HOW HEALTH BENEFITS WRITTEN ON SAUCE LABELS AFFECT AND IMPACT THE BEHAVIORS OF CONSUMERS LIVING IN BANGKOK
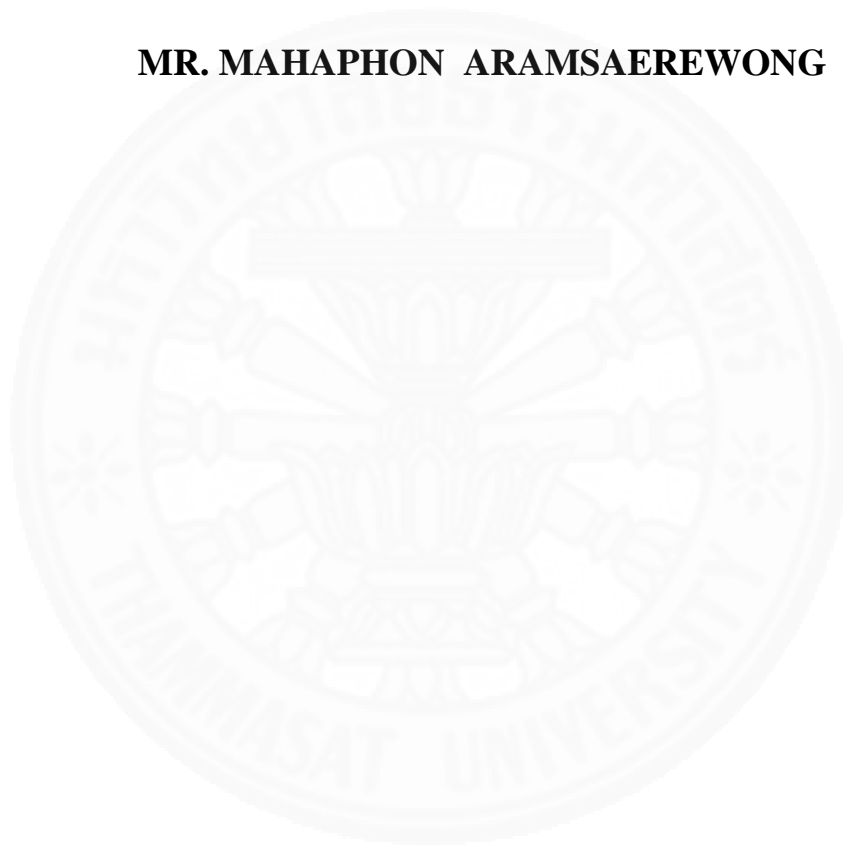
BY

MR. MAHAPHON ARAMSAEREWONG

AN INDEPENDENT STUDY SUBMITTED IN PARTIAL
FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE
OF MASTER OF SCIENCE PROGRAM IN MARKETING
(INTERNATIONAL PROGRAM)
FACULTY OF COMMERCE AND ACCOUNTANCY
THAMMASAT UNIVERSITY
ACADEMIC YEAR 2019
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ENTITLED

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IMPACT THE BEHAVIORS OF CONSUMERS LIVING IN BANGKOK

was approved as partial fulfillment of the requirements for

the degree of Master of Science Program in Marketing (International Program)

18 MAY 2020
on ....

Chairman   _____
(Associate Professor Nigel Barrett, Ph.D.)

Member and Advisor   _____
(Professor Kenneth E. Miller, Ph.D.)

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Independent Study Title	HOW HEALTH BENEFITS WRITTEN ON SAUCE LABELS AFFECT AND IMPACT THE BEHAVIORS OF CONSUMERS LIVING IN BANGKOK
Author	Mr. Mahaphon Aramsaerewong
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ABSTRACT

As Thailand is facing a decline in birth rate and an aging population, people have to look after themselves. Eating is the most important and tangible way to stay healthy. Sauces are used in every Thai dish and people do not know what lies inside those delicious sauces that they consume.

Reading labels is the main source of information for consumers. Brands and marketing managers can use this limited real estate to convey information to them. This research will focus on the health aspect of a contemporary topic in applied marketing where the goal is to understand how the health benefits written on the sauce labels affect the purchasing decision of the consumers. To understand their decision process and their awareness, preference, perception towards health benefits on the label and their comprehension of health benefits on the label.

This research will employ both exploratory and descriptive research design. Exploratory research has been represented by a 6 respondent in-depth interview and descriptive research has been represented by a questionnaire with 194 responses. The data collected from the questionnaire have been analysed through the use of Statistical Package for the Social Sciences (SPSS).

The results show that the respondents can be divided into 4 groups: Cooks and Non-Cooks, Health Concerned and Health Unconcerned, Benefits Seekers and Non-Seekers, and Label Readers and Non-Readers. All of the groups have different behaviors and attitudes but the most important decision criteria factor for all of the groups is Taste.

Recommendations from this research will be focused especially on labelling which are targeted towards brands and marketing managers.
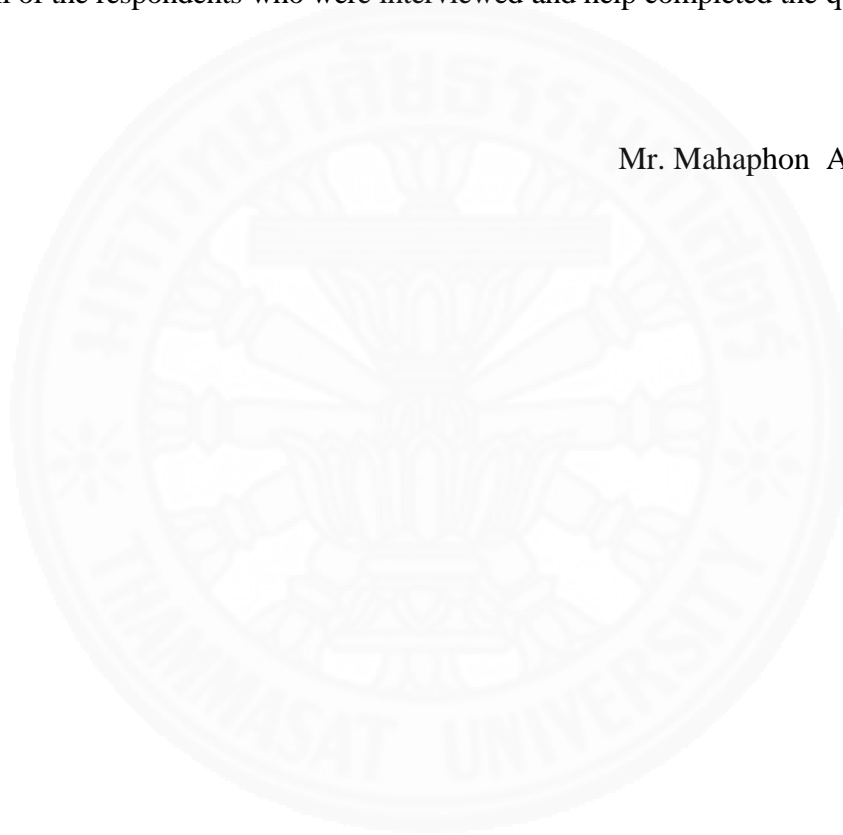
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CHAPTER 1
INTRODUCTION

1.1 Introduction and Background to the Proposal

Since the 1970s, Thailand's population growth rate has been in a decline. Its population has been stagnant for half a decade. (Division, 2019) This results as a reduction in the number of people entering its workforce. Less population growth also indicates an aging population. As the general population ages, there will be less support for the older generations who are retired. (Chaitrong, 2017) People will have to look after themselves in order to stay away from the rising cost of medical care which is comparatively higher than what the average population can afford. (Thanadkah & Chaladsook, 2018)

One of the most important ways for people to look after themselves is to eat; as nutrients intake correlates directly to health. (Shridhar, et al., 2015) If one's daily staples consist of deep-fried food, their food intake will be full of trans fat and cholesterol (LDL). This means that they will be prone to obesity and diseases such as heart disease. (Steinbaum, 2018) On the other hand, people living in rural areas of developing countries do not have the luxury of lavishing themselves in fatty foods. Finding food to eat is considered a reward for them. Therefore, this leads to the problem of malnutrition. The main nutrients that these people lack are iron, iodine, vitamin A and zinc. (Müller & Krawinkel, 2005) Therefore, people should be aware of what kind of food they are eating, what kind of nutrients does the food provide and what kind of nutrients are they ingesting.

Thailand has been called the 'Kitchen of the World'. Not only with its distinctive and tasty food that could be found all over the world, but also as a producer of many important agricultural products. With cheap skilled labour and agricultural produce that could be grown all year round, Thailand is one of the largest net food exporting country in the world. (Thailand Board of Investment, 2018)

One of the most important compositions that makes up a dish are sauces. Sauces are found in every type of Thai culinary whether it be cooking, coating, dressing, dipping, marinating and so forth. Furthermore, more than 50% of Thailand's food

ingredients exported are sauces. (Food Industry in Thailand 'Kitchen of the World', 2011) With Thailand's sauces, dressings and condiments industry total market capitalisation in 2018 of approximately 44 billion Baht, it has been growing at a steady rate of 3.4% per year (CAGR). The market has been dominated by several key players: Rosdee (Ajinomoto), Ajinomoto, Knorr, Tiparos and Healthy Boy (ranked respectively). (Euromonitor, 2019) As the Euromonitor report covers all sauces, dressings, and condiments, this research will focus solely on sauces. To clarify the difference between the terms; sauce is "a liquid, cream, or semi-solid food served on or used in preparing other foods". An example of a sauce is fish sauce. Dressings are similar to sauces but used only for coating salads for example, Caesar salad dressing. Condiments are solids that is used to augment the dish such as salt and pepper. (Spiro, n.d.)

