# A STUDY OF THE FACTORS INFLUENCING THE CONSUMPTION OF READY-TO-DRINK MEAL REPLACEMENT AMONG THAI URBAN PROFESSIONALS 

BY

MISS INTUON ISRAPRASAS

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 2018
COPYRIGHT OF THAMMASAT UNIVERSITY

# A STUDY OF THE FACTORS INFLUENCING THE CONSUMPTION OF READY-TO-DRINK MEAL REPLACEMENT AMONG THAI URBAN PROFESSIONALS 

## BY

MISS INTUON ISRAPRASAS

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 2018 COPYRIGHT OF THAMMASAT UNIVERSITY

# THAMMASAT UNIVERSITY <br> FACULTY OF COMMERCE AND ACCOUNTANCY 

## INDEPENDENT STUDY

BY

## MISS INTUON ISRAPRASAS

## ENTITLED

## A STUDY OF THE FACTORS INFLUENCING THE CONSUMPTION OF READY-TO-DRINK MEAL REPLACEMENT AMONG THAI URBAN PROFESSIONALS

was approved as partial fulfillment of the requirements for the degree of Master of Science Program in Marketing (International Program)

$$
\text { on ..... } 13 \text { MAY } 2019
$$

Chairman


Member and Advisor

Dean

(Associate Professor Pipop Udorn, Ph.D.)

Independent Study Title
A STUDY OF THE FACTORS INFLUENCING THE CONSUMPTION OF READY-TO-DRINK MEAL REPLACEMENT AMONG THAI URBAN
PROFESSIONALS

Author
Miss Intuon Israprasas
Degree

Major Field/Faculty/University

Independent Study Advisor
Academic Years

Master of Science Program in Marketing
(International Program)
Faculty of Commerce and Accountancy Thammasat University

Associate Professor Nigel Barrett, Ph.D. 2018


#### Abstract

The research was conducted using both qualitative and quantitative methods. Due to limited time and resources, convenient sampling and snowball method were used to collect data. In exploratory research, the data were obtained from secondary research and 15 in-depth interviews. In descriptive research, the data were gathered from 177 self-administered online questionnaire responses. In-depth interview analysis was done using deductive and inductive approach. The results were used to form hypotheses on factors influencing the intention to purchase and benefit segmentation. The data analysis for the questionnaire was done using the Statistic Program for the Social Sciences (SPSS). The analysis identified three major benefit segments, the 'Sport and Nutrition' segment, the 'Time and Convenience' segment, and the 'Weight-control' segment. The opportunity for potential consumers is in the 'Sport and Nutrition' and 'Time and Convenience' segment, especially in consumers who are already dietary supplement users. Different product features and consumption behaviors were found to be significantly related to different consumer benefit segments. Overall product features and marketing elements to be improved are taste, value for the price, and 'feel good' factors. Office buildings and mass transit locations can be effective locations to target. Potential users are lower involvement consumer and marketing should be made available at purchase points, especially in convenience


stores. Recommended marketing messages are on personal appearance improvement and solution to daily life hassles.

Keywords: Ready-To-Drink meal replacement, meal replacement drink, urban professional, influencing factors, intention to purchase, benefit segmentation

## ACKNOWLEDGEMENTS

First and foremost, I would like to express my gratitude toward my advisor, Associate Professor Nigel Barrett, Ph.D., for his encouragements, support and guidance throughout this project. Furthermore, I would like give thanks to my classmates who had been the source of inspirations, knowledge, and advices, and also to the respondents who kindly provided the information which made this project possible. Last but not least, I am forever grateful to my family who has been there for me whenever I needed.

Miss Intuon Israprasas

## TABLE OF CONTENTS

## ACKNOWLEDGEMENTS

## LIST OF TABLES

LIST OF FIGURES
CHAPTER 1 INTRODUCTION ..... 1
1.1 Problem Statement ..... 1
1.2 Research Purpose ..... 2
1.3 Research Objectives ..... 2
CHAPTER 2 REVIEW OF LITERATURE ..... 3
2.1 Background on Meal Replacement ..... 3
2.2 Global Market and Trends ..... 3
2.3 Thai Market, Trends, and Health Issues ..... 4
2.4 Academic Theory Implication ..... 5
2.4.1 Determinants of Customer-Perceived Value ..... 5
2.4.2 Influences on Consumer Behavior ..... 6
2.4.3 Consumer Buying Decision Process ..... 7
CHAPTER 3 RESEARCH METHODOLOGY ..... 8
3.1 Exploratory Research Methodology ..... 8
3.1.1 Secondary Research Methodology ..... 8
3.1.2 In-depth Interview ..... 8
3.2 Descriptive Research Methodology ..... 9
3.2.1 Questionnaire Design ..... 9
3.2.2 Key Research Variables ..... 11
3.3 Sample Size ..... 11
3.4 Data Collection ..... 11
3.5 Data Analysis Plan ..... 12
3.2.1 Exploratory Research Analysis ..... 12
3.2.2 Descriptive Research Analysis ..... 12
CHAPTER 4 RESULTS AND DISCUSSION ..... 13
4.1 In-depth Interview Analysis ..... 13
4.2 Questionnaire Analysis ..... 15
4.2.1 Profiles of Respondents ..... 15
4.2.2 Benefit Segmentation ..... 18
4.2.3 Factors Influencing the Intention to Purchase ..... 23
CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS ..... 26
5.1 Conclusion and Managerial Implication ..... 26
5.2 Research Limitation ..... 28
5.3 Suggestions for Future Study ..... 29
REFERENCES ..... 30
APPENDICES
APPENDIX A: Questions for In-depth Interviews ..... 33
APPENDIX B: A Sample of Survey Questionnaire ..... 34
APPENDIX C: Total Respondents' Socio-Demographic Profile ..... 39
APPENDIX D: Cluster Differences by Socio-Demographic Profile ..... 40
APPENDIX E: Cluster Differences by Consumers’ Attitudes ..... 41
APPENDIX F: Factors Influencing Intention to Purchase ..... 42
BIOGRAPHY ..... 44

## LIST OF TABLES

Tables Page
4.1 Segment Difference by Gender ..... 16
4.2 Consumer Segments by Ready-To-Drink Meal Replacement Knowledge ..... 16
4.3 Consumer Segments by Dietary Supplement Intake ..... 17
4.4 Results of ANOVA - Consumer Segments Differences by Attitudes ..... 17
4.5 Consumer Segments by Behavioral Characteristics ..... 18
4.6 Result of Cluster Analysis on Benefit Sought ..... 19
4.7 Consumer Segments by Clusters ..... 19
4.8 Cluster Differences by Behavioral and Psychographic Characteristics ..... 21
4.9 Results of ANOVA - Cluster Differences by Product Attributes ..... 23
4.10 Results of t-test and Descriptive Statistics for Consumer Perceived Value ..... 24
4.11: Multiple Regression on Factors Influencing Intention to Purchase ..... 25

## LIST OF FIGURES

Figures ..... Page
2.1 Determinants of Customer-Perceived Value ..... 5
2.2 Model of Influences on Consumer Behavior ..... 6
2.3 Five-stage Model of the Consumer Buying Decision Process ..... 7
3.1 Selection Criteria and Definition of Respondents ..... 10
3.2 Independent Variables and Dependent Variables ..... 10

## CHAPTER 1 INTRODUCTION

### 1.1 Problem Statement

Nowadays, many urban professionals across the globe face hectic lifestyle and health issues from their sedentary work life amid the growing trends of health and fitness, as well as the rise of healthcare costs. Due to tight schedules, traffics and long work hours, many urban professionals find themselves skipping meals and eating lowquality food with high sodium, high sugar and lack nutritional value which affects both their mental and physical health. Meal replacement has become one of the solutions for a convenient healthy diet by saving time, minimizing efforts, and ensuring proper nutritional value.

The global health trend is shifting from weight control to holistic healthy lifestyle and fitness. In USA, Soylent launched Ready-To-Drink meal as a nutritional solution for people who are living a busy life, frustrated with meal preparation, and conscious about nutrition. In India, myDaily launched meal replacement shakes for busy urban professionals as $70 \%$ of Indian skip their breakfast, and many of them only have time for fast food which results in weight problems. Meal replacements in Thailand are positioned only for weight loss, neglecting the portion of consumers without a weight problem, seeking the healthy and convenient benefit of nutritional food in easy consumption form. BodyKey by Nutrilite is a leading product in Ready-To-Drink meal replacement among smaller local players. The brand image of weight loss benefits might be a barrier to prospective customers with different attitudes towards health. Hence, this research was conducted to understand consumer demand for Ready-To-Drink meal replacements among Thai urban professionals, to identify factors influencing the intention to purchase Ready-To-Drink meal replacement amid the changing health trends, and to identify potential consumer and consumer by benefit segmentation.

### 1.2 Research Purpose

This study aims to understand the changing health trends and its effects on consumer demand for Ready-To-Drink meal replacements, and identify the segment of Thai urban professionals who seek nutritional and convenience benefits of Ready-ToDrink meal replacements. The data uncovered from this study will benefit companies who seek new opportunities for a meal replacement product and to tailor effective marketing strategies to the changing health trends and behaviors among urban professionals in Thailand. This study is a Contemporary Topic in Applied Marketing regarding Health Issues and Opportunities.

### 1.3 Research Objectives

The following objectives were addressed in this study
i) To identify Ready-To-Drink meal replacement potential consumer and consumer among Thai urban professionals by benefit segmentation.
ii) To identify factors influencing the intention to purchase Ready-To-Drink meal replacement among Thai urban professionals, i.e., perceived value between regular meal and Ready-To-Drink meal replacement, the psychological factors, and the situational factors.

## CHAPTER 2

## REVIEW OF LITERATURE

### 2.1 Background on Meal Replacement

Meal replacement is a formulated food that, by itself, can replace one or more daily meals. It can be in form of ready-to-serve or to be prepared with water or milk. Requirements for a meal replacement include a minimum food energy value of 225 calories per serving, a specified amount and quality of protein, a maximum amount of energy derived from fat ( 35 percent), and specified amounts of various vitamins and mineral nutrients. Common categories for meal replacement are weight reduction diet, daily meals replacement, clinical meal replacement and instant breakfast (Canadian Food Inspection Agency, 2018).

