2.8 Did you read the following information on the nutrition label? (Calorie)



Graph 4.12

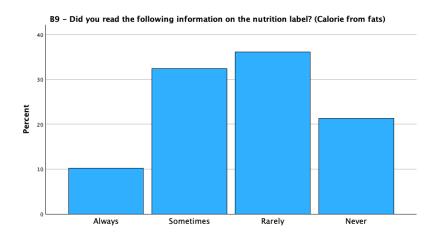
B8 - Did you read the following information on the nutrition label? (Calorie)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	15	13.9	13.9	13.9
	Sometimes	32	29.6	29.6	43.5
	Rarely	46	42.6	42.6	86.1
	Never	15	13.9	13.9	100.0
	Total	108	100.0	100.0	

#### <u>Table 4.8</u>

Based on the graph 4.13 and table 4.8, the most number of respondents 46 with a percentage of 42.6 rarely read the calorie information on the nutrition label. 32 respondents with a percentage of 29.6 only sometimes read the calorie information on the nutrition label. Meanwhile 15 respondents with a percentage of 13.9% always read the calorie information on the nutrition label. Another 15 respondents with a percentage of 13.9 % never read the calorie information on the nutrition label.

#### 4.2.9 Did you read the following information on the nutrition label? (Calorie from fats)



Graph 4.13

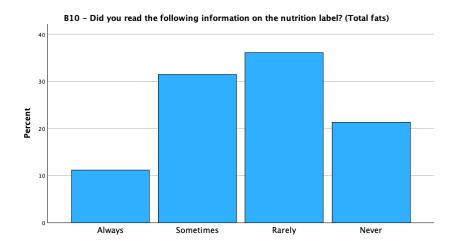
B9 - Did you read the following information on the nutrition label? (Calorie from fats)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	11	10.2	10.2	10.2
	Sometimes	35	32.4	32.4	42.6
	Rarely	39	36.1	36.1	78.7
	Never	23	21.3	21.3	100.0
	Total	108	100.0	100.0	

Table 4.9

Based on the graph 4.14 and table 4.9, the most number of respondents with 39 and a percentage of 36.1% rarely read the calorie from fats information on the nutrition label. 35 respondents with a percentage of 32.4% only sometimes read the calorie from fats information on the nutrition label. Meanwhile 23 respondents with a percentage of 21.3% never read the calorie from fats information on the nutrition label. The least respondents, 11 with a percentage of 10.2 % always read the calorie from fats information on the nutrition label.

#### 4.3.0 Did you read the following information on the nutrition label? (Total fats)



Graph 4.14

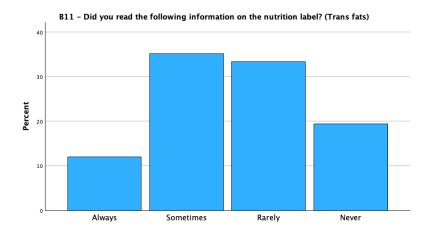
B10 - Did you read the following information on the nutrition label? (Total fats)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	12	11.1	11.1	11.1
	Sometimes	34	31.5	31.5	42.6
	Rarely	39	36.1	36.1	78.7
	Never	23	21.3	21.3	100.0
	Total	108	100.0	100.0	

#### <u>Table 4.10</u>

Based on the graph 4.15 and table 4.10, the most number of respondents with 39 and a percentage of 36.1% rarely read the total fats information on the nutrition label. 34 respondents with a percentage of 31.5% only sometimes read the total fats information on the nutrition label. Meanwhile 23 respondents with a percentage of 21.3% never read the total fats information on the nutrition label. The least respondents, 12 with a percentage of 11.1 % always read the total fats information on the nutrition label.

#### 4.3.1 Did you read the following information on the nutrition label? (Trans fats)



Graph 4.15

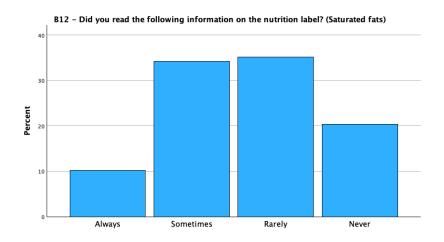
B11 - Did you read the following information on the nutrition label? (Trans fats)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	13	12.0	12.0	12.0
	Sometimes	38	35.2	35.2	47.2
	Rarely	36	33.3	33.3	80.6
	Never	21	19.4	19.4	100.0
	Total	108	100.0	100.0	

# <u>Table 4.11</u>

Based on the graph 4.16 and table 4.11, the most number of respondents with 38 and a percentage of 35.2% only sometimes read the trans fats information on the nutrition label. 36 respondents with a percentage of 33.3% rarely read the trans fats information on the nutrition label. Meanwhile 21 respondents with a percentage of 19.4% never read the trans fats information on the nutrition label. And the least respondents, 13 with a percentage of 12.0% always read the trans fats information on the nutrition label.

# 4.3.2 Did you read the following information on the nutrition label? (Saturated fats)



Graph 4.16

B12 - Did you read the following information on the nutrition label? (Saturated fats)

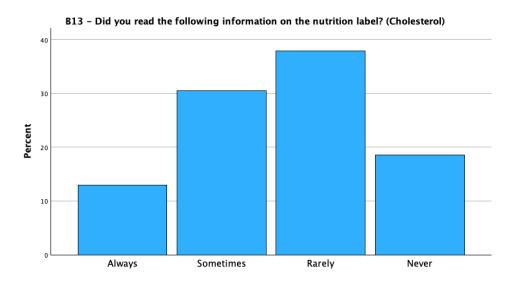
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	11	10.2	10.2	10.2
	Sometimes	37	34.3	34.3	44.4
	Rarely	38	35.2	35.2	79.6
	Never	22	20.4	20.4	100.0
	Total	108	100.0	100.0	

#### Table 4.12

Based on the graph 4.17 and table 4.12, the most number of respondents with 38 and a percentage of 35.2% rarely read the saturated fats information on the nutrition label. 37 respondents with a percentage of 34.3% sometimes read the saturated fats information on the nutrition label. Meanwhile 22 respondents with a percentage of 20.4% never read the saturated

fats information on the nutrition label. And the least respondents, 11 with a percentage of 10.2% always read the saturated fats information on the nutrition label.

#### 4.3.3 Did you read the following information on the nutrition label? (Cholesterol)



Graph 4.17

B13 - Did you read the following information on the nutrition label? (Cholesterol)

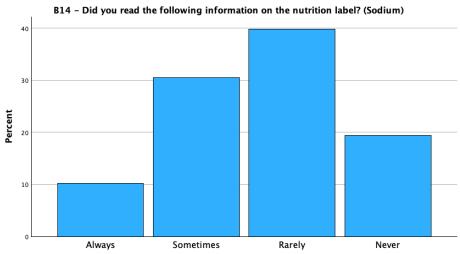
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	14	13.0	13.0	13.0
	Sometimes	33	30.6	30.6	43.5
	Rarely	41	38.0	38.0	81.5
	Never	20	18.5	18.5	100.0
	Total	108	100.0	100.0	

#### Table 4.13

Based on the graph 4.18 and table 4.13, the most number of respondents with 41 and a percentage of 38.0% rarely read the cholesterol information on the nutrition label. 33 respondents with a percentage of 30.6% sometimes read the cholesterol information on the nutrition label. Meanwhile 20 respondents with a percentage of 18.5% never read the cholesterol

information on the nutrition label. And the least respondents, 14 with a percentage of 13.0% always read the cholesterol information on the nutrition label.

#### 4.3.4 Did you read the following information on the nutrition label? (Sodium)



B14 - Did you read the following information on the nutrition label? (Sodium)

Graph 4.18

B14 - Did you read the following information on the nutrition label? (Sodium)

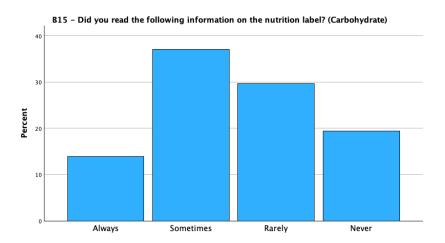
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	11	10.2	10.2	10.2
	Sometimes	33	30.6	30.6	40.7
	Rarely	43	39.8	39.8	80.6
	Never	21	19.4	19.4	100.0
	Total	108	100.0	100.0	

#### Table 4.14

Based on the graph 4.19 and table 4.14, the most number of respondents with 43 and a percentage of 39.8% rarely read the sodium information on the nutrition label. 33 respondents with a percentage of 30.6% sometimes read the sodium information on the nutrition label. Meanwhile 21 respondents with a percentage of 19.4% never read the sodium information on the

nutrition label. And the least respondents, 11 with a percentage of 10.2 % always read the sodium information on the nutrition label.

#### 4.3.5 Did you read the following information on the nutrition label? (Carbohydrate)



Graph 4.19

B15 - Did you read the following information on the nutrition label? (Carbohydrate)

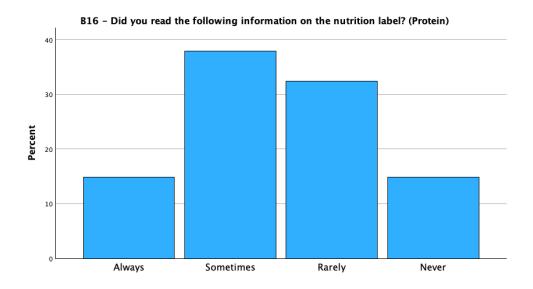
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	15	13.9	13.9	13.9
	Sometimes	40	37.0	37.0	50.9
	Rarely	32	29.6	29.6	80.6
	Never	21	19.4	19.4	100.0
	Total	108	100.0	100.0	

#### <u>Table 4.15</u>

Based on the graph 4.20 and table 4.15, the most number of respondents with 40 and a percentage of 37.0% sometimes read the carbohydrate information on the nutrition label. 32 respondents with a percentage of 29.6% rarely read the carbohydrate information on the nutrition label. Meanwhile 21 respondents with a percentage of 19.4% never read the carbohydrate information on the nutrition label. And the least respondents, 15 with a percentage of 13.9 %

always read the carbohydrate information on the nutrition label.

#### 4.3.6 Did you read the following information on the nutrition label? (Protein)



Graph 4.20

B16 - Did you read the following information on the nutrition label? (Protein)

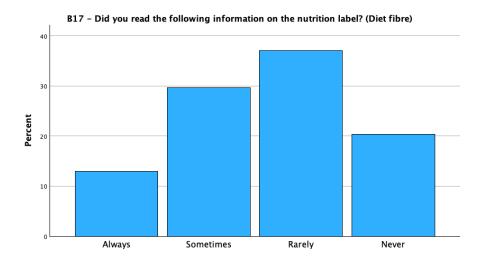
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	16	14.8	14.8	14.8
	Sometimes	41	38.0	38.0	52.8
	Rarely	35	32.4	32.4	85.2
	Never	16	14.8	14.8	100.0
	Total	108	100.0	100.0	

#### <u>Table 4.16</u>

Based on the graph 4.21 and table 4.16, the most number of respondents with 41 and a percentage of 38.0% sometimes read the protein information on the nutrition label. 35 respondents with a percentage of 32.4% rarely read the protein information on the nutrition label. Meanwhile 16 respondents with a percentage of 14.8% always read the protein information on

the nutrition label. And also another 16 respondents with a percentage of 14.8 % always read the protein information on the nutrition label.