As there are hundreds of varieties of sauces, this research will be focusing mainly on sauces that are used by home cooks and are easily bought in Bangkok. Sauces are used in nearly every process of cooking/eating Thai food; whether it be during marination, stir-frying, topping or even dipping. However, consumers do not realize how much sugar and sodium content lies within the sauces they consume. On average, sweet chili sauce consists of 56% sugar (Saxelby, 2016) and yet consumers still enjoy their crispy fried chicken wings fully layered with sweet chili sauce. This poses a health risk not only for people with diabetes but for the general population.

This research will focus on the health aspect of the contemporary topic in applied marketing where the goal is to understand how the health benefits written on sauce labels affect the purchasing decision of the consumers. The consumers' awareness, preference, perception and comprehension of health benefits labelling on sauce will also be explored. Marketing managers could use the information and key findings in this research to help improve how they communicate their key message(s) to the consumers.

Since this research's topic is extremely specific, there are little to no information on how the consumers react towards sauce labels. Therefore, the literature review in this research will be providing a structural framework by using similar or broader categories of food as a reference.

1.2 Research Objectives

The research objectives are goals that the researcher aims to achieve/answer in this research. They are deemed to be attainable within the time frame and the budget of this project. The objectives are as follows:

1. To understand the consumer decision process and decision criteria for purchasing sauces.

2. To identify the characteristics of the consumers.

3. To understand the importance of health considerations and impact in their decision process.

4. To understand the role of health benefit terms and health information included on the package labelling for the consumers.
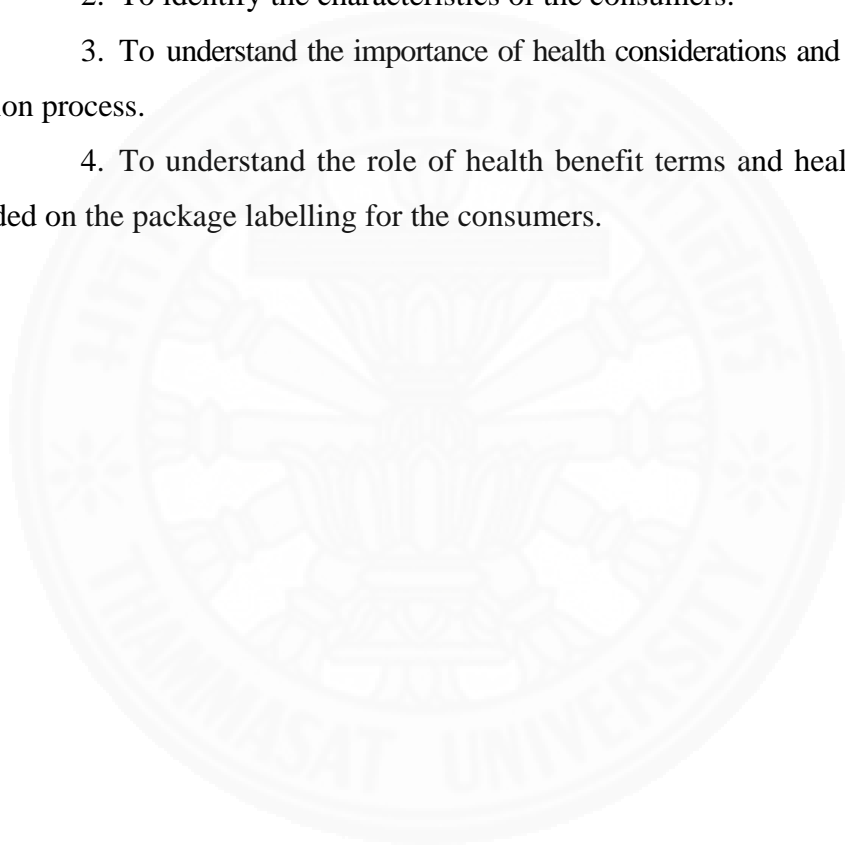
CHAPTER 2
REVIEW OF LITERATURE

2.1 Literature Review

When consumers seek to buy an item, they go must through a process called the buying decision process. (Kotler & Keller, 2016) This five-stage model (Figure 2.1) identifies the stages that the consumer goes through before deciding to make a purchase.

Problem Recognition

Information Search

Evaluation of Alternatives

Purchase Decision

Post Purchase Behavior
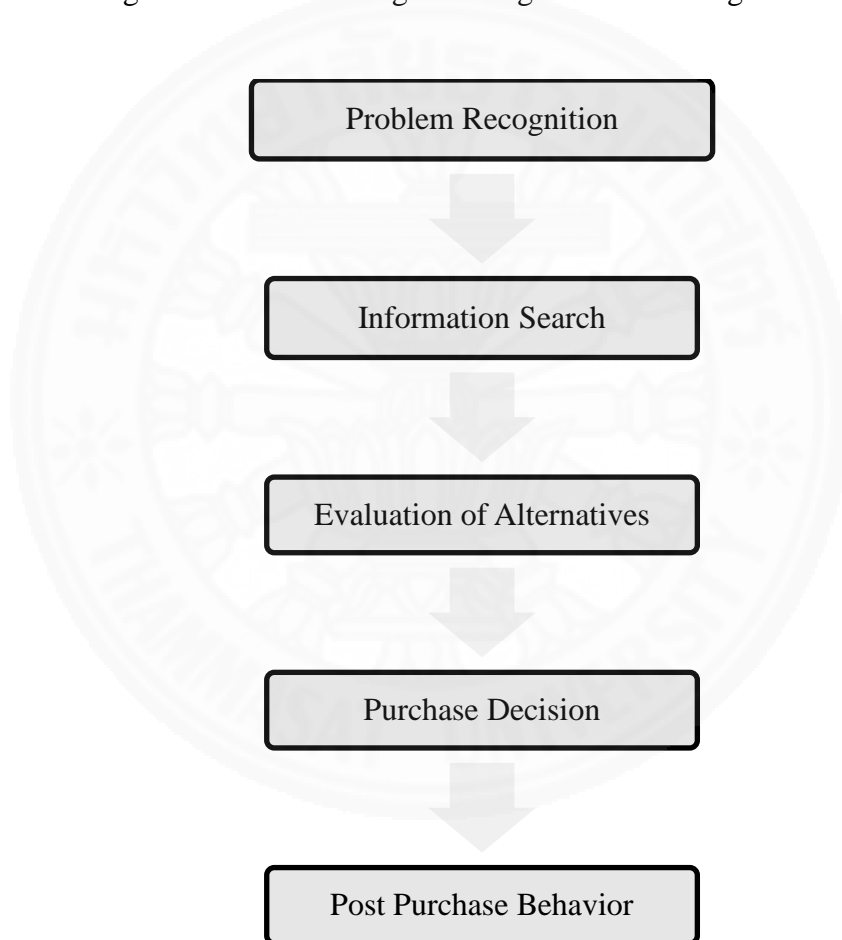
Figure 2.1 Buying Decision Process

First, consumers will recognize what is the problem that needs to be addressed. For instance, the consumer is hungry, therefore they will need to find food. In the second stage, they will be searching for restaurants around them. Consideration of the different restaurants in the area and the decision to go and eat at that restaurant is the third and

fourth stage (respectively). The last stage will be whether or not they have enjoyed the meal. If they do, they might go back and eat at this restaurant again and if not, they might tell their friends how bad the food was.

As previously mentioned, Thai consumers are being more concerned about their health. By being concerned about their health is a problem recognized for Thai consumers. This is where this research comes in. As there are many sources of information for nutrients in sauces, one of the easiest ways for the consumers to learn about it is to look at the labels. When consumers read the label, consumers are looking to find more information to educate themselves before they decide to make a purchase. This stage is vital to the marketing managers as the information they provide on the label may make or break the consumer's decision. If the information is not attractive enough, the consumers will move on to the next stage where alternate brands are compared and evaluated, therefore decreasing the chances of purchasing.

Nonetheless, questions may arise from this claim as: will the consumers read the labels before their purchase, how much do they actually read and how much information can they interpret?