Meal replacement was initially meant for elderlies or as a medical food for ill adults, however, in recent years it has widened its market into regular adults as a convenient solution for balance nutrition, sports nutrition, and weight control. There are some controversies and concerns over the benefits and disadvantages of relying on meal replacements as a main source of nutrition over real food (Krasy, 2004).

### 2.2 Global Market and Trends

In the Consumer Health market, Meal Replacement is the largest product category within Weight Management and Wellbeing (WMW, 15.9 billion USD). The global market value of meal replacement is 6.9 billion USD in 2016 with $31 \%$ growth over five-year period. Other growths in WMW such as supplement nutrition drink (73\% growth) is driven by seniors' consumption, protein-based sports nutrition ( $80 \%$ growth) is driven by health and fitness trends, and protein supplements ( $61 \%$ growth) is driven by plant-based protein demand among the vegan population. Meal replacement will have to evolve as consumer trends are moving away from weight loss into staying active and healthy. Innovations such as integration with online fitness management plans and digital tools, online connected communities, transparency, and clean labels will drive
future growth. Current market leaders are Herbalife (19\%) and Abbott Laboratories (8\%). Examples of innovative brands that are gaining recognition are Nupo (Denmark) which is low cost, uses real ingredients and has long shelf-life; and Soylent (USA) which is a balanced meal on-the-go product with high-quality plant-based nutrition. Examples of products are meal bars and shakes (Euromonitor, 2017). Soylent is a meal replacement brand which started out as a startup and gains traction among techies and entrepreneurs by offering open-source build your own meal replacement platform that is machine learning based. Employing agile methodology, the products are launched with transparent release notes and reinvented continually, using learnings from its customers, testings, and feedbacks. This gives Soylent a community of enthusiastic and engaged customers (CB Insights, 2017). myDaily is a Ready-To-Drink meal replacement brand founded in India. The product is positioned as a solution for busy urban professionals. 30 percent of Indians skip their breakfast, and 72 percent of urban professionals have junk food due to busy schedules. The company offers free diet consultation and product subscription (Srikant, 2017).

### 2.3 Thai Market, Trends and Health Issues

The current market value of meal replacement in Thailand is 6.8 billion THB and registered 5\% growth with Amway (Thailand) Ltd and Herbalife International (Thailand) Ltd as the market leaders. Thai consumers are becoming more knowledgeable and health conscious. Although a small portion of consumer exercise routinely, the majority of them seeks healthier diets. This is an opportunity for convenience easy-to-use products for managing nutrition intake. International brands compete on innovation and know-how while local brands push hard sales.

Amway (Thailand) Ltd launched BodyKey by Nutrilite as a meal replacement for weight management, alongside InBody watch and boost interest with competition challenge. Local brands are mostly weight loss supplements that promote and sell on online channels and use celebrities as a mean to capture the market. Current channels are specialist retailers (37\%), direct selling (36\%), grocery retailers (18\%), internet retailing (5.6\%) and home shopping (3.5\%) (Euromonitor, 2018).

Rising incomes, internet access and global fitness trends are driving changes in Thai urban consumer's diets and habits. There are increasing demands for organic products, fortified/functional foods, 'free from' foods, and dietary supplements. Urban consumers shop for packaged food and save time by frequenting convenience stores for meals. Busy urban consumers are joining fitness, doing short workout sessions (Euromonitor, 2018).

A study of Thai urban sedentary workers diet intake concluded that there is a declining consumption of energy and carbohydrate, while consumption of proteins and fats increases. Dietary fiber and most micronutrients intakes were not sufficient according to the Thai Dietary Reference Intake (DRI). The study suggests improvement in dietary patterns and healthier meal selections to avoid risks of diet-related chronic diseases (Ivanovitch, Klaewkla, Chongsuwat, Viwatwongkasem and Kitvorapat, 2014).

### 2.4 Academic Theory Implication

### 2.4.1 Determinants of Customer-Perceived Value



Figure 2.1: Determinants of Customer-Perceived Value

Customer-Perceived Value is the difference between the prospective customer's evaluation of the total benefits and costs of a product offering against the
perceived alternatives. The total customer benefit is the perceived monetary value of economic benefits, functional benefits, and psychological benefits customers expect from a given market offering in terms of product, service, personal, and image benefit. The total customer cost is the perceived bundle of costs customers expect to incur in evaluating, obtaining, using, and disposing of the given market offering, which can be categorized into monetary, time, energy, and psychological costs. The value of the offering can be increased by raising the benefits or reducing the costs (Kotler \& Keller, 2016).

### 2.4.2 Influences on Consumer Behavior



Figure 2.2: Model of Influences on Consumer Behavior

Consumer behavior is the study of how individuals, groups, and organizations select, buy, use, and dispose of goods to satisfy their needs and wants. Consumer's buying behavior is influenced by cultural, social, and personal factors (Kotler \& Keller, 2016). Culture is a set of values, norms, and attitudes that shape human behavior, transmitted from one generation to the next. Social class is a group of people in a society who are considered nearly equal in status or community esteem, who share behavioral norms. It can be measured by occupation, income, education, wealth and others. Social influences consist of reference groups, opinion leaders, and family members. Individual influences consist of consumer characteristics such as age
and gender, as well as, personality, self-concept, and lifestyle. Psychological influences consist of perception, motivation, learning, and attitudes (Lamb, Hair, \& Mcdaniel, 2018). The marketing mix is a model used to define the marketing options in terms of price, product, promotion, and place for a product offering to meet a specific customer need or demand.

### 2.4.3 Consumer Buying Decision Process

Consumer buying process covers five stages of all experiences in learning, choosing, using, and disposing of a product, especially in high involvement purchases. It consists of problem recognition stage, information search, evaluation of alternatives, purchase, and post-purchase evaluation. (1) Problem recognition occurs when a buyer recognizes a problem or need to be triggered by internal or external stimuli. (2) There are four important information sources which consumers will use: personal, commercial, public, and experiential. (3) In the evaluation of alternatives stage, the expectancy-value model is used by combining beliefs about each attribute of a product according to importance, forming attitudes toward the product. (4) Consumer purchase decision in the purchase stage can be disrupted by two factors. The first factor is the attitudes of others. The second factor is the unanticipated situational factors. A consumer may decide to modify, postpone, or avoid a purchase decision as a result of perceived risks which are financial, physical, functional, social, psychological, and time risks. (5) Reinforcements after purchase are crucial as consumers might experience dissonance. Post-purchase satisfaction, post-purchase actions, post-purchase uses and disposal must be monitored. (Kotler \& Keller, 2016)


Figure 2.3: Five-stage Model of the Consumer Buying Decision Process

## CHAPTER 3

## RESEARCH METHODOLOGY

This study includes both exploratory and descriptive research. The research was conducted using both qualitative and quantitative methods. In exploratory research, the data were obtained from secondary research and in-depth interviews. In descriptive research, the data were gathered from self-administered online questionnaires.

### 3.1 Exploratory Research Methodology

The exploratory research was conducted to obtain the overview information of Ready-To-Drink meal replacement market, trends, and competitions in Thailand, as well insights into Thai urban professionals' lifestyles, attitudes, and behaviors, including the features and benefits that they seek from meal replacements. The data obtained from exploratory research was used in developing descriptive research.

### 3.1.1 Secondary Research

The secondary research was conducted to explore the overview of meal replacement industry in Thailand, including opportunities, trends and key players, and give a basic understanding of Thai urban consumers such as their lifestyles, dietary demands and factor influencing the consumption of meal replacements. The data was collected from academic journals, market research publication, articles, government and trade association publications, websites, and other credible online sources.

### 3.1.2 In-depth Interviews

In-depth interviews was conducted to (1) understand the perception and consumption behavior of Thai urban professionals towards regular food and Ready-To-Drink meal replacement products, (2) explore the factors influencing the intention to purchase Ready-To-Drink meal replacement, especially, the functional and emotional benefits that Thai urban professionals seek, (3) gain a perspective on consumer segmentation. Qualitative data was collected from 15 Thai urban professionals working in Bangkok, between the age of 23-40 years old who have
consumed meal replacement products within the past 12 months. The results from indepth interviews were used to form hypotheses on factors influencing the intention to purchase for further test and quantification in the descriptive research (See Appendix A: Questions for In-depth Interview).

### 3.2 Descriptive Research Methodology

### 3.2.1 Questionnaire Design

Descriptive research was conducted in the form of a self-administered questionnaire based on insights collected from the in-depth interviews. The purpose of the questionnaire was to (1) identify Ready-To-Drink meal replacement potential consumer and consumer among Thai urban professionals by benefit segmentation, (2) identify factors influencing the intention to purchase Ready-To-Drink meal replacement among Thai urban professionals, i.e., perceived value between regular meal and Ready-To-Drink meal replacement, psychological factors, and situational factors. The questionnaire was distributed to reach the target of 150 respondents. Respondents are Thai professionals working in Bangkok, between the age of 23-40 years old who may or may not have consumed Ready-To-Drink meal replacement.

The questionnaire consisted of five parts. The first part measured consumer's past experience with Ready-To-Drink meal replacements. The second part measured consumption purposes and behaviors. The third part was designed to determine the importance of each product attributes. The fourth part measured psychographic and situational factors and the fifth part consisted of socio-demographic questions. The consumer attitudes and influencing factors were measured by Likert scale format. Behaviors and demographics were measured in the form of multiplechoice questions (See Appendix B: A Sample of Survey Questionnaire).

### 3.2.2 Key Research Variables

Key research variables were identified from exploratory research. Perceived value between regular diet and Ready-To-Drink meal replacement, psychological factors, and situational factors were used as independent variables. Perceived value consists of functional benefits, emotional benefits, perceived price, and


Figure 3.1: Selection Criteria and Definition of Respondents

Independent Variables (IVs)

Perceived Value
(Regular diet/RTD-MR)
(functional benefits, emotional benefits, perceived price, perceived convenience,


Figure 3.2: Independent Variables and Dependent Variables
perceived convenience. Psychological factors consist of self-perception, health consciousness, self-efficacy, and dietary preference. Situational factors consist of physical wellness, physical activity, degree of busyness, eating habits, and dietary supplement intake.

