



**UNDERSTANDING THE FOOD PURCHASING
BEHAVIOR OF OVERWEIGHT PEOPLE
IN BANGKOK METROPOLITAN AREA
AND HOW IT AFFECTS THEIR HEALTH**

BY

MISS SUTHAPORN TEERAPRASERT

**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 2016
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INDEPENDENT STUDY

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ENTITLED

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Member and Advisor



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Independent Study Advisor	Professor Malcolm C. Smith, Ph.D.
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ABSTRACT

It is a must to promote healthy eating among overweight people. Over 17 million people in Thailand are overweight and/or obese. This problem may be a cause of many non-communicable diseases such as Diabetes, Hyperlipidemia, and Myocardial Infarction. Healthy eating and exercise will help people to control or lose weight. The 80-20 rule for successful weight loss states that 80% of the achievement is from a healthy diet while the other 20% is from exercise.

The study began with a problem and conceptual review, followed by an exploration of customer characteristics, illustrations of buying behavior, and measuring of key factors influencing the overweight person's decision process. This research applied secondary data, qualitative, and quantitative research. The secondary research described the overweight issues, root causes, weight management and a conceptual model. Qualitative research explored customer insights in order to construct a questionnaire survey for quantitative research. The purpose of this study is to investigate the marketing mix that influences overweight Bangkokians' purchasing behavior with regard to healthy food choices.

Keywords: Healthy eating, Healthy products, Overweight, Food Purchasing

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CHAPTER 1

INTRODUCTION

1.1 Importance of the study

The 2014 annual report of the Thai Health Organization stated that one-third of the Thai population is overweight and one-tenth is obese. This has dramatically increased three times within two decades and applies to all aspects of the demographics (i.e. ages, gender, living, or income level). This report illustrated that 91% of overweight people do not perceive that they are overweight or obese; thus, overweight people are not as concerned as they should be about the health effects of being overweight (Thai's Health Organization, 2014). Recently in 2016, the Thai Ministry of Public Health reported that there are 17 million overweight and obese people, and 20,000 people have died from obesity. The numbers are growing at 4 million people annually. A major cause of this non-communicable disease is a changing of modern lifestyle that has people consuming more foods than their bodies need and the lack of enough exercising (Thai's Health Organization, 2016).

1.2 Purpose and objective research

This study is designed to investigate health issues as a contemporary topic in applied marketing and health opportunities under the topic of “Understanding the food purchasing behavior of overweight people in Bangkok and how it affects their health”. The purpose of this study is to investigate the marketing mix that influences overweight people’s purchase behavior towards healthy eating (for people living in Bangkok). The study focused on meals, snacks, and drinks that are imported or produced in Thailand. The objectives of this study are:

1. To understand the overweight person’s buying behavior toward healthy eating
 - 1.1. To determine an understanding of overweight people toward healthy eating
 - 1.2. To determine general consumption behavior toward healthy eating
 - 1.2.1. Frequency of buying and budgeting
 - 1.2.2. Healthy eating categories

2. To determine factors affecting buying behavior through the process of problem recognition, information search, evaluation of alternatives, purchasing decisions, post purchasing decisions
3. To identify the marketing mix influencing overweight's decision process toward healthy eating
 - 3.1. To understand attitudes toward product branding, taste, and nutrition
 - 3.2. To understand attitudes toward packaging and nutrition labels
 - 3.3. To understand attitudes about the costs of healthy food products
 - 3.4. To understand attitudes about the distribution channels of healthy food products
 - 3.5. To understand attitudes about sales promotion of healthy food products
4. To identify overweight's people buying characteristics that affect buying decision for healthy eating

Thus, this research aims to understand the purchasing of healthy products by overweight people and their healthy eating habits for a better and healthier society. The research focused on both males and females living in the Bangkok metropolitan area and do they consume healthy products or are they interested in healthy eating. The results of this study answered 1) What is the buying behavior toward healthy eating? and 2) What are the factors that influence an overweight person in Bangkok make decisions about healthy eating?

The next chapter reviews relevant literature concerning healthy eating. This is followed by a chapter describing research the methodology. In the chapter 4, the results are presented and conclusions and recommendations are discussed in the last chapter.

CHAPTER 2

REVIEW OF LITERATURE

This research will investigate the marketing mix that influences overweight peoples' purchasing behavior about eating healthy food, focusing on people living in Bangkok. This chapter presents a review of the relevant literature.

Measuring overweight status

The World Health Organization (WHO) uses a scientific indicator - Body Mass Index (BMI) - which is weight-for-height ratio and to classifies overweight and obesity in adults. A BMI greater than or equal to 25 kg/m² is classified as overweight and obesity is classified as a BMI of over 30 kg/m². WHO reported that the fundamental cause of being overweight is an energy imbalance between calories consumed and calories expended (World Health Organization, 2016).

Although an indicator BMI can help both doctors and some patients make accurate judgments about the person's weight level, Cognitive Overweight Status (COS hereinafter) is a subjective overweight level and a perception that may not be proportionately related to actual weight level (i.e., body-mass index [BMI]). The research of Wei and Sethna (2016) examines the positive effects of COS on food choices and it is predicted by gender, age, and education level (Wei & Sethna, 2016). The research also generally outlined the planned behavior theory, and shows that weight control behavior can be predicted by a person's COS (subjective norms) and their purchase intentions of red meat or vegetables (Wei & Sethna, 2016).

Healthy eating

Healthy eating means eating a variety of foods that give you the nutrients you need to maintain your health, feel good, and have energy. These nutrients include protein, carbohydrates, fat, water, vitamins, and minerals (Breast Cancer, 2016).

Healthy eating means consuming the right quantities of foods from all food groups in order to lead a healthy life. The crucial part of healthy eating is a balanced diet. A balanced diet - or a good diet - means consuming from all the different good groups in

the right quantities. Nutritionists say there are five main food groups - whole grains, fruit and vegetables, protein, legumes, dairy, fat & sugar (Nordqvist, 2015). Food Based Dietary Guidelines for Thai People is determined by Thai Bureau of Nutrition (See Appendix 1: A description of healthy eating)

Nutrition is important for everyone. Combining exercise and maintaining a healthy weight, and eating well is an excellent way to strengthen one's body and be healthy. What a person eats can affect his/her immune system, mood, and energy level (Bureau of Nutrition, 2015).

Buying decision process toward – healthy foods

Paola & Azzurra (2009) concluded that a better understanding of consumers' perceptions of healthy foods and its determinants are key success factors for market orientation, market development and successfully market opportunities. This research concludes that a better knowledge about food products can create a better attitude toward healthy eating.

This research paper of Paola and Azzurra was done with Italian people aged over 18 years old. Overall, 48% of the respondents were aware of their food choices in determining their state of health, and 50% of the people were aware that the consumption of certain foods could result in beneficial effects on their health (Azzurra & Paola, 2009).

The lifestyle of respondents was documented in this study. The lifestyle factors that were documented were: amounts and types of physical exercising, did they take care of their health, consulting with a nutritionist and/or attending health centers, what was their frequency of consuming fruits, vegetables, legumes, cereals, fried foods, soft drinks, snack meals; products high in fat, white meat, fish and other seafood. This lifestyle survey can indicate the customers' healthy habits and also specify their healthiness and satisfaction of their diet (Azzurra & Paola, 2009).

Healthy Thai food choices

The National Indicator of Health Consumer Protection in 2014 discovered that 79.8% of consumers in Thailand have a good knowledge about healthy consumer products. They can choose by themselves to purchase and consume products that are

of good quality and up to the safety and other standards. 89.3% of the people surveyed have a fair knowledge about healthy consumer products. Furthermore, the survey also found that 65.5% consume food with high fat content; 49.6% drink soda pop, and sweet beverages; and 35.5% consume crispy snacks (Pisitpaiboon, 2016).

There are many websites published which discuss how to cook healthy Thai food. Also, many bloggers are reviewing their healthy habits and healthy eating. (See Appendix 2: Thai website promoting a healthy eating.)

The research clearly summarizes the attributes of products and processes that have an affect on the buying process of healthy food. The most influencing factors when buying healthy food products are the taste in the choice of food products and nutritional aspects, while freshness, price and brand of the products are perceived as medium important attributes. The nutritional information contained in the nutritional labels are considered more important by consumers in making their choices of consumption, specifically the indication of fat (Azzurra & Paola, 2009).

CHAPTER 3

RESEARCH METHODOLOGY

This research studies overweight people's attitudes and purchasing behavior toward healthy eating, focusing on both males and females living in the Bangkok metropolitan area. This study applied secondary and qualitative data, and then quantitative analysis. The literature review, the research framework and methods are shown step by step.

3.1 Research framework

The literature review helped to structure the research conceptual framework which is shown in figure 1.

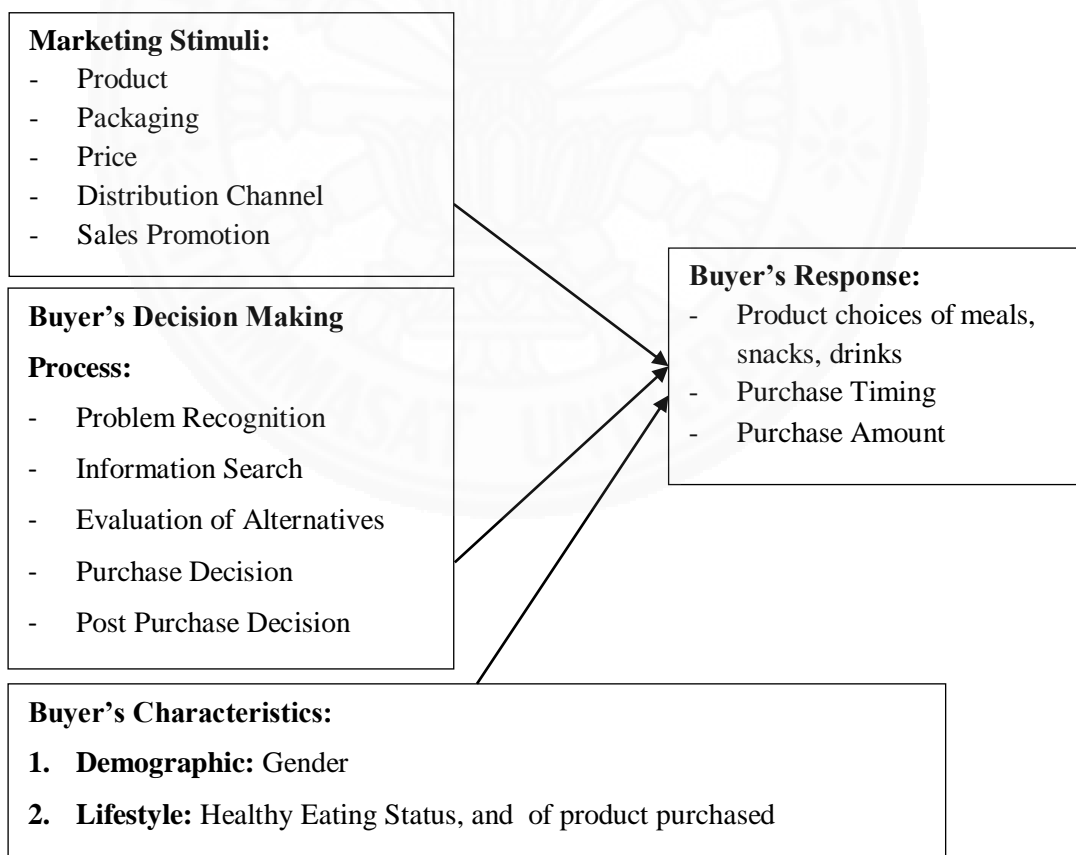


Figure 1 Conceptual Research Framework

3.2 Research Design

Exploratory and descriptive research were designed for this study and it was conducted by using a convenience sampling method.