Nutrition facts on the label are one of the most frequent sources of nutrition information for the consumers. However, not every consumer fully understands the details on the label. As the education level increases, consumers have a higher chance of identifying what the message on the label is trying to convey. Furthermore, income and also the education level of the consumers positively correlate to the chances of them reading the labels. (Wang, Fletcher, & Carley, 1995) This study also mentioned that people who are concerned about their health and weight also read the labels in order to determine how they should balance their diet. People who are looking to control their weight would be more inclined to look at the calories whilst people who have health problems would look at a more specific trait such as sodium, cholesterol or allergens. Attractive labels will also encourage consumers to read the labels. Women and people who cook will have a higher chance of reading the labels. Therefore, reading labels directly affects their purchase decision. (Plain, 2018)

Labelling on sauces are categorized into 2 types: front of product label (FOP) and back of product label (BOP). The information stated on the FOP provides a simple claim that will allow the consumers to easily digest the information before

making a purchase. If the consumers are interested in the product, they might read the more detailed information on the BOP. (Mandle, Tugendhaft, Michalow, & Hofman, 2015)

A study has found out that 80% of Americans read the labels for the first time of their purchase, but as low as 25% always read the labels on repeated purchases. This is because consumers want to save time on grocery shopping and reading the same details repetitively is boring and time consuming. (Byrd-Bredbenner, Alferi, & Kiefer, 2001)

Different regions and different ethnic groups look for different claims on the label. A study has found out that South East Asians prioritize other information such as manufacturing date, expiry date, and storage conditions over the nutrition. Furthermore, consumers are looking for signs that relate to the quality of the ingredients rather than the nutrition that the product provides. (Mandle, Tugendhaft, Michalow, & Hofman, 2015)

Specific nutrition traits will allow manufacturers to capitalize on the pricing scheme as consumers find that the nutrition traits are extra value added. (Muth, et al., 2013) These trends vary depending on the region and the demographics; as lower income countries look for more nutritious traits such as vitamins, omega-3, iodine rather than traits such as low-calorie, low-fat, sugar-free for richer countries. (Mandle, Tugendhaft, Michalow, & Hofman, 2015)

FOP health benefit claims are used to seduce consumers to purchase the food item. There are many types of food claims which can be segmented into 3 major categories. Nutrient claims such as 'low-fat' and 'rich in vitamins'. Health claims such as 'keeps the heart healthy' and 'good for muscle building' and structure/ function claims such as 'fiber keeps you regular'. (Rizzo, 2017) The US FDA has loosely regulated the claims. For example, food labels that contain the word 'healthy' must contain at least 10% of the daily diet of these specific 6 nutrients (vitamin A, vitamin C, calcium, protein and fiber) and must not have more than a specified amount of total fat, saturated fat, sodium and cholesterol. These specifications are misleading as there is no single food that will fit into these criteria. For example, avocados are considered healthy but it cannot be labelled as 'healthy' because it does not contain enough protein to fit the criteria. This is misleading as this contradicts the common belief. Perhaps, the US

FDA's 'healthy' food classification is better suited for a diet rather than a single individual food. (Horwath, 2019) With this loosely acclaimed nomenclature, this means that consumers are prone to be misled by it as it is used as a marketing tool. In assurance, a study has found that 58% of the Americans (from a 2000 people sample) feels that these health claims are misleading. (Gervis, 2018) They are bombarded with claims that sounded like marketing jargons. Therefore, the consumers in the sample prefer a clear and concise label over the more complicated and information-oriented labels.

CHAPTER 3
RESEARCH METHODOLOGY

The research has utilized 2 types of research design: Exploratory Research Design and Descriptive Research Design. Secondary, qualitative and quantitative data has been gathered and analyzed in order to provide a comprehensive understanding of the impacts and effects of health benefits written on sauce labels towards Bangkok consumers.

3.2 Research Framework

The literature review has provided this research with a structural basis for the framework. As there are many factors that affect and impact the decision of the consumers, all of them are independent variables. The key variables that this research will be considered are shown in the table below:

Table 3.1

Variables

	Variables	**Research objectives**
Dependent Variable	The decision to buy sauces	To understand the consumer decision process and decision criteria for purchasing sauces.
Independent Variables	The respondents' demographics	To identify the characteristics of the consumers.
	The respondents' psychographics	To identify the characteristics of the consumers.
	The respondents' behaviors	To identify the characteristics of the consumers.
	Consumers looking for health benefit claims or specific nutrition traits such as allergens or 'sugar-free'	To understand the importance of health considerations and impact in their decision process

Table 3.1

Variables (cont.)

	Variables	Research objectives
	Consumers are aware that there are health benefit claims written on the label	To understand the role of health benefit terms and health information included on the package labelling for the consumers
	Consumers that understands the health benefit claims written on the label	To understand the role of health benefit terms and health information included on the package labelling for the consumers
	Consumers that believe the health benefit claims written on the label	To understand the role of health benefit terms and health information included on the package labelling for the consumers
	Consumers that are willing to pay more for the specific health claims	To understand the role of health benefit terms and health information included on the package labelling for the consumers

3.3 Exploratory Research

This research design has been used to find information and insights from consumers. It will help the researcher to understand the basis of how the consumers think, their attitude and many more aspects towards health benefits written on the labels. Furthermore, the results obtained will also be used as a foundation for constructing the descriptive research's questionnaire. The exploratory research consists solely of in-depth interviews.

3.3.1 In-depth Interviews

In-depth interviews have been conducted on 6 individuals. The results from these interviews has allowed this research to delve further into the details that might be unobtainable through conventional questionnaires such as their attitude, their behavior, their awareness, their perception and so on. Furthermore, these key insights have aided the researcher in the creation of the questionnaire.

3.4 Descriptive Research

A questionnaire has been conducted for this research design as a basis to help support the claims and findings that were discovered during the in-depth interviews. An online questionnaire has been sent out to 194 respondents who live in Bangkok on a convenient basis via Google Forms.

3.5 Sample Selection Plan

According to the budget constraints, sampling procedure has been conducted by a convenient-based sampling method. This method of sampling will apply to both in-depth interviews and the questionnaire.

Table 3.2

Sample Selection Details

Research Design	Methodology	Pilot test (unit: people)	Sample size (unit: people)
1. Exploratory	In-depth interviews	3	6
2. Descriptive	Questionnaire	10	194

3.5.1 In-depth Interview Recruitment Criteria

The in-depth interview has been conducted upon respondents aged between 18 to 65 years old living in Bangkok. All of the respondents must have purchased any kind of sauce within the past 3 months. The respondents have been interviewed by either through phone call (which has been recorded) or by face to face (the meeting place has been agreed on by both the respondents and the researcher).

3.5.2 Questionnaire Recruitment Criteria

The questionnaire has been crafted by using Google Form and sent to the 194 respondents through various different means electronically such as Line, Facebook, Webboards/Forums and etc. A screening question has been inserted into

the questionnaire in order to eliminate unqualified respondents and prevent the results from skewing.

3.6 Limitations

This research is solely conducted by a single person with a single advisor. Therefore, there are many constraints such as man power and time. Furthermore, since this research uses a convenient-based sampling method, the data may not represent the entire population. Moreover, the is no sponsorship from any major companies for this research, therefore causing this research to be severely limited in budget. Last but not least, this research serves only as an introduction towards health labelling in Bangkok. Further analysis of this subject could be conducted with a broader and a more sophisticated method of analysis.

3.7 Data Analysis Plan

Data obtained from the exploratory research (secondary data and in-depth interviews) has been analyzed and interpreted before conducting the exploratory research in order to identify the crucial insights that will aid in questionnaire design. Descriptive research data obtained from the questionnaire has been analyzed by using Statistical Package for the Social Sciences (SPSS). The chosen methods of analysis included analysis of variances (ANOVA), compare means analysis, frequency analysis, and other appropriate statistical analyses.

3.8 Deliverable and Timeline

This research has been conducted within a period of 7 months, starting from 23rd September 2019 to 16th March 2020. Refer to Appendix A for the timeline.

CHAPTER 4
DATA ANALYSIS AND RESULTS

4.1 Key findings from the Exploratory Research

The in-depth interview was conducted from 2 Jan 2020 to 17 Jan 2020 with a total of 6 respondents. All of the respondents have purchased sauces in the past 3 months. They were conveniently selected through the researcher's connections.

Table 4.1

In-depth Interview Respondent Profiles

No.	Name	Age	Occupation	Education Level	Income (THB)
1	Mrs. Pannada	57	Office worker	Bachelors Degree	> 60,000
2	Ms. Thitarat	26	Office worker	Bachelors Degree	40,000 to 50,000
3	Ms. Thanawan	29	Private business owner	Bachelors Degree	> 60,000
4	Mr. Ben	29	Office worker	Masters Degree	> 60,000
5	Ms. Mookamphan	26	Unemployed	Bachelors Degree	none
6	Ms. Chawisa	27	Private business owner	Masters Degree	between 50,000 to 60,000

4.1.1 Characteristics of the respondents

All of the respondents are Thais with different backgrounds. Mr. Ben and Ms. Chawisa have been brought up in an international school and have been studying abroad whilst all other respondents went to a Thai University. Therefore, their purchasing behavior is different as they prefer to cook Western food rather than Thai food. Both of these respondents cook for the whole family and guests while others prefer to cook for themselves. Mrs. Pannada is the only parent in this group and she cooks for the whole of her family.

Table 4.2

In-depth Interview Respondent Characteristics

No.	Name	Cooking Frequency	Ingredients Purchase Frequency
1	Mrs. Pannada	Every day	Every day
2	Ms. Thitarat	Once/week	Once/week
3	Ms. Thanawan	2-3 times/week	2-3 times/week
4	Mr. Ben	Once/week	Once/week
5	Ms. Mookamphan	Twice/month	Twice/week
6	Ms. Chawisa	Once/week	Once/week

Table 4.2 shows that nearly all of the respondent's frequency of purchase corresponds to their cooking frequency. However, Ms. Mookamphan is the only person living alone, therefore she stocks up twice per month to cook for eight times per month. Furthermore, supermarkets are every respondent's main shopping location for sauces.