### 3.3 Sample Size

The target population were Thai urban professionals working in Bangkok, between the age of 23-40 years old. For qualitative research, the sample size for indepth interviews were 15 respondents. Respondents were Thai urban professionals who had consumed meal replacement product within the past 12 months. For quantitative research, a total of 177 respondents were selected for further analysis. Respondents included users, potential users, and nonusers.

### 3.4 Data Collection

Due to limited time and resources, convenient sampling and snowball method were used for in-depth interviews and questionnaires. 15 in-depth interviews were conducted between December 17-31, 2018 by both face-to-face interviews and telephone interviews. The interviews were sound recorded for further analysis. Each indepth interview took approximately 30-45 minutes. Respondents were recruited through personal connections of the researcher. Self-administered questionnaires were distributed between February 25 - March 15, 2019 to reach the target respondents of 150. The final number of valid responses were 177. The recruitment for questionnaires were through online channels, personal connections, and the snowball method. Respondents were qualified through a set of screening questions to ensure that the samples will represent the population of interest. Pilot tests were conducted prior to actual data collection with the sample size of 10 to validate and improve the questions design and sequence from errors and misinterpretations.

### 3.5 Data Analysis Plan

The purpose of this study is to understand consumer demand for Ready-ToDrink meal replacements among Thai urban professionals, to identify factors influencing the intention to purchase Ready-To-Drink meal replacement, and to identify potential consumer and consumer by benefit segmentation.

### 3.5.1 Exploratory Research Analysis

The data analysis was done using deductive and inductive approach. For the inductive approach, data was grouped and analyzed for similarities and differences. For the deductive approach, data was grouped based on frameworks and analyzed for relationships. The analysis process was as follows: (1) Data reduction: data was organized, cleaned and labelled and assigned to each research objectives. (2) Coding: using content analysis, the organized data was coded by categorizing into concepts and patterns for interpretation; using thematic analysis, data was grouped into identified themes linking to research objectives. (3) Conclusion: implications were validated against previous findings and research objectives to draw final conclusions.

### 3.5.2 Descriptive Research Analysis

The data analysis was done using the Statistic Program for the Social Sciences (SPSS). First objective was to identify Ready-To-Drink meal replacement potential consumer and consumer by benefit sought segmentation. The data analysis objectives were (1) to segment Thai urban professionals, based on benefits sought; (2) To profile segments based on demographic, behavioral, and psychographic. Statistical methods used were cluster analysis, chi-square test, and ANOVA. Second objective was to identify factors influencing the intention to purchase Ready-To-Drink meal replacement among Thai urban professionals. The data analysis objectives were (1) to determine the perceived value between regular meal and Ready-To-Drink meal replacement; (2) to determine the relationship among the influencing factors and the intention to purchase Ready-To-Drink meal replacements; (3) to compare the similarities and differences between the consumer segments (current users, potential users, and nonusers). Statistical methods used were tests of difference between groups ( t -test, ANOVA) and multiple regression

## CHAPTER 4 RESULTS AND DISCUSSION

### 4.1 In-depth Interview Analysis

Research results were concluded from 15 in-depth interviews, conducted on Thai urban professionals working in Bangkok, between the age of 23-40 years old who have consumed meal replacement products within the past 12 months. Product mentioned by the respondents were categorized into four product groups, which were soy-based meal replacement drinks (Hooray! Better Shake), high protein drinks (Meiji High Protein, FAV, whey protein drinks, and chicken breast drinks.), weight-control product (BodyKey by Nutrilite), and medical nutritional drinks (Ensure, Gen-DM).

Purpose for consuming Ready-To-Drink meal replacements products discovered from the interviews were for sport supplement, weight-control, convenience, time-saving, better nutrition, cost-saving and taste. For sport supplement, respondents sought high protein and low sodium features. Sugar and carbohydrates were concerns varied between respondents who exercised to be leaner $(n=3)$ and to gain body mass ( $n=2$ ). Product used for this purpose were high protein drinks and soy-based meal replacement drinks. Soy-based meal replacement drinks gives moderate amount of protein while providing lower calories which was preferred by the respondents who exercised to be leaner, especially women. Respondents who consumed Ready-ToDrink meal replacement for weight-control was divided into two categories, the routine users who are heavy user ( $n=3$ ), and the casual users who are light user ( $n=3$ ). The routine users used weight-control product such as BodyKey by Nutrilite as a daily meal replacement for breakfast. Two respondents reported consuming products periodically until desire weight is reached. One respondent found the product to be a permanent convenience solution for diet. Protein supplements were sometimes used in combined with weight-control product. The casual users consumed low sugar and low calories soy-based meal replacement drinks and high protein drinks occasionally to replace meals and to satisfy hunger between meals or late nights without adding too much carbohydrates. Most of the respondents perceived Ready-To Drink meal replacement
as a solution for better health and convenience ( $n=10$ ). Of which, five respondents consumed high protein supplements and soy-based meal replacement drinks for early commutes, two respondents to save time during busy lunch, and three respondents when working late nights. Two respondents who consumed healthy food regularly, considered Ready-To-Drink meal replacement consumption as a cost-saving method since healthy food are usually more expensive than regular food. Three respondents consumed the products for the taste.

Influencing factors toward intention to purchase Ready-To-Drink meal replacement were hypothesized from the in-depth interview insights, and categorized based on the objective and academic theories into three groups, which are perceived value, psychological factors, and situational factors. First, 'perceived value' consisted of functional benefit, emotional benefit, perceived value for the price, and perceived convenience between regular daily diet and Ready-To-Drink meal replacement. From the interviews, functional benefits were identified as nutritional value and 'keep me full'. Emotional benefits were identified as taste, visual appeal, healthiness, and 'make me feel good' Second, 'psychological factors', consisted of self-perception, health consciousness, self-efficacy, and dietary preference. From the interviews, 12 respondents considered themselves as health conscious and often looked for healthy alternatives. 11 respondents were willing to consume less delicious products if they were healthier. Eight respondents were willing to pay more for healthier products. Six respondents said they took good care of their own health. Two of the them said they exercise regularly and they believe they can commit to their healthy diet. Respondents who consumed weight-control meal replacements expressed dissatisfaction with how their they look. Six respondents prefer non repetitive diets. Third, ‘situational factors, consisted of physical wellness, level of physical activity (exercise), level of busyness, unhealthy eating habits (skip meals, instant meals, snacks, etc.), and dietary supplement intake. Five respondents reported taking dietary supplements as another method to fulfill nutritional needs.

In addition, some barriers to purchase intention were identified as follows. In taste and texture aspects, eight respondents perceived that products were too sweet for their liking and the taste of the sweetness felt chemical. Five respondents were particular about the liquidity level, consistency, and volume. When compared to regular
daily diet, two respondents felt that Ready-To-Drink meal replacements cannot completely substitute regular food because there is nothing to chew on. Six respondents sought variety and sometimes prefer convenience food in the convenience stores. In value for the price aspect, respondents mentioned the price should not exceed other convenient nutritional sources. For example, two boiled eggs can yield equal amount of protein and fullness at cheaper price. The preferred price was between 25-60 THB and should not exceed 100 THB. In terms of satisfying hunger, six respondents said they would prefer if there are products that make them feel full longer and last three to five hours. In terms of benefit positioning, one respondent mentioned that she wanted a solution to her breakfast problem but she didn't consume Ready-To-Drink meal replacement product regularly as the product is marketed as a weight-loss product.

### 4.2 Questionnaire Analysis

### 4.2.1 Profiles of Respondents

There were 250 surveys completed, of which 210 samples passed the screening process. 177 responses were considered valid and used in data analysis. 72 respondents were current users, 87 were potential users, and 18 were nonusers. The profile of qualified respondents were $33 \%$ male and $67 \%$ female. $69 \%$ of the profile were between 23 and 31 years of age, $31 \%$ were between 32 and 40 . For education level, $53 \%$ of the profile were bachelor's degree graduates, $47 \%$ were master's degree graduates. For occupation, $61 \%$ were corporate employees, $16 \%$ were business owners, $8 \%$ were freelancers, and $4 \%$ were government employees. $11 \%$ were reported as having multiple occupations. $87 \%$ of the profile lived in Bangkok. $60 \%$ of the respondents' monthly personal incomes were between 20,001-60,000 THB (See Appendix C: Total respondents' socio-demographic profile).
chi-square test of independence was performed to examine the relation between consumer segments and socio-demographic characteristics. The result indicated that gender was significantly related with consumer segments ( $p<0.05$ ). There was higher proportion of male respondents who were current users (45.6\%), while female respondents were higher in potential users and nonusers' segments ( $71.6 \%$ and $88.9 \%$, respectively).

Table 4.1: Segment Difference by Gender

| Gender | Current <br> $(n=72)$ | Potential <br> $(n=87)$ | Non <br> $(n=18)$ | Total <br> $(n=177)$ | $x^{2}$ | Sig |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Male | $\mathbf{3 1 ( 4 5 . 6 \% )}$ | $22(27.2 \%)$ | $2(11.1 \%)$ | $55(32.9 \%)$ | 10.961 | .027 |
| Female | $37(54.4 \%)$ | $\mathbf{5 8}(\mathbf{( 7 1 . 6 \%})$ | $\mathbf{1 6}(\mathbf{8 8 . 9 \%})$ | $111(66.5 \%)$ |  |  |
| Other | $0(0.0 \%)$ | $1(1.2 \%)$ | $0(0.0 \%)$ | $1(0.6 \%)$ |  |  |

Note: The numbers in the table indicate $n$, with column percentage in parentheses.

On product knowledge, results indicated around $50 \%$ of potential users and nonusers had no prior knowledge of the term 'Ready-To-Drink meal replacement', including $33 \%$ of the current users. For communication, online channel and self-research were significantly related with consumer segments ( $p<0.1$ ). High percentage of current users reportedly learned about Ready-To-Drink meal replacement product from online (56.9\%) and self-research ( $29.2 \%$ ), comparing to potential users and nonusers.