3.2.1 Exploratory Research

The exploratory research aimed to understand the current situation of overweight and obese people in Thailand, to understand healthy eating behavior and to use this information to develop a questionnaire to gather quantitative data. In this research, secondary data and in-depth interviews were used for exploratory research.

3.2.1.1 Secondary Research

Secondary data was collected to describe the overweight situation in Thailand, to identify causes of being overweight, to illustrate the published information, to understand customer perceptions of overweight status, and to review the concept of healthy eating. Statistics and data from a variety of sources were obtained by exploring credible sources in academic marketing and economics research, journal papers, Thai government organization published data (e.g. the Thai Health's Organization, Thai Health, and Thai Promotion Foundation), and publications from international organizations, such as the World Health Organization (WHO), British Nutrition Foundation, and Medical News Today.

3.2.1.2 In-depth interviews

The interviews were conducted to better understand how people measure their overweight status, their attitudes towards healthy eating, their attitudes toward the marketing mix, and their purchasing decisions related to their healthy eating. The actual questions for the in-depth interviews were roughly framed from preliminary interviews of 3 target consumers. Then, the responses from the in-depth interviews and summaries from the literature review were used to structure a questionnaire survey for the descriptive research. A total of 5 respondents were interviewed. Each interview took approximately 15 minutes. The interviewees were overweight as per the BMI guidelines.

3.2.2 Descriptive Research

The descriptive research was conducted to reflect the current perception of their overweight status and the purchasing behavior of consumers toward healthy eating. The questionnaire was used to expand the findings from the exploratory research. The questionnaire survey was pretested with 5 respondents before distributed online to 274 respondents.

3.2.2.1 Independent Variables of the Study

1. Overweight peoples' buying behavior toward healthy eating, the process of problem recognition, information search, evaluation of alternatives, purchasing decisions, and post purchasing decisions.
2. The marketing mix influencing the subjects' decision making process toward healthy eating such as branding, taste, packaging, nutrition labels, prices, distribution channels, and sales promotion.
3. Consumer characteristics
 - Demographics: age, gender, weight, height, education level, and monthly income level
 - Lifestyle: healthy eating status, and number of products purchased

3.2.2.2 Dependent Variables of the Study

1. Buyer's response towards healthy product choices.
2. Consumption behavior of healthy products such as frequency of buying and budgeting per time, and healthy eating categories.

3.3 Sampling Procedure

The Non-probability sampling was chosen for both qualitative and quantitative analysis. The target respondents were overweight people who had consumed healthy products within 1 year or people who were interested in healthy eating, and living in Bangkok.

3.3.1 Sample Size

For the in-depth interviews, five respondents were interviewed on October 23rd, 2016. Each interview took 15 minutes. All interviewees were overweight as per BMI measurement guidelines, and living in metropolitan Bangkok.

The quantitative data collection period was in February 2017. Target respondents were overweight people who consumed healthy products within one year or who were interested in healthy eating, and living in metropolitan Bangkok. After screening questions which were asked to be sure respondents fit the selection criteria, there was a sample size of 238 overweight people for this study.

3.3.2 Survey acquisition and recruiting plan

In-depth interviewees were recruited by personal connections. The questionnaire survey was created by “Google Form” and was distributed through online channels. All respondents were considered as target respondents.

3.4 Data Collection

3.4.1 Secondary Data

Secondary data was mainly collected from annual reports of Thai government organization such as Thai health organizations, Bureau of Non-communicable Disease, and Bureau of Nutrition to gather the statistics and information about consumer health. Other online sources such as health community, academic journals, and articles such as industry journals were studied.

3.4.2 The in-depth interviews

Interviews were conducted by one-on-one telephone calls with a total of five respondents who had consumed healthy products within one year and living in metropolitan Bangkok area. Five of them were overweight. (See Appendix 3: In-depth Interview Question)

3.4.3 The Survey

The questionnaire survey was constructed by gathering secondary data and insights from in-depth interviews. It was created by GoogleForm (<https://goo.gl/forms/pxOkWFr85zhqwaD72>) which was verified in a pilot test of five people (See Appendix 4: The Questionnaire Survey). The survey was distributed by using a convenience sampling method through online channels which were Facebook, and Line messaging application via the researcher's connections. A total of 274 respondents completed a questionnaire but 37 failed the screening questions. Thus, there were a total of 238 qualified respondents in this study. The questionnaire was divided into five parts as following:

1. Screening Questions – 3 Questions. It was only for people who consumed healthy products within 1 year or interested in healthy eating, and living in Bangkok.

2. Questionnaire Survey Outlined:

Part I: Personal Health – 3 Questions.

Part II: Healthy Eating Behavior – 38 Questions. It was about general consumption and factors affecting buying decision process.

Part III: Influence Purchasing Factors – 22 Questions. A set of questions about how the marketing mix influenced overweight's decision process.

Part IV: Demographics – 7 Questions. It asked about age, gender, weight, height, education level, monthly personal income

Behavior – 1 Question. It was a healthy eating status.

The questions were mainly closed-end. To measure a level of an agreement of attitudes toward healthy eating behavior and a level of important of factors influencing the consumer to purchase healthy products, a Likert scale was applied with the following corresponding scores;

Strongly Agree / Very Important	= 5 points
Somewhat Agree / Important	= 4 points
Neural / Moderately Important	= 3 points
Somewhat Disagree / Slightly Important	= 2 points
Strongly Disagree / Not Important	= 1 points

3.5 Data analysis

3.5.1 The in-depth interviews

The interviews were recorded and analyzed by using qualitative methods to identify key factors which were used in the questionnaire.

3.5.2 The Questionnaire Survey

The survey results were analyzed using the Statistical Package for Social Science (SPSS). The survey data from Google Form was screened and coded into an SPSS format. The quantitative data was analyzed by frequency analysis, multiple linear regression, cross tabulation, and comparing means as described in Table 1.

Table 1 Statistical Data Analysis

Data Analysis	Statistical Analysis
Respondents profile	Frequency Analysis: Mean, Standard Deviation, Frequency and Percentage
The relationship of marketing stimuli attributes, and buying decision process attributes.	Factor Analysis
Attitudes toward marketing mix and buying decision process	Frequency Analysis, and Cross Tabulation
The prediction model buyer choice of products towards marketing mix and buying decision process	Multiple Linear Regression Analysis
The differences between buyer's characteristics	Independent Sample t-test and One-way ANOVA

3.5.3 Data Validability

3.5.3.1 Data Constructing

Where appropriate, data from the questionnaire was subjected to a factor analysis to identify similar independent attributes. Principal Component Analysis was used in the factor analysis with a Varimax rotation method to form 5 factors. Intention to buy a healthy product was used as the dependent variable, attitude toward marketing mix (5Ps) (See Appendix 4: Question 13) and buying decision process (See Appendix 4: Question 12) were used as the independent variables.

Marketing Stimuli (marketing mix)

There were 22 questions about the marketing stimuli. The factor analysis on these questions showed KMO = 0.910 and Bartlett's Test = Sig. 0.000. It covered 70.37% of all information, and resulted in 5 factors (See Appendix 5: Factor Analysis of Marketing Stimuli):

Factor1 Products Attributes and Accessibility:

Including: Testiness (X1), Convenience to eat (X4), and Convenience to buy (or access) (X13)

Factor2 Packaging and Brand Image:

Including: Healthy Ingredient (X2), Product Hygiene (X5), Package Hygiene (X7), and Nutrition Label (X8)

Factor3 Price:

Including: Price Signal Quality (X9), Price and Quantity (X10), Price Compatible with Normal Products (X11), Price Signal Nutrition (X12), and Sales Promotion at POS (X18)

Factor4 Services:

Including: Delivery Services (X14), In-store Experience (X15), Services of Sales People (X16), Product Knowledge of Sales People (X17), and Product Testing (X4)

Factor5 PR & Advertising:

Including: Brand Reputation (X3), Attractive Packaging (X6), Social Influencer (X20), Customers Review (X21), and PR from Export (X22)

Consumer Buying Decision Process

There were 16 questions about the buying decision process. The factor analysis on these questions showed KMO = 0.850 and Bartlett's Test = Sig. 0.000. It covered 70.57% of all information, and resulted in 5 factors (See Appendix 6: Factor Analysis of Buying Decision Process):

Factor 1 Problem Recognition:

Including: Rec Cause of Unhealthy (B1), Rec Risky to Disease (B2), and Rec for Lose Weight (B3)

Factor 2 Information Search:

Including: Search from Manufacturer (B4), Search from Friends/Family (B5), Search from Stores (B6), and Search from Media (B7)

Factor 3 Alternatives Evaluation:

Including: Evaluate Sales Promotion (B9), Compare Quantity per Packing (B10), and Find Stores (B11)

Factor 4 Purchase Decision:

Including: Budget (B12), WOM about Nutrition (B13)

Factor 5 PR & Advertising:

Including: Evaluate Price and Nutrition (B8), Speak out about Satisfaction (B14), Speak out about Nutrition (B15), Repurchase products (B16)

3.5.3.2 Data reliability

After the factor analysis, a reliability test using Cronbach's Coefficient Alpha was conducted. The result show an overall reliability coefficient for a set of variables Cronbach's Alpha was 0.938. (See Appendix 7: The Reliability Test)

CHAPTER 4

RESULTS AND DISCUSSION

4.1 Key Results from Secondary Research

Measuring Overweight Status

Body mass index (BMIs) measures accurate weight level. Self-perception of overweight status, however, may be subjective and it may not be related to actual weight level. The consumer cognitive overweight status (COS) had an effect on food choices and it is significantly predicted by gender, age, and education level.