4.1.2   Factors affecting the respondent's decision process

All of the respondents purchase Thai sauces (for example Fish sauce, Thai Soy sauce, Oyster sauce and etc.) in large quantities. There are less to no consideration for purchasing Thai sauces because it is something that they have been buying for many years. Their parents have been using the same brands in which the taste and the familiarity have been passed down to them. They are reluctant to switch to other brands for this type of sauce. However, for other types of sauces such as dipping sauces (for example ketchup, chili sauces, sriracha sauce and so forth) and foreign sauces (for example Worcestershire sauce, Shoyu, barbeque sauce, steak sauce and so forth), the respondents are more willing to consider other brands. Furthermore, all of the respondents that buy dipping sauces and foreign sauces usually buy them in small to medium sizes.

All of the respondents read the labels for their first purchase. However, the details that they read all vary. Ms. Mookamphan, Ms. Thanawan, and Ms. Chawisa only look at the front of the label details whilst all other respondents read both the

front and the back of the labels. Mrs. Pannada and Ms. Thitarat read the labels in extreme depth as both of them read the nutrition facts as well.

Each of the respondents has a specific set of details that they look for on the labels which are referred to in Table 4.3:

Table 4.3

In-depth Interview Respondent Benefits Preference

No.	Name	Specific Details
1	Mrs. Pannada	Bottle design
2	Ms. Thitarat	Preservatives, low salt and low sugar/fat
3	Ms. Thanawan	Country of origin, no artificial sweetener
4	Mr. Ben	Country of origin and Expiry date
5	Ms. Mookamphan	Looks for well known brands, low sodium and price
6	Ms. Chawisa	Salt, fat and sugar content

From the interviews, this research found that health consciousness is a factor that directly correlates to the specific information that the respondents look for. Mrs. Pannada, Ms. Thanawan and Mr. Ben are not health conscious while the rest of the respondents are. The results from Table 5 clearly shows that the specific health traits are sought after by the respondents who are health conscious and the respondents who are not health conscious looks for other types of details. Mr. Ben and Ms. Thanawan, look for country of origin as they believe that certain origins refer to quality. Mr. Ben specifically says that he prefers to buy sauces that are not made in China as he thinks that China connotates with low quality. Ms. Chawisa and Ms. Thitarat both consider themselves as health-conscious as they cook clean food and exercise on a regular basis. Therefore, the details that they look for are health-related.

For subsequent purchases, all of the respondents spend minimal effort in reading the labels. Mr. Ben says that he does not want to waste time looking at something he is used to; therefore, he only checks to confirm that it is the brand that he wants. This is the same for Ms. Mookamphan, Ms. Thanawan, and Ms. Chawisa as well. As for Mrs. Pannada, she usually checks the packaging size as well so that she does not

buy the unintended size. Ms. Thitarat has a different approach compared to other respondents, she occasionally re-reads the labels or even compares the intended purchase to other brands located on the shelf.

From the in-depth interviews, not every respondent would buy the sauce after they read the labels. Nearly all of the respondents would compare the sauces with their competitors first. The factors that they look to compare are price, packaging size, and health benefits. However, Mr. Ben is different, he will always buy it as he is price insensitive and thinks that comparing is a waste of time for grocery shopping. He does not want to get sidetracked and lose focus as he always comes with a shopping list. Furthermore, he is willing to pay extra for the same sauce that has the specific details that he looks for. He will choose to buy the tomato ketchup made in the United States which is more expensive than a local made one. However, he rarely switches brands because he is not familiar with the taste and might alter his cooking recipe. This is also the same case for Ms. Mookamphan where she considers her familiarity over the specific health benefits. Mrs. Pannada is also similar to these two respondents but she is more inclined to try new sauces with health benefits considering that they must provide incentives for her to switch. The incentives might be in the form of price discounts or freebies. Ms. Chawisa and Ms. Thitarat are different, they are willing to pay a 30% price difference for sauces with specific health traits such as low fat, low sugar, and low salt as both of these respondents consider the extra upcharge as an investment for health. Furthermore, both of them are not brand loyal, they prefer the specifications and attributes over brand familiarity.

4.1.3 Factors affecting label comprehension and health claims

All of the respondents think that they know what the health claims on the label mean. However, Mr. Ben and Ms. Thanawan do not read the nutrition facts. Furthermore, all of the respondents also think that the health claims on the label are true but with a caveat. Ms. Thitarat believes that the claims are exaggerated and are used as a marketing tool to lure customers to buy it. Despite her belief, she still prefers to buy the sauce with the claims rather than the one with no claim. Ms. Thanawan and Ms. Mookamphan are not skeptical and do not think about the claims being exaggerated. Mrs. Pannada and Ms. Chawisa will read the nutrition facts and compares them with other brands to check whether the claim is misleading or not. Mr. Ben will trust the

label claims as long as it is made in the country that he perceives are trustworthy. For example, he mentioned that he will not trust the claims for sauces made in China but will trust claims from sauces made in Sweden.

4.1.4 Overall key insights that affect the questionnaire

Conducting in-depth interviews has led to several key insights that have significantly impacted how the questionnaire was designed.

First, respondents have different types of behaviors. This includes their cooking behavior, shopping behavior, label reading behavior and their eating behavior. These types of behavior allowed this research to incorporate several behavior categorization questions in the questionnaire. Second, each respondent has several criteria such as; price, brand, taste and so forth that they consider before purchasing sauces. These criteria are an essential part of the questionnaire. Last but not least, respondents help suggest lists of specific health benefits that they look for when purchasing sauces.

4.2 Descriptive Research Data Analysis

The questionnaire was launched for a period of 1 month from 17th January 2020 to 17th February 2020. The total number of responses received were 194 responses. The total responses that passed the screening question (Have ever bought sauces within the past 4 months?) are 161 responses which will be this research's sample. The analysis was performed using Statistic Program for the Social Sciences (SPSS) which the key statistics will be summarized, explained and interpreted in the next section. Please refer to Appendix B for the questionnaire and Appendix C for the variable definition.

4.2.1 Respondents' General Characteristics

Table 4.4

Descriptive Research Respondents' Demographic Profile

Profile		Frequency	Percent
Gender	Male	96	59.63%
	Female	65	40.37%
Cook	Does not cooks	34	21.12%
	Cooks	127	78.88%
Income (THB)	< 10,000	2	1.24%
	10,001 - 20,000	10	6.21%
	20,001 - 30,000	25	15.53%
	30,001 - 40,000	19	11.80%
	40,001 - 50,000	21	13.04%
	50,001 - 60,000	14	8.70%
	Over 60,001	70	43.48%
Education Level	Middle school or Below	0	0%
	Highschool	2	1.24%
	Associate's Degree	6	3.73%
	Bachelor's Degree	73	45.34%
	Master's Degree	78	48.45%
	PhD. or higher	2	1.24%
Status	Single	98	60.87%
	Married	63	39.13%
Occupation	Student	4	2.48%
	Office Worker	64	39.75%
	Government officer	11	6.83%
	Retired	0	0%
	Business owner	71	44.10%
	Freelance	5	3.11%
	Unemployed	3	1.86%
	Others	3	1.86%

Table 4.4

Descriptive Research Respondents' Demographic Profile (cont.)

Profile		Frequency	Percent
Age	Below 18 years old	0	0%
	18-24 years old	2	1.24%
	25-34 years old	80	49.69%
	35-44 years old	56	34.78%
	45-54 years old	17	10.56%
	55-64 years old	6	3.73%
	Over 65 years old	0	0%

Findings from the questionnaire conducted show that majority of the respondents are male (59.63%) and cooks (78.88%). Unexpectedly, 43.48% of the respondents are have a personal income of over 60,001 THB which is the maximum criteria for this research and their education level lies between Bachelor's (45.34%) and Master's Degree (48.45%). They are mostly single (60.87%) and are either an office worker (39.75%) or a business owner (44.10). Most of the respondents are between 25-44 years old (84.47%).

4.2.2 Respondents groups

This research has classified the respondents by their characteristics and behaviors. There are 4 different groups that will be explored. Variables: Brand, Design, Benefits, Price, and Taste are critical variables that are used to define the purchasing criteria of the respondent. On the other hand, variables: Look_benefits, Label_compre, Label_believe, and BrandvsBenefit are used to explore their attitudes.

4.2.3 The Cooks and the Non-Cooks

The respondents' cooking behavior was used to split them into two groups; respondents who cooks are grouped as 'Cooks' and the respondents who do not cook are grouped as 'Non-Cooks'.

Table 4.5

The Cooks and the Non-Cooks Group Distribution

	Frequency	Percent
Non-Cooks	34	21.1
Cooks	127	78.9
Total	**161**	**100.0**

Referring to Table 4.5 from a total of 161 respondents, there is a large discrepancy between the number of respondents between the two groups. The number of Cooks are substantially more than the Non-Cooks at 78.9% compared to 21.1%.

Table 4.6

Compare Means Results for the Cooks and the Non-Cooks

	Cooks		Non-Cooks	
	Mean	Std. Deviation	Mean	Std. Deviation
Brand	3.630	.8980	3.471	.7481
Design	3.031	.9253	2.735	.8981
Benefits	3.866	0.9117	3.618	1.2313
Price	3.559	0.9812	3.471	1.0797
Taste	4.441	.7934	4.471	.6622
Look_benefits	3.378	1.0536	3.324	1.0652
Label_compre	3.669	.9682	3.529	.8611
Label_believe	3.189	.9818	3.265	.8279
BrandvsBenefit	3.236	1.0424	3.176	1.1927

The Compare Means analysis was used to analyse the results from a 5-point Likert Scale which is shown in Table 4.6 Refer to Appendix D for the classification of the values.