#### 4.3.7 Did you read the following information on the nutrition label? (Diet fiber)



Graph 4.21

B17 - Did you read the following information on the nutrition label? (Diet fibre)

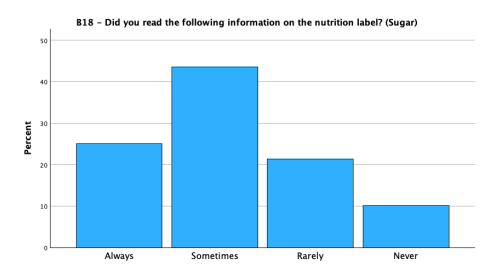
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	14	13.0	13.0	13.0
	Sometimes	32	29.6	29.6	42.6
	Rarely	40	37.0	37.0	79.6
	Never	22	20.4	20.4	100.0
	Total	108	100.0	100.0	

<u>Table 4.17</u>

Based on the graph 4.22 and table 4.17, the most number of respondents with 40 and a percentage of 37.0% sometimes read the diet fiber information on the nutrition label. 32 respondents with a percentage of 29.6% sometimes read the diet fiber information on the nutrition label. Meanwhile, 22 respondents with a percentage of 20.4% always read the diet fiber

information on the nutrition label. And also the least respondents, 14 with a percentage of 13.0% always read the diet fiber information on the nutrition label.

#### 4.3.8 Did you read the following information on the nutrition label? (Sugar)



Graph 4.22

B18 - Did you read the following information on the nutrition label? (Sugar)

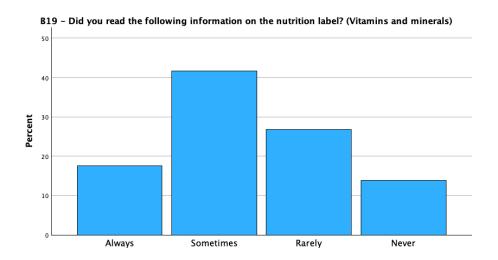
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	27	25.0	25.0	25.0
	Sometimes	47	43.5	43.5	68.5
	Rarely	23	21.3	21.3	89.8
	Never	11	10.2	10.2	100.0
	Total	108	100.0	100.0	

#### Table 4.18

Based on the graph 4.23 and table 4.18, the most number of respondents with 47 and a percentage of 43.5% sometimes read the sugar information on the nutrition label. 27 respondents with a percentage of 25.0% always read the sugar information on the nutrition label. Meanwhile, 23 respondents with a percentage of 21.3% rarely read the sugar information on the nutrition

label. And also the least respondents, 11 with a percentage of 10.2% never read the sugar information on the nutrition label.

#### 4.3.9 Did you read the following information on the nutrition label? (Vitamins and minerals)



Graph 4.23

B19 - Did you read the following information on the nutrition label? (Vitamins and minerals)

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Always	19	17.6	17.6	17.6
	Sometimes	45	41.7	41.7	59.3
	Rarely	29	26.9	26.9	86.1
	Never	15	13.9	13.9	100.0
	Total	108	100.0	100.0	

### <u>Table 4.19</u>

Based on the graph 4.24 and table 4.19, the most number of respondents with 45 and a percentage of 41.7% sometimes read the vitamins and minerals information on the nutrition label. 29 respondents with a percentage of 26.9% rarely read the vitamins and minerals

information on the nutrition label. Meanwhile, 19 respondents with a percentage of 17.6% always read the vitamins and minerals information on the nutrition label. And also the least respondents, 15 with a percentage of 13.9% never read the vitamins and minerals information on the nutrition label.

## 4.4 Skills in understanding and interpreting food labels.

Cod e	Item	Strongl y disagree %	Disagre e %	Slightly disagree %	Neutra 1 %	Slightl y Agree %	Agree %	Strongly agree %	Mean %	Standard deviation %	Mean ranking %
C1	It is difficult for me to understan d nutrition label s.	9.3%	14.8%	20.4%	31.5%	15.7%	3.7%	4.6%	3.5926	1.48536	4
C2	Read ing nutrit ion label s takes too muc h time.	5.6%	5.6%	15.7%	28.7%	20.4%	13.0%	11.1%	4.3611	1.57941	1
C3	Ther e is too muc h infor mati on on the nutrit ion label and I get conf used reading it.	9.3%	11.1%	14.8%	18.5%	26.9%	11.1%	8.3%	4.0926	1.70506	2
C4	It is bette	9.3%	16.7%	17.6%	25.9%	17.6%	7.4%	5.6%	3.7037	1.60757	3

	r for me to rely on my own kno wled ge than to read nutrit ion label s.										
C5	I do not take any noti ce of the food label	18.5%	23.1%	16.7%	20.4%	11.1%	4.6%	5.6%	3.1852	1.70841	5
C6	I neve r read nutrit ion label s beca use I'm not inter ested	25.9%	14.8%	17.6%	21.3%	9.3%	5.6%	5.6%	3.1204	1.78109	7
С7	I neve r read the food label beca use I do not have time.	19.4%	23.1%	14.8%	24.1%	13.0%	2.8%	2.8%	3.0741	1.57494	8

C8	I do not worr y abou t the food label beca use I buy the chea pest bran d.	19.4%	27.8%	10.2%	22.2%	14.8%	5.6%	0%	3.0185	1.54667	9
C9	I do not take any notic e of the food label as it make s prod ucts more expensive	22.2%	19.4%	20.4%	25.0%	10.2%	2.8%	0%	2.8981	1.41382	10
C10	I do not have any healt h probl ems, so I do not have to read nutrit ion label s.	21.3%	21.3%	11.1%	26.9%	11.1%	3.7%	4.6%	3.1481	1.69007	6
C11	I think that readi ng	25.0%	24.1%	18.5%	22.2%	7.4%	2.8%	0%	2.1730	1.39459	11

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C1 ranked as the fourth place with the most highest value of mean at 3.5926 and with a standard deviation of 1.49. Majority of the respondents (31.5%) were neutral on whether it is difficult for them to understand nutrition labels. While a minority of respondents (3.7%) agree that it is difficult for them to understand nutrition labels. (15.7%) respondents agree to that and (4.6%) agree on that item as well. However, (9.3%) respondents strongly disagree on that, another (14.8%) respondents disagree on that. And (20.4%) slightly disagree on that item.

C2 ranked as the first place with the highest value of mean, 4.3611 and with a standard deviation of 1.58. Majority of the respondents (28.7%) were neutral that reading nutrition labels takes too much time. While a minority of the respondents (5.6%) strongly disagree that reading nutrition labels takes too much time. Another (5.6%) of respondents also disagree with that statement. However, (13.0%) agree and (11.1%) strongly agree on the item.

C3 ranked as the second place with the second highest value of mean, 4.0926 and with a standard deviation of 1.71. Majority of the respondents (26.9%) slightly agree that there is too much information on the nutrition label and I get confused reading it. While a minority of respondents (8.3%) agree that there is too much information on the nutrition label. (9.3%)

strongly disagree while (11.1%) agree on the item. (8.3%) respondents strongly agree on the item.

C4 ranked as the third place with the most highest value of mean at 4.0926 and with a standard deviation of 1.61. Majority of the respondents (25.9%) were neutral on whether it is better for them to rely on their own knowledge than to read nutrition labels. While a minority of respondents (5.6%) strongly agree that it is better for them to rely on their own knowledge than to read nutrition labels. Both (17.6%) slightly agree and slightly disagree on that item. (7.4%) agree to that and (9.3%) strongly disagree on that. Another (16.7%) disagree on that item as well.

C5 ranked as the fifth place with the highest value of mean at 3.1852 and with a standard deviation of 1.71. Majority of the respondents (23.1%) disagree that they do not take any notice of the food label. While a minority of respondents (4.6%) agree that they do not take any notice of the food label. (11.1%) respondents slightly agree on that and another (5.6%) strongly agree on that item. Meanwhile, (18.5%) respondents strongly disagree and (16.7%) slightly disagree on that item. (20.4%) respondents were neutral about it.

C6 ranked as the seventh place with the highest value of mean at 3.1204 and with a standard deviation of 1.78. Majority of the respondents (25.9%) strongly disagree with I never read nutrition labels because I'm not interested. While a minority of respondents (5.6%) both slightly agree and agree on the item I never read nutrition labels because I'm not interested. Another (9.3%) of respondents slightly agree on that. Meanwhile, (14.8%) respondents disagree with that and the same goes for (17.6%) of respondents slightly disagree with that.

C7 ranked as the eighth place with highest value of mean at 3.0741 and with a standard deviation of 1.57. Majority of the respondents (24.1%) were neutral with I never read the food label because I do not have time. While a minority of respondents (2.8%) both agree and strongly agree that they never read the food label because they do not have time. (13.0%) respondents slightly agree on that. However, (19.4%) respondents strongly disagree on that, (23.1%) respondents disagree with that and another (14.8%) respondents slightly disagree with that item.

C8 ranked as the ninth place with the highest value of mean at 3.0185 and with a standard deviation of 1.55. Majority of the respondents (27.8%) disagree with I do not worry about the food label because I buy the cheapest brand. While a minority of respondents (0%) strongly agree, I do not worry about the food label because I buy the cheapest brand. (14.8%) respondents slightly agree and (5.6%) respondents agree to that. Meanwhile, (19.4%) strongly disagree and (10.2%) slightly disagree with that. While (22.2%) of the respondents were neutral to that item.

C9 ranked as the tenth place with the highest value of mean at 2.8981 and with a standard deviation of 1.41. Majority of the respondents (25.0%) were neutral on I do not take any notice of the food label as it makes products more expensive. While a minority of respondents (0%) strongly agree that they do not take any notice of the food label as it makes products more expensive. (10.2%) of respondents slightly agree on that and (2.8%) agree towards that item. Meanwhile, (22.2%) respondents strongly disagree with that (19.4%) disagree and (20.4%) slightly disagree with that.

C10 ranked as the sixth placed with the highest value of mean at 3.1481 and with a standard deviation of 1.69. Majority of the respondents (26.9%) were neutral on the fact that I do not have any health problems, so I do not have to read nutrition labels. While a minority of respondents (3.7%) agree that they do not have any health problems, so they do not have to read nutrition labels. (11.1%) of respondents slightly agree and (4.6%) agree on that item. However, (23.1%) respondents strongly disagree with that and another (23.1%) also disagree. (11.1%) of respondents slightly disagree on that item as well.

C11 ranked as the eleventh place with the highest value of mean at 2.1730 and with a standard deviation of 1.39. Majority of the respondents (25.0%) think that reading nutrition labels is not worth it. While a minority of respondents (0%) strongly agree that reading nutrition labels is not worth it. (7.4%) respondents agree and (2.8%) respondents slightly agree on that. Meanwhile, (24.1%) respondents disagree with that and (18.5%) slightly disagree. (22.2%) were neutral about it.