Healthy Eating

Healthy eating is consuming the right quantities of the different types of foods or five food groups. The healthy food trends are 1) the problems of an increasing number of overweight people in Thailand 2) the important changes of behavior that affect health and wellness 3) the healthy food products that lack good marketing and packaging. The factors that have the most influence when buying healthy food products are taste, the many choices, and the nutritional aspects.

Buying Behavior of Foods in Thailand

80% of consumers in Thailand have a good knowledge about healthy consumer products. However, 65% of the people surveyed have been found to consume food with high fat content; 50% have been found to drink soda pop, and sweet beverages; and 36% have been found to consume crispy snacks (Pisitpaiboon, 2016). There are research findings of overweight people around the world. In the Thai society, both public and private sectors have begun to promote an awareness of overweight status, and to educate Thai people how healthy products can help us to control bodyweight. However, the number of overweight people is increasing with a severe growth rate.

This research study investigates how overweight people understand healthy eating habits and to help these people understand their choices of food products, in order to find the right marketing mix for healthier people.

4.2 Key results from in-depth Interviews

The in-depth interviews were used to discover key influencing factors of being overweight and self-perception of overweight status and their relationship to purchasing-e healthy products. Five respondents were interviewed. All interviewees had consumed at least one healthy food product per day: i.e. cooking ingredients, food meals, snacks and drinks. The reported findings as below:

Some defined healthy products separately by:

Food meals:

Considering the healthy ingredients to cook by themselves. Some interviewees order healthy meals from delivery services, so they can control their caloric intake.

Snacks:

Having snacks is a way to reduce stress from work or study; thus, choosing to have healthy snacks is much better because healthy snacks will have fewer calories and higher nutrition than normal snacks. Packaging and longer expiration dates are key purchasing factors. There are many food producers upgrading both the quality and packaging of their products.

Drinks:

Cold pressed juice is popular because there are health benefits such as losing weight, improving your metabolism or detoxing a body system associated with these drinks.

The budget ranges by each categories:

Food meals:

Budgets ranged from 100 – 150 THB per meal purchased 10-30 times per month.

Snacks and Drink:

They are mostly purchased together: budgets ranged from 50-500 THB per time and they were purchased 3-4 times per month.

Place to buy food conveniently:**Physical Stores:**

Specialty stores are the first consideration as there are many choices and there is nutrition information on almost every single product. Supermarkets normally offer a variety of healthy food products. However, at physical stores, the salesperson is the most the influential factor for buying healthy products. Free product testing, sales promotion, and nutrition labels are important factors.

Social media:

Facebook and Instagram, are used to find information and reviews of taste, and sometimes it is used to order healthy products via delivery services. Key influential factors to purchase are a quick response, product knowledge and free delivery.

4.3 Key Results from Questionnaire Survey

4.3.1 General Respondents Profile

Respondent profiles are summarized in Table 2. 100% of respondents for this study are people who have consumed healthy products or are interested in healthy eating, and living in the Bangkok Metropolitan area. All respondents are overweight and obese people with 64% and 36% respectively. Most respondents were female (72%) and ages highly ranged between 16 - 35 years (45%). They seldom buy and eat healthy food products (70%).

Table 2 Respondent Profiles

Demographics		Frequency	Percentage
Gender	Male	66	28%
	Female	172	72%
Aged Range	Below 25 Years	20	8%
	26-35 years	106	45%
	36-45 years	28	12%
	Above 45 Years	84	35%
Occupation	Student	6	3%
	Private Sector Employee	136	57%
	Government Sector Employee	38	16%
	Business Owner	42	18%
	Unemployed	16	7%
Education	Below Bachelor's Degree	8	3%
	Bachelor's Degree	96	40%
	Master's Degree	113	47%
	Above Master's Degree	21	9%
Personal Monthly Income	Below 15,000 THB	15	6%
	15,001 - 30,000 THB	66	28%
	30,001 - 45,000 THB	58	24%
	45,001 - 60,000 THB	31	13%
	Above 60,000 THB	68	29%
Healthy Eating Status	Always Buy and Eat	63	26%
	Seldom Buy and Eat	166	70%
	Interesting to Buy or Eat	9	4%
Level BMI	Overweight	152	64%
	Obese	86	36%

4.3.2 Consumption Behavior of Respondents

According to the frequency analysis of general consumption and budgeting toward healthy food products, the results show in Table 3 that consumers regularly eat healthy foods 2-3 times per week (24%). 53% have healthy foods at dinner time (5 p.m. – 8 p.m.), and 38% eat healthy foods at breakfast time (6 a.m. – 9 a.m.).

Table 3 General Consumption Behavior

Cross-tabulation between buying healthy products and a buying frequency (n=238)		Frequency	Percentage
Frequency of purchasing Healthy Products (Single Answer)	Once a month	20	8%
	2 - 3 times / month	51	21%
	4 - 6 times / month	46	19%
	2 - 3 times / week	58	24%
	4 - 6 times / week	27	11%
	Everyday	36	15%
Cross-tabulation between buying healthy products and a consumption period (n=238)		Frequency	Percentage
Timing (Multiple Answer)	Before 6:00 a.m.	4	2%
	6:00 a.m. – 9:00 a.m. Breakfast	89	38%
	9:00 a.m. – 11:00 a.m. Break	27	11%
	11:30 a.m. – 1:30 p.m. Lunch	50	21%
	2:00 p.m. – 4:00 p.m. Afternoon	43	18%
	5:00 – 8:00 p.m. Dinner	126	53%
	After 8:00 p.m.	17	7%

The frequency of purchasing each healthy product is shown in Table 4, and it varies due to healthy meals likely to purchase everyday (Mean Meals = 4.08, SD Meals = 1.25), healthy snacks likely to purchase 4-6 times/week (Mean Snacks = 3.67, SD Snacks = 1.27), and healthy drinks highly purchase 4-6 times/week (Mean Drinks = 4.22, SD Snacks = 0.97)

Table 4 Means of frequent purchase by each category

Cross Tabulation of "Intention to Purchase" each healthy products and "Frequency of Purchase"		Intention to Buy...					
		Healthy Meals		Healthy Snacks		Healthy Drinks	
		Mean	SD	Mean	SD	Mean	SD
Frequency of Healthy Eating	Once a month	3.25	1.12	3.20	1.01	3.45	0.89
	2 - 3 times / month	3.55	0.78	3.22	1.03	3.71	0.94
	4 - 6 times / month	3.63	0.97	3.24	1.12	3.87	0.81
	2 - 3 times / week	3.76	0.88	3.43	0.99	3.86	0.96
	4 - 6 times / week	4.37	0.74	3.67	1.27	4.22	0.97
	Everyday	4.08	1.25	3.31	1.43	3.72	1.45

Intention to purchase and budgeting of the three healthy products categories were analyzed by frequency analysis and mean analysis. Intention to buy healthy drinks is slightly higher than healthy meals and healthy snacks in Table 5. (Mean_{Meals} = 3.76, Mean_{Snacks} = 3.34, Mean_{Drinks} = 3.82) (See Appendix 8: The example of healthy products)

Table 5 Means of Intention to Purchase by Product Category

Intention to buy	Mean	SD
Healthy Meals	3.76	0.99
Healthy Snacks	3.34	1.13
Healthy Drinks	3.82	1.02

The budgeting of healthy products is shown by category in Table 6. Almost 80% of overweight people are generally not willing to pay more than 200 THB per meal for healthy meals which is double the price compared to healthy snacks; 57% are willing to pay 51-100 THB. Half of the consumers (52%) are willing to pay below 50 THB per healthy drink which is half the price of healthy snacks and one third the price of healthy meals.

Table 6 Intention to Buy and Willingness to Pay by product choices
Cross-tabulation between buying intention and price at willingness to buy (n=238)

Category	Frequency	Percentage	Product Price Range	Frequency	Percentage	
Intention to buy Healthy Meals	144	61%	Price of Meals	I never have healthy meals.	8	6%
				Below 100 THB	61	42%
				100 - 200 THB	57	40%
				201 - 300 THB	12	8%
				301 - 400 THB	3	2%
				Above 400 THB	3	2%
Intention to buy Healthy Snack	104	44%	Price of Snacks	I never have healthy snacks.	7	7%
				Below 50 THB	26	25%
				51 - 100 THB	59	57%
				101 - 150 THB	6	6%
				151 - 200 THB	3	3%
				Above 200 THB	3	3%
Intention to buy Healthy Drinks	153	64%	Price of Drinks	I never have healthy snacks.	3	2%
				Below 50 THB	80	52%
				51 - 100 THB	54	35%
				101 - 150 THB	9	6%
				151 - 200 THB	3	2%
				201 - 250 THB	1	1%
				Above 200 THB	3	2%

4.4 Results for Research Objectives

4.4.1 An Overweight's Understanding of Healthy Eating

To make yourself healthy in the right way, the meaning of “Healthy Eating” and “Healthy Food Products” should be determined correctly. Frequency analysis shown in Table 7 reveals that almost 65% of respondents understand healthy eating that is “5 Food Groups: having five food groups in a day” (See Appendix 1: A description of healthy eating).

Table 7 Attitudes toward Healthy Eating and Healthy Food Products

Attitudes toward Healthy Eating				Attitudes toward Healthy Food Products			
(n=238)		Frequency	Percentage	(n=238)		Frequency	Percentage
Healthy Eating (Single Answer)	5 Food Groups	148	62%	Healthy Food Products (Multiple Answer)	Healthy	119	50%
	Clean Food	41	17%		High Nutrition	177	74%
	Low-fat Food	16	7%		Fiber	125	53%
	Low Calorie Food	12	5%		Organic	87	37%
	Organic Food	8	3%		Fat Free	47	20%
	Detox Food	6	3%		Detox	45	19%
	Herb Food	4	2%		Diet	21	9%
	Vegetarian Food	2	1%		Delicious	21	9%
Blood Group Food	1	0%	Fat Free		18	8%	
					Slim	14	6%
				Not tasty	9	4%	

Table 7 shows that about 75% of respondents perceived that healthy food products have high nutrition value and half of respondents explained that “Health” and “Fiber” describe a healthy product.