The results show that Taste is the most important decision criteria for both groups. Their means are also extremely close (4.441 for Cooks and 4.471 for Non-Cooks). Even though their means do not classify the results as extremely important but the results are significantly higher than other variables. Cooks value Brand, Benefits, Price, and Taste as their important decision criteria whilst viewing design as a neutral factor. However, Non-Cooks only value Benefits and Taste as their important decision criteria factor while they are neutral towards other variables. Design (2.735) is another interesting variable for this group. Although the classification of Design's mean (2.735) is considered Neutral, the value shows that its neutrality is slightly shifted towards the lower side which means that Design is slightly less important to them.

The results show that cooks consider nearly all of the purchasing decision criteria variables as they are the ones who actually use the sauce whilst non cooks only consider the variables that are tangible to them; the health benefits that they will ingest and the taste of the food which the sauce is used to cook.

The attitude results also show that both of the groups have a higher degree of label comprehension (3.669 for Cooks and 3.529 for Non-Cooks) but are neutral towards other variables. This shows that both groups have similar attitudes when purchasing sauces.

Table 4.7

ANOVA Results for Cooks and Non-Cooks

		Sum of Squares	df	Mean Square	F	Sig.
Brand	Between Groups	.681	1	.681	.902	.344
	Within Groups	120.077	159	.755		
	Total	120.758	160			
Design	Between Groups	2.353	1	2.353	2.782	.097
	Within Groups	134.492	159	.846		
	Total	136.845	160			
Benefits	Between Groups	1.656	1	1.656	1.702	.194
	Within Groups	154.754	159	.973		
	Total	156.410	160			

Table 4.7

ANOVA Results for Cooks and Non-Cooks (cont.)

		Sum of Squares	df	Mean Square	F	Sig.
Price	Between Groups	.210	1	.210	.209	.648
	Within Groups	159.778	159	1.005		
	Total	159.988	160			
Taste	Between Groups	.024	1	.024	.040	.842
	Within Groups	93.778	159	.590		
	Total	93.801	160			
Look_benefits	Between Groups	.079	1	.079	.071	.790
	Within Groups	177.299	159	1.115		
	Total	177.379	160			
Label_compre	Between Groups	.525	1	.525	.585	.445
	Within Groups	142.581	159	.897		
	Total	143.106	160			
Label_believe	Between Groups	.154	1	.154	.170	.681
	Within Groups	144.082	159	.906		
	Total	144.236	160			
BrandvsBenefit	Between Groups	.096	1	.096	.083	.774
	Within Groups	183.855	159	1.156		
	Total	183.950	160			

All of the results shown in Table 4.7 are not significant to the 5% confidence level. Therefore, there is no statistical difference between the groups for both their decision criteria variables and their attitudes. However, if this research were to adopt a 10% confidence level, the only variable that is statistically significant is Design as its p-value (0.097) is below the critical value.

4.2.4 The Health Concerned and the Health Unconcerned

The respondents' eating habits were used to split them into two groups. Respondents who are concerned with their food consumption and are cautious about their intake are categorized into 'Health Concerned' respondents whilst respondents who do not care/care less about their food consumption will be considered as 'Unhealth Concerned' respondents.

Table 4.8

The Health Concerned and the Health Unconcerned Group Distribution

	Frequency	**Percent**
Health Concerned	84	52.2
Health Unconcerned	77	47.8
Total	**161**	**100.0**

Referring to Table 4.8 from a total of 161 respondents, the groups are split relatively equally. The number of Health Concerned at 52.2% are slightly less than the number of the Health Unconcerned at 47.8%.

Table 4.9

Compare Means Results for the Health Concerned and the Health Unconcerned

	Health Unconcerned		**Health Concerned**	
	Mean	**Std. Deviation**	**Mean**	**Std. Deviation**
Brand	3.597	.8924	3.595	.8519
Design	2.922	.9286	3.012	.9248
Benefits	3.390	0.9341	4.202	0.8751
Price	3.416	1.0924	3.655	0.8984
Taste	4.571	.7332	4.333	.7813
Look_benefits	2.922	0.9286	3.774	0.9982
Label_compre	3.468	.9260	3.798	.9414
Label_believe	3.013	.9104	3.381	.9557
BrandvsBenefit	2.753	0.9618	3.655	0.9878

The Compare Means analysis was used to analyse the results from a 5-point Likert Scale which is shown in Table 4.9 Refer to Appendix D for the classification of the values.

The results show that Taste is the most important decision criteria for both groups. The Health Unconcerned with a mean of 4.571, considers Taste as extremely important. They also view Brand as an important factor but with a lower value of 3.597. All other decision criteria variables are neutral. The Health Concerned, even though their mean is not as high as the Health Unconcerned (4.333) also considers that Taste is Important. A close second for the Health Concerned is Benefits (4.202). This shows that the Health Concerned are looking for specific health benefits before buying sauces unlike the Health Unconcerned which has a lower mean (3.390). The Brand and Price are also considered as important factors but their values (3.595 and 3.655 respectively) are not as high as the previous two. Therefore, these two factors have less significance towards the Health Concerned's purchasing decision.

The Health Unconcerned are neutral towards all attitude variables. On the other hand, the Health Concerned are neutral towards only the Label_Believe variable. All of the other attitude variables are high. This means that they would be more likely to look for specific health benefits before every purchase (3.774), they are able to understand what the label is trying to convey to a higher degree (3.798) and they would prefer specific health benefits over brands (3.655).

Table 4.10

ANOVA Results for the Health Concerned and the Health Unconcerned

		Sum of Squares	**df**	**Mean Square**	**F**	**Sig.**
Brand	Between Groups	.000	1	.000	.000	.987
	Within Groups	120.758	159	.759		
	Total	120.758	160			
Design	Between Groups	0.324	1	0.324	0.378	.540
	Within Groups	136.521	159	.859		
	Total	136.845	160			
Benefits	Between Groups	26.539	1	26.539	32.491	.000
	Within Groups	129.871	159	.817		
	Total	156.410	160			

Table 4.10

ANOVA Results for the Health Concerned and the Health Unconcerned (cont.)

		Sum of Squares	df	Mean Square	F	Sig.
Price	Between Groups	2.298	1	2.298	2.317	.130
	Within Groups	157.689	159	0.992		
	Total	159.988	160			
Taste	Between Groups	2.277	1	2.277	3.956	.048
	Within Groups	91.524	159	.576		
	Total	93.801	160			
Look_benefits	Between Groups	29.144	1	29.144	31.261	.000
	Within Groups	148.235	159	0.932		
	Total	177.379	160			
Label_compre	Between Groups	4.377	1	4.377	5.017	.026
	Within Groups	138.728	159	.873		
	Total	143.106	160			
Label_believe	Between Groups	5.439	1	5.439	6.231	.014
	Within Groups	138.797	159	.873		
	Total	144.236	160			
BrandvsBenefit	Between Groups	32.651	1	32.651	34.312	.000
	Within Groups	151.300	159	0.952		
	Total	183.950	160			

The ANOVA results shown in Table 4.10 also confirms that the Health Concerned are seeking for specific health benefits before purchasing sauces. The variables Benefits, Taste, Look_benefits, Label_compre, Label_believe and BrandvsBenefit all have a p-value of lower than 0.05. This shows than these variables are significant to the 5% confidence level, therefore these variables make the groups different from each other. As a result, these two groups' characteristics are rather distinct and are different from each other.

Table 4.11

Specific Health Benefits preference for the Health Concerned and the Health Unconcerned

	Reduced Salt	Reduced Sugar	Low Fat	Organic	No Artificial Flavorings	Health standard	non-toxic
Health Unconcerned	61.04%	51.95%	48.05%	14.29%	42.86%	31.17%	45.45%
Health Concerned	66.67%	72.62%	51.19%	33.33%	69.05%	42.86%	53.57%

The Health Concerned has a clear preference towards health-related benefits compared to the Health Unconcerned. This is shown in Table 4.13 where the Health Concerned has a considerably higher percentage of preference on all categories.

4.2.5 The Benefit Seekers and the Non-Seekers

The respondents' sauce purchasing habits were used to split them into two groups. Respondents who require specific health benefits when purchasing sauces are categorized into 'Benefits Seeker' respondents whilst respondents who do not look for specific health benefits when purchasing sauces will be considered as 'Non-Seeker' respondents.

Table 4.12

The Benefit Seekers and the Non-Seekers Group Distribution

	Frequency	Percent
Benefit Seekers	90	55.9
Non-Seekers	71	44.1
Total	**161**	**100.0**

Referring to Table 4.12 from a total of 161 respondents, the groups are split relatively equally. The number of Benefit Seekers at 55.9% are slightly more than the number of the Non-Seekers at 44.1%.

Table 4.13

Compare Means Results for the Benefit Seekers and the Non-Seekers

	Benefit Seekers		Non-Seekers	
	Mean	Std. Deviation	Mean	Std. Deviation
Brand	3.578	.9238	3.620	.7994
Design	2.878	.9460	3.085	.8904
Benefits	4.067	0.9216	3.493	0.9838
Price	3.611	0.8305	3.451	1.1807
Taste	4.300	.8135	4.634	.6599
Look_benefits	3.567	1.0711	3.113	0.9791
Label_compre	3.611	.9680	3.676	.9223
Label_believe	3.267	.9338	3.127	.9700
BrandvsBenefit	3.422	1.1315	2.972	0.9407

The Compare Means analysis was used to analyse the results from a 5-point Likert Scale which is shown in Table 4.13. Refer to Appendix D for the classification of the values.