Table 4.2: Consumer Segments by Meal Replacement Drink Knowledge

| Knowledge | Current <br> $(\mathrm{n}=72)$ | Potential <br> $(\mathrm{n}=87)$ | Non <br> $(\mathrm{n}=18)$ | Total <br> $(\mathrm{n}=177)$ | $x^{2}$ | Sig |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Knowledge |  |  |  |  |  |  |
| $\quad$ Yes | $48(66.7 \%)$ | $42(48.3 \%)$ | $9(50.0 \%)$ | $99(55.9 \%)$ | 5.692 | .058 |
| No | $24(33.3 \%)$ | $45(51.7 \%)$ | $9(50.0 \%)$ | $78(44.1 \%)$ |  |  |
| Communication |  |  |  |  |  |  |
| TV and Radio | $16(22.2 \%)$ | $20(23.0 \%)$ | $2(11.1 \%)$ | $38(21.5 \%)$ | 1.289 | .525 |
| Online | $\mathbf{4 1}(\mathbf{5 6 . 9 \% )}$ | $32(36.8 \%)$ | $4(22.2 \%)$ | $77(43.5 \%)$ | 10.209 | .006 |
| Recommendation $33(45.8 \%)$ | $30(34.5 \%)$ | $7(38.9 \%)$ | $70(39.5 \%)$ | 2.127 | .345 |  |
| Self-search | $\mathbf{2 1}(\mathbf{2 9 . 2 \% )}$ | $6(6.9 \%)$ | $1(5.6 \%)$ | $28(15.8 \%)$ | 16.258 | .000 |
| Store browse | $44(61.1 \%)$ | $45(51.7 \%)$ | $7(38.9 \%)$ | $96(54.2 \%)$ | 3.300 | .192 |
| Direct sales | $10(13.9 \%)$ | $7(8.0 \%)$ | $5(27.8 \%)$ | $22(12.4 \%)$ | 5.572 | .062 |
| Others | $1(1.4 \%)$ | $2(2.3 \%)$ | $0(0.0 \%)$ | $3(1.7 \%)$ | 0.541 | .763 |

[^0]Dietary supplement intake was found to be significantly related to consumer segments ( $\mathrm{p}<0.05$ ). $68.1 \%$ of current users took dietary supplements while $66.7 \%$ of nonusers did not.

Table 4.3: Consumer Segments by Dietary Supplement Intake

|  | Current <br> $(\mathrm{n}=72)$ | Potential <br> $(\mathrm{n}=87)$ | Non <br> $(\mathrm{n}=18)$ | Total <br> $(\mathrm{n}=177)$ | $x^{2}$ | Sig |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Dietary Supplements |  |  |  |  |  |  |
| $\quad$ Take | $\mathbf{4 7}(\mathbf{6 8 . 1 \%})$ | $40(48.2 \%)$ | $6(33.3 \%)$ | $93(54.7 \%)$ | 9.747 | .008 |
| Not take | $22(31.9 \%)$ | $43(51.8 \%)$ | $\mathbf{1 2}(\mathbf{6 6 . 7 \%})$ | $77(45.3 \%)$ |  |  |

Note: The numbers in the table indicate means, with standard deviations in parentheses.

One-way ANOVA was used to compare the means between consumer segments against different attitudes, using the $F$-distribution. On health consciousness, the means differences of 'search for healthy alternatives', 'exercise', and 'skip meals' were found to be significant ( $p<0.05$ ). The result indicated that current users searched for healthy alternatives more ( $M=4.25, S D=0.76$ ) and also did more exercise ( $M=3.07, S D=1.15$ ). The mean of potential users is highest on skipping meals ( $M=3.18, S D=1.46$ )

Table 4.4: Results of ANOVA - Consumer Segments Differences by Attitudes

| Attitudes | Current <br> $(\mathrm{n}=72)$ | Potential <br> $(\mathrm{n}=87)$ | Non <br> $(\mathrm{n}=18)$ | Total <br> $(\mathrm{n}=177)$ | $F$ | Sig |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| Health Consciousness |  |  |  |  |  |  |
| $\quad$ Search for | $\mathbf{4 . 2 5}$ | 4.13 | 3.72 | 4.14 |  |  |
| healthy alternatives | $(0.76)$ | $(0.76)$ | $(0.89)$ | $(0.78)$ | 3.277 | .040 |
| Exercise | $\mathbf{3 . 0 7}$ | 2.24 | 2.33 | 2.59 |  | 12.704 |
|  | $(1.15)$ | $(1.02)$ | $(0.84)$ | $(1.11)$ |  |  |
| Skip meals | 2.75 | $\mathbf{3 . 1 8}$ | 2.22 | 2.91 | 3.927 | .022 |
| Self-efficacy for healthy behavior | $(1.48)$ | $(1.46)$ | $(1.17)$ | $(1.46)$ |  |  |
| Take good care of health | $\mathbf{3 . 4 6}$ | 2.90 | 2.94 | 3.14 |  |  |
| Willing to consume | $\mathbf{3 . 6 5}$ | $(0.98)$ | $(1.00)$ | $(1.06)$ | 5.912 | .003 |
| $\quad$ less delicious products | $(1.01)$ | $(0.96)$ | $(0.97)$ | $(1.02)$ | 7.428 | .001 |
| Self-perception |  |  |  |  |  |  |
| Physically healthy | $\mathbf{3 . 6 5}$ | 3.04 | $\mathbf{3 . 2 8}$ | 3.31 |  |  |
|  | $(0.74)$ | $(0.80)$ | $(0.67)$ | $(0.82)$ | 12.183 | .000 |

Note: The numbers in the table indicate means, with standard deviations in parentheses.

Chi-square test of independence was performed to examine the relation between consumer segments and behavioral characteristics. Consumption location and purchase channels were found to be significantly related with consumer segments ( $p<0.05$ ). Majority of current users consumed products at home ( $50 \%$ ), followed by workplace ( $23.6 \%$ ) and $16.7 \%$ consumed products at purchase points. $39.1 \%$ of potential users prefer to consume products at workplace, followed by $28.7 \%$ who wanted to consume at home. A significantly high proportion of potential users wanted to consumed Ready-To-Drink meal replacement while commuting ( $25.3 \%$ ). Convenience stores were found to be significantly related to consumer segments ( $p<$ 0.05 ) and were most preferred by major proportion of potential users at $85.1 \%$. Direct sales were also significantly related to consumer segments and in comparison, higher percentage of current users purchased products by direct sales (18.1\%)

Table 4.5: Consumer Segments by Behavioral Characteristics

| Characteristics | Current <br> $(\mathrm{n}=72)$ | Potential <br> $(\mathrm{n}=87)$ | Total <br> $(\mathrm{n}=159)$ | $x^{2}$ | Sig' |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Behavioral |  |  |  |  |  |
| Consumption Location <br> Home | $\mathbf{3 6 ( 5 0 \% )}$ | $25(28.7 \%)$ | $61(38.4 \%)$ | 18.543 | .001 |
| Workplace | $17(23.6 \%)$ | $\mathbf{3 4}(\mathbf{3 9 . 1 \% )}$ | $51(32.1 \%)$ |  |  |
| Purchase Point | $\mathbf{1 2 ( 1 6 . 7 \% )}$ | $6(6.9 \%)$ | $18(11.3 \%)$ |  |  |
| On-the-Go | $6(8.3 \%)$ | $\mathbf{2 2 ( 2 5 . 3 \% )}$ | $28(17.6 \%)$ |  |  |
| $\quad$ Other | $1(1.4 \%)$ | $0(0.0 \%)$ | $1(0.6 \%)$ |  |  |
| Purchase Channels |  |  |  |  |  |
| $\quad$ Convenience | $35(48.6 \%)$ | $\mathbf{7 4 ( 8 5 . 1 \% )}$ | $109(68.6 \%)$ | 24.275 | .000 |
| store |  |  |  |  |  |
| Supermarket | $29(40.3 \%)$ | $46(52.9 \%)$ | $75(47.2 \%)$ | 2.508 | .113 |
| Direct sales | $\mathbf{1 3}(\mathbf{1 8 . 1 \% )}$ | $3(3.4 \%)$ | $16(10.1 \%)$ | 9.288 | .002 |
| Online | $22(30.6 \%)$ | $17(19.5 \%)$ | $39(245 \%)$ | 2.582 | .108 |
| Others | $6(8.3 \%)$ | $0(0.0 \%)$ | $6(3.8 \%)$ | 7.534 | .006 |

Note: The numbers in the table indicate means, with standard deviations in parentheses.

### 4.2.2 Benefit Segmentation

The cluster analysis was used to segment 158 potential users and current users based on benefit sought. Three important segments were identified: cluster
one 'Convenience and Time saving' ( $21.5 \%, \mathrm{n}=34$ ), cluster two 'Nutrition and Sport supplement' $(55.1 \%, \mathrm{n}=87)$, and cluster three 'Weight control' $(20.9 \%, \mathrm{n}=33)$.

Table 4.6: Result of Cluster Analysis on Benefit Sought

| Benefit sought | Cluster 1 | Cluster 2 |  | Cluster 3 Cluster 4 |  | $F$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: |
| $(n=34)$ | $(n=87)$ | $(n=33)$ | $(n=4)$ |  | Sig |  |
| Cluster name | Time and | Sport and | Weight | Irrational |  |  |
| Taste | Convenience | Nutrition | Control |  |  |  |
| Convenience | 3.91 | 4.10 | $\mathbf{4 . 1 8}$ | 3.00 | 3.154 | .027 |
| Nutritional Value | $\mathbf{4 . 4 4}$ | 4.16 | 3.97 | 2.50 | 13.577 | .000 |
| Time-saving | 4.44 | $\mathbf{4 . 6 7}$ | 4.18 | 1.75 | 38.588 | .000 |
| Cost-saving | $\mathbf{4 . 2 6}$ | 4.02 | 3.58 | 2.00 | 12.284 | .000 |
| Weight Control | 2.97 | $\mathbf{3 . 9 8}$ | 2.88 | 3.25 | 19.522 | .000 |
| Sport Supplement | 2.32 | 4.14 | $\mathbf{4 . 5 8}$ | 1.75 | 85.312 | .000 |
| Medical purpose | 2.82 | $\mathbf{4 . 0 0}$ | 3.18 | 2.25 | 16.367 | .000 |

Note: The numbers in the table indicate means.