## 4.4.1 Skills in using food labels.

Code	Ite m	Strongly disagree %	Disagree %	Slightly disagre e %	Neutral %	Slightly Agree %	Agre e %	Strongly agree %	Mean %	Standard deviation %	Mean ranking %
DI	The nutri tion label is very usef ul for me.	1.9%	5.6%	5.6%	34.3%	25.9%	14.8%	12.0%	4.6944	1.38387	1
D2	I alwa ys read nutri tion label s to see the healt h bene fits to my healt h.	2.8%	13.9%	15.7%	26.9%	25.9%	8.3%	6.5%	4.1019	1.46574	10
D3	I am conc erne d abou t my healt h and so try to choo se prod ucts that give	2.8%	9.3%	12.0%	29.6%	25.0%	14.8%	6.5%	4.3519	1.43595	7

	me detai led healt h infor mati on.										
D4	My food choi ce is bette r whe n I use the nutri tion label .	1.9%	7.4%	13.0%	32.4%	20.4%	18.5%	6.5%	4.4352	1.39608	6
D5	Whe n choo sing food , I pref er to read nutri tion label s to kno w abou t the ingr edie nts cont aine d in the food .	2.8%	7.4%	10.2%	28.7%	25.9%	13.0%	12.0%	4.5463	1.49381	4
D6	In choo sing a healt hy diet,	1.9%	6.5%	8.3%	37.0%	23.1%	13.9%	9.3%	4.5185	1.37046	5

	I feel conf ident whe n I kno w how to mak e use of the nutri tion label .										
D7	I alwa ys read the nutri tion label as bein g healt hy is imp orta nt for me.	1.9%	7.4%	13.0%	36.1%	24.1%	10.2%	7.4%	4.3333	1.34651	8
D8	I want to become more kno wled geab le about nutrition label s so I can choose healt hy	1.9%	3.7%	8.3%	33.3%	26.9%	14.8%	11.1%	4.6852	1.34406	2

	food s.										
D9	Som etim es I try new food s beca use of the infor mati on on the nutri tion label .	5.6%	12.0%	12.0%	32.4%	16.7%	12.0%	9.3%	4.1574	1.60701	9
D10	I alwa ys choo se healt hy food opti ons, if avail able.	2.8%	3.7%	10.2%	29.6%	25.0%	20.4%	8.3%	4.6481	1.38291	3

D1 is ranked as the first place with the highest value of mean at 4.6944 and with a standard deviation of 1.38387. Majority of the respondents (34.3%) were neutral with the nutrition label is very useful for me. While a minority of respondents (1.9%) Strongly disagree that the nutrition label is very useful for me. Both (5.6%) of respondents also disagree and slightly disagree on that. Meanwhile, (25.9%) respondents slightly agree with that, (14.8%) slightly agree on that and another (12.0%) of respondents strongly agree on that.

D2 ranked as the tenth place with the value of mean at 4.1019 and with a standard deviation of 1.46574. Majority of the respondents (26.9%) were neutral with I always read nutrition labels to see the health benefits to my health. Meanwhile, a minority of respondents, (2.8%) strongly disagree that they always read nutrition labels to see the health benefits to my health. (13.9%) disagree and (15.7%) slightly disagree on that. Meanwhile, (25.9%) respondents slightly agree that they always read nutrition labels to see the health benefits to my health. (8.3%) agree and (6.5%) strongly agree with that.

D3 ranked as the seventh place with the value of mean at 4.3519 and with a standard deviation of 1.43595. Majority of the respondents (29.6%) were neutral with I am concerned about my health and so try to choose products that give me detailed health information. Meanwhile, a minority of respondents, (2.8%) strongly disagree on I am concerned about my health and so try to choose products that give me detailed health information. (9.3%) disagree and (12.0%) slightly disagree on that. Meanwhile, (25.0%) respondents slightly agree that I am concerned about my health and so try to choose products that give me detailed health information. (14.8%) agree and (6.5%) strongly agree with that.

D4 ranked as the sixth with the value of mean at 4.4352 and with a standard deviation of 1.39608. Majority of the respondents (32.4%) were neutral with I always read nutrition labels to see the health benefits to my health. Meanwhile, a minority of respondents, (1.9%) strongly disagree on I always read nutrition labels to see the health benefits to my health. (6.5%) disagree and (8.3%) slightly disagree on that. Meanwhile, (20.4%) respondents slightly agree I always

read nutrition labels to see the health benefits to my health. (18.5%) agree and (6.5%) strongly agree with that.

D5 ranked as the fourth place with the highest value of mean at 4.5463 and with a standard deviation of 1.49381. Majority of the respondents (28.7%) were neutral with when choosing food. I prefer to read nutrition labels to know about the ingredients contained in the food. Meanwhile, a minority of respondents, (2.8%) strongly disagree when choosing food, they prefer to read nutrition labels to know about the ingredients contained in the food. (7.4%) disagree with that and (10.2%) slightly disagree. Meanwhile, (25.9%) respondents slightly agree that they prefer to read nutrition labels to know about the ingredients contained in the food. (13.0%) agree and (12.0%) slightly agree with that.

D6 ranked as the fifth place with the value of mean at 4.5463 and with a standard deviation of 1.49381. Majority of the respondents (37.0%) were neutral in choosing a healthy diet, I feel confident when I know how to make use of the nutrition label. Meanwhile, a minority of respondents, (1.9%) strongly disagree on I feel confident when I know how to make use of the nutrition label. (6.5%) disagree and (8.3%) slightly disagree on that. Meanwhile, (23.1%) respondents slightly agree that they feel confident when they know how to make use of the nutrition label. (13.9%) agree and (9.3%) slightly agree with that.

D7 ranked as the eighth place with the value of mean at 4.3333 and with a standard deviation of 1.34651. Majority of the respondents (36.1%) were neutral with I always read the nutrition label as being healthy is important for me. Meanwhile, a minority of respondents, (1.9%) strongly

disagree that I always read the nutrition label as being healthy is important for me. (7.4%) disagree and (13.0%) slightly disagree on that. Meanwhile, (24.1%) respondents slightly agree I always read the nutrition label as being healthy is important for me. (10.2%) agree and (7.4%) strongly agree with that.

D8 ranked as the second place with the highest value of mean at 4.6852 and with a standard deviation of 1.34406. Majority of the respondents (33.3%) were neutral with I want to become more knowledgeable about nutrition labels so I can choose healthy foods. While a minority of respondents (1.9%) strongly disagree on that. (3.7%) disagree on that and (8.3%) slightly disagree on that. Meanwhile, (26.9%) slightly agree on that , (14.8%) agree on that and (11.1%) strongly agree on that.

D9 ranked as the ninth placed with the value of mean at 4.1574 and with a standard deviation of 1.60701. Majority of the respondents (32.4%) were neutral with sometimes I try new foods because of the information on the nutrition label. Meanwhile, a minority of respondents, (5.6%) strongly disagree that I try new foods because of the information on the nutrition label. (12.0%) disagree and (12.0%) slightly disagree on that. Meanwhile, (16.7%) respondents slightly agree I try new foods because of the information on the nutrition label. (12.0%) agree and (9.3%) strongly agree with that.

D10 ranked as the third place with the highest value of mean at 4.6481 and with a standard deviation of 1.38291. Majority of the respondents (29.6%) were neutral with I always choose healthy food options, if available. Meanwhile, a minority of respondents, (2.8%) strongly

disagree on that, (3.7%) disagree and (10.2%) slightly disagree. (25.0%) respondents slightly agree that they will always choose healthy food options, if available. (20.4%) agree and (8.3%) strongly agree on that.

#### CHAPTER V

#### **DISCUSSION & CONCLUSION**

#### 5.0 Introduction

Throughout chapter 5, the result and information that is obtained through the data analysis will be discussed in more depth. Moreover, limitations towards this study will also be discussed and the recommendations for future researchers who wish to pursue similar topics will also be given. There will also be Inclusion of the summary and recap of this entire research.

#### 5.1 Major findings

#### 5.1.1 Skills in understanding and interpreting food labels.

Based on the result obtained from chapter 4, the research objective (RO 2) can be obtained, one of the barriers towards young adults from private universities within the Klang Valley health literacy in the context of product labeling is from C2 which is "reading nutrition labels takes too much time". As the vast majority of respondents 11.1% strongly agree on that statement when compared to 5.6% strongly disagree. This is a strong indication that reading nutrition labels which takes too much time can be the barriers towards the respondents.

#### 5.1.2 Skills in understanding and interpreting food labels.

Based on the data analysis from D3 the research objective (RO1) is obtained "To examine the effectiveness of product labeling in promoting health literacy". This is because 6.5% of the respondents actually strongly agreed that they are concerned about their health and so try to choose only products that give them detailed health information compared to only 2.8% of

respondents who disagree with that. This shows us that product labeling is effective in promoting health literacy among them.

#### 5.2 Limitations

The limitations towards this study is the accuracy and the consistency of the questionnaire result. When a set of questions are too long and especially done virtually, some respondents tend to not have the time to genuinely complete the questionnaire and just rather just simply pick an answer just for the sake of completing it. Respondents might answer well at the beginning but eventually they will gradually just simply pick and answer for the set of questionnaires to speed up the process of submission.

#### 5.3 Recommendations

My recommendation is instead of distributing out the questionnaire virtually, it is better for any future researchers to print out the entire set of questionnaires and distribute them physically, face to face. With this, respondents will tend to have a sense of more responsibility when researchers are beside them while they complete the questionnaires. On top of that, future researchers might want to consider giving out incentives to motivate respondents to fill up the questionnaires full heartedly.

#### 5.4 Conclusion

Throughout chapter 1, the background of the research study was discussed. The role of product labeling was explained. According to Perumal et al. (2022), product labeling assists customers to understand and grapes all the necessary information especially on nutritional composition,

safety and quality of the food. Sajdakowska et al. (2022), also explained that the product label does provide consumers with information such as ingredients used, their nutritional value and storage of food goods.

Other than that, the definition of health literacy was also clearly explained. According to the World Health Organization it explained that health literacy is vital as it functions as a cornerstone to assist consumers to be actively involved in improving their health, engage successfully in community action for health, and demand governments to fulfill their obligations in addressing health and health inequalities.

Moving on, the problem statements were also stated down in this research. It was mentioned that in recent years, nutrition deficiency has become a common issue for adolescents. Also the research gap was discussed in chapter 1. The research gap where in recent years there are sufficient studies that have been conducted to discuss health literacy in general, but do not focus on the discussion of its effectiveness of specifically product labeling in promoting health literacy. Also, limited studies have been conducted to identify the barriers towards health literacy based on product labeling.

Moreover, the research objectives for the research study were stated down. RO1 is to examine the effectiveness of product labeling in promoting health literacy while R02 was to identify the barriers towards health literacy in the context of product labeling. The research questions were also stated down. RQ1 were "How does the clarity, content, and format of product labeling influence the health literacy of young adults from private universities within the Klang valley,

and what are the key factors that contribute to or hinder the effectiveness of product labeling in promoting health literacy? And RQ 2 were "What are the barriers towards young adults from private universities within the Klang valley health literacy in the context of product labeling".

Beside that, the scope of study and significance of the research study was also discussed and explained in detail.

In chapter 2, the literature reviews were discussed and explained with the help of various journals from different researchers. A total of 10 journals were studied and applied throughout chapter 2 for literature review. The first item that was discussed was the introduction and the main issue. Second item that was discussed was the "Different types of products "Front of Pack Labeling" (FOPL) by (Ale & Noubiap, 2022). The second item that was discussed was the "Effects of product / Food labeling". The third item that was discussed was "Frequency of product label use and purchasing for Food groups across New Zealand". The fourth item that was discussed was "More excellent product label comprehension score". The fifth item that was discussed were "Barriers towards product labeling in promoting health literacy". The sixth item that was discussed was the "Downfall of product labeling".

Beside that, the theoretical framework "Health Belief Model (HBM)" was also discussed and explained in great detail in chapter 2. The explanation of the HBM model was given as well. On top of that, the components of the HBM model such as perceived susceptibility, perceived severity, perceived benefits, perceived barriers, cues to action and self efficacy were discussed. The correlation between the theory and research topic were also discussed. Also, it was

concluded with the explanation of the beauty of the HBM model and how it can promote health literacy among the people.