The Benefit Seekers considers Taste (4.300) as their most important criteria whilst the Benefits (4.067) comes second. Price (3.611) and Brand (3.578) are also important but less so than the previous two and is neutral towards Design. Non-Seekers view Taste (4.634) as their most important criteria followed by Brand (3.620). However, they are neutral towards all other decision criteria variables. The significant difference between the Benefits means of both groups proves that the behavior difference from a compare means perspective is true.

Benefit Seekers considers Look_Benefit (3.567) as important and has a higher degree of Label_compre (3.611). Even though they are neutral towards all other attitude variables, the value for BrandvsBenefit (3.422) is extremely close to high (3.5). This is a limitation for the criteria setup for this research. However, if it is compared directly to Non-Seeker's mean of 2.972, the different is quite significant and could be considered as a characteristic of the Benefit Seekers where they prefer benefits over

brand. The Non-Seekers only have a high level of Label_compre (3.676) but all other variables are neutral.

Table 4.14

ANOVA Results for the Benefit Seekers and the Non-Seekers

		Sum of Squares	df	Mean Square	F	Sig.
Brand	Between Groups	.070	1	.070	.092	.762
	Within Groups	120.688	159	.759		
	Total	120.758	160			
Design	Between Groups	1.696	1	1.696	1.996	.160
	Within Groups	135.149	159	.850		
	Total	136.845	160			
Benefits	Between Groups	13.063	1	13.063	14.490	.000
	Within Groups	143.346	159	.902		
	Total	156.410	160			
Price	Between Groups	1.021	1	1.021	1.021	.314
	Within Groups	158.966	159	1.000		
	Total	159.988	160			
Taste	Between Groups	4.422	1	4.422	7.867	.006
	Within Groups	89.379	159	.562		
	Total	93.801	160			
Look_benefits	Between Groups	8.180	1	8.180	7.687	.006
	Within Groups	169.199	159	1.064		
	Total	177.379	160			
Label_compre	Between Groups	.167	1	.167	.186	.667
	Within Groups	142.938	159	.899		
	Total	143.106	160			
Label_believe	Between Groups	.777	1	.777	.861	.355
	Within Groups	143.459	159	.902		
	Total	144.236	160			
BrandvsBenefit	Between Groups	8.051	1	8.051	7.278	.008
	Within Groups	175.899	159	1.106		
	Total	183.950	160			

The ANOVA results shown in Table 4.14 shows the difference between these two groups lies with the variable Benefits, Taste, Look_benefits and BrandvsBenefit. Their p-value is below 0.05 therefore it is statistically significant. Even though the variable BrandvsBenefit's classification is the same, the nominal difference between the mean rather large (.4504). The ANOVA analysis confirms that there is a difference between the two groups for this analysis. However, the classification for Price is different for both groups but the ANOVA results are not significant therefore, there is no difference between the two groups for this variable.

Table 4.15

Specific Health Benefits preference for the Benefit Seekers and the Non-Seekers

	Reduces Salt	Reduced Sugar	Low Fat	Organic	No Artificial Flavorings	Health standard	non-toxic
Benefit Seekers	63.33%	63.33%	55.56%	25.56%	67.78%	45.56%	60.00%
Non-Seekers	64.79%	61.97%	42.25%	22.54%	42.25%	26.76%	36.62%

As shown in Table 4.15 the Benefit Seekers favour most of the specific health benefits written on the labels. However, they are less likely to favour Organic and Health Standard. On the other hand, Non-Seekers will favour only Reduced Salt and Reduced Sugar.

4.2.6 The Label Readers and the Non-Readers

The respondents' label reading behavior were used to split them into two groups. Respondents who reads the label before purchasing sauces are categorized into 'Label Reader' respondents whilst respondents who do read the labels when purchasing sauces will be considered as 'Non-Reader' respondents.

Table 4.16

The Label Readers and the Non-Readers Group Distribution

	Frequency	Percent
Label Readers	40	24.8
Non-Readers	121	75.2
Total	**161**	**100.0**

Referring to Table 4.16 from a total of 161 respondents, there is a large discrepancy between the number of respondents between the two groups. The number of Label Readers are substantially more than the Non-Readers at 75.2% compared to 24.8%.

Table 4.17

Compare Means Results for the Label Readers and the Non-Readers

	Non-Readers		Label Readers	
	Mean	**Std. Deviation**	**Mean**	**Std. Deviation**
Brand	3.850	.8638	3.512	0.857
Design	2.875	.9388	3.000	0.922
Benefits	3.400	0.9282	3.950	0.973
Price	3.400	1.1503	3.587	0.946
Taste	4.550	.8458	4.413	0.738
Look_benefits	2.875	0.9388	3.529	1.041
Label_compre	3.200	.9661	3.785	0.896
Label_believe	2.975	.9195	3.281	0.951
BrandvsBenefit	2.800	0.9115	3.364	1.088

The Compare Means analysis was used to analyse the results from a 5-point Likert Scale which is shown in Table 4.17. Refer to Appendix D for the classification of the values.

With the highest mean of 4.550, Non-Readers view Taste as the most important purchasing criteria of buying sauces. Brands with a mean of 3.850 are also another important factor that they consider. However, they are neutral towards other variables. This is because, Non-Readers might rely on the Brand to represent all of the other criteria. On the other hand, although Label Readers also considers Brand important, their magnitude is slightly less than Non-Readers. This means that the details that the Label Reader reads also cover brands as well. However, they are neutral towards the Design but views all other criteria important with Taste being the most important factor with a mean of 4.4132. The mean of the variable Benefits (3.950) is significantly higher than the Non-Readers (3.400) which suggests that the readers are also looking for specific health benefits whilst reading the labels.

The attitudes variable also tells the same story as the decision criteria variables. The Label Readers' mean of Look_benefits (3.529) is significantly higher than the Non-Readers (2.875) which shows that there are more Label Readers are looking for specific health benefits for every purchase than the Non-Readers. The mean of Label_compre also shows that the Label Readers has a higher label comprehension than the Non-Readers. Even though both groups's mean for BrandvsBenefit are classified as neutral, but the mean for Label Readers (3.281) is higher than the Non-Readers (2.800), this shows that the Label Readers are more leaned towards benefits than Brands whilst the Non-Readers are leaned more toward Brands than the Benefits.

Table 4.18

ANOVA Results for the Label Readers and the Non-Readers

		Sum of Squares	df	Mean Square	F	Sig.
Brand	Between Groups	3.426	1	3.426	4.643	.033
	Within Groups	117.331	159	.738		
	Total	120.758	160			
Design	Between Groups	0.470	1	0.470	0.548	.460
	Within Groups	136.375	159	.858		
	Total	136.845	160			

Table 4.18

ANOVA Results for the Label Readers and the Non-Readers

		Sum of Squares	df	Mean Square	F	Sig.
Benefits	Between Groups	9.107	1	9.107	9.831	.002
	Within Groups	147.302	159	.926		
	Total	156.410	160			
Price	Between Groups	1.049	1	1.049	1.049	.307
	Within Groups	158.939	159	1.000		
	Total	159.988	160			
Taste	Between Groups	.562	1	.562	.959	.329
	Within Groups	93.239	159	.586		
	Total	93.801	160			
Look_benefits	Between Groups	12.855	1	12.855	12.424	.001
	Within Groups	164.524	159	1.035		
	Total	177.379	160			
Label_compre	Between Groups	10.292	1	10.292	12.322	.001
	Within Groups	132.813	159	.835		
	Total	143.106	160			
Label_believe	Between Groups	2.815	1	2.815	3.165	.077
	Within Groups	141.421	159	.889		
	Total	144.236	160			
BrandvsBenefit	Between Groups	9.550	1	9.550	8.707	.004
	Within Groups	174.400	159	1.097		
	Total	183.950	160			

The ANOVA results shown in Table 4.18 also confirms that there is a difference between the groups. The variables Brand, Benefits, Look_benefits, Label_compre, and BrandvsBenefit all have a p-value below 0.05. This therefore shows that the results are statistically significant and that there is a difference between the groups for these variables. If this research were to increase the confidence level to 10%, the ANOVA results for the variable Label_believe will be statistically significant. This therefore, signifies that there is a difference for this variable.

Table 4.19

Reading behaviors of the Label Readers and the Non-Readers

		Read_purc	**Detail_read**	**Difficulty_read**	**Subseq_read**
Non-Readers	Mean	1.200	2.375	.400	.375
	Std. Deviation	.6485	1.0300	.4961	.4903
Label	Mean	1.149	3.893	.289	.595
Readers	Std. Deviation	.3799	1.0786	.4553	.4929

As shown in Table 4.19 these variables will help explain the reading behaviors of the respondents. The mean of Read_purc for both groups are closer to 1. This means both groups would compare the sauces with competing brands on the shelf after reading the labels (0 = respondents would not buy the sauce after reading the labels, 2 = respondents would buy the sauce after reading the labels). Detail_read shows that Label Readers would read every detail of on the label meticulously including the nutrition facts whilst Non-Readers would read only the front of the label. Difficulty_read demonstrates that Label Readers finds it labels easier to read than the Non-Readers. This is also confirmed by the mean and ANOVA analysis of the variable Label_compre in the previous section. Subseq_read provides a clear difference where 59.5% of the Label Readers will read the labels in their subsequent purchases whilst 37.5% of the Non-Readers will.