4.4.2 Overweight’ Attitudes toward buying decision process

To make yourself healthy in the right way, the meaning of “Healthy Eating” and “Healthy Food Products” should be determined correctly. Frequency analysis shown in Table 7 reveals that almost 65% of respondents understand healthy eating that is “5 Food Groups: having five food groups in a day” (See Appendix 1: A description of healthy eating).

Table 8 Attitudes of overweight people towards buying behavior process

Factors that reflect an overweight's buying behavior process (n=238)										
Purchase Decision Stage	Group Mean	Group SD	Attributes	Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree	Mean	SD
1. Problem Recognition	4.03	0.69	B1 Rec Cause of Unhealthy	2	6	21	107	102	4.26	0.79
			B2 Rec Risky to Disease	5	28	71	94	40	4.26	0.78
			B3 Rec for Lose Weight	3	4	20	112	99	3.57	0.97
2. Information Search	3.48	0.67	B4 Search from Manufacturer	9	25	50	122	32	3.60	0.97
			B5 Search from Friends/Family	7	25	74	107	25	3.50	0.92
			B6 Search from Stores	12	36	101	75	14	3.18	0.94
			B7 Search from Media	6	21	67	103	41	3.64	0.95
3. Evaluate Alternatives	3.61	0.85	B9 Evaluate Sales Promotion	6	22	62	107	41	3.62	0.96
			B10 Compare Quantity per Packing	6	22	70	98	42	3.56	1.02
			B11 Find Stores	11	18	79	87	43	3.54	1.00
4. Purchase decision	3.56	0.85	B12 Budget	13	19	65	109	32	3.58	0.95
			B13 WOM about Nutrition	9	17	72	106	34	3.65	0.92
5. Post purchase decision	3.71	0.79	B8 Evaluate Price and Nutrition	10	25	62	98	43	3.65	0.95
			B14 Speak out about Satisfaction	7	14	74	104	39	3.76	0.91
			B15 Speak out about Nutrition	6	12	62	112	46	3.58	1.03
			B16 Repurchase products	3	17	48	118	52	3.84	0.89

1. Problem Recognition: It was found that overweight people place the highest importance to make a decision in problem recognition stage (Group Mean_{Problem Recognition}= 4.03, Group SD_{Problem Recognition}= 0.69) whether they were aware about healthy eating or not. It evidently shows consumers equally recognize that “an unhealthy because of unhealthy eating habits” and “an unhealthy habits (eating

and activities) are a root cause of risky to get a disease” (Mean_{Risky} = 4.26, Mean_{cause} = 4.26).

- 2. Information Search:** The results show that respondents are likely searching for healthy products’ information from online and offline media such as social media, social influencers, and publishing, as well as searching important information directly from its manufacturer (Mean_{Media} = 3.64, Mean_{Manufacturer} = 3.60). In Table 9, the top three sources of healthy product information that overweight consumers mostly get from friends and family, advertising from online media and social influencer.

Table 9 Top 3 Sources of Information

Sources of Information	Frequency	Percentage
Friends/Family	145	61%
Advertising Online Channels	133	56%
Guru/Expert	84	35%

- 3. Evaluate Alternatives:** In this stage, consumers are more likely to evaluate sales promotion at point-of-sale more than others attributes (Mean_{Sales Promotion} = 3.62). As well, they evaluate alternatives of product quantities and stores location.
- 4. Purchase Decision:** In the decision stage, it was found that they were likely to consider a product review or word-of-mouth about nutrition of healthy products (Mean_{WOM-Nutrition} = 3.65) , as shown in the Table 6 above, 35% of overweight consumers need to hear a products information from an expert.
- 5. Post Purchase Decision:** In the last stage, respondents are likely to tell others their satisfaction level about healthy products that they had eaten. They tend to compare the price and nutrition of products that they had whether it was healthy or not, as many healthy products show positive effects for the body circulation system immediately or in a week.

4.4.3 Overweight’ Attitudes toward marketing mix

To make yourself healthy in the right way, the meaning of “Healthy Eating” and “Healthy Food Products” should be determined correctly. Frequency analysis shown in Table 7 reveals that almost 65% of respondents understand healthy eating

that is “5 Food Groups: having five food groups in a day” (See Appendix 1: A description of healthy eating).

The respondents were asked to rate the level of importance of healthy eating toward market mix stimuli in a Likert scale format on how they likely make a purchase of healthy products. The results are analyzed by using mean and standard deviation to illustrate a level of importance through five factors as shown in Table 10. In the marketing mix factors, packaging and product image are the most important factors to make a purchase decision of healthy products. Each factor is presenting below: (See Table 10: Overweight’s Attitude toward Marketing Stimuli)

Table 10 Attitudes of overweight people towards Marketing Stimuli

Question 13: Marketing mix influencing a purchase of healthy products (n=238)										
Marketing Mix	Group Mean	Group SD	Factors	Not Important	Slightly Important	Moderately	Important	Very Important	Mean	SD
1. Product Attributes & Accessibility	4.11	0.71	X1 Tastiness	5	18	20	127	68	3.99	0.93
			X4 Convenience to Eat	4	5	22	124	83	4.16	0.81
			X13 Convenience to Buy	1	10	24	113	90	4.18	0.81
2. Packaging & Images	4.43	0.59	X2 Healthy Ingredients	0	4	12	101	121	4.42	0.67
			X5 Product Hygiene	1	2	9	68	158	4.60	0.65
			X7 Package Hygiene		4	15	91	128	4.44	0.69
			X8 Nutrition Information Label	1	8	30	93	106	4.24	0.83
3. Price	4.20	0.71	X9 Price Signal Quality	1	7	16	102	112	4.33	0.77
			X10 Price Signal Quantity	2	6	22	105	103	4.26	0.80
			X11 Price - Nutrition	1	6	23	112	96	4.24	0.76
			X12 Compatible with Normal Products	2	11	48	107	70	3.97	0.87
			X18 Price and Promotion at POS	4	19	64	97	54	3.75	0.95
4. Services	3.83	0.76	X14 Delivery Services	11	24	65	78	60	3.64	1.10
			X15 In-Store Experiences	5	24	61	95	53	3.70	0.99
			X16 Services of Sales Person	4	14	41	108	71	3.96	0.93
			X17 Product Knowledges of Sales Person	1	11	32	105	89	4.13	0.85
			X19 Product Testing	4	21	63	95	55	3.74	0.97
5. PR & Social Influencer	3.52	0.72	X3 Brand Reputation	7	18	50	117	46	3.74	0.95
			X6 Attractive Packaging	6	23	74	107	28	3.54	0.91
			X20 Social Influencer (Blogger)	17	37	107	67	10	3.07	0.94
			X21 Customer Reviews	11	32	69	100	26	3.41	1.01
			X22 PR from Expert	4	19	47	110	58	3.84	0.94

1. Product Attributes and Accessibility: Overweight consumers place a high importance on this factor as for buying healthy products (Group Mean $_{\text{Products}} = 4.11$). They are likely placing importance on convenience attributes - both convenience to eat and to buy (Mean $_{\text{Convenience-to-eat}} = 4.16$, Mean $_{\text{Convenience-to-buy}} = 4.18$)

2. Packaging & Images: This is the most important factor that influences purchasing healthy products (Group Mean $_{\text{Packaging}} = 4.43$). The highest score is “Product Hygiene” (Mean $_{\text{Product Hygiene}} = 4.60$). Also “Packaged Hygiene” has a high score (Mean $_{\text{Packaged Hygiene}} = 4.44$). Once it is a food, consumers always definitely care about hygiene.

3. Price: Pricing of healthy products is the second most important factor that affects overweight consumers to purchase (Group Mean $_{\text{Price}} = 4.20$). Price signals product values in many criteria. The most important criteria to overweight consumers is a product quality toward retail prices (Mean $_{\text{Price-Quality}} = 4.33$), followed by signaling quantity and nutrition (Mean $_{\text{Price-Quantity}} = 4.26$, Mean $_{\text{Price-Nutrition}} = 4.24$). In fact, consumers are highly concerned when comes to something special to their body.

4. Services: This factor is a moderately important factor to purchase healthy product (Group Mean $_{\text{Services}} = 3.83$). The results show that the most influencing factor is “product knowledge of sales person at point of sale” (Mean $_{\text{Product knowledge}} = 3.83$) which means that customers would rather seek for product information from salesperson than other aspects (Delivery Services, In-store Experiences, and Services of Salesperson).

5. PR & Social Influencer: For overweight consumers, this factor is the least important for influence their purchasing of healthy products (Group Mean $_{\text{PR}} = 3.53$). For them, “PR from Expert” is the most influential factors to purchase; however, a brand reputation itself is considered an essential factor for purchase (Mean $_{\text{PR-Expert}} = 3.84$, Mean $_{\text{Brand Reputation}} = 3.74$). Brand reputation generally requires a period of time to build up on customers’ minds, but the great offering of products and services is first step for the brand. Once it is in their mind, it always in their mind.

4.4.4 Key Finding for Objectives

The main objective of this study is to find aspects that affect an overweight person's response to product choices (healthy meals, snacks, and drinks). A research hypothesis was analyzed by using multiple linear regression with stepwise method to predict an intention to buy healthy meals, snacks, and drinks based on consumer purchase decision process and marketing stimuli factors. Demographics and healthy lifestyle were analyzed by using an independent sample t-test based on gender, and healthy lifestyle, self-perception of overweight status to figure out what is the differences between each group of overweight consumers.

4.4.4.1 Overweight's Buying Decision Process influencing a Healthy Product Choices

A multiple linear regression was calculated to predict the buying of healthy meals, snacks, and drinks based on buying behavior process of problem recognition, information search, evaluation of alternatives, purchasing decisions, and post purchasing decisions,

Healthy Meals:

To predict a choice of healthy meals, a significant regression equation was found ($F(2,235) = 14.515, p < .000$), with Adjusted R^2 of 0.102. Overweight's predicted a choice of healthy meals (Y_1) is $1.605 + 0.316 (B_2) + 0.263 (B_1)$. The factors of B_2 Information Search is the highest predicted factors (B , Beta = 0.316, 0.213), while B_1 Problem recognition has lower predicted value (B , Beta = 0.263, 0.183). A collinearity was not a concern in this choice (B_2 , Tolerance = 0.84, VIF = 1.182; B_1 , Tolerance = 0.84, VIF = 1.182). See Table 11.