In chapter 3, it is about methodology. The type of research was specified down which is using a quantitative research method of approaches to obtain and gather data from target audiences. Moving on the population was also discussed. The research was specifically focused and directed towards the Young adults from private universities in the region of Klang Valley, Malaysia anywhere between the age range of 18 to 26 years old and opened to those who are pursuing their Foundations, Diplomas, Bachelor Degrees, Master's Degrees and PhD's. This group of populations was approached due to the fact that there is insufficient amount of data available towards their health literacy in the context of product labeling. The sampling size was also determined, a confidence level of 70%, population size of 144,203 and a margin of error of 5% were used.

The targeted effective response (sampling size) were 107 responses, total responses collected ( $\Sigma$  n) were 109 responses and 1 ineffective responses. Therefore the total number of effective responses (n) is 108. Meanwhile, for distribution of channels, this study was totally dependent on social media's platform to virtually distribute the questionnaire. For the data collection instrument, this research study adopted google form as it has the capability to reach a wide range of respondents.

Moving on , the reliability test for this research was not conducted for the questionnaire as it was adopted from a well known and established local university, UKM "Universiti Kebangsaan Malaysia" by Professor Dr Ruzita Abd. talib. The design for the questionnaire consisted of 4 sections with the first section on demographics question and the rest were more focused on research related questions. On the other hand, for the analysis plan, this research uses IBM SPSS Statistics 29 software to analyze the raw data collected. The research questionnaires were also approved by the University of Scientific and Ethical Review Community of Universiti Tunku Abdul Rahman Sg Long.

In chapter 4, the raw data collected were discussed and analyzed in detail with the assistance of the IBM SPSS Statistics 29 software. Information such as mean, mean ranking and standard deviation were all listed down for each related question and the percentage of the seven choices of available answers such as Strongly disagree, Disagree, Slightly disagree, Neutral, Slightly agree, Agree and Strongly agree were also stated down. A total of 11 questions on "skills in understanding and interpreting food labels" for section C were analyzed and 10 questions of "Skills in using food labels" for section D.

Throughout the last chapter for the research study, chapter 5. A further discussion was made on the data and results that was collected. The major findings that were found was that based on section C2 were that a vast majority of respondents 11.% strongly agree that "reading nutrition labels takes too much time" and only 5.6% of respondents disagree. Therefore, it was stated that is a strong indication and it was identified that the barriers of young adults from private

universities within the Klang Valley health literacy in the context of product labeling were based on "reading nutrition labels takes too much time".

Another major finding based on the questionnaire questions under section D3 "Skills in interpreting food labels". The majority of 6.5% respondents strongly agreed that they are concerned about their health and so try to choose only products that give them detailed health information, while 2.8% of respondents disagree on that. Therefore, it was finalized that the product labeling is effective in promoting health literacy among them.

Lastly, In Chapter 5, comprehensive coverage of the research's limitations was provided, offering insights and suggestions for improvement. These considerations aim to guide and support future researchers interested in exploring similar avenues within the field, providing a valuable direction for their studies.

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#### APPENDIX A

## PERMISSION TO SEEK FOR QUESTIONNAIRE APPROVAL



KITTIVONGSAK VONGSUTHEP KEITH <keithkittivongsak@1utar.mv>

#### Permission for adopting questionnaire.

KITTIVONGSAK VONGSUTHEP KEITH <keithkittivongsak@1utar.my>
To: rzt@ukm.edu.my
Cc: Raduan bin Sharif <raduan@utar.edu.my>

Mon. Oct 23, 2023 at 10:36 AM

Dear Prof Dr Ruzita,

I hope this message finds you well. My name is Keith, and I am currently a student in the Corporate Communication program at UTAR. I am writing to seek your permission to adopt the questionnaires developed for your research project titled "EFFECTIVENESS OF INFO-NUTRITEEN @ EDUCATION PROGRAM ON NUTRITION LABEL LITERACY AND FOOD CHOICE BEHAVIOR OF 13 TO 16 YEARS OLD SCHOOL STUDENTS IN MALAYSIA."

I am interested in incorporating your questionnaires into my final year project, which is titled "INVESTIGATING THE ENRICHMENT OF HEALTH LITERACY THROUGH PRODUCT LABELING: A COMPREHENSIVE CASE STUDY ON YOUNG ADULTS IN KLANG VALLEY, MALAYSIA". I want to assure you that any data collected through these questionnaires will be treated with the utmost confidentiality and used exclusively for academic purposes.

I kindly request your approval for the use of these questionnaires in my research. Your support in this matter would be greatly appreciated.

Thank you for considering my request, and I look forward to a positive response from you.

Sincerely, Keith

Ruzita Abd. Talib <rzt@ukm.edu.my>
To: KITTIVONGSAK VONGSUTHEP KEITH <keithkittivongsak@1utar.my>
Cc: Raduan bin Sharif <raduan@utar.edu.my>

Mon, Oct 23, 2023 at 2:52 PM

Dear Keith
I have no objection to you using the questionnaire in your study. However, you need to mention it in your thesis and any related publications. Good luck!

Professor Dr. Ruzita Abd. Talib Nutritional Sciences Programme Centre for Community Health Studies (ReaCH) Faculty of Health Sciences Universiti Kebangsaan Malaysia Jalan Raja Muda A. Azit 5300 Kuala Lumpur ORCID ID: https://orcid.org/0000-0002-3174-

#### APPENDIX B

## QUESTIONNAIRE

# Investigating the Enrichment of Health Literacy through Product Labeling: A Comprehensive Case Study of Young Adults in Private Universities in Klang Valley, Malaysia.

Good day Dear respondents,

I am Keith Kittivongsak Vongsuthep, an undergraduate researcher studying for a Bachelor of Corporate Communication (Honours) at Universiti Tunku Abdul Rahman (UTAR) Sungai Long Campus.

 $Currently \ I \ am \ conducting \ a \ study \ one \ a \ topic \ of \ product \ labelling \ in \ promoting \ health \ literacy \ for \ my \ final \ year \ research \ project.$ 

Throughout this study, I aim to achieve the following research objectives:

- 1. To examine the effectiveness of product labelling in promoting health literacy.
- 2. To identify the barriers towards health literacy in context of product labelling.

This survey will be separated into Section A, B, C and D. It will take up to 8-10 minutes approximately for it to be completed. Thank you very much in advance for your contribution and participation towards this survey. Wishing you a blessed day ahead!

Regards,

Keith Kittivongsak Vongsuthep.

\* Indicates required question

1. Email \*

Ack	<u>nowledgement</u>
	intary Participation icipation is <i>completely voluntary</i> .
All i	fidentiality information that is collected from participants will be kept strictly confidential. All data will be encrypted and protected; only aggregated data will be published with no personal identity and rmation.
	ical Approval University Scientific and Ethical Review Committee has approved the project.
Kine	dly contact Keith Kittivongsak Vongsuthep (Mr) at keithkittivongsak@lutar.my if you have further clarifications.
2.	1. Hereby I, *
	Mark only one oval.
	consent and agree to participate in this research. Skip to question 3
	disagree with participating in this research. Skip to section 2 (Opps!)
Se	ection A: Demographics Background.
2	2. Gender *
э.	Mark only one oval.
	Female
	Male
4	3. Age Group *
	Mark only one oval.
	18 - 20 years old
	18 - 20 years old 21 - 23 years old
	21 - 23 years old
5.	21 - 23 years old
5.	21 - 23 years old 24 - 26 years old
5.	21 - 23 years old 24 - 26 years old  4. Race *
5.	21 - 23 years old 24 - 26 years old  4. Race *  Mark only one oval.
5.	21 - 23 years old 24 - 26 years old  4. Race *  Mark only one oval.  Malay

### 6. 5. Your University \* Mark only one oval. Al- Madinah International University (MEDIU) Skip to question 7 Asia e University (AeU) Skip to question 7 Asia Metropolitan University Skip to question 7 Asia Pacific University of Technology and Innovation (APU) Skip to question 7 Asia School of Business Skip to question 7 Binary University of Management and Entrepeuneurship Skip to question 7 City University Skip to question 7 Help University Skip to question 7 Heriot- Watt University Malaysia Skip to question 7 Infrastructure University Kuala Lumpur (IUKL) Skip to question 7 International Centre for Education in Islamic Finance (INCEIF) Skip to question 7 International Medical University (IMU) Skip to question 7 International University of Malaya-Wales Skip to question 7 Limkokwing University of Creative Technology Skip to question 7 MAHSA University Skip to question 7 Malaysia Institute of Supply Chain Innovation (MISI) Skip to question 7 Malaysia University of Science & Technology (MUST) Skip to question 7 Management and Science University (MSU) Skip to question 7 Manipal GlobalNxt University Skip to question 7 Multimedia University (MMU) Cyberjaya Skip to question 7 Open University Malaysia (OUM) Skip to question 7 Perdana University Skip to question 7 Putra Business School Skip to question 7 SEGI University Skip to question 7 SUNWAY University Skip to question 7 TAR UMT Skip to question 7 Taylor's University Skip to question 7 UCSI University Skip to question 7 UNITAR International University Skip to question 7 Universiti Cyberjaya (UOC) Skip to question 7 Universiti Islam, Cyberjaya Skip to question 7

Universiti Teknologi Petronas (UTP) Skip to question 7

Universiti Teknologi Petronas (UTP) Skip to question 7

Universiti Tenaga Nasional (UNITEN) Skip to question 7

Universiti Tunku Abdul Razak (UniRAZAK) Skip to question 7

Universiti Tunku Abdul Raman (UTAR) Skip to question 7

University Malaysia of Computer Science and Technology Skip to question 7

University of Nottingham Malaysia Campus Skip to question 7

Xiamen University Malaysia Skip to question 7

7.	6. Student Status *  Check all that apply.  Full time studying  Half time working and studying, state the job description below
8.	7. Level of study pursuing *  Mark only one oval.  Foundation  Diploma  Degree  Master/ PhD
9.	8. Parents/ Guardian Marital Status *  Mark only one oval.  Single  Married  Divorced  Other:
10.	9. Father's education level *  Mark only one oval.  Primary/ Secondary school  Certificate/ Diploma  Degree  Master/ PhD
11.	10. Mother's education level *  Mark only one oval.  Primary/ Secondary school  Certificate/ Diploma  Degree  Master/ PhD

12.	11. Father's / Guardian	's Occupat	tion *					
	Mark only one oval.							
	Self- employed							
	Government							
	Private							
	Retired  Not working							
	Other:							
Secti	on B : Food Label Practi	ce.						
13.	1. How frequent do you	read nutr	ition labels w	hen purch:	asing foods	and bever	ages? *	
	Mark only one oval.							
	Always							
	Sometimes							
	Rarely							
	Never							
14.	2. Did you read the follo	owing info	rmation on th	e nutrition	ı label? *			
	Please select only ONE	answer for	each categor	y*				
	Check all that apply.							
	T	Always	Sometimes	Rarely	Never			
	Ingredients							
	Food claim							
	Expiry date							
	Healthier Choice logo							
	Front of Pack icon							
	Serving size							
	Calorie							
	Calorie from fats							
	Total fats							
	Trans fats							
	Saturated fats							
	Cholesterol							
	Sodium							
	Carbohydrate							
	Protein							
	Diet fibre							
	Sugar							
	Vitamins and minerals							

#### Section $\mathbf{C}$ : Skills in understanding and interpreting food labels.

Based on the scale from 1 to 7 (1=Strongly Disagree to 7=Strongly Agree)

Please <b>Select</b> the number that best indicates your d	egree of agreement with the respective statements.	Please be sure that you answer ALL questions. Remembe	r! There is no right or wrong answer.