CHAPTER 5
CONCLUSIONS AND RECOMMENDATIONS

5.1 Conclusion

From a total of 194 responses, a total of 161 responses were chosen for statistical analysis to find their characteristics, their behavior and their attitudes towards sauces and health benefits. The results have divided them into four different groups

5.1.1 Cooks Vs Non-Cooks

This group was classified by their cooking behavior where one group cooks and the other does not cook. The most important factor for both of these groups is Taste followed by the Benefits. However, Cooks are more Price concerned than Non-Cooks. Even though the Cooks have a higher understanding of the labels, it is a marginal difference. Both groups have a relatively good understanding of the label. However, the ANOVA test shows that the difference between both of these groups lies only with the design as it is the only variable that is significant. This clearly proves that both groups are extremely similar in nature.

5.1.2 Health Concerned vs Health Unconcerned

This group was classified by their eating behavior where one group is concerned about their food intake and the other group is not concerned. Both of the groups consider Taste as the most important factor followed by Brand. The Health Unconcerned are neutral towards all other variables. This shows that this group is generally unconcerned hence their name. They are unconcerned about all other factors as well as their attitudes are neutral. However, the Health Concerned are only neutral towards Design whilst consider all other decision criteria variables important. This shows that not only they are concerned about health, but they are also concerned about all other factors as well. They will be more likely to look for specific health Benefits on every purchase and prefers Benefits over Brands. They read the label with little difficulty. The Health concerned has a clear preference towards all of the specific health benefits

with a focus on 'Reduced Salt', 'Reduced Sugar', and 'No Artificial Flavourings' but the Health Unconcerned only preferred 'Reduced Salt' and 'Reduced Sugar'.

5.1.3 Benefit Seekers vs Non-Seekers

This group was classified by their purchasing behavior where one group is constantly looking for Benefits written on the labels and the other group does not look for it. Benefit Seekers' most important decision criteria are Taste followed closely by Benefits as that is the group's raison d'être. Price and Brand are also important but are neutral towards design. They have a higher understanding of the label which allows them to be able to constantly look for Benefits on the label. On the other hand, Non-Seekers are extremely concerned about Taste followed by Brand. Moreover, they have a fairly good understanding of the label as well. The ANOVA test results also confirms a distinct difference in behavior between the two groups. Benefit Seekers also prefers most of the specific health Benefits whilst Non-Seekers only prefers 'Reduced Salt' and 'Reduced Sugar'.

5.1.4 Label Readers vs Non-Readers

This group was classified by their label reading behavior where one group constantly reads the label before purchase whilst the other group just takes a glance at it. The Label Readers are quite similar to the Benefits Seekers as all of their means are extremely close to each other. Their decision criteria preferences are the same where they value Taste and Benefits the most, Brand and Price are next whilst they are neutral towards Design. Their attitudes are also similar where they constantly look for benefits and have a high level of label comprehension. On the other hand, the Non-Readers are also similar to the Non-Seekers as their preference lies towards Taste and Brand. The only difference is that the Non-Readers have a lesser comprehension of the label compared to the Non-Seekers; hence the name Non-Readers. The ANOVA test results are extremely interesting; six out of the nine variables tested are significant which makes the two groups extremely different from each other.

5.2 Recommendations

This research has found key insights that will help brands and marketing managers streamline their key marketing messages and allow them to convey it to their customers more effectively. The key insights are summarized below:

1. All of the groups listed taste as their most important purchasing decision factor. Therefore, the most important improvement that brands could do is to focus on improving their taste. Even with attractive marketing, people will not rebuy sauces that do not suit their taste.

2. The respondents who read the label almost always look for specific health benefits. Furthermore, the benefits that they look for are 'reduced salt' and 'reduced sugar'. Therefore, it is beneficial to have a derivative of the sauce that has these specific health benefits to cater to these targets.

3. Even though the respondents love to eat, they will have some restraints. This means that they consider themselves health concerned. The health concerned are more inclined to look for and consider specific health benefits before their purchase.

4. The aesthetics of the bottle and the label design does not matter as much as the brand. If the respondents do not look for specific health benefits, they will look for sauces from a familiar brand. This is because brands will substitute for the unknown risks that they are taking (for first purchases) and will represent quality. As a result, investing in the brand will prove to be successful in the long term.

5. Most of the respondents believe the context written on the label. They are unlikely to challenge the integrity of the label. Therefore, brands and marketing managers have to consider moral and ethical business practices for label design and the context that will be written on it.

REFERENCES

Books

Kotler, P., & Keller, K. L. (2016). *Marketing Management* (15th ed.).. Boston: Pearson.

Thanadkah, K., & Chaladsook, A. (2018). *Is the future of Thailand's health care in danger?* Bangkok Post.

Articles

Byrd-Bredbenner, C., Alferi, L., & Kiefer, L. (2001). The Nutrition Label Knowledge and Usage Behaviours of Women in the US. *BNF Nutrition Bulletin*, 25, 315–22.

Mandle, J., Tugendhaft, A., Michalow, J., & Hofman, K. (2015). Nutrition labelling: A review of research on consumer and industry response in the global South. *Global Health Action*, 8(1), 1-10.

Müller, O., & Krawinkel, M. (2005). Malnutrition and health in developing countries. *Canadian Medical Association Journal*, 173, 279-286.

Muth, M. K., Zhen, C., Taylor, J., Cates, S., Kosa, K., Zorn, D., & Choiniere, C. (2013). The Value to Consumers of Health Labeling Statements on Breakfast Foods and Cereals. *Journal of Food Products Marketing*, 19(4), 279-298.

Shridhar, G. et al. (2015). Modern Diet and its Impact on Human Health. *Journal of Nutrition & Food Sciences*, 5(6), 430.

Wang, G., Fletcher, S. M., & Carley, D. H. (1995). Consumer Utilization of Food Labeling as a Source of Nutrition Information. *The Journal of Consumer Affairs*, 29(2), 368-380.

Electronic Media

Chaitrong, W. (2017). *Risks grow for ageing population*. Retrieved from https://www.nationthailand.com/business/30333636

Division, U. N. (2019). *Thailand Population*. Retrieved from https://countrymeters. info/en/Thailand#population_2018

Euromonitor. (2019). *Sauces, Dressings and Condiments in Thailand*. Retrieved from https://www.euromonitor.com/sauces-dressings-and-condiments-in-thailand/report

Gervis, Z. (2018). *Most people think food labels are misleading*. Retrieved from https://nypost.com/2018/06/07/most-people-think-food-labels-are-misleading/

Horwath, A. T. (2019*). What Constitutes 'Healthy' Claims for Foods?* Retrieved from https://www.foodqualityandsafety.com/article/what-constitutes-healthy-claims-for-foods/

Plain, C. (2018). *Who Reads the Nutrition Facts Food Labels?* Retrieved from https://www.sph.umn.edu/news/reads-nutrition-facts-food-labels/

Rizzo, N. (2017). Decoding Food Label Claims: The Lowdown on Package Promises. Retrieved from https://giveumhealth.com/blog-original/2019/4/8/decoding-food-label-claims.

Royal Thai Embassy in Mexico. (2011). *Food Industry in Thailand 'Kitchen of the World'*. Retrieved from https://thailatinamerica.net/mexico/index.php/en/about-thailand/economy/thai-indus/296-food-industry-in-thailand-kitchen-of-the-world

Saxelby, C. (2016). *I-Spy Hidden Sugar! The unsavoury truth of savoury sauces.* Retrieved from https://foodwatch.com.au/blog/carbs-sugars-and-fibres/item/i-spy-hidden-sugar-the-unsavoury-truth-of-savoury-sauces.html

Spiro, S. (n.d.). *Condiments, Sauces and Dips: What's The Difference?* Retrieved from https://spoonuniversity.com/lifestyle/what-the-difference-between-condiments-and-sauces

Steinbaum, S. R. (2018). *Heart Disease and Lowering Cholesterol*. Retrieved from https://www.webmd.com/heart-disease/guide/heart-disease-lower-cholesterol-risk#1

Thailand Board of Investment. (2018). *Thailand: The Kitchen of the World.* Retrieved from https://www.boi.go.th/upload/content/food_industry2018_ 5c25d479c34a7.pdf