Table 11 Prediction Model of Healthy Meals (Buying Decision Process)

Dependent Variable: Y1 = Buy Healthy Meals, R² = 0.110, Adjusted R² = 0.102 , F = 14.515

Independent Variables	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	Forecast Equation
(Constant)	1.605	0.409		3.924	0.000			Y1 = 1.605 + 0.316 (B2) + 0.263 (B1)
B2 Information Search	0.316	0.099	0.213	3.190	0.002	0.846	1.182	
B1 Problem Recognition	0.263	0.096	0.183	2.741	0.007	0.846	1.182	

Dependent Variable: Y1 = Buy Healthy Meals

Independent Variables: B1, B2 = Influencing factors

Healthy Snacks:

To predict a choice of healthy snacks, a significant regression equation was found ($F(2,236) = 23.756, p < .000$), with R² of 0.091. Overweight's predicted a choice of healthy snacks (Y2) is $1.556 + 0.512 (B2)$. The factors of B2 Information Search is the only predicted factors (B, Beta = 0.512, 0.302). A collinearity was not a concern in this choice (B2, Tolerance = 1.000, VIF = 1.000). See Table 12.

Table 12 Prediction Model of Healthy Snacks (Buying Decision Process)

Dependent Variable: Y2 = Buy Healthy Snacks, R² = 0.091 , F = 23.756

Independent Variables	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	Forecast Equation
(Constant)	1.556	0.372		4.185	0.000			Y2 = 1.556 + 0.512 (B2)
B2 Information Search	0.512	0.105	0.302	4.874	0.000	1.000	1.000	

Dependent Variable: Y2 = Buy Healthy Snacks

Independent Variables: B2 = Influencing factors

Healthy Drinks:

To predict a choice of healthy drinks, a significant regression equation was found ($F(2,236) = 18.975, p < .000$), with R² of 0.077. Overweight's predicted a choice of healthy drinks (Y3) is $2.342 + 0.423 (B2)$. The factors of B2 Information Search is the only predicted factors (B, Beta = 0.423, 0.277). A collinearity was not a concern in this choice (B2, Tolerance = 1.000, VIF = 1.000). See Table 13.

Table 13 Prediction Model of Healthy drinks (Buying Decision Process)

Dependent Variable: Y3 = Buy Healthy Drinks, $R^2 = 0.077$, $F = 19.564$

Independent Variables	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	Forecast Equation
(Constant)	2.342	0.339		6.910	0.000			Y3 = 2.342 + 0.423 (B2)
B2 Information Search	0.423	0.096	0.277	4.423	0.000	1.000	1.000	

Dependent Variable: Y3 = Buy Healthy Drinks

Independent Variables: B2 = Influencing factors

Table 14 shows a model summary of buying decision process that affecting a purchase of healthy product choices: healthy meals, snacks, and drinks.

Table 14 Prediction Model Summary (Buying Decision Process)

Product Choices	Buying Decision Process					Model Summary
	B1 Problem Recognition	B2 Information Search	B3 Alternatives Evaluation	B4 Purchase decision	B5 Post purchase decision	
Healthy Meals	x	x				$Y1 = 1.605 + 0.316 (B2) + 0.263 (B1)$
Healthy Snacks		x				$Y2 = 1.556 + 0.512 (B2)$
Healthy Drinks		x				$Y3 = 2.342 + 0.423 (B2)$

4.4.4.2 Marketing mix factors influencing overweight's decision process toward healthy product choices

Healthy Meals:

To predict a choice of healthy meals, a significant regression equation was found ($F(2,235) = 12.705$, $p < .000$), with Adjusted R^2 of 0.090. Overweight's predicted a choice of healthy meals ($Y1$) is $1.491 + 0.350 (X2) + 0.206 (X5)$. The factors of $X2$: Packaging and Image is the highest predicted factors (B, Beta = 0.350, 0.208), while $X5$: PR and Advertising has lower predicted value (B, Beta = 0.206, 0.150). A collinearity was not a concern in this choice ($X2$, Tolerance = 0.745, VIF = 1.343; $X5$, Tolerance = 0.745, VIF = 1.1343). See Table 15.

Table 15 Prediction Model of Healthy Meals (Marketing Mix)

Dependent Variable: Y1 = Buy Healthy Meals, Adjusted R² = 0.090 , F = 12.705

Independent Variables	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	Forecast Equation
(Constant)	1.491	0.472		3.161	.002			Y1 = 1.491 + 0.35 (X2) + 0.206 (X5)
X2 Packaging & Images	0.350	0.121	0.208	2.899	.004	0.745	1.343	
X5 PR & Social Influencer	0.206	0.098	0.150	2.093	.037	0.745	1.343	

Dependent Variable: Y1 = Buy Healthy Meals

Independent Variables: X2, X5= Influencing factors

Healthy Snacks:

To predict a choice of healthy snacks, a significant regression equation was found ($F(2,235) = 13.051, p < .000$), with Adjusted R² of 0.092. Overweight's predicted a choice of healthy snacks (Y2) is $1.202 + 0.273 (X4: Services) + 0.265 (X1: Product Attributes and PR and Social Influencer)$. The factors of X4: Services is the highest predicted factors (B, Beta = 0.273, 0.184), while X1: Product Attributes and Accessibility has lower predicted value (B, Beta = 0.265, 0.166). A collinearity was not a concern in this choice (X4, Tolerance = 0.604, VIF = 1.655; X1, Tolerance = 0.604, VIF = 1.655). See Table 16.

Table 16 Prediction Model of Healthy Snacks (Marketing Mix)

Dependent Variable: Y2 = Buy Healthy Snacks, Adjusted R² = 0.092 , F = 13.051

Independent Variables	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	Forecast Equation
(Constant)	1.202	0.429		2.800	.006			Y2 = 1.202 + 0.273 (X4) + 0.265 (X1)
X4 Services	0.273	0.118	0.184	2.308	.022	0.604	1.655	
X1 Product Attributes & Accessibility	0.265	0.126	0.166	2.092	.038	0.604	1.655	

Dependent Variable: Y2 = Buy Healthy Snacks

Independent Variables: X1, X4 = Influencing factors

Healthy Drinks:

To predict a choice of healthy drink, a significant regression equation was found ($F(2,235) = 15.628, p < .000$), with Adjusted R² of 0.110. Overweight's predicted a choice of healthy drinks (Y3) is $1.700 + 0.301 (X1) + 0.250 (X5)$. The factors of X1: Product Attributes and Accessibility is the highest predicted factors (B, Beta = 0.301, 0.209), while X5: PR and Social Influencer has lower predicted value

(B, Beta = 0.250, 0.177). A collinearity was not a concern in this choice (X1, Tolerance = 0.674, VIF = 1.484; X1, Tolerance = 0.674, VIF = 1.484). See Table 17.

Table 17 Prediction Model of Healthy Drinks (Marketing Mix)

Dependent Variable: Y3 = Buy Healthy Drinks, Adjusted R² = 0.110 , F = 15.628

Independent Variables	B	Std. Error	Beta	t	Sig.	Tolerance	VIF	Forecast Equation
(Constant)	1.700	0.386		4.403	.000			Y3 = 1.7 + 0.301 (X1) + 0.25 (X5)
X1 Product Attributes & Accessibility	0.301	0.107	0.209	2.803	.005	0.674	1.484	
X5 PR & Social Influencer	0.250	0.105	0.177	2.370	.019	0.674	1.484	

Dependent Variable: Y3 = Buy Healthy Meals

Independent Variables: X1, X5 = Influencing factors

In Table 18 shows a model summary of marketing stimuli that influencing a purchase of healthy product choices; healthy meals, snacks, and drinks.

Table 18 Prediction Model Summary (Marketing Stimuli)

Product Choices	Marketing mix factor					Model Summary
	X1 Product Attributes	X2 Packaging & Images	X3 Price	X4 Services	X5 PR & Social Influencer	
Healthy Meals		x			x	Y1 = 1.491 + 0.35 (X2) + 0.206 (X5)
Healthy Snacks	x			x		Y2 = 1.202 + 0.273 (X4) + 0.265 (X1)
Healthy Drinks	x				x	Y3 = 1.7 + 0.301 (X1) + 0.25 (X5)

4.4.4.3 Overweight's characteristics affecting healthy product choices

An independent sample t-test was conducted to compare the means of these following independent groups: gender, healthy eating lifestyle, BMI level, and self-perception of overweight status. This research's result employed one-way ANOVA to determine whether these following independent: income level are significantly different in healthy product choices

Gender:

An independent-samples t-test was conducted to compare product choices: healthy meals, snacks, and drinks for overweight male and female. There was no significant difference among these product choices which is shown below (See Table 19):

Healthy Meals:

There was no significant difference in the scores for males (Mean_{Male} = 3.74, SD_{Male} = 1.01) and females (Mean_{Female} = 3.77, SD_{Female} = 0.99); conditions; $t(236) = -0.214$, $p = .830$

Healthy Snacks:

There was no significant difference in the scores for males (Mean_{Male} = 3.20, SD_{Male} = 1.18) and females (Mean_{Female} = 3.39, SD_{Female} = 1.11); conditions; $t(236) = -1.177$, $p = .240$

Healthy Drinks:

There was no significant difference in the scores for males (Mean_{Male} = 3.74, SD_{Male} = 1.10) and females (Mean_{Female} = 3.84, SD_{Female} = 0.99); conditions; $t(236) = -0.679$, $p = .0498$

Table 19 Compare Means between Male and Female toward product choices

Gender		N	Mean	Std. Deviation	Std. Error Mean	t-test	Sig. (2-tailed)
BUY Healthy Meals	Male	66	3.74	1.01	0.12	-0.214	0.83
	Female	172	3.77	0.99	0.08		
BUY Healthy Snacks	Male	66	3.2	1.18	0.15	-1.177	0.24
	Female	172	3.39	1.11	0.08		
BUY Healthy Drinks	Male	66	3.74	1.1	0.14	-0.679	0.498
	Female	172	3.84	0.99	0.08		

Healthy Living Status:

An independent-samples t-test was analyzed to compare product choices: healthy meals, snacks, and drinks between healthy and unhealthy current eating lifestyles. There are significant differences between healthy and unhealthy eating lifestyles among these product choices which is shown below (See Table 20):

Healthy Meals:

There was a significant difference in the scores for unhealthy lifestyle (Mean $_{\text{Unhealthy}} = 3.52$, SD $_{\text{Unhealthy}} = 0.96$) and healthy lifestyle (Mean $_{\text{Healthy}} = 4.20$, SD $_{\text{Healthy}} = 0.91$); conditions; $t(236) = -5.357$, $p = .000$