Cross tabulation analysis found that there were more percentage of cluster three 'Weight-Control' who were current users (57.6\%). For cluster one 'Time and Convenience' and cluster two 'Sport and Nutrition', potential users had higher percentage ( $52.9 \%$ and $59.8 \%$, respectively)

Table 4.7: Consumer Segments by Clusters

| Consumer Segment | Cluster 1 <br> $(n=34)$ | Cluster 2 <br> $(n=87)$ | Cluster 3 <br> $(n=33)$ | Total <br> $(n=154)$ |
| :--- | :---: | :---: | :---: | :---: |
| Cluster name | Time and | Sport and | Weight |  |
|  | Convenience | Nutrition | Control |  |
| Current User | $16(47.1 \%)$ | $35(40.2 \%)$ | $\mathbf{1 9 ( 5 7 . 6 \% )}$ | $70(45.4 \%)$ |
| Potential User | $\mathbf{1 8}(\mathbf{5 2 . 9 \%})$ | $\mathbf{5 2 ( 5 9 . 8 \% )}$ | $14(42.2 \%)$ | $84(54.5 \%)$ |

Note: The numbers in the table indicate $n$, with column percentage in parentheses.

For further analysis on cluster differences, first chi-square test of independence was performed to examine the relation between each cluster (cluster one:

Time and Convenience, Cluster two: Sport and Nutrition, Cluster three: Weight Control) and socio-demographic characteristics. All of the relations between these variables were insignificant ( $p>0.05$ ). The socio-demographic characteristics of the total current users and potential users from all three clusters were $64.4 \%$ female, $69.0 \%$ between the age of 23-31 years old, $99.4 \%$ had bachelor's degree or higher, $61 \%$ were office employees, $61 \%$ had monthly personal income of 20,001-60,000 THB, and $87.7 \%$ were Bangkok residents (See Appendix D: Cluster Differences by Sociodemographic Characteristics).

The second chi-square test of independence was performed to examine the relation between each cluster and behavioral and psychographic characteristics. For behavioral characteristics, consumption patterns, consumption locations, and two of the purchase channels were found to be significantly related with cluster segments ( $\mathrm{p}<0.05$ ). In terms of consumption pattern, the majority of cluster one and cluster two consumes Ready-To-Drink meal replacement occasionally (55.9\% and $49.4 \%$ respectively), followed by few times a week ( $32.4 \%$ and $19.5 \%$ respectively), while cluster three had higher percentages of respondents who consume periodically ( $33.3 \%$ ) and once a week ( $15.2 \%$ ) than the other clusters. In terms of consumption location, the majority of cluster one consumes Ready-To-Drink meal replacement at their workplaces ( $47.1 \%$ ), and cluster two and cluster three at home ( $34.5 \%$ and $54.5 \%$, respectively). However, cluster two has significantly higher percentage of people who consume Ready-To-Drink on-the-go and at purchase points ( $24.1 \%$ and $14.9 \%$, respectively). In terms of purchase channels, cluster one and two have the highest percentage of purchasing products from convenient store ( $76.5 \%$ and $73.6 \%$ ), while cluster three has the highest percentage of purchasing products from online direct sales ( $27.3 \%$ ). For psychographic characteristics-busyness, cluster two has the highest percentage of people who can manage daily tasks ( $74.4 \%$ ), while cluster one has the highest percentage of people who cannot manage daily tasks (48.4\%).

Table 4.8: Cluster Differences by Behavioral and Psychographic Characteristics

| Characteristics | $\begin{gathered} \hline \text { Cluster } 1 \\ (n=34) \end{gathered}$ | $\begin{gathered} \hline \text { Cluster } 2 \\ (n=87) \end{gathered}$ | $\begin{gathered} \hline \text { Cluster } 3 \\ (n=33) \end{gathered}$ | Total $(n=154)$ | $x^{2}$ | Sig |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Time and Convenience | Sport and Nutrition | Weight <br> Control |  |  |  |
| Behavioral |  |  |  |  |  |  |
| Consumption Pattern |  |  |  |  |  |  |
| Occasionally | 19 (55.9\%) | 43 (49.4\%) | 11 (33.3\%) | 73 (47.4\%) | 22.864 | . 011 |
| Periodically | 1 (2.9\%) | 13 (14.9\%) | 11 (33.3\%) | 25 (16.2\%) |  |  |
| Once a week | 2 (5.9\%) | 8 (9.2\%) | 5 (15.2\%) | 15 (9.7\%) |  |  |
| Few times a week | 11 (32.4\%) | 17 (19.5\%) | 2 (6.1\%) | 30 (19.5\%) |  |  |
| Workdays | 1 (2.9\%) | 3 (3.4\%) | 1 (3.0\%) | 5 (3.2\%) |  |  |
| Everyday | 0 (0.0\%) | 3 (3.4\%) | 3 (9.1\%) | 6 (3.9\%) |  |  |
| Consumption Location |  |  |  |  |  |  |
| Home | 11 (32.4\%) | $30(34.5 \%)$ | 18 (54.5\%) | 59 (38.3\%) | 17.233 | . 028 |
| Workplace | 16 (47.1\%) | 23 (26.4\%) | 10 (30.3\%) | 49 (31.8\%) |  |  |
| Purchase Point | 2 (5.9\%) | 13 (14.9\%) | 2 (6.1\%) | 17 (11.0\%) |  |  |
| On-the-Go | 5 (14.7\%) | 21 (24.1\%) | 2 (6.1\%) | 28 (18.2\%) |  |  |
| Other | 0 (0.0\%) | 0 (0.0\%) | 1 (3.0\%) | 1 (0.6\%) |  |  |
| Consumption Time |  |  |  |  |  |  |
| Morning | 12 (35.3\%) | 36 (41.4\%) | 14 (42.4\%) | 62 (40.3\%) | 5.642 | . 687 |
| Noon | 4 (11.8\%) | 6 (6.9\%) | 1 (3.0\%) | 11 (7.1\%) |  |  |
| Afternoon | 6 (17.6\%) | 11 (12.6\%) | 2 (6.1\%) | 19 (12.3\%) |  |  |
| Evening | 8 (23.5\%) | 27 (31.0\%) | 13 (39.4\%) | 48 (31.2\%) |  |  |
| Late evening | 4 (11.8\%) | 7 (8.0\%) | 3 (9.1\%) | 14 (9.1\%) |  |  |
| Purchase Channels |  |  |  |  |  |  |
| Convenience store | 26 (76.5\%) | $64(73.6 \%)$ | 15 (45.5\%) | 105 (68.2\%) | 10.095 | . 006 |
| Supermarket | 15 (44.1\%) | 46 (52.9\%) | 11 (33.3\%) | 72 (46.8\%) | 3.791 | . 150 |
| Direct sales | 0 (0.0\%) | 6 (6.9\%) | 9 (27.3\%) | 15 (9.7\%) | 16.007 | . 000 |
| Online | 5 (14.7\%) | 23 (26.4\%) | 11 (33.3\%) | 39 (25.3\%) | 3.203 | . 202 |
| Others | 2 (5.9\%) | 3 (3.4\%) | 1 (3.0\%) | 6 (3.9\%) | 0.471 | . 790 |
| psychographic |  |  |  |  |  |  |
| Level of busyness |  |  |  |  |  |  |
| Manageable | 16 (51.6\%) | 64 (74.4\%) | 18 (60.0\%) | 98 (66.7\%) | 6.087 | . 048 |
| Unmanageable | 15 (48.4\%) | $22(25.6 \%)$ | 12 (40.0\%) | 49 (33.3\%) |  |  |

[^1]One-way ANOVA was used to compare the means between each cluster segments against different attitudes, using the F-distribution. All of the means differences were found to be insignificant ( $p>0.05$ ). In terms of health consciousness, the mean of the total profile for 'search for healthy alternatives' is 4.22 ( $\mathrm{SD}=0.67$ ), exercise is 2.59 ( $\mathrm{SD}=1.12$ ), water consumption is 3.08 ( $\mathrm{SD}=1.02$ ), fruit and vegetable consumption is 2.71 ( $\mathrm{SD}=0.72$ ), meal skipping is 2.99 ( $\mathrm{SD}=1.47$ ), instant meal consumption is 2.78 ( $\mathrm{SD}=1.06$ ), and snacking between meals is 3.31 ( $\mathrm{SD}=1.26$ ). In terms of self-efficacy for healthy behavior, the mean of the total profile for 'take good care of health' is 3.17 ( $\mathrm{SD}=1.06$ ), 'willing to pay more for healthier products' is 4.01 ( $\mathrm{SD}=0.78$ ), and 'willing to consume less delicious product if it is healthier' is 3.52 ( $\mathrm{SD}=0.96$ ). In terms of diet preference, the mean of the total profile for 'like to try new things' is $3.72(\mathrm{SD}=0.82)$ and 'able to eat the same thing repeatedly' is $3.71(\mathrm{SD}=0.91)$. In terms of self-perception, the mean of the total profile for 'happy with own body' is 3.17 ( $\mathrm{SD}=1.00$ ) and 'physically healthy' is 3.31 ( $\mathrm{SD}=0.84$ ) (See Appendix E: Cluster Differences by Consumers' Attitudes).