APPENDICES

APPENDIX A
TIMELINE

Date	Agenda
9 Dec 2019	Final Proposal Submission
2 Jan 2020– 17 Jan 2020	In-depth Interview
18 Jan 2020 – 25 Jan 2020	Questionnaire Development
25 Jan 2020 – 17 Feb 2020	Questionnaire Distribution and Data Collection
18 Feb 2020 – 15 Mar 2020	Data Analysis and Report Finalization
16 Mar 2020	Report Submission
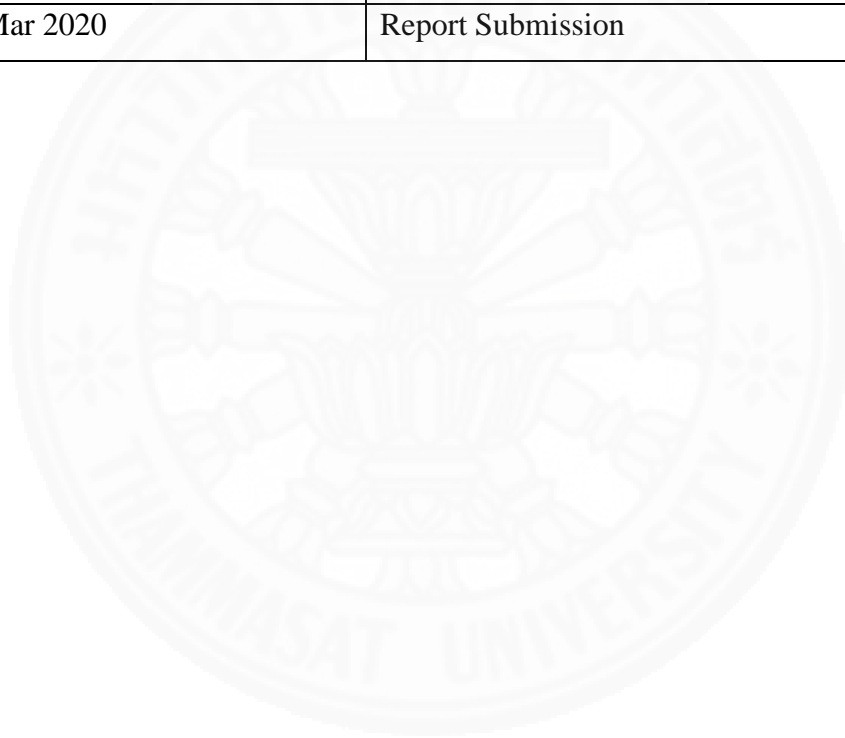
APPENDIX B

QUESTIONNAIRE

Section 1

1. Do you cook?
    a. Yes   b. No

Section 2

2. How often do you cook?
    a. Every day   b. Once a week
    c. Twice a month   d. Once a month
3. How many people do you live with?
    a. 1   b. 2   c. 3
    d. 4   e. 5   f. 6
    g. 7 and more
4. How many people do you cook for?
    a. 1   b. 2   c. 3
    d. 4   e. 5   f. 6
    g. 7 and more

Section 3

5. Have bought any kind of sauces within the past 4 months
    a. Yes   b. No

Section 4

6. Where do you buy the sauces?
    a. Market
    b. Supermarket
    c. Online

7. What types of sauces do you 'BUY' the most?

    a. For everyday Thai cooking FS, soy sauce, oyster sauce, and etc.

    b. For dipping chili sauce, sriracha sauce, sweet chili sauce, ketchup, and etc.

    c. Foreign sauces worcestershire sauce, shoyu, korean sauce, bbq sauce, hot sauce, and etc.

8. What types of sauces do you 'USE' the most?

    a. For everyday Thai cooking FS, soy sauce, oyster sauce, and etc.

    b. For dipping chili sauce, sriracha sauce, sweet chili sauce, ketchup, and etc.

    c. Foreign sauces worcestershire sauce, shoyu, korean sauce, bbq sauce, hot sauce, and etc.

9. Do you read the labels before buying sauces?

    a. Yes   b. No

Section 5

10. Do you read the labels for subsequent purchases?

    a. Yes   b. No

11. Do you think that reading labels are hard and complex?

    a. Yes   b. No

12. How detailed do you read the label?

	Just a glance	Reads only the catchy details on the front of the label	'Reads all the details in the front of the label	Reads the front and the back	Reads everything including the nutrition facts
Level of Detail	1	2	3	4	5

13. Do you buy the sauce after reading the label?

    a. Yes

    b. Yes, but compares first

    c. No

14. Do you consider yourself as a Healthy person?

    a. Yes   b. No

15. I would choose to buy a sauce with a specific health benefit rather than the one that has a better design/aesthetics.

Design/ Aesthetics	1	2	3	4	5	Specific Health benefits

16. Would you buy sauces without health benefits?

    a. Yes   b. No

17. Rank the important characteristics

Factors	1	2	3	4	5
Brand					
Design					
Benefits					
Price					
Taste					

18. Rank the important characteristics

Factors	1	2	3	4	5
Do you look for specific health benefits on the label for every purchase?					
Do you understand what the health benefit claims mean?					
Do you believe the claims on the labels?					
Would you choose to buy a sauce with a specific health benefit rather than the brand that you are familiar with?					

19. What kind of health benefits are you looking for? (Multiple ticks)

    a. Reduces Salt   b. Reduced Sugar

    c. Low Fat   d. Organic

    e. No Artificial Flavorings   f. Health standard

    g. non-toxic

20. Would you pay more for labels that contain specific health benefits?

    a. No

    b. I would pay up to 10% more.

    c. I would pay up to 20% more.

    d. I would pay up to 30% more.

    e. I would pay up to 40% more.

    f. I would pay up to 50% more.

    g. I would pay more than 51%.

Section 6

21. How old are you?

    a. Below 18 years old   b. 18-24 years old

    c. 25-34 years old   d. 35-44 years old

    e. 45-54 years old   f. 55-64 years old
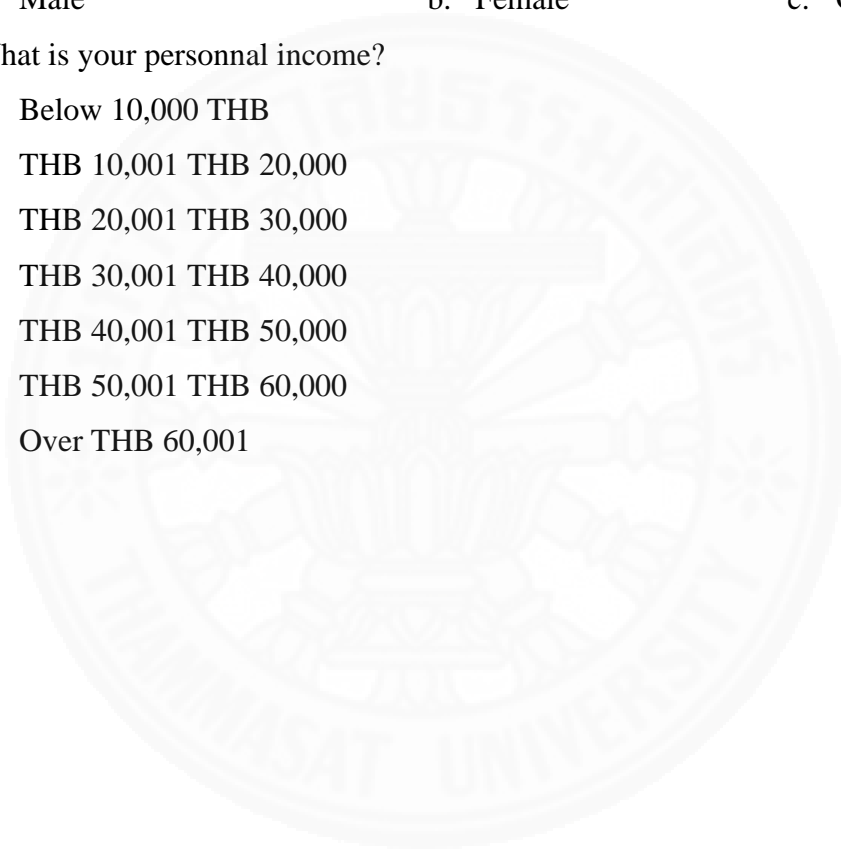
    g. Over 65 years old

22. What is your occupation?

    a. Student   b. Office worker

    c. Government officer   d. Retired

    e. Business Owner/Entrepreneur f. Freelance

    g. Unemployed

23. Would you rather go out with friends or stay home and watch your favourite TV show?

    a. Go out   b. Stay home

24. How often do you doodle on your phone

Just to check important messages	1	2	3	4	5	All the time

25. What is your marital status?

    a. Single   b. Married

26. What is your education level?

    a. Middle school or below   b. Highschool

    c. Associate's Degree   d. Bachelor's Degree

    e. Master's Degree   f. Ph.D.

27. What is your gender?

    a. Male   b. Female   c. Others

28. What is your personnal income?

    a. Below 10,000 THB

    b. THB 10,001 THB 20,000

    c. THB 20,001 THB 30,000

    d. THB 30,001 THB 40,000

    e. THB 40,001 THB 50,000

    f. THB 50,001 THB 60,000

    g. Over THB 60,001

APPENDIX C

VARIABLE DEFINITION

Variable name	Question
Brand	Rank the important characteristics that you consider
Design	before purchasing sauces.
Benefits	
Price	
Taste	
Look_benefits	Do you look for specific health benefits on the label for every purchase?
Label_compre	Do you understand what the health benefit claims mean?
Label_believe	Do you believe the claims on the labels?
BrandvsBenefit	Would you choose to buy a sauce with a specific health benefit rather than the brand that you are familiar with?
Read_purc	Do you buy the sauce after reading the label?
Detail_read	How detailed do you read the labels
Difficulty_read	Do you think that reading labels are hard and complex
Subseq_read	Do you read the labels for subsequent purchases
Reduces Salt	What benefits on the label do you look for?
Reduced Sugar	[Multiple choice]
Low Fat	
Organic	
No Artificial Flavorings	
Health standard	
non-toxic	

APPENDIX D
MEAN CLASSIFICATION

Lowest	Low	Neutral	High	Extremely High
1-1.50	1.51-2.5	2.51-3.50	3.51-4.5	4.51-5

BIOGRAPHY

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