Healthy Snacks:

There was no significant difference in the scores for unhealthy lifestyle (Mean $_{\text{Unhealthy}} = 3.25$, SD $_{\text{Unhealthy}} = 1.02$) and healthy lifestyle (Mean $_{\text{Healthy}} = 3.49$, SD $_{\text{Healthy}} = 1.29$); conditions; $t(236) = -1.471$, $p = .143$

Healthy Drinks:

There was a significant difference in the scores for unhealthy lifestyle (Mean $_{\text{Unhealthy}} = 3.70$, SD $_{\text{Unhealthy}} = 0.93$) and healthy lifestyle (Mean $_{\text{Healthy}} = 4.01$, SD $_{\text{Healthy}} = 1.14$); conditions; $t(236) = -2.249$, $p = .025$

Table 20 Compare Means between Healthy and Unhealthy status toward product choices

Healthy Living Lifestyle		N	Mean	Std. Deviation	Std. Error Mean	t-test	Sig. (2-tailed)
BUY Healthy Meals	Unhealthy	152	3.52	0.96	0.08	-5.357	0.000
	Healthy	86	4.20	0.91	0.10		
BUY Healthy Snacks	Unhealthy	152	3.25	1.02	0.08	-1.471	0.143
	Healthy	86	3.49	1.29	0.14		
BUY Healthy Drinks	Unhealthy	152	3.70	0.93	0.08	-2.249	0.025
	Healthy	86	4.01	1.14	0.12		

Self-perception of overweight status:

Independent-samples t-tests were used to compare product choices: healthy meals, snacks, and drinks between respondents who perceived that they were overweight and respondents who did not perceive that they were overweight. There was no significant difference among these product choices which is shown below: (See Table 21)

Healthy Meals:

There was no significant difference in the scores for those who perceived they were not overweight (Mean $_{\text{Perceived not Overweight}} = 3.98$, SD $_{\text{Perceived not Overweight}} = 0.97$) and those who did perceive that they were overweight (Mean $_{\text{Perceived Overweight}} = 3.70$, SD $_{\text{Perceived Overweight}} = 0.99$); conditions; $t(236) = 1.812$, $p = .071$

Healthy Snacks:

There was no significant difference in the scores for those who perceived they were not overweight (Mean $_{\text{Perceived not Overweight}} = 3.26$, SD $_{\text{Perceived not Overweight}} = 1.26$) and those who did perceive that they were overweight (Mean $_{\text{Perceived Overweight}} = 3.36$, SD $_{\text{Perceived Overweight}} = 1.10$); conditions; $t(236) = -0.525$, $p = .600$

Healthy Drinks:

There was no significant difference in the scores for those who perceived they were not overweight (Mean $_{\text{Perceived not Overweight}} = 3.75$, SD $_{\text{Perceived not Overweight}} = 1.12$) and those who did perceive that they were overweight (Mean $_{\text{Perceived Overweight}} = 3.83$, SD $_{\text{Perceived Overweight}} = 0.99$); conditions; $t(236) = -0.487$, $p = .627$

Table 21 Compare Mean of self-perception of overweight status toward product choices

Perceived Overweight		N	Mean	Std. Deviation	Std. Error Mean	t-test	Sig. (2-tailed)
BUY Healthy Meals	Non Fat	53	3.98	.97	.133	1.812	0.071
	Fat	185	3.70	.99	.073		
BUY Healthy Snacks	Non Fat	53	3.26	1.26	.173	-0.525	0.600
	Fat	185	3.36	1.10	.080		
BUY Healthy Drinks	Non Fat	53	3.75	1.12	.152	-0.487	0.627
	Fat	185	3.83	.99	.073		

The next chapter, chapter 5, is summarizing research findings, recommendations, and limitations of the study.

CHAPTER 5

CONCLUSIONS AND RECOMMENDATIONS

5.1 Research Summary

This research aims to understand the food purchasing behavior of overweight people living in the Bangkok metropolitan area, focusing on both males and females who have consumed healthy products or are interested in healthy eating.

The research mainly focused on what are the factors influencing a purchase of healthy food products: meals, snacks, and drinks. In this research, the studied factors were “buying decision process”, “marketing stimuli”, and “personal characteristics”. The buying decision process is composed of problem recognition, information search, alternative evaluation, purchase decision, and post purchase behavior. Factor analysis showed that the marketing stimuli (or the marketing mix) could be grouped into five factors which were named: product attributes and accessibilities, packaging and image, price, services, and PR and advertising. Personal characteristics included gender, healthy living status, and self-perception of overweight status.

This study researched many sources of information such as national annual reports, conference papers, academic articles, related articles on websites as in references. Together with in-depth interviews with overweight people led to the development a questionnaire. This questionnaire was distributed via online channels, and the data was collected from 12th – 28th February 2017. The Statistical Package for the Social Sciences (SPSS) was used to analyze the quantitative data.

5.2 Conclusion

Data from a total of 238 respondents were used to analyze in this study. Half of the respondents were aged 26-35 years old, and one-third of the respondents were aged over 45 years old, thus this research can represent a wide age range of people. They mostly hold a university degree. Seven-tenths seldom buy and eat at least one type of healthy product. They normally buy healthy products 2-3 times/week, and they have healthy products for dinner time.

An understand of healthy eating

Overweight people understand that healthy eating means “5 Food Groups” and they perceived that healthy food products contain high nutrition value. The products have high nutrition value and fiber.

Attitudes of healthy eating toward buying decision process

Problem recognition is the most important stage of the decision process for overweight people who place an importance unhealthy eating. The statistical results are described in each stage as following:

1. Problem Recognition: Overweight consumers highly recognized that an unhealthy stage is the cause of unhealthy eating habits. The root cause of getting a disease is because of unhealthy eating habits.
2. Information Search: Overweight consumers are likely to search for information via online and offline media, as well as, directly from manufacturers. They mostly received healthy products’ information from friends, family, experts and online advertising such as social media (Facebook, and Line), and websites.
3. Evaluate Alternatives: Overweight consumers are likely to compare sales promotion at point-of-sale.
4. Purchase Decision: Overweight consumers are likely to make a decision based on word-of-mouth about nutritive value, and advice from the health experts.
5. Post Purchase Decision: Overweight consumers are likely to repurchase the products that they already experienced and share their satisfaction with others.

Attitudes of healthy eating toward marketing stimuli (marketing mix)

Packaging and product image attributes are the most important factors for overweight consumers to purchase healthy products. They are concerned about the following factors; product attributes and accessibility, price signal, services at point-of-sale, and PR and social influence, respectively. As each factor represent many criteria, following is explained in details:

1. **Product Attributes and Accessibility:** Convenience is a key factor for overweight consumers to purchase healthy foods. It is not only convenience to eat, but also convenient to buy.
2. **Packaging and product images:** This factor has the highest influence to purchase healthy products. The product's hygiene and package's hygiene are the key factors of concern for overweight consumers.
3. **Price:** This attribute signals many aspects to overweight people and they use it as an important factor to purchase a healthy product. Because price signals quality, quantity, and nutritive value, they use it to evaluate the product value.
4. **Services:** At the point-of-sale, services moderately influence overweight consumers to purchase a healthy product. However, the product knowledge of a sales person can greatly affect a purchase decision.
5. **PR and Social Influencer:** The attribute of PR from experts is moderately influential factors to consumers.

Factors that influence a purchase of healthy product choices

1. To predict what an overweight consumer will choose for a healthy meal:
 - In buying decision process, information search and problem recognition are factors to predict an overweight's choice for a healthy meal.
 - For marketing stimuli, packaging and product image and PR and Social influencer are factors predicting a choice of healthy meal.
2. To predict an overweight consumer choices for a healthy snack:
 - In a buying decision process, an information search is a factor to predict an overweight's choice for a healthy snack.
 - For marketing stimuli, services and products attributes and accessibility are factors predicting a choice of a healthy snack.
3. To predict an overweight consumer choices a healthy drink:
 - In the buying decision process, an information search is a factor to predict an overweight's choice for a healthy drink.
 - For marketing stimuli, products attributes and accessibility, and PR and social influencer are factors predicting a choice of a healthy drink.

Personal characteristics that affect a purchase of healthy product choices

1. Gender: Males and females do not have a significant difference in responses to any product choices.
2. Healthy living status: Healthy and unhealthy living are statistically significant differences in purchasing a healthy meal, and a healthy drink.

Self-perception of overweight status: Those who perceive that they are overweight and those who do not perceive that they are overweight are not statistically significant difference in response to any product choices.

5.3 Recommend for Action

Due to the increasing number of overweight people in the Bangkok metropolitan area, the research results show a likelihood of important factors of marketing stimuli toward healthy food products. The ultimate objective of this study is to investigate the marketing mix that influences overweight people's purchasing behavior with regard to healthy food choices, the recommendation is outlined following the marketing mix factors.

The two key factors of marketing mix that influencing overweight, specifically to those who are living in Bangkok metropolitan area, to purchase a healthy food products are:

1. Product Attributes and Accessibility

For the busier life nowadays, an overweight people value convenience. Not only for the product that is convenient to eat, but also to find. Suppliers should be distribute the healthy products widely throughout supermarket channels. It creates trust in products to be on shelves of well-known stores. (See Appendix 9: The place that overweight normally buy a healthy product)

2. PR and Advertising

Nowadays, overweight people are seeking a healthy product that has a good brand reputation with some fruitful information from experts. To build a brand reputation, food producers should improve their product quality to standardize offerings which means that every time they consume product they will get an exactly

taste and nutrition value. Moreover, they should develop and update about their brand knowledge to customers to build more creditability and reliability.

3. Information Search

When it comes to the issue of purchasing healthy products, overweight consumers get information from online social media or from the producers. The importance of word-of-mouth in social media today is more important than in the past. The producers cannot control any positive or negative feedback online; however, they should be providing fact sheets of product details to any customers and offering standardized services to all customers.

In summary, product quality, a great atmosphere of production or physical stores, and great services from salespeople are important factors that create a positive brand reputation, and positive word-of-mouth in social media which can influence a customer to purchase healthy food products and they will always ask for it.

5.4 Limitations

The research findings cannot be generalized to the entire Bangkok metropolitan population for the following reasons:

1. This study applied a convenience sampling method (non-probability method).
2. The sample size is small: two hundred thirty-eight respondents.
3. The time period of collecting data and questionnaire was short.
4. The questionnaire was distributed by personal connection through online only.