One-way ANOVA was also used to compare the means between each cluster segments against different the importance of each product attributes, using the F-distribution. In terms of important nutritional attributes, the means differences on high fiber, low calories, low carbohydrate and sugar, low fat, low sodium, and specific compound added were significant ( $\mathrm{p}<0.05$ ). The means of cluster one on all significant attributes are relatively low compared to other clusters. The means of cluster two 'Sport and Nutrition' on high fiber, low fat, low sodium and specific compound added are highest at $4.27(\mathrm{SD}=0.68), 4.42(\mathrm{SD}=0.74), 4.31(\mathrm{SD}=0.72)$, and $3.23(\mathrm{SD}=0.90)$, respectively. The means of cluster three 'Weight Control', on low calories and low carbohydrate and sugar are highest at $4.55(\mathrm{SD}=0.57)$ and 4.39 ( $\mathrm{SD}=0.76$ ), respectively. In terms of important convenience attributes, the means difference on time-saving was significant ( $\mathrm{p}<0.05$ ). The means of cluster one and two are similar at 4.25 ( $\mathrm{SD}=0.76$ ) and $4.28(\mathrm{SD}=0.66)$, while cluster three is at $3.90(\mathrm{SD}=0.75)$.

Table 4.9: Results of ANOVA - Cluster Differences by Product Attributes

| Attributes | Cluster 1 $(n=34)$ | Cluster 2 $(n=87)$ | $\begin{gathered} \hline \text { Cluster } 3 \\ (n=33) \end{gathered}$ | $\begin{gathered} \text { Total } \\ (n=154) \end{gathered}$ | $F$ | Sig |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Time and Convenience | Sport and Nutrition | Weight Control |  |  |  |
| Important nutritional attributes |  |  |  |  |  |  |
| Complete nutrition | $\begin{gathered} 4.09 \\ (0.93) \end{gathered}$ | $\begin{gathered} 4.40 \\ (0.67) \end{gathered}$ | $\begin{gathered} 4.16 \\ (0.64) \end{gathered}$ | $\begin{gathered} 4.28 \\ (0.74) \end{gathered}$ | 2.535 | . 083 |
| High in protein | $\begin{gathered} 3.91 \\ (0.78) \end{gathered}$ | $\begin{gathered} 4.19 \\ (0.74) \end{gathered}$ | $\begin{gathered} 3.97 \\ (0.95) \end{gathered}$ | $\begin{gathered} 4.08 \\ (0.80) \end{gathered}$ | 1.830 | . 164 |
| High in fiber | $\begin{gathered} 3.72 \\ (0.92) \end{gathered}$ | $\begin{gathered} 4.27 \\ (0.68) \end{gathered}$ | $\begin{gathered} 3.84 \\ (0.73) \end{gathered}$ | $\begin{gathered} 4.06 \\ (0.78) \end{gathered}$ | 8.011 | . 000 |
| Low calories | $\begin{gathered} 3.34 \\ (0.97) \end{gathered}$ | $\begin{gathered} 4.36 \\ (0.78) \end{gathered}$ | $\begin{gathered} 4.55 \\ (0.57) \end{gathered}$ | $\begin{gathered} 4.18 \\ (0.90) \end{gathered}$ | 23.645 | . 000 |
| Low carbohydrates/sugar | $\begin{gathered} 3.91 \\ (0.93) \end{gathered}$ | $\begin{gathered} 4.33 \\ (0.77) \end{gathered}$ | $\begin{gathered} 4.39 \\ (0.76) \end{gathered}$ | $\begin{gathered} 4.25 \\ (0.82) \end{gathered}$ | 3.732 | . 026 |
| Low fat | $\begin{gathered} 3.44 \\ (0.91) \end{gathered}$ | $\begin{gathered} 4.42 \\ (0.74) \end{gathered}$ | $\begin{gathered} 4.35 \\ (0.71) \end{gathered}$ | $\begin{gathered} 4.19 \\ (0.87) \end{gathered}$ | 19.478 | . 000 |
| Low sodium | $\begin{gathered} 3.84 \\ (0.90) \end{gathered}$ | $\begin{gathered} 4.31 \\ (0.72) \end{gathered}$ | $\begin{gathered} 3.94 \\ (0.68) \end{gathered}$ | $\begin{gathered} 4.14 \\ (0.78) \end{gathered}$ | 5.890 | . 003 |
| Energizing <br> (e.g., contain caffeine) | $\begin{gathered} 2.78 \\ (1.07) \end{gathered}$ | $\begin{gathered} 3.23 \\ (0.92) \end{gathered}$ | $\begin{gathered} 3.06 \\ (1.06) \end{gathered}$ | $\begin{gathered} 3.10 \\ (0.99) \end{gathered}$ | 2.491 | . 086 |
| Specific compound added (e.g., collagen, l-carnitine, etc.) | $\begin{gathered} 2.72 \\ (0.89) \end{gathered}$ | $\begin{gathered} 3.23 \\ (0.90) \end{gathered}$ | $\begin{gathered} 2.58 \\ (0.92) \end{gathered}$ | $\begin{gathered} 2.99 \\ (0.94) \end{gathered}$ | 7.710 | . 001 |
| Important convenience attributes |  |  |  |  |  |  |
| Ease of consumption | $\begin{gathered} 4.31 \\ (0.82) \end{gathered}$ | $\begin{gathered} 4.33 \\ (0.62) \end{gathered}$ | $\begin{gathered} 4.23 \\ (0.56) \end{gathered}$ | $\begin{gathered} 4.30 \\ (0.65) \end{gathered}$ | . 267 | . 766 |
| Easy to find | $\begin{gathered} 4.31 \\ (0.69) \end{gathered}$ | $\begin{gathered} 4.33 \\ (0.66) \end{gathered}$ | $\begin{gathered} 4.10 \\ (0.60) \end{gathered}$ | $\begin{gathered} 4.28 \\ (0.66) \end{gathered}$ | 1.460 | . 236 |
| Portability | $\begin{gathered} 3.75 \\ (0.92) \end{gathered}$ | $\begin{gathered} 4.10 \\ (0.80) \end{gathered}$ | $\begin{gathered} 3.81 \\ (0.75) \end{gathered}$ | $\begin{gathered} 3.97 \\ (0.83) \end{gathered}$ | 2.965 | . 055 |
| Time-saving | $\begin{gathered} 4.25 \\ (0.76) \end{gathered}$ | $\begin{gathered} 4.28 \\ (0.66) \end{gathered}$ | $\begin{gathered} 3.90 \\ (0.75) \end{gathered}$ | $\begin{gathered} 4.19 \\ (0.71) \end{gathered}$ | 3.390 | . 036 |

Note: The numbers in the table indicate means, with standard deviations in parentheses.

### 4.2.3 Factors Influencing the Intention to Purchase

A paired sample $t$-test was conducted to compare each factors of consumer perceived value between importance on choosing regular daily diet and Ready-To-Drink meal replacement satisfaction level. Taste is the most important factor
in regards of choosing a regular diet ( $M=4.27, S D=0.68$ ), followed by value for the price ( $M=4.03, S D=0.71$ ) and 'make me feel good' ( $M=3.90, S D=0.76$ ), respectively. However, the paired sample $t$-test results showed that consumer satisfaction toward Ready-To-Drink meal replacement on taste ( $M=3.99, S D=0.89$ ), value for the price ( $M=3.69, S D=0.99$ ), and 'make me feel good' $(M=3.69, S D=0.86)$ were significantly lower ( $p<0.05$ ). In regards of satisfaction, healthiness is the most satisfied factor ( $M=4.28, S D=0.78$ ), followed by nutrition ( $M=4.26, S D=0.76$ ). The scores of both factors on satisfaction ( $M=3.97, S D=0.79$ and $M=3.84, S D=0.88$ ) are significantly higher than importance on choosing regular diet ( $p<0.05$ ). Convenience, 'keep me full', and visual appeal did not differ significantly ( $p>0.05$ )

Table 4.10: Results of $t$-test and Descriptive Stats for Consumer Perceived Value

| Outcome | Importance on <br> choosing diet | RTD-MR <br> Satisfaction | Mean Diff. | $t$ | Sig. |
| :--- | :---: | :---: | :---: | :---: | :---: |
| Taste | $\mathbf{4 . 2 7}$ | 3.99 | 0.28 | 3.470 | .001 |
|  | $\mathbf{( 0 . 6 8 )}$ | $(0.89)$ | $(1.01)$ |  |  |
| Visual appeal | 3.38 | 3.35 | 0.03 | .340 | .735 |
|  | $(0.74)$ | $(0.88)$ | $(0.93)$ |  |  |
| Nutrition | 3.84 | $\mathbf{4 . 2 6}$ | -0.42 | -5.268 | .000 |
|  | $(0.88)$ | $\mathbf{( 0 . 7 6 )}$ | $(1.01)$ |  |  |
| Healthiness | 3.97 | $\mathbf{4 . 2 8}$ | -0.30 | -4.080 | .000 |
|  | $(0.79)$ | $\mathbf{( 0 . 7 8 )}$ | $(0.93)$ |  |  |
| Keep me full | 3.78 | 3.82 | -0.04 | -.495 | .621 |
|  | $(0.84)$ | $(0.92)$ | $(1.12)$ |  |  |
| Make me feel good | $\mathbf{3 . 9 0}$ | 3.69 | 0.21 | 2.779 | .006 |
|  | $\mathbf{( 0 . 7 6 )}$ | $(0.86)$ | $(0.94)$ |  |  |
| Value for the price | $\mathbf{4 . 0 3}$ | 3.69 | 0.34 | 3.861 | .000 |
|  | $\mathbf{( 0 . 7 1 )}$ | $(0.99)$ | $(1.09)$ |  |  |
| Convenience | 3.96 | 4.08 | -0.11 | -1.727 | .086 |

Note: The numbers in the table indicate means, with standard deviations in parentheses.