- 1 = Strongly disagree
- 2 = Disagree
- 3 = Slightly disagree
- 4 = Neutral
- 5 = Slightly agree
- 6 = Agree
- 7 = Strongly agree

15.	O1 (C) I4	in difficult	fan	understand	 labala 1

Mark only one oval.



16. Q2 (C) Reading nutrition labels takes too much time. \*

Mark only one oval.



17. Q3 (C) There is too much information on the nutrition label and I get confused reading it. \*

Mark only one oval.



18. Q4 (C) It is better for me to rely on my own knowledge than to read nutrition labels.  $\star$ 

Mark only one oval.



19. Q5 (C) I do not take any notice of the food label.\*

Mark only one oval.



20. Q6 (C) I never read nutrition labels because I'm not interested. \*

Mark only one oval.



21. Q7 (C) I never read the food label because I do not have time.  $\star$ 

Mark only one oval.



	Mark only one oval.
	1 2 3 4 5 6 7
23.	Q9 (C) I do not take any notice of the food label as it makes products more expensive. *
	Mark only one oval.
	1 2 3 4 5 6 7
0.4	
24.	Q10 (C) I do not have any health problems, so I do not have to read nutrition labels. *
	Mark only one oval.
	1 2 3 4 5 6 7
25.	Q11 (C) I think that reading nutrition labels is not worth it. *
	Not observed.
	Mark only one oval.
	1 2 3 4 5 6 7
Sect	ion D: Skills in using food labels.
Base	d on the scale from 1 to 7 (1=Strongly Disagree to 7=Strongly Agree)
Pleas	se Select the number that best indicates your degree of agreement with the respective statements. Please be sure that you answer ALL questions. Remember! There is no right or wrong answer.
	Strongly disagree
	Disagree Slightly disagree
	Neutral
	Slightly agree
	Agree Strongly agree
, - :	nautgi, ugice

22. Q8 (C) I do not worry about the food label because I buy the  ${\color{red}\star}$ 

cheapest brand.

Mark only one oval.  Q3 (D) I am concerned about my health and so try to choose products that give me detailed health information. *  Mark only one oval.  1 2 3 4 5 6 7  Q4 (D) My food choice is better when I use the nutrition label. *  Mark only one oval.  1 2 3 4 5 6 7  Q6 (D) In choosing a healthy diet, I feel confident when I know how to make use of the nutrition label. *  Mark only one oval.  1 2 3 4 5 6 7  Q6 (D) In choosing a healthy diet, I feel confident when I know how to make use of the nutrition label. *  Mark only one oval.  1 2 3 4 5 6 7  Q7 (D) I always read the nutrition label as being healthy is *  important for me.  Mark only one oval.  1 2 3 4 5 6 7  Q7 (D) I always read the nutrition label as being healthy is *  important for me.		1 2 3 4 5 6 7		
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1 2 3 4 5 6 7	•	Q8 (D) I want to become more knowledgeable abo	ut nutrition labels so I	can choose healthy foods. *
		Mark only one oval.		
		1 2 3 4 5 6 7		

26. Q1 (D) The nutrition label is very useful for me. \*

Mark only one oval.

	1 2 3 4 5 6 7
35.	Q10 (D) I always choose healthy food options, if available. *
	Mark only one oval.
	1 2 3 4 5 6 7
	I have come to the end of this survey.  unk you very much for participating it!
I wo	ould appreciate if you can help by sharing this survey with your friends.
Stay	y safe, and have a blessed day.

34. Q9 (D) Sometimes I try new foods because of the information on the nutrition label.  $\star$ 

Mark only one oval.

This content is neither created nor endorsed by Google.

Google Forms

## APPENDIX C

## RAW DATA COLLECTED FROM RESPONDENTS

1			1. Hereby I,										
		Email Address		2. Gender	3. Age Group	4. Race	5. Your University	6. Student Status					le: 11. Father's / Guardian's
2			consent and agree to part		21 - 23 years old	Chinese	Infrastructure University I		Degree	Married	Primary/ Secondary scho		
3			consent and agree to part		21 - 23 years old	Chinese	Multimedia University (MI		Degree	Married		Certificate/ Diploma	Retired
4			consent and agree to part		21 - 23 years old	Chinese	Multimedia University (MI		Degree	Single		Degree	Private
5			consent and agree to part		21 - 23 years old	Chinese	Multimedia University (MI		Degree	Married	Primary/ Secondary school		
6			consent and agree to part		21 - 23 years old	Chinese	Heriot- Watt University M		Degree	Single		Degree	Private
7			consent and agree to part		21 - 23 years old	Chinese	SEGI University	Full time studying	Degree	Married	Primary/ Secondary school		
8			consent and agree to part		21 - 23 years old	Chinese	Universiti Tunku Abdul R		Degree	Single		Certificate/ Diploma	Not working
9		xyee195@1utar.my	consent and agree to part		21 - 23 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary scho		
10			consent and agree to part		21 - 23 years old	Malay	University of Nottingham		Degree	Married		Primary/ Secondary sch	
11			consent and agree to part		21 - 23 years old	Chinese	Taylor's University	Full time studying	Degree	Single	Primary/ Secondary scho		
12			r consent and agree to part		21 - 23 years old	Indian		Full time studying	Degree	Single		Degree	Government
13			consent and agree to part		18 - 20 years old	Chinese	Taylor's University	Full time studying	Degree	Married		Degree	Self- employed
14			consent and agree to part		21 - 23 years old	Chinese		Full time studying	Degree	Married	Primary/ Secondary scho		Private
15			consent and agree to part		24 - 26 years old	Chinese		Full time studying	Degree	Single	Primary/ Secondary scho		
16			consent and agree to part		21 - 23 years old	Dutch	Taylor's University	Half time working and str		Single		Degree	Private
17			consent and agree to part		21 - 23 years old	Chinese	TAR UMT	Full time studying	Degree	Single	Master/ PhD	Master/ PhD	Self- employed
18			consent and agree to part		21 - 23 years old	Chinese		Full time studying	Degree	Single	Primary/ Secondary scho		
19			consent and agree to part		21 - 23 years old	Chinese	Xiamen University Malay		Degree	Married	Primary/ Secondary school		
20			r consent and agree to part		24 - 26 years old	Bangladeshi		Full time studying	Degree	Married		Degree	Private
21			consent and agree to part		21 - 23 years old	Chinese	Infrastructure University I		Diploma	Single	Primary/ Secondary school		Self- employed
22			consent and agree to part		24 - 26 years old	Indian	Universiti Tunku Abdul R		Degree	Married		Degree	Private
23			consent and agree to part		18 - 20 years old	Chinese	SUNWAY University	Full time studying	Foundation	Married		Master/ PhD	Self- employed
24			onsent and agree to part	Male	21 - 23 years old	Chinese	Universiti Tunku Abdul R		Foundation	Married		Master/ PhD	Private
25	11/21/2023 10:02:06		consent and agree to part	t Female	18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married		Degree	Private
26	11/21/2023 10:03:10		consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul Ro		Degree	Married	Primary/ Secondary school		
27			r consent and agree to part		21 - 23 years old	Chinese	Universiti Tunku Abdul Ro	Half time working and st	u Degree	Married	Degree	Primary/ Secondary sch	io Private
28			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R	Full time studying	Degree	Married	Primary/ Secondary school		
29			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Single	Primary/ Secondary scho		
30			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Foundation	Single	Primary/ Secondary scho		
31			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary scho		
32			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary scho		
33			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Single	Primary/ Secondary school		Private
34			consent and agree to part		21 - 23 years old	Chinese	Universiti Tunku Abdul R		Degree	Single	Primary/ Secondary school		
35	11/21/2023 11:24:03		consent and agree to part		21 - 23 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary school		
36			n consent and agree to part		21 - 23 years old	Chinese	Universiti Tunku Abdul R		Degree	Married		Master/ PhD	Government
37	11/21/2023 11:26:59		consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Single		Primary/ Secondary sch	
38			r consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Single	Primary/ Secondary school		
39	11/21/2023 11:30:13		consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul Ri		Degree	Married	Primary/ Secondary school		
40			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Single		Certificate/ Diploma	Self- employed
41			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary scho		
42	11/21/2023 11:33:48		consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary school		
43			consent and agree to part		24 - 26 years old	Chinese	Universiti Tunku Abdul Ra		Degree	Single	Primary/ Secondary scho		
44	11/21/2023 11:56:39		consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary school		
45			consent and agree to part		21 - 23 years old	Chinese	Universiti Tunku Abdul R		Degree	Married		Primary/ Secondary sch	
46			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Single		Certificate/ Diploma	Private
47	11/21/2023 12:19:06		consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary scho		Self- employed
48			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary school		
49			n consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married		Primary/ Secondary sch	
50			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married		Primary/ Secondary sch	
51			consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married		Degree	Private
52	11/21/2023 14:52:54		consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul R		Degree	Married	Primary/ Secondary school		
53		jionn.lim@gmail.com	consent and agree to part	Male	18 - 20 years old	Chinese	SUNWAY University	Half time working and str	u Degree	Single	Primary/ Secondary scho		
54			consent and agree to part	Male	18 - 20 years old	Chinese	Universiti Tunku Abdul Ri		Degree	Married	Primary/ Secondary scho		
55		leeweixuan@1utar.my	consent and agree to part		18 - 20 years old	Chinese	Universiti Tunku Abdul Ri		Degree	Married	Primary/ Secondary scho		
56			consent and agree to part	Female	18 - 20 years old	Chinese	Universiti Tunku Abdul R	Half time working and st	u Degree	Single	Primary/ Secondary scho	Primary/ Secondary sch	ioi Private
57	11/21/2023 22:16:41	byakrin21@1utar.my	consent and agree to part	Male	18 - 20 years old	Chinese	Universiti Tunku Abdul R	Full time studying	Degree	Married	Degree	Certificate/ Diploma	Not working