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APPENDICES

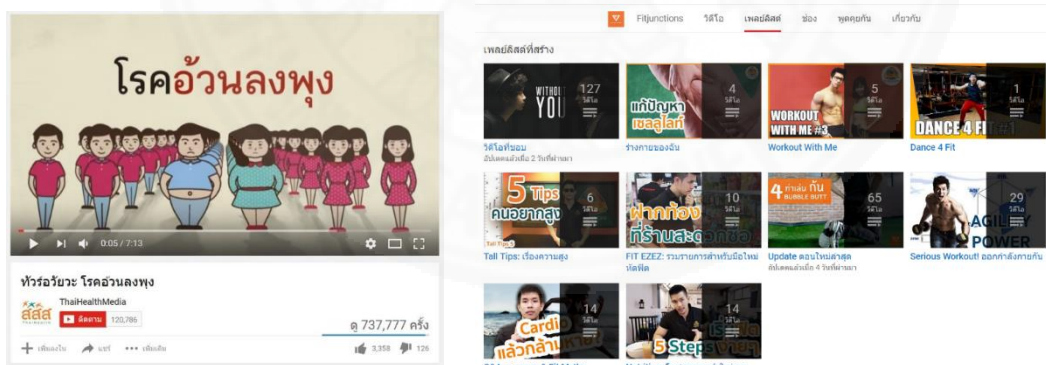
APPENDIX A

A DESCRIPTION OF HEALTHY EATING



APPENDIX B

THAI HEALTH MEDIA CHANNEL IN YOUTUBE PROMOTING A HEALTHY EATING



APPENDIX C

IN-DEPTH INTERVIEW QUESTIONS

Screening Question

1. Have you consumed any healthy products such as healthy meals, snacks, and drinks within 1 year?
2. Are you living in Bangkok Metropolitan?

The questions for in-depth interview

1. What do you think about your shape?
2. Do you know about BMI measure? Do you know how to calculate it? What did you do when you know your current BMI?
3. How do you describe “healthy eating” and “healthy food products” in your opinion?
4. How do you normally buy each healthy product i.e. healthy meals, snacks, and drinks?
5. On an average, how much do you pay for healthy meals, snacks and drinks?
6. How often do you buy each product? And what time do you normally having each healthy product?
7. What are the reasons of eating healthy? Why? How do you normally get the information about healthy products? Where do you buy it? What are the factors that influencing you to buy healthy products? What are the factors considering when purchasing healthy products?

Demographic Questions

1. Weight/ Height
2. Occupation
3. Healthy eating habits

APPENDIX D
THE QUESTIONNAIRE SURVEY

**“UNDERSTANDING THE FOOD PURCHASING BEHAVIOR
OF OVERWEIGHT PEOPLE IN BANGKOK
AND HOW IT AFFECTS THEIR HEALTH”**

Screening Question

SQ1. Do you live or work in Bangkok? **(Single Answer)**

1. Yes (go to question SQ2)
2. No (End of the questionnaire)

SQ2. What is your healthy eating status? **(Single Answer)**

1. You have consumed healthy food products within 1 year. (go to Part I)
2. You are interested in healthy eating. (go to Part I)
3. You are not interested in healthy eating. (End of the questionnaire)

Questionnaire

Part I: Personal health awareness

Q 1. How do you perceived about yourself? What is the best describe words about yourself?
(Single Answer)

- | | |
|----------------------------------|--------------------------------|
| 1. Heavysset | 7. In shape |
| 2. Chubby | 8. Cut / Ripped / Six-pack |
| 3. Plump / Beer Gut / Beer Belly | 9. Skin and bones |
| 4. Portly / Chunky | 10. Skinny / Thin |
| 5. Overweight / Obese | 11. Other(Please specify_____) |
| 6. Fit | |

Q 2. Do you know your “BMI”? (BMI = weight-for-height, to classify overweight and obesity in adults) **(Single Answer)**

1. Yes
2. No

Part II: Buying behavior of healthy products

Q 3. In your opinion, what does healthy eating means? **(Single Answer)**

- Q3.1 Low Calorie Food
- Q3.2 Low-fat Food
- Q3.3 Vegetarian Food
- Q3.4 Organic Food
- Q3.5 Blood Group Food
- Q3.6 Herb Food
- Q3.7 Clean Food
- Q3.8 Detox Food
- Q3.9 5 Food Group
- Q3.10 Other (Please specify_____)

Q 4. In your point of view, one word that is the best describe of your healthy food products?

(Single Answer)

- Q4.1 Healthy
- Q4.2 Fat Free
- Q4.3 Diet
- Q4.4 High Nutrition
- Q4.5 Slim
- Q4.6 Fiber
- Q4.7 Organic
- Q4.8 Zero fat / Fat Free
- Q4.9 Delicious
- Q4.10 Not tasty
- Q4.11 Detox
- Q4.12 Other(Please specify_____)

Q 5. If you are interested in healthy food products, how likely are you going to purchase these healthy product categories?

(Please circle any number that corresponds to your purchasing. Answer only the product you have purchased.)

		Definitely will not purchase	Probably will not purchase	Neutral	Probably will purchase	Definitely will purchase
1	Healthy Ingredients	1	2	3	4	5
2	Healthy Meals	1	2	3	4	5
3	Healthy Snacks	1	2	3	4	5
4	Healthy Drinks	1	2	3	4	5
5	Other (Please specify _____)	1	2	3	4	5

Q 6. On average how much do you spend on each healthy product categories per time? **(Single Answer)**

Q6.1 Healthy Meals

1. I don't have healthy meals.
2. Less than 100 THB/meal
3. 100-200 THB/meal
4. 201-300 THB/meal
5. 300-400 THB/meal
6. More than 400 THB/meal



Q6.2 Healthy Snacks

1. I don't have healthy snacks.
2. Less than 50 THB/package
3. 51 – 100 THB/package
4. 101 – 150 THB/package
5. 151 – 200 THB/package
6. More than 200 THB/package



Q6.3 Healthy Drinks

1. I don't have healthy drinks.
2. Less than 50 THB/drink
3. 51 – 100 THB/drink
4. 101 – 150 THB/drink
5. 151 – 200 THB/drink
6. 201 – 250 THB/drink
7. More than 250 THB/time



Q 7. How often do you buy healthy food products? **(Single Answer)**

1. Less than 1 time per month
2. 2-3 times per month
3. 4-6 times per month
4. 2-3 times per week
5. 4-6 times per week
6. Everyday

Q 8. How often do you buy healthy food products? **(Multiple Answer)**

1. Before 6:00 a.m.
2. 6:00 a.m. – 9:00 a.m. Breakfast
3. 9:00 a.m. – 11:00 a.m. Break
4. 11:30 a.m. – 1:30 p.m. Lunch
5. 2:00 p.m. – 4:00 p.m. Afternoon
6. 5:00 p.m. – 8:00 p.m. Dinner
7. After 8:00 p.m.

Q 9. To which degree do you agree/disagree about the reason of eating healthily for the below attributes? (What are the reason of eating healthy?)

(Please rate 1-5 score of each attribute, 1 = Strongly Disagree, 5 = Strongly Agree)

	I eat healthy food...	Strongly Disagree	Somewhat Disagree	Neural	Somewhat Agree	Strongly Agree
1	To Control Weight	1	2	3	4	5
2	To Lose Weight	1	2	3	4	5
3	To Control Calories Consumption	1	2	3	4	5
4	To Avoid High Sugar Product / High Fat / High Cholesterol	1	2	3	4	5
5	For Disease Control Such As Diabetes	1	2	3	4	5
6	For A Better healthcare	1	2	3	4	5
7	To Eat More Food Per Day	1	2	3	4	5
8	Because of Health Conscious	1	2	3	4	5
9	Instead of doing exercise	1	2	3	4	5

Q 10. How do you get the information about the healthy food products? (**Multiple Answers**)

1. Friends/Family
2. Influencer
3. Guru/Expert
4. Television Commercial
5. Newspaper/Magazine
6. Point of Sales Material
7. Out of Home Media such as Billboard
8. Transit Media such as BTS, MRT, Bus, Boat
9. Online Media such as Facebook, Line, Website
10. Brochure/Catalog
11. Other (Please specify_____)

Q 11. Where do you normally buy healthy food products? (**Multiple Answers**)

1. Wet market
2. Supermarket such as Home Fresh Mart, Tops, Foodland
3. Hypermarket such as Lotus, Big C, Makro
4. Mini supermarket such as Tesco Lotus Express, Mini Big C, Maxvalu, Tunjai
5. Specialty Stores such as Lemon Farm, Golden Place
6. Other (Please specify_____)

Q 12. To which degree do you agree/disagree about healthy products of your favorite healthy eating choices for the below attributes?

(Please rate 1-5 score of each attribute, 1 = Strongly Disagree, 5 = Strongly Agree)

		Strongly Disagree	Somewhat Disagree	Neutral	Somewhat Agree	Strongly Agree
1	You recognize that you are unhealthy because of unhealthy eating habits.	1	2	3	4	5
2	You recognize that it is a risky to get a disease if you have unhealthy activities and eating.	1	2	3	4	5
3	You recognize that healthy eating help you to reduce weight	1	2	3	4	5
4	You search healthy products from manufacture's channel. (Website, Brochure etc.)	1	2	3	4	5
5	You search healthy products from your family, friends, or relatives.	1	2	3	4	5
6	You search healthy products from local market, supermarket, and specialty stores.	1	2	3	4	5
7	You search healthy products from others media. (Blogger, YouTube Channels, Publishing.	1	2	3	4	5
8	You evaluate the difference nutritive value between healthy and normal food products.	1	2	3	4	5
9	You evaluate prices between healthy and normal eating.	1	2	3	4	5
10	You evaluate a promotional program before buying.	1	2	3	4	5
11	Before making decision, you plan portion sizes of healthy products.	1	2	3	4	5
12	Before making decision, you plan about places to purchase healthy foods	1	2	3	4	5
13	Before making decision, you plan about your budget for buying healthy products	1	2	3	4	5
14	After enjoying healthy products, you will share information about the product nutrition.	1	2	3	4	5
15	After enjoying healthy products, you will share how you are satisfied or dissatisfied about the products	1	2	3	4	5
16	After enjoying healthy products, you will repeat the purchase of products under that brand	1	2	3	4	5

Part III: Factors that influence the consumer to purchase healthy products

Q 13. Please check [X] at the level of importance of factors affecting your decision to purchase healthy products. If you think it is very important, circle a “5”. If it is not important, circle a “1” or circle any other number that corresponds to your opinion.