Multiple regression analysis was used to test if the following factors significantly influence the intention to purchase Ready-To-Drink meal replacement of current users, potential users, and nonusers. Overall, three factors explained $20.4 \%$ of the variance in the total profile of current users, potential users, and nonusers ( $(\mathrm{R} 2=.20$,
$\mathrm{F}=3.08, \mathrm{p}<.05$ ). The results indicated higher purchase intention was significantly influenced by negative self-perception ( $\beta=-.24, \mathrm{p}<.05$ ), higher health consciousness ( $\beta=.25, \mathrm{p}<.05$ ), and dietary supplement intake ( $\beta=.33, \mathrm{p}<.05$ ). For current users, three factors explained $38.4 \%$ of the variance ( $\mathrm{R} 2=.38, \mathrm{~F}=2.63$, $\mathrm{p}<.05$ ). Higher purchase intention was found to be significantly influenced by non-fussy diet preference ( $\beta=.29$, $\mathrm{p}<.05$ ), higher physical wellness ( $\beta=.27, \mathrm{p}<.05$ ), and lower physical activity ( $\beta=-.17$, $\mathrm{p}<.05$ ). For potential users, two factors explained $23.2 \%$ of the variance ( $\mathrm{R} 2=.23$, $\mathrm{F}=1.60, \mathrm{p}=.11$ ). Higher purchase intention was found to be significantly influenced by lower self-perception ( $\beta=-.31, \mathrm{p}<.05$ ) and lower ability to overcome busyness $(\beta=-.31$, $\mathrm{p}<.05$ ). For nonusers, the factors were non-significant. (See Appendix D: Multiple Regression on Factors Influencing Intention to Purchase).

Table 4.11: Multiple Regression on Factors Influencing Intention to Purchase

|  | Current User Potential User |  | Nonuser | Total |
| :---: | :---: | :---: | :---: | :---: |
| (Constant) | 1.186 | 3.893 | -3.427 | 1.074 |
| Perceived Value |  |  |  |  |
| Functional benefit | . 001 | -. 057 | 1.287 | -. 002 |
| Emotional benefit | -. 185 | -. 067 | . 003 | -. 046 |
| Perceived price | . 042 | -. 030 | -. 443 | . 124 |
| Perceived convenience | . 175 | -. 135 | -. 170 | -. 103 |
| Psychological factors |  |  |  |  |
| Self-perception | -. 024 | -.308* | -. 038 | -.241* |
| Health consciousness | . 156 | . 118 | . 924 | . 253 * |
| Self-efficacy | . 090 | . 144 | -1.254 | . 273 |
| Diet preference | .291* | -. 060 | 1.395 | . 080 |
| Situational factors |  |  |  |  |
| Physical wellness | .270** | . 088 | -. 638 | . 186 |
| Physical activity | -.171* | . 085 | 1.128 | . 050 |
| Level of busyness | -. 209 | -.287* | . 022 | -. 128 |
| Unhealthy eating habits | . 061 | . 179 | -. 551 | . 075 |
| Supplement intake | . 270 | -. 054 | . 152 | .330** |
| R | . 619 | . 481 | . 879 | . 452 |
| R Square | . 384 | . 232 | . 773 | . 204 |
| Adjusted R Square | . 238 | . 087 | . 034 | . 138 |
| $F$ | 2.632 | 1.600 | 1.046 | 3.08 |
| Sig. | . 006 | . 106 | . 537 | . 000 |

[^2]
## CHAPTER 5 CONCLUSIONS AND RECOMMENDATIONS

### 5.1 Conclusion and Managerial Implication

Overall, there was no significant difference in consumer segments in terms of socio-demographic. However, there was a higher proportion male current user which can be related to high amounts of current users who are in sport and nutrition segment, high proportion of female were nonusers and potential users which could means opportunity for marketing Ready-To-Drink meal replacement to female consumers. The term Ready-To-Drink meal replacement could be educated more to consumer to signify dietary functions since high percentage of all consumer segments did not know this term even though they had awareness of the products in the market. Online channels were the main source of product awareness for current users. Hence, online advertising should be tailored to broaden awareness to other segments. Current users also became aware of products by self-search which means that they were more conscious of their dietary needs. To reach potential users, communication focus should be expanded to other channels such as purchase points. Ready-To-Drink meal replacements can be successfully promoted to the same audience as dietary supplement users since there were many current users reportedly use dietary supplements and already had nutritional knowledge. Based on research results, current users were health conscious consumer who had self-efficacy for healthy behaviors, while potential users were most prone to skipping meals but also open to less delicious but healthy products. Ready-To-Drink meal replacement can be marketed to meet this need. According to research findings, in addition to convenience store and supermarket, there were also opportunities to market products to be available near office buildings and public transportation locations.

Three major clusters were identified from current users and potential users based on benefit segmentation. First cluster sought convenience and time saving benefit. Second cluster 'Sport and Nutrition' sought nutritional, sport supplement, costsaving, and medical benefits. Third cluster 'Weight-control' sought weight-control and
taste benefits. 'Sport and Nutrition' was the largest cluster at $54 \%$. 'Time and Convenience' and 'Weight-control' cluster were equally smaller. 'Weight-control' had the lowest proportion of potential users which could mean that growth is in the 'Time and Convenience' and 'Sport and Nutrition' clusters. In terms of product attributes, 'Time and Convenience' users wanted complete nutrition and convenience. 'Sport and Nutrition' users wanted high protein, low fat, low sodium. They also sought high fiber and specific compound added. Time-saving and portability were also more concerned by this group. 'Weight-control' users wanted low calories, low carbohydrates and low sugar product which are easy to consume. On consumption habits and lifestyle, 'Time and Convenience' users were likely to purchase products at convenience store and consume products occasionally to few times a week at their workplace. They were busy consumer who felt that daily tasks were more than manageable. 'Sport and Nutrition' users were also likely to purchase products at convenience store and consume products occasionally to few times a week but at home, purchase points, and while commuting. They lived an active and manageable lifestyle. 'Weight-control' users were likely to purchase products from all channels, however they had higher tendency than other groups to purchase from direct sales and online channels since weight-control products were especially sold more by these channels. Heavy users were likely to consume product every day or periodically, while light users were likely to consume once a week. Marketing managers can use the insights from benefit segmentation.

Taste, value for the price, healthiness and 'make me feel good' were the most important factors for choosing daily diet among Thai urban professionals. Except for healthiness, consumer satisfaction of the products was significantly lower than the expectation of daily diet in three of the important factors. The satisfaction of Ready-To-Drink meal replacement products significantly exceeded expectation of regular diet in nutrition and healthiness. The influencing factors for purchasing intentions are negative self-perception, high health consciousness, and dietary supplement intake. Current users who were non-fussy eater and had low physical activities had higher purchase intention. Potential users were influenced by low self-perception and lower ability to overcome busyness.

For recommendations, marketing managers can communicate product function as meal replacement in addition to specific nutritional features, to serve as a solution for meal skipping behavior among potential users. Potential users are lower involvement consumer who have moderate health consciousness and self-efficacy for healthy behaviors. Information and marketing communication should be made at purchase points, especially in convenience stores which is the most preferred channel. Moreover, consumption behaviors suggested office buildings and public transportation locations such as mass transit system stations (BTS and MRT) can also be effective locations for new channels to market breakfast replacement suitable for commuting. Product features and marketing elements to be improved are taste, value for the price, and feel good factors. Marketing message should focus on personal appearance improvement and solution to daily life hassles. Dietary supplement users have high potential on becoming Ready-To-Drink meal replacement users. 'Sport and nutrition' users are the highest segment, followed by 'Time and Convenience'. There are lower opportunities on potential consumer in the 'Weight control' segment. Product features for "Sport and Nutrition should focus on high protein, low fat and low sodium with additional fiber and specific compound added for product differentiation. 'Time and Convenience' users seek quick and easy complete nutrition.

### 5.2 Research Limitation

Due to time constraint and limited budget, the questionnaire was distributed online and non-probability were used for data collection. The sample size was relatively small, and female biased. Therefore, the findings cannot be generalized to the entire population since such inference would need a sample that is larger and better represents the population. The unproportionate nature of the respondents in each consumer segments (current users, potential users, and nonusers) affected the integrity of the analysis results. Segmentation and clusters comparison were limited to the analogous socio-demographic characteristics of urban professional samples.

The term 'meal replacement' was not a widely generalized term among Thai consumers. Therefore, responses in the questionnaire may be distorted to individual misconceptions. In addition, Ready-To-Drink meal replacements in Thailand are still
limited. The product used by consumers as meal replacements in this research may not fit all definitions of meal replacement by the official Food and Drug Administration.

Despite best efforts in planning and structuring this study, the researcher had limited experience in descriptive research and analysis. While the methodology employed in this research fall into a quantitative research, causality interpretation from this research should be done in a cautious manner, especially for marketing managers aiming to launch new products.

### 5.3 Suggestion for Future Study

This research, influencing factors on purchase intentions were mainly determined in consumer behavior aspects in terms of situational and psychological influences. Further research can focus more on market stimuli (product, price, distribution, and communication) and explore the social influences and purchase decision in the Influences on Consumer Behavior model. In terms of samples, segmentation and clusters comparison were limited to the analogous sociodemographic characteristics of urban professional samples. The sample can be improved by widening the demographic and by using probability and proportion sampling. In determining the perceived value between regular diet and Ready-To-Drink meal replacement, the analysis can be improved by dividing the satisfaction of meal replacement products into product categories. To build on the insights from this research, comparative studies can be done between 'officers' and 'sportsman', and also between animal-based products and plant-based products.

## REFERENCES

## Books and Book Articles

Kotler, P., \& Keller, K. L. (2016). Marketing Management: Global Edition. Essex: Pearson Education Limited.

Lamb, C. W., Hair, J. F., \& Mcdaniel, C. (2018). MKTG: Principles of Marketing. Boston, MA: Cengage Learning.