Timestamp I	mail Address	1. Hereby I,	2. Gender	3. Age Group	4. Race	5. Your University	6. Student Status	7. Level of study pursuing	8. Parents/ Guardian Mar	9. Father's education leve	10. Mother's education	le 11. Father's / Guar
11/21/2023 23:31:15	hinyc37@1utar.my	consent and agree to pa	rt Male	18 - 20 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Single	Primary/ Secondary scho	Primary/ Secondary sci	no Private
11/22/2023 11:26:42	riweijay346@gmail.com	consent and agree to pa	rt Male	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Single	Certificate/ Diploma	Certificate/ Diploma	Self- employed
11/22/2023 18:44:42	eeyz-wv18@student.tar	consent and agree to pa	rt Female	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Single	Primary/ Secondary scho	Primary/ Secondary sci	no Self- employed
11/23/2023 18:26:24 1	shadventurous15@gma	consent and agree to pa	rt Female	24 - 26 years old	Chinese	SEGI University	Half time working and stu	Master/ PhD	Married	Certificate/ Diploma	Certificate/ Diploma	Self- employed
11/23/2023 18:33:16	nelanieng0921@gmail.o	consent and agree to pa	rt Female	21 - 23 years old	Chinese	UCSI University	Full time studying	Degree	Single	Primary/ Secondary scho	Certificate/ Diploma	Private
11/24/2023 3:14:03	aylasoomohru@gmail.ci	consent and agree to pa	rt Female	21 - 23 years old	Chinese	SEGI University	Half time working and stu	Diploma	Single	Certificate/ Diploma	Certificate/ Diploma	Private
11/25/2023 2:14:25	angdaiven1229@gmail.	consent and agree to pa	rt Male	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Half time working and stu	Degree	Single	Degree	Degree	Self- employed
		consent and agree to pa		24 - 26 years old	Chinese	Help University	Full time studying			Primary/ Secondary scho	Primary/ Secondary sci	o Self- employed
		consent and agree to pa		21 - 23 years old	Chinese	TAR UMT	Full time studying	Degree	Single	Primary/ Secondary scho	Certificate/ Diploma	Private
11/26/2023 17:44:17		consent and agree to pa		24 - 26 years old	Chinese	Universiti Tunku Abdul Ra				Primary/ Secondary scho		o Self- employed
11/27/2023 8:20:31		consent and agree to pa		21 - 23 years old	Malay	Infrastructure University K				Degree	Certificate/ Diploma	Retired
		consent and agree to pa		18 - 20 years old	Chinese		Full time studying			Primary/ Secondary scho		
		consent and agree to pa		18 - 20 years old	Chinese		Full time studying			Certificate/ Diploma	Primary/ Secondary sci	
		consent and agree to pa		24 - 26 years old	Indian	Management and Science				Master/ PhD	Master/ PhD	Private
		consent and agree to pa		24 - 26 years old	Indian	Asia School of Business				Degree	Primary/ Secondary sci	
		consent and agree to pa		24 - 26 years old	Indian	University Malaysia of Co				Primary/ Secondary scho		
		consent and agree to pa		18 - 20 years old	Malay	University Malaysia of Co				Master/ PhD	Certificate/ Diploma	Private
		consent and agree to pa		24 - 26 years old	Malay	Universiti Cyberjaya (UOC				Primary/ Secondary scho		
		consent and agree to par consent and agree to par		24 - 26 years old 24 - 26 years old	Malay	Limkokwing University of				Certificate/ Diploma	Certificate/ Diploma	Retired
					Chinese							
11/28/2023 11:39:38		consent and agree to pa		18 - 20 years old		Universiti Tunku Abdul Ra				Degree	Degree	Self- employed
		consent and agree to pa		21 - 23 years old	Chinese	Xiamen University Malays				Certificate/ Diploma	Certificate/ Diploma	Private
		consent and agree to pa		18 - 20 years old	Chinese		Half time working and stu			Primary/ Secondary scho		
		consent and agree to pa		21 - 23 years old	Chinese		Full time studying			Primary/ Secondary scho		
		consent and agree to pa		18 - 20 years old	Chinese	University of Nottingham I				Certificate/ Diploma	Certificate/ Diploma	Private
11/29/2023 19:16:41		consent and agree to pa		21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Degree	Degree	Private
11/29/2023 21:08:02		consent and agree to pa		21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Primary/ Secondary scho		Private
11/30/2023 9:01:33 1		consent and agree to pa		21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Primary/ Secondary scho		
		consent and agree to pa		21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Primary/ Secondary scho		
		consent and agree to pa		18 - 20 years old	Indian	Universiti Tunku Abdul Ra				Primary/ Secondary scho		
		consent and agree to pa		21 - 23 years old	Chinese		Full time studying			Degree	Primary/ Secondary sci	
11/30/2023 20:14:03		consent and agree to pa		21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Primary/ Secondary scho		
11/30/2023 20:15:46 1	erencechung02@gmail.o	consent and agree to pa	rt Male	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying			Certificate/ Diploma	Certificate/ Diploma	Private
11/30/2023 20:17:13 j		consent and agree to pa		21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Primary/ Secondary scho		
11/30/2023 20:23:10 ]	asonlee85042@1utar.my	consent and agree to pa	rt Male	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Primary/ Secondary scho		Self- employed
11/30/2023 20:55:07	ycooper31@1utar.my	consent and agree to pa	rt Female	21 - 23 years old	Eurasian	Universiti Tunku Abdul Ra	Full time studying	Degree	Married	Primary/ Secondary scho	Primary/ Secondary sci	no Private
11/30/2023 21:12:19	hooyautee000@1utar.m	disagree with participating	ng in this research.									
12/1/2023 11:02:22	uanming700@1utar.my	consent and agree to par	rt Male	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Single	Primary/ Secondary scho	Primary/ Secondary sci	no Private
12/1/2023 11:14:33 j	zs0408@1utar.my	consent and agree to par	rt Male	18 - 20 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Married	Primary/ Secondary scho	Primary/ Secondary sci	no Private
12/1/2023 11:17:22	sheuec0301@1utar.my	consent and agree to par	rt Female	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Single	Primary/ Secondary scho	Primary/ Secondary sci	no Self- employed
12/1/2023 12:05:59 j	eh300@1utar.my	consent and agree to pa	rt Male	21 - 23 years old	Bumiputera	Universiti Tunku Abdul Ra	Full time studying	Degree	Married	Master/ PhD	Master/ PhD	Government
12/1/2023 13:49:43 1	shykarp@1utar.my	consent and agree to pa	rt Male	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying			Primary/ Secondary scho	Degree	Self- employed
12/1/2023 14:42:09 j	lui777@1utar.my	consent and agree to par	rt Male	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Married	Primary/ Secondary scho	Primary/ Secondary sci	no Self- employed
12/1/2023 15:04:57	eewen1124@1utar.my	consent and agree to par	rt Female	18 - 20 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Divorced	Certificate/ Diploma	Primary/ Secondary sci	no Self- employed
12/1/2023 15:47:51	aronkoh2003@1utar.my	consent and agree to pa	rt Male	18 - 20 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Married	Certificate/ Diploma	Primary/ Secondary sci	no Self- employed
12/1/2023 17:29:38	shlywong1019@gmail.c	consent and agree to pa	rt Female	18 - 20 years old	Chinese	Taylor's University	Full time studying	Degree	Married	Primary/ Secondary scho	Primary/ Secondary sci	no Self- employed
12/1/2023 17:54:10	caiyi0102@gmail.com	consent and agree to pa	rt Female	18 - 20 years old	Chinese	Taylor's University	Full time studying, Half tir	Degree	Single	Primary/ Secondary scho	Primary/ Secondary sci	no Self- employed
12/1/2023 19:35:46	eline.xuan@1utar.my	consent and agree to pa	rt Female	21 - 23 years old	Chinese	Universiti Tunku Abdul Ra	Full time studying	Degree	Single	Primary/ Secondary scho	Certificate/ Diploma	Retired
		consent and agree to pa	rt Female	18 - 20 years old	Chinese	Universiti Tunku Abdul Ra	Half time working and stu	Degree	Single	Primary/ Secondary scho	Primary/ Secondary sci	no Self- employed
12/1/2023 21:32:56	enichisakamoto36@1ut	consent and agree to pa	rt Male	21 - 23 years old	Siam	Universiti Tunku Abdul Ra	Full time studying	Degree	Married	Primary/ Secondary scho	Primary/ Secondary sci	no Private
12/1/2023 21:57:42		consent and agree to pa		21 - 23 years old	Chinese	Universiti Tunku Abdul Ra				Certificate/ Diploma	Certificate/ Diploma	Private
	ddyau03@gmail.com	consent and agree to pa		18 - 20 years old	Chinese		Full time studying			Certificate/ Diploma	Certificate/ Diploma	Private
	coebon@gmail.com	consent and agree to pa		18 - 20 years old	Chinese		Full time studying			Master/ PhD	Certificate/ Diploma	Self- employed

	2. Did you read t	he follow 2. Did you read the	e follow 2. Did you read the	e follow 2. Did you read the f	ollow 2. Did you read the follow	2. Did you read the follow	2. Did you read the follow	2. Did you read the follo	w 2. Did you read the follow	w 2. Did you read the
1. How freque	nt do you r∈ Please select on	ly ONE a Please select only	ONE a Please select only	ONE a Please select only O	NE a Please select only ONE	Please select only ONE	Please select only ONE	Please select only ONE	a Please select only ONE	a Please select only
Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Rarely	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Sometimes	Sometimes	Sometimes	Always	Rarely	Sometimes	Always	Sometimes	Rarely	Sometimes	Rarely
Rarely	Sometimes	Never	Always	Never	Sometimes	Never	Never	Never	Rarely	Rarely
Sometimes	Sometimes	Rarely	Always	Rarely	Sometimes	Sometimes	Rarely, Never	Never	Never	Never
Sometimes	Sometimes	Sometimes	Always	Sometimes	Always	Always	Sometimes	Rarely	Rarely	Rarely
Rarely	Sometimes	Rarely	Always	Rarely	Sometimes	Always	Rarely	Never	Never	Never
Rarely	Rarely	Rarely	Always	Sometimes	Rarely	Never	Rarely	Never	Never	Sometimes, Rare
Sometimes	Sometimes	Rarely	Always	Sometimes	Sometimes	Always	Rarely	Rarely	Rarely	Rarely
Sometimes	Always	Sometimes	Sometimes	Sometimes	Always	Rarely	Rarely	Rarely	Rarely	Rarely
Sometimes	Sometimes	Sometimes	Always	Sometimes	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes
Sometimes	Sometimes	Rarely	Always	Sometimes	Sometimes	Rarely	Always	Always	Always	Always
Sometimes	Sometimes	Rarely	Always	Sometimes	Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Sometimes	Rarely	Never	Sometimes	Sometimes	Always	Rarely	Rarely	Never	Never	Sometimes
Always	Sometimes	Rarely	Sometimes	Rarely	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Never	Sometimes	Rarely	Sometimes	Rarely	Rarely	Sometimes	Sometimes	Sometimes	Rarely	Rarely
Sometimes	Sometimes	Sometimes	Always	Sometimes	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes
Never	Sometimes	Never	Sometimes	Always	Always	Never	Never	Never	Never	Never
Sometimes	Sometimes	Sometimes	Always	Sometimes	Always	Always	Rarely	Rarely	Rarely	Rarely
Always	Always	Rarely	Sometimes	Rarely	Always	Never	Never	Never	Never	Always
Rarely	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Rarely	Rarely	Rarely	Always	Sometimes	Never	Never	Never	Never	Never	Never
Sometimes	Sometimes	Sometimes	Always	Sometimes	Always	Never	Rarely	Rarely	Rarely	Rarely
Always	Always	Always	Always	Always	Always	Always	Always	Always	Always	Always
Sometimes	Sometimes	Sometimes	Always	Rarely	Sometimes	Rarely	Rarely	Never	Never	Never
Rarely	Sometimes	Rarely	Always	Rarely	Sometimes	Never	Never	Never	Never	Never
Never	Always	Never	Always	Always	Always	Always	Never	Never	Never	Never
Always	Always	Always	Always	Sometimes	Sometimes	Always	Rarely	Rarely	Rarely	Rarely
Sometimes	Sometimes	Rarely	Always	Rarely	Sometimes	Rarely	Rarely	Rarely	Rarely	Rarely
Rarely	Always	Never	Always	Always	Rarely	Always	Sometimes	Sometimes	Sometimes	Sometimes
Always	Never	Never	Sometimes	Rarely	Rarely	Always	Always	Rarely	Rarely	Rarely
Rarely	Rarely	Rarely	Always	Rarely	Always	Always	Rarely	Rarely	Rarely	Rarely
Always	Never	Rarely	Always	Rarely	Sometimes	Rarely	Always	Rarely	Rarely	Sometimes
Rarely	Sometimes	Sometimes	Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Sometimes	Sometimes	Rarely	Always	Sometimes	Always	Sometimes	Rarely	Never	Never	Never
Sometimes	Sometimes	Sometimes	Always	Sometimes	Never	Never	Never	Never	Never	Never
Sometimes	Always	Sometimes	Always	Sometimes	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes
Sometimes	Sometimes	Rarely	Always	Rarely	Sometimes	Rarely	Rarely	Rarely	Rarely	Rarely
Never	Sometimes	Always	Always	Sometimes	Sometimes	Rarely	Sometimes	Sometimes	Sometimes	Sometimes
Always	Always	Sometimes		Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
Sometimes			Always							
	Rarely	Rarely	Always	Never	Always	Rarely	Never	Never	Never	Never
Never	Sometimes	Rarely	Sometimes	Never	Sometimes	Sometimes	Rarely	Rarely	Rarely	Rarely
Rarely	Sometimes	Sometimes	Sometimes	Sometimes	Always	Always	Rarely	Rarely	Rarely	Rarely
Sometimes	Always	Rarely	Always	Sometimes	Sometimes	Always	Sometimes	Sometimes	Always	Always
Sometimes	Sometimes	Rarely	Always	Rarely	Always	Sometimes	Rarely	Rarely	Rarely	Rarely
Always	Always	Sometimes	Always	Always	Always	Always	Always	Always	Always	Always
Sometimes	Sometimes	Rarely	Always	Rarely	Rarely	Rarely	Sometimes	Sometimes	Sometimes	Sometimes
Rarely	Sometimes	Rarely	Sometimes	Rarely, Never	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely
Rarely	Always	Sometimes	Always	Sometimes	Always	Sometimes	Rarely	Rarely	Rarely	Never
Rarely	Sometimes	Sometimes	Always	Rarely	Always	Always	Rarely	Rarely	Sometimes	Sometimes
Sometimes	Always	Sometimes	Always	Sometimes	Sometimes	Sometimes	Rarely	Rarely	Rarely	Rarely
Sometimes	Sometimes	Rarely	Always	Rarely	Sometimes	Rarely	Rarely	Rarely	Never	Never
Sometimes	Rarely	Rarely	Always	Rarely	Always	Sometimes	Rarely	Rarely	Rarely	Rarely
Sometimes	Sometimes	Sometimes	Always	Always	Sometimes	Always	Never	Never	Never	Never
				D 1	Sometimes	Always	Rarely	Rarely	Rarely	Rarely
Rarely	Sometimes	Rarely	Always	Rarely	Sometimes	Aiways	rearely	reareiy	Rarely	rearety

Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	A	AJ	AK	AL	AM	AN
				low 2. Did you read the follo								Q5 (C) I do not take any	,		Q8 (C) I do not worry at
				E a Please select only ONE				Q1 (C) It is difficult for me	Q2 (C) Reading nutrition				Q6 (C) I never read nutrit		
metimes	Sometimes	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	3		4 6		2	4		
rely	Sometimes	Sometimes	Sometimes	Sometimes	Rarely	Sometimes	Sometimes	2		5		2	1		1
rely metimes. Never	Rarely	Never Never	Never Rarely	Rarely	Rarely	Sometimes Sometimes	Rarely Sometimes	4		2 6 8 5		- 2			1
metimes, Never	Rarely	Rarely	Sometimes	Rarely Sometimes	Rarely	Sometimes	Sometimes Always					1	1		
ver	Never	Never	Never	Never	Never	Never	Never								
metimes	Rarely	Never	Never	Sometimes	Never	Rarely	Sometimes	1					1		ă.
rely	Never	Never	Sometimes	Sometimes	Rarely	Sometimes	Sometimes			5	. 2				4
rely	Rarely	Sometimes	Rarely	Sometimes, Rarely	Rarely	Always	Always	2		5 2	2 2	2	. 3		ś
metimes	Sometimes	Sometimes	Sometimes	Always	Always	Always, Sometimes	Always	1		5 4	3		3		2
vays	Always	Always, Rarely	Always, Rarely	Sometimes	Sometimes	Sometimes	Sometimes	4		4 4	4	4	4		é .
metimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	3		5 5	5 2		6		i i
ver	Rarely	Rarely	Sometimes, Rarely	Sometimes	Sometimes	Always, Sometimes	Sometimes	5		7 (		2	4		i
metimes	Rarely	Rarely	Rarely	Sometimes, Rarely	Sometimes	Rarely	Rarely	- 6		6 6		- 6	6		i
irely	Rarely	Rarely	Rarely	Sometimes	Rarely	Sometimes	Sometimes	- 4							-
metimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	4		5 6			3		1
ever	Never	Never	Never	Never	Never	Never	Never	7		7 7	7	7	7		
irely	Rarely Never	Rarely	Rarely Never	Sometimes Never	Rarely Never	Sometimes Sometimes	Rarely Sometimes	2			3				
metimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	- 1				- 1			
impernes	Never	Never	Never	Never	Never	Never	Never								
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Sometimes	Rarely					-			
Allys	Always	Always	Always	Always	Always	Always	Always								A
wer	Never	Never	Never	Never	Never	Never	Never				4				4
iver	Never	Sometimes	Sometimes, Rarely	Never	Never	Always	Never			7	4		3		1
iver	Never	Rarely	Never	Never	Never	Never	Never			7	2	2	4		2
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Sometimes	Sometimes	5		5 6	4		3		1
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	2		4 5	5 4		3		š
metimes	Sometimes	Rarely	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	4		5 6	7	3	2		4
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely			3	7 3	2			t
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	4			3	3	3		d .
irely	Rarely	Sometimes	Sometimes	Rarely	Rarely	Always	Rarely	2		3 3		2	1		2
metimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Always, Sometimes	Sometimes	4				- 4			
ever	Sometimes	Sometimes	Sometimes	Rarely	Rarely	Sometimes	Always	4		6 (	5 5	2			,
iver	Never	Sometimes	Sometimes	Rarely	Rarely	Sometimes	Rarely	1		3	4	4	4		1
metimes irely	Sometimes Sometimes	Sometimes Rarely	Sometimes Sometimes	Sometimes Sometimes		Sometimes Sometimes	Always			3 3			1 3		
metimes	Always	Sometimes	Sometimes	Always	Rarely Sometimes	Always	Aways Sometimes	- 1		5 4		- 1			
metmes metimes	Sometimes	Sometimes	Sometimes	Aways Sometimes	Sometimes	Aways Sometimes	Sometimes						4		
ver	Never	Never	Never	Never	Never	Never	Never						7		4
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	4			2				2
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	4		3			6		5
vays	Sometimes	Sometimes	Always	Always	Always	Always	Always	- 2		4 :	2	1	1		1
irely	Rarely	Rarely	Rarely	Rarely	Rarely	Sometimes	Rarely	4		4	1	2	. 2		t
vays	Always	Always	Always	Always	Always	Always	Always	1		2	3	1	1		t
metimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	4		4 6	6		2		š
rely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	4				4	4		1
ver	Never	Never	Never	Never	Never	Sometimes	Never					1			i
metimes	Sometimes	Sometimes	Always	Always	Always	Sometimes	Always	3		3		1	4		1
rely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	3		4 :		4	4		1
ver	Rarely	Rarely	Never	Rarely	Sometimes	Sometimes	Sometimes	2		5 6		4	3		1
rely	Rarely	Rarely	Rarely	Rarely	Rarely	Sometimes, Rarely	Rarely	4		5 :			4		
ver	Never	Never	Never	Sometimes	Never	Sometimes	Sometimes						2		
rely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	2							0
ely ely	Rarely Sometimes	Rarely Rarely	Rarely Sometimes	Rarely Sometimes	Rarely Rarely	Rarely Sometimes	Rarely Sometimes	3		3 3	3		4		4

AO	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	88
		Q11 (C) I think that readi							Q7 (D) I always read the				
Q9 (C) I do not take any r	Q10 (C) I do not have an		Q1 (D) The nutrition label	I Q2 (D) I always read nutri	Q3 (D) I am concerned a	t Q4 (D) My food choice is	Q5 (D) When choosing f	o Q6 (D) In choosing a hea	important for me.	Q8 (D) I want to become	Q9 (D) Sometimes I try no	Q10 (D) I always choose I	nealthy food options, if a
3	4	3		4	. 4			5 4			4	4	
1	1	2		-							-	6	
1	5											4 7	
2												,	
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2		3	4					3 2	2	4	2	2	
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1. How frequent do v	ou re Please select only (	ONE a Please select only	ONE a Please select only	ONE a Please select only C	NE a Please select only ON	NE a Please select only Of	NE a Please select only ONE	E a Please select only ON	E a Please select only 0	NE a Please select only
ometimes	Sometimes	Rarely	Sometimes	Always	Sometimes	Sometimes	Rarely	Sometimes	Sometimes	Always
lways	Sometimes	Sometimes	Always	Always	Always	Sometimes	Always	Sometimes	Sometimes	Sometimes
ometimes	Always	Sometimes	Always	Sometimes	Always	Sometimes	Rarely	Rarely	Rarely	Rarely
ways	Always	Always	Always	Never	Always, Never	Always	Never	Never	Never	Never
irely	Always	Rarely	Always	Rarely	Rarely	Always	Rarely	Rarely	Sometimes	Sometimes
wavs	Always	Always	Always	Always	Always	Always	Always	Always	Always	Always
ways	Sometimes	Sometimes	Always	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
arely	Sometimes	Rarely	Always	Sometimes	Rarely	Never	Sometimes	Sometimes	Sometimes	Sometimes
metimes	Sometimes	Sometimes	Always	Sometimes	Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
rely	Rarely	Rarely	Always	Rarely	Rarely	Always	Rarely	Rarely	Rarely	Rarely
metimes	Sometimes	Sometimes	Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
rely	Rarely	Sometimes	Sometimes	Rarely	Rarely	Sometimes	Rarely	Rarely	Sometimes	Sometimes
ver	Never	Never	Sometimes	Never	Never	Never	Never	Never	Never	Never
vays	Always	Sometimes	Always	Sometimes	Always	Always	Always	Always	Always	Always
ways metimes	Sometimes	Rarely	Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
metimes	Always	Sometimes	Always	Always	Always	Always	Always	Always	Always	Always
rrely	Sometimes	Sometimes	Always	Sometimes	Always	Sometimes	Sometimes	Always	Sometimes	Sometimes
vays	Always	Always	Always	Always	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes
ways	Sometimes	Sometimes	Sometimes	Rarely	Sometimes	Always	Rarely	Sometimes	Sometimes	Sometimes
ometimes	Always	Always	Always	Always	Always	Always	Always	Always	Always	Always
rrely			Sometimes		Sometimes	Sometimes		Rarely		Rarely
metimes	Rarely Rarely	Rarely Sometimes		Rarely Sometimes	Sometimes	Sometimes	Rarely	Rarely	Rarely	Rarely
			Always				Rarely		Rarely	
arely	Rarely Sometimes	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely
arely		Sometimes	Always	Sometimes	Sometimes	Always	Sometimes	Sometimes	Sometimes	Sometimes
ometimes	Sometimes	Sometimes	Always	Sometimes	Sometimes	Always	Always	Always	Always	Always
ometimes	Always	Sometimes	Always	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Rarely	Sometimes
ways	Always	Sometimes	Always	Rarely	Rarely	Always	Always	Always	Always	Always
metimes	Rarely	Never	Always	Sometimes	Rarely	Sometimes	Rarely	Sometimes	Rarely	Sometimes
ways	Sometimes	Sometimes	Always	Always	Sometimes	Rarely	Sometimes	Sometimes	Sometimes	Rarely
ever	Sometimes	Never	Always	Never	Sometimes	Never	Never	Never	Never	Never
arely	Sometimes	Sometimes	Always	Rarely	Always, Sometimes	Sometimes	Rarely	Rarely	Rarely	Rarely
metimes	Sometimes	Always	Always	Sometimes	Always	Always	Rarely	Rarely	Rarely	Rarely
ometimes	Sometimes	Sometimes	Always	Sometimes	Sometimes	Sometimes, Never	Sometimes	Sometimes	Always	Sometimes
ometimes	Always	Rarely	Always	Sometimes	Sometimes	Sometimes	Rarely	Rarely	Never	Never
ways	Always	Sometimes	Always	Always	Sometimes	Rarely	Sometimes, Rarely	Sometimes	Sometimes	Sometimes
metimes	Always	Sometimes	Always	Sometimes	Sometimes	Always	Always	Rarely	Rarely	Rarely
ever	Sometimes	Sometimes	Always	Never	Sometimes	Always	Never	Never	Never	Never
metimes	Always	Rarely	Always	Sometimes	Always	Always	Rarely	Sometimes	Rarely	Sometimes
arely	Rarely	Rarely	Rarely	Always	Always, Sometimes	Never	Never	Never	Never	Never
metimes	Rarely	Sometimes	Always	Sometimes	Sometimes	Always	Sometimes	Never	Rarely	Rarely
metimes	Sometimes	Sometimes	Always	Sometimes	Sometimes	Always	Sometimes	Sometimes	Sometimes	Sometimes
metimes	Sometimes	Sometimes	Always	Sometimes	Rarely	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes
rely	Rarely	Never	Sometimes	Always	Always	Always	Never	Never	Never	Never
rely	Sometimes	Sometimes	Always	Sometimes	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes
irely	Rarely	Rarely	Sometimes	Sometimes	Rarely	Always	Rarely	Rarely	Sometimes	Rarely
metimes	Always	Sometimes	Always	Rarely	Always	Rarely	Always	Sometimes	Sometimes	Sometimes
irely	Rarely	Rarely	Always	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Rarely
arely	Sometimes	Sometimes	Always	Always	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes
metimes	Sometimes	Never	Always	Sometimes	Always	Sometimes	Rarely	Never	Never	Never
rely	Rarely	Rarely	Sometimes	Rarely	Rarely	Sometimes	Rarely	Rarely	Rarely	Rarely
wavs	Always	Never	Always	Never	Always, Never	Always	Always	Always	Always	Always