		Not Important	Slightly Important	Moderately Important	Important	Very Important
1	Tastiness	1	2	3	4	5
2	Healthy Ingredients	1	2	3	4	5
3	Brand Reputation	1	2	3	4	5
4	Convenience to Eat	1	2	3	4	5
5	Cleanliness (Product Hygiene)	1	2	3	4	5
6	Attractive Packaging	1	2	3	4	5
7	Cleanliness of Package	1	2	3	4	5
8	Nutrition Information Label	1	2	3	4	5
9	Good Value for Quality	1	2	3	4	5
10	Good Value for Quantity Per Serving	1	2	3	4	5
11	Good Value for Nutrition	1	2	3	4	5
12	Compatible Price as Normal Products	1	2	3	4	5
13	Convenience to Buy e.g. Convenience Store or Department Store	1	2	3	4	5
14	Delivery Services	1	2	3	4	5
15	In-Store Experiences	1	2	3	4	5
16	Services of Sales Person	1	2	3	4	5
17	Product Knowledges of Sales Person	1	2	3	4	5
18	Sales Promotion at Point of Sales	1	2	3	4	5
19	Product Testing	1	2	3	4	5
20	Social Influencer (Blogger)	1	2	3	4	5
21	Customer Reviews	1	2	3	4	5
22	PR from Expert e.g. Doctors or Nutritionist	1	2	3	4	5

Part IV: Respondent Profile

Q 14. You are _____ Years old. **(Please fill in the blank.)**

Q 15. Your weight is _____ kg. **(Please fill in the blank.)**

Q 16. Your height is _____ cm. **(Please fill in the blank.)**

Q 17. Gender **(Single Answer)**

1. Male
2. Female

Q 18. What is your occupation? **(Single Answer)**

1. Student
2. Private sector employee
3. State enterprise officer/government sector employee
4. Business owner
5. Unemployed
6. Other (Please specify_____)

Q 19. What is your highest education level? **(Single Answer)**

1. Below Senior High School
2. Senior High School
3. High Vocational Certificate
4. Bachelor's Degree
5. Above Bachelor's Degree
6. Other (Please specify_____)

Q 20. What is the range of your income per month? **(Single Answer)**

1. Below 10,000 THB/month
2. 10,001 - 20,000 THB/month
3. 20,001 – 30,000 THB/month
4. 30,001 - 40,000 THB/month
5. 40,001 – 50,000 THB/month
6. Above 50,000 THB/month

Q 21. What is your current healthy eating status? **(Single Answer)**

1. Always Buy and Eat
2. Seldom Buy and Eat
3. Interesting to Buy or Eat

Q 22. Please circle number that corresponds to your healthy eating lifestyles.

	Never	Seldom	Sometimes	Often	Almost Always
How likely you are eating healthy products	1	2	3	4	5

APPENDIX E

FACTOR ANALYSIS OF MARKETING STIMULI

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.850
Approx. Chi-Square	1797.123
Bartlett's Test of Sphericity	
df	120
Sig.	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings			Rotation Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	5.953	37.207	37.207	5.953	37.207	37.207	3.027	18.919	18.919
2	1.696	10.602	47.809	1.696	10.602	47.809	2.932	18.325	37.244
3	1.493	9.329	57.138	1.493	9.329	57.138	2.064	12.901	50.145
4	1.214	7.586	64.724	1.214	7.586	64.724	2.025	12.658	62.803
5	.936	5.848	70.571	.936	5.848	70.571	1.243	7.769	70.571
6	.811	5.070	75.642						
7	.651	4.069	79.711						
8	.578	3.615	83.326						
9	.498	3.116	86.441						
10	.461	2.881	89.322						
11	.425	2.657	91.979						
12	.324	2.024	94.003						
13	.302	1.887	95.890						
14	.282	1.761	97.652						
15	.264	1.648	99.300						
16	.112	.700	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
B1_Rec Cause of Unhealthy			.863		
B2_Rec Healthy Food for lose weight			.866		
B3_Rec Risky to disease	.398		.538		-.335
B4_Srch Manufacturer				.604	.396
B5_Srch Friends/Family				.582	
B6_Srch Stores				.778	
B7_Srch Media		.308		.616	
B9_Cmpre Price Btw N&H		.782			
B10_BF/Buy Cmpre Promotion		.810			
B11_BF/Buy Cal qty/packing		.838			
B12_BF/Buy Find Stores		.328			.747
B13_BF/Buy Est Budget		.675			.364
B8_Cmpre Nutrition Btw N&H	.603	.351			
B14_WOM Nutrition	.843				
B15_WOM Satisfac	.863				
B16_Repurchase	.811				

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 7 iterations.

APPENDIX F

FACTOR ANALYSIS OF BUYING DECISION PROCESS

KMO and Bartlett's Test

Kaiser-Meyer-Olkin Measure of Sampling Adequacy.	.910
Bartlett's Test of Sphericity	Approx. Chi-Square
	3437.802
	df
	231
	Sig.
	.000

Total Variance Explained

Component	Initial Eigenvalues			Extraction Sums of Squared			Rotation Sums of Squared		
	Initial Eigenvalues			Loadings			Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	9.871	44.869	44.869	9.871	44.869	44.869	4.263	19.377	19.377
2	2.196	9.981	54.850	2.196	9.981	54.850	3.275	14.887	34.264
3	1.368	6.216	61.066	1.368	6.216	61.066	3.025	13.750	48.013
4	1.068	4.853	65.919	1.068	4.853	65.919	2.737	12.441	60.455
5	.979	4.451	70.371	.979	4.451	70.371	2.182	9.916	70.371
6	.829	3.768	74.139						
7	.672	3.054	77.193						
8	.590	2.681	79.874						
9	.568	2.582	82.456						
10	.489	2.222	84.677						
11	.443	2.016	86.693						
12	.407	1.849	88.542						
13	.387	1.759	90.302						
14	.344	1.562	91.864						
15	.323	1.469	93.333						
16	.297	1.350	94.683						
17	.277	1.259	95.942						
18	.233	1.058	97.000						
19	.196	.890	97.890						
20	.174	.792	98.681						
21	.158	.716	99.398						
22	.132	.602	100.000						

Extraction Method: Principal Component Analysis.

Rotated Component Matrix^a

	Component				
	1	2	3	4	5
X1_Prod_Tastiness					.618
X2_Prod_Convenience to Eat	.437				.521
X3_Prod_Convenience to Buy		.526			.542
X4_PImg_Healthy Ingredients	.732				
X5_PImg_Cleanliness	.771				
X6_PImg_Cleanliness of Package	.749				
X7_PImg_Nutrition Information Label	.651				
X8_Price - Quality	.649	.597			
X9_Price - Quantity	.550	.686			
X10_Price - Nutrition	.635	.612			
X11_Price - Compatible with normal		.716			
X12_Price_Sales Promotion		.688			
X13_Serv_Delivery Services			.648		.451
X14_Serv_In-Store Experiences			.694		
X15_Serv_Services of Sales Person			.736		
X16_Serv_Product Knowledges of Sales Person	.417		.746		
X17_Serv_Product Testing		.569	.447		
X18_PR_Brand Reputation				.435	.639
X19_PR_Attractive Packaging				.584	
X20_PR_Social Influencer (Blogger)				.853	
X21_PR_Customer Reviews				.805	
X22_PR_From Expert			.419	.548	

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 14 iterations.

APPENDIX G

**THE RELIABILITY TEST OF MARKETING MIX
AND BUYING DECISION PROCESS ATTRIBUTES**

Reliability Statistics

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.938	.941	22

Item-Total Statistics

	Scale Mean if Item Deleted	Scale Variance if Item Deleted	Corrected Item-Total Correlation	Squared Multiple Correlation	Cronbach's Alpha if Item Deleted
X1_Prod_Tastiness	83.38	146.641	.612	.506	.935
X2_Prod_Convenience to Eat	83.20	146.862	.704	.581	.934
X3_Prod_Convenience to Buy	83.18	147.561	.665	.542	.934
X4_Plmg_Healthy Ingredients	82.94	151.170	.588	.607	.936
X5_Plmg_Cleanliness	82.77	150.643	.644	.681	.935
X6_Plmg_Cleanliness of Package	82.92	150.011	.639	.654	.935
X7_Plmg_Nutrition Information Label	83.13	147.587	.645	.549	.935
X8_Price - Quality	83.03	147.720	.698	.780	.934
X9_Price - Quantity	83.10	147.720	.668	.777	.934
X10_Price - Nutrition	83.12	149.145	.621	.710	.935
X11_Price - Compatible with normal	83.39	146.754	.653	.645	.934
X12_Price_Sales Promotion	83.62	146.035	.623	.620	.935
X13_Serv_Delivery Services	83.73	145.423	.550	.506	.937
X14_Serv_In-Store Experiences	83.66	144.604	.657	.688	.934
X15_Serv_Services of Sales Person	83.41	144.740	.703	.704	.934
X16_Serv_Product Knowledges of Sales Person	83.23	147.596	.631	.625	.935
X17_Serv_Product Testing	83.63	146.058	.611	.604	.935
X18_PR_Brand Reputation	83.62	147.392	.561	.518	.936
X19_PR_Attractive Packaging	83.83	147.510	.584	.516	.935
X20_PR_Social Influencer (Blogger)	84.30	149.839	.457	.529	.938
X21_PR_Customer Reviews	83.95	146.188	.579	.657	.936
X22_PR_From Expert	83.53	145.474	.656	.596	.934

Extraction Method: Principal Component Analysis.

Rotation Method: Varimax with Kaiser Normalization.

a. Rotation converged in 14 iterations.

APPENDIX H

THE EXAMPLE OF HEALTHY PRODUCTS

Healthy meals:



Healthy drinks:



Healthy snacks:



APPENDIX I

THE PLACE THAT OVERWEIGHT NORMALLY BUY

A HEALTHY PRODUCT

Place to Purchase	BUY_Meals		BUY_Snack		BUY_Drinks	
	Frequency	Percentage	Frequency	Percentage	Frequency	Percentage
PLC Wet Market	50	24%	42	23%	55	25%
PLC Supermarket	162	76%	144	78%	171	76%
PLC Hypermarket	61	29%	54	29%	67	30%
PLC Mini Supermarket	56	26%	50	27%	58	26%
PLC Specialty Store	37	17%	34	18%	38	17%
PLC Amway Shop	3	1%	1	1%	2	1%
PLC Online	8	4%	5	3%	6	3%



BIOGRAPHY

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