Part	Y	Z	AA	AB	AC	AD	AE	AF	AG	AH	Al	AJ	AK	AL.	AM	AN
Morphote   Morphote		,		,					Q1 (C) It is difficult for m	e Q2 (C) Reading nutritio	n I Q3 (C) There is too mu	sch Q4 (C) It is better for me	Q5 (C) I do not take any	r Q6 (C) I never read nuts	% Q7 (C) I never read the	Q8 (C) I do not worry a fo cheapest brand.
Mary															4	5
New   New		Sometimes								2	3	3	4		4	5
Service   Serv	Rarely		Rarely		Rarely	Rarely	Rarely	Rarely		3	4	4	4		3	5
Augy         Augy <th< td=""><td>Never</td><td>Never</td><td></td><td>Never</td><td></td><td></td><td></td><td></td><td></td><td>1</td><td>1</td><td>1</td><td>1</td><td></td><td>1</td><td>1</td></th<>	Never	Never		Never						1	1	1	1		1	1
Description		Sometimes	Rarely	Sometimes			Always	Always		5	4	5	4		1	2
Sourcines   Sour	Always		4	3	3	2		2	2							
Sourclaines	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Always	Sometimes		1	3	1	1 :		1	4
Restrict   Restrict	Sometimes	Rarely	Rarely	Sometimes	Sometimes	Never	Sometimes	Rarely		2	2	2	1 :	!	3	2
Soundame   Mary   Mary   Soundame   Sounda	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Always	Sometimes		3	3	5	5	:	2	2
Soundame   Soundame	Rarely		7	4	4	4 4		4	4							
Nover   Nove	Sometimes	Always	Always	Sometimes	Sometimes	Sometimes	Sometimes	Always		4	2	2	3	!	1	1
Mary	Sometimes		3	3	4	2		4	3							
Sourdines   Sour	Never		4	7	3	5		7	7							
Augy   Augy   Sourdiers   So	Always		7	7	6	7	ı	1	1							
Soundines   Soun	Sometimes		4	6	6	4		1	4							
Soundineal Soundinea	Always	Always	Sometimes	Always	Always	Always	Always	Always	1	3	4	4	4 4		4	4
Sourcitimes	Sometimes		3	5	5	4 :	l .	3	2							
Assys         Assys <th< td=""><td>Sometimes</td><td>Sometimes</td><td>Sometimes</td><td>Sometimes</td><td>Sometimes</td><td>Sometimes</td><td>Always</td><td>Always</td><td></td><td>1</td><td>7</td><td>7</td><td>4</td><td></td><td>1</td><td>1</td></th<>	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Sometimes	Always	Always		1	7	7	4		1	1
Restry   Rustry   R		Sometimes		5	5	4	6 :	l .	3	5						
Restry   R	Always		1	1	1	1		1	1							
Rearly   R		Rarely	Rarely	Rarely	Rarely	Rarely	Sometimes	Sometimes		4	5	5	4		4	4
Sourcitions	Rarely		4	4	4	4 4		4	4							
Mary   Many	Rarely			4	4	4		4	4							
Soundame   Soundame		Sometimes		5	6	7	5		7	7						
Assign         1	Always	Always	Always	Always	Always			Always		3	3	3	5		1	2
Soundame   Rurely   Rurely   Rurely   Rurely   Rurely   Rurely   Rurely   Rurely   Soundame   2   5   4   5   2   2   3		Sometimes	Sometimes	Always	Always	Sometimes	Always	Sometimes		1	1	1	1		1	1
Resty   Rawly   Rawly   Rawly   Rawly   Rawly   Rawly   Routines   Sounderse   Sounderse		Always				1	1		1	4						
New   New		Rarely	Rarely	Rarely	Rarely	Rarely	Rarely	Sometimes			5	4	5	!	2	3
Restry   New   N		Rarely	Rarely	Rarely	Rarely	Rarely	Sometimes	Sometimes		5	7	7	4		1	1
Reary   Rear		Never	Never	Never	Rarely	Never	Rarely	Never		5	3	2	2		6	2
Soundary   Soundary		Never					Never	Never		3	6	3	4		3	3
New												1	1		1	1
															1	1
Rearly   Rearly   Sometimes   Sometimes		Never	Never	Never	Never	Never	Rarely	Rarely			6	5	3	!	2	1
Rearly   Raney   Soundines	Sometimes		5	1	3	2		1	1							
New   New																
Soundines										3	3	4	3 :	!	2	3
Nover   Nove											6	4			7	4
Resty   Rest											1	3			1	2
		Rarely		Never	Never	Never	Never	Never			4	5	3		4	3
															1	5
Nover         Nover         Constrience         Const															1	1
										4	4	4	4 4		2	2
Rendy   Randy   Randy   Randy   Randy   Sounderse										7	7	7	5		5	ó
															5	5
Randy   Randy   Randy   Randy   Randy   Randy   Randy   Randy   3   3   5   5   4   5   3											•				6	6
Sometimes         Observer         Always         Always         Sometimes         Sometimes         5         7         5         2         3         1           Revey         Ravey         Ravey         Ravey         8         4         5         6         3         5         7         2																2
Nover Nover Nover Nover Nover Nover Nover Nover Randy 7 5 7 5 2 3 1 Randy Randy Randy Randy Randy Storders Family 4 5 6 6 3 5 7 2										3	3	5	5		5	3
Rarely Rarely Rarely Rarely Rarely Rarely Sometimes Rarely 4 5 6 3 5 7 2										5	5	5	5 5		5	5
															3	1
										*	0				7	2
Aways Aways Aways Aways Aways Aways Aways 2 4 1 2 1 1 2	Always		2	4	1	2		1	2							

	AN	AD	AP	AQ	AR	AS	AT	AU	AV	AW	AX	AY	AZ	BA	88	BC
1 0	28 (C) I do not worry abo	DB (C) I do not take any r	Q10 (C) I do not have any	Q11 (C) I think that reading	C1 (D) The publics lab	al C3 (D) I always read out	or O3 (D) I am concerned	at Q4 (D) My food choice is	OE (D) When choosing f	lo Off (D) to choosing a bar	Q7 (D) I always read the	OR (D) I want to become	OB (D) Sometimes I to o	O10 (D) I always choose	healthy food options, if avai	vilable
58	4	20 (C) 1 CO 110: take any 1	GTO (C) TOO HOL HAVE AN	4				5 3			i inponiani na me.		(Q) (D) DOINGOING 1 D) 11	5		
59	2	3	4					6 5								
60	5	3		3		5 4		4 4		3 6						
61	1	1	1	1		7 7	,	7 7		7	7	7	7	1		
62	3	3		3			2	4 4		3 5	5	5	5	3		
63	2	2		2		4 4	1	5 5			5 (		6	6		
64	1	1		1		7 1		7 7					7			
65	3	3 2		3		5 5		5 3 6 5		2 6						
67	3	2				2 1		2 2		5						
GB	2	3				6 5		4 5								
69	3	1				5 4		4 4								
70	2	3		5			1	1 1			1					
71	1	1		1				7 7			7					
72	5	6	4	2		4 2	2	4 4		2 (	3	3		6		
73	4	4						6 5		5 4						
74	4	4						4 4		4 4						
75	1	1						7 7			7					
76 77	2	3	2	3		6 5		6 5		4 6						
77	1 4	1 4	1 4	1		2 2		2 2			7					
79	4	4						4 4		4						
80	4	4						4 4		4						
81	2	4				1 1		1 1								
82	2	1	1	1		6 6	3	6 6								
83	1	- 1	1	1		2 2	2	6 6		7 .	5 6	5 6	4	5		
84	1	1	1	1		7 6	5	6 7		7	7	7	6	4		
85	4	2				5 5		5 4								
86	1	1	1			5 5		5 5								
87	2	1						1 6								
88	2	4				4 2		3 4								
90	1					7 6		5 4			7					
90	5	1 3						6 6			7 6					
92	2	3						7 6			7					
93	2											,		,		
94	2	2	2	2		5 4	1	4 4		5 4		5 5	3	4		
95	5	6	3	4				4 2	:	2 2	2		. 2	5		
96	2	4						5 6			5 (					
97	2	3				3 3		3 3			3					
98	4	4	5	5		5 4		4 4		4 3						
99	1	- 1	1	1		6 6		6 6		4 4						
100	2	2	2	2		4 4		4 4			3 4					
101	4	6	5	4 5		5 5		5 6								
102	5	5		5		5 5		5 5		5 6						
104	4	4						6 7			5 4					
105	4	4				4 3		3 4			1					
106	5	5				5 5		5 5		5 5						
107	1	1	5	5		5 3		3 3								
108	6	4	6	5		3 2	2	2 2		2 4	4	2 2	3	5		
109	1	3	1	2		7 7	7	7 6		5 5	5		6	7		

## APPENDIX D

## TURNITIN SIMILARITY REPORT

ORIGIN	ALITY REPORT					
1 SIMIL	3% ARITY INDEX	<b>7</b> % INTERNET SOURCES	11% PUBLICATIONS	% STUDENT PAPERS		
PRIMAF	Y SOURCES					
1	Osman, l Tayyib co	Zainol, Rusliza Nor Asiah Oma Incept among l Irs", Journal of	r. "Application Malaysian mu	of the slim		
2	www.em	eraldinsight.co	m	1 9		
3	"Front-of intervent	kime Ale, Jean J -pack labeling: ion to improve iharan Africa",	a health litera cardiovascula	acy ar health		
4	WWW.res	earchgate.net		1 9		
5	newsroom.heart.org Internet Source					
6	www.uke	essays.com		<b>&lt;1</b> °		