## Electronic Media

Canadian Food Inspection Agency. (2018, May 11). Labeling Requirements for Foods for Special Dietary Use. Retrieved November 25, 2018, from Canadian Food Inspection Agency: http://www.inspection.gc.ca/food/labelling/food-labelling-for-industry/foods-for-special-dietary/eng/1393627685223/1393637610720? chap $=16 \#$ s29c16

CB Insights. (2017, December 14). We Analyzed 9 Of The Biggest Direct-toConsumer Success Stories To Figure Out The Secrets to Their Growth Here's What We Learned. Retrieved November 25, 2018, from CB Insights: https://www.cbinsights.com/research/direct-to-consumer-retail-strategies/
Euromonitor International. (2018, January). Consumer Lifestyles in Thailand. Retrieved November 25, 2018, from Euromonitor: http://www.euromonitor.com/

Euromonitor International. (2018, October). Weight Management and Wellbeing in Thailand. Retrieved November 25, 2018, from Euromonitor: http://www.euromonitor.com/

Euromonitor International. (2017, June). Weight Management and Wellbeing: Trends and Innovations. Retrieved November 25, 2018, from Euromonitor: http://www.euromonitor.com/

Ivanovitch, K., Klaewkla, J., Chongsuwat, R., Viwatwongkasem, C., \& Kitvorapat, W. (2014, December 2). The Intake of Energy and Selected Nutrients by Thai

Urban Sedentary Workers: An Evaluation of Adherence to Dietary
Recommendations. Retrieved November 25, 2018, from Hindawi:
https://www.hindawi.com/journals/jnme/2014/145182/
Krasny, L. T. (2004, December 3). Regulatory Issues: Meal Replacements Convenience or Compromise? Retrieved November 25, 2018, from Food Processing: https://www.foodprocessing.com/articles/2004/53/

Srikant, M. (2017, April 10). A meal-replacement shake for busy professionals.
Retrieved November 25, 2018, from Smart CEO:
http://smartceo.co/a-meal-replacement-shake-for-busy-professional

APPENDICES

## APPENDIX A QUESTIONS FOR IN-DEPTH INTERVIEWS

1. What are the factors you use for choosing a regular daily diet?
2. What does your daily diet usually look like?
3. How much do you spend on a regular meal?
4. Do you think your current diet is healthy? If not, what are your concerns?
5. Do you find your workday diet convenient? If not, what are the inconveniences?
6. How often do you find yourself skipping a meal or not having a proper meal?
7. What are your usual reasons for skipping a meal or not having a proper meal?
8. How did you become aware of meal replacement drinks?
9. Which meal replacement drinks have you consumed in the past 12 months?
10. Where did you buy the product?
11. What was your purpose in purchasing the product?
12. How satisfied were you with the product?
13. What would be the reasons for you to stop consuming meal replacement drinks?
14. Describe your meal replacement drink consumption habit.
15. Do you look for a better solution to your diet? If so, what features do you seek?
16. How would you feel about a meal replacement drink, marketed directly to urban professionals as a healthy and convenient solution to a busy lifestyle?
17. Are you a health-conscious person?
18. Describe your healthy and unhealthy behaviors.
19. Demographic questions (gender, age, occupation, household size)

## APPENDIX B

## A SAMPLE OF SURVEY QUESTIONNAIRE

## Part 1: preliminary questions

1. How important are these following factors on choosing your regular daily diet? ( $1=$ very unimportant, $5=$ very important)
a. Taste
b. Visual appeal
c. Nutrition
d. Healthiness (not bad for health)
e. Keep me full
f. Make me feel good
g. Value for the price
h. Convenience
2. Do you know what is "meal replacement drink"?
a. Yes
b. No

## Definition of meal replacement drink

Meal replacement drink or shake is a formulated drink that can replace one or more daily meals. It gives minimum energy of 225 calories per serving and has a specified amount and quality of protein, carbohydrates, fat, and various vitamins and mineral nutrients. It can be used for many purposes such as weight reduction diet, daily meals replacement, instant breakfast, and sports supplement.
3. Which of these meal replacement drinks have you seen before?
(Select all that apply)
a. High protein supplements (e.g., Meiji High Protein, FAV High protein milk)
b. Plant-based drinks (e.g., Tipco Beat High Protein, Hooray! Better Shake)
c. Weight-control product (e.g., BodyKey by Nutrilite-Amway, Herbalife)
d. Medical nutritional drinks (e.g., Ensure, Gen-DM)
e. None (proceed to 1-E)
f. Others (please specify)

## Part 1-A: Consumers who have awareness of meal replacement products

4. How did you become aware of the meal replacement products you have selected (Select all that apply)?
a. TV/Radio
b. Online
c. Personal Recommendation
d. Self-search
e. Store browse
f. Direct sales
g. Others (please specify)
5. How relevant are the benefit claims of products in the market to your needs?
a. Very relevant
b. Relevant
c. So-so
d. Not so relevant
e. Not at all relevant
6. Which meal replacement drinks have you consume before? (Select all that apply)
a. High protein supplements (e.g., Meiji High Protein, FAV High protein milk)
b. Plant-based drinks (e.g., Tipco Beat High Protein, Hooray! Better Shake)
c. Weight-control product (e.g., BodyKey by Nutrilite-Amway, Herbalife)
d. Medical nutritional drinks (e.g., Ensure, Gen-DM)
e. None (proceed to 1-E)
f. Others (please specify)

## Part 1-B: Consumers who have tried meal replacement products

7. How well do meal replacement drinks in the market actually meet your needs?
a. Very well
b. Well
c. So-so
d. Not so well
e. Not at all well
8. How satisfied were you with your choice of meal replacement drink according to each following factor? ( $\mathbf{1}=$ very unsatisfied, $\mathbf{5}=$ very satisfied $)$
a. Taste
b. Visual appeal
c. Nutrition
d. Healthiness (not bad for health)
e. Keep me full
f. Make me feel good
g. Value for the price
h. Convenience
9. Have you consumed meal replacement drinks in the past 12 months?
a. Yes
b. No

## Part 1-C: Potential for future consumption

10. How would you feel about a meal replacement drink, marketed directly to urban professionals as a healthy and convenient solution to a busy lifestyle?
a. Very interested
b. Interested
c. So-so
d. Not so interested
e. Not at all interested
11. How likely will you consume meal replacement drinks in the next 12 months?
a. Definitely
b. Very likely
c. Likely
d. Unlikely
e. Definitely not

## Part 2: Current user and Potential user

12. Which meal replacement drinks will you be interested to consume in the future? (Select all that apply)
a. High protein supplements (e.g., Meiji High Protein, FAV High protein milk)
b. Plant-based drinks (e.g., Tipco Beat High Protein, Hooray! Better Shake)
c. Weight-control product (e.g., BodyKey by Nutrilite-Amway, Herbalife)
d. Medical nutritional drinks (e.g., Ensure, Gen-DM)
e. None (proceed to 1-E)
f. Others (please specify)
13. What would be your purpose for consuming meal replacement drinks? Please rate the factors below according to the level of importance.
( $1=$ very unimportant, $5=$ very important $)$
a. Taste
b. Convenience
c. Nutritional Value
d. Time-saving
e. Cost-saving
f. Weight Control
g. Sport Supplement
h. Medical purpose
i. Others (please specify)
14. How often are you likely to consume meal replacement drinks?
a. Occasionally
b. Periodically
c. Once a week
d. Few times a week
e. Workdays
f. Everyday
15. Where are you most likely to consume meal replacement drinks?
a. Home
b. Workplace
c. Purchase point
d. On-the-go (while commuting)
e. Others (please specify)
16. When are you most likely to consume meal replacement drinks?
a. Morning
b. Noon
c. Afternoon
d. Evening
e. Late evening
17. Where are you most likely to purchase meal replacement drinks (select all that apply)
a. Convenience store
b. Supermarket
c. Direct sales
d. Online
e. Others (please specify)

## Part 3: Product Attributes

18. How important are each following nutritional factors on your meal replacement drinks consumption? ( $\mathbf{1}=$ very unimportant, $\mathbf{5}=$ very important $)$
a. Complete nutrition
b. High in protein
c. High in fiber
d. Low calories
e. Low carbohydrates/sugar
f. Low fat
g. Low sodium
h. Energizing (e.g., contain caffeine)
i. Specific compound added (e.g., collagen, 1-carnitine, etc.)
19. How important are each following convenient factors on your meal replacement drinks consumption? ( $\mathbf{1}=$ very unimportant, $\mathbf{5}=$ very important $)$
a. Ease of consumption
b. Easy to find
c. Portability
d. Time-saving

## Part 4: Health behaviors and concerns

20. How much do you agree with the following statements?
( $1=$ strongly disagree, $5=$ strongly agree)
a. I search for healthy alternatives
b. I'm willing to pay more for healthier products
c. I'm willing to consume less delicious product if it's healthier
d. I'm happy with my body
e. I'm physically very healthy
f. I take very good care of my health
g. I like to try new things
h. I can eat the same thing repeatedly

## APPENDIX C

## TOTAL RESPONDENTS' SOCIO-DEMOGRAPHIC PROFILE

Table C: Total Respondents by Socio-demographic Characteristics

| Characteristics | Current $(\mathrm{n}=72)$ | Potential $(\mathrm{n}=87)$ | $\begin{gathered} \text { Non } \\ (\mathrm{n}=18) \end{gathered}$ | $\begin{gathered} \text { Total } \\ (\mathrm{n}=177) \\ \hline \end{gathered}$ | $x^{2}$ | Sig |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Socio-demographic |  |  |  |  |  |  |
| Gender |  |  |  |  |  |  |
| Male | 31 (45.6\%) | 22 (27.2\%) | 2 (11.1\%) | 55 (32.9\%) | 10.961 | . 027 |
| Female | 37 (54.4\%) | 58 (71.6\%) | 16 (88.9\%) | 111 (66.5\%) |  |  |
| Other | 0 (0.0\%) | 1 (1.2\%) | 0 (0.0\%) | 1 (0.6\%) |  |  |
| Age |  |  |  |  |  |  |
| 23-31 years | 43 (63.2\%) | 60 (75.0\%) | 13 (72.2\%) | 116 (69.9\%) | 2.470 | . 291 |
| 32-40 years | 25 (36.8\%) | 20 (25.0\%) | 5 (27.8\%) | 50 (30.1\%) |  |  |
| Education Level |  |  |  |  |  |  |
| Vocational | 0 (0.0\%) | 1 (1.2\%) | 0 (0.0\%) | 1 (0.6\%) | 3.679 | . 451 |
| Bachelor degree | 31 (45.6\%) | 47 (58.0\%) | 10 (55.6\%) | 88 (52.7\%) |  |  |
| Master degree | 37 (54.4\%) | 33 (40.7\%) | 8 (44.4\%) | 78 (46.7\%) |  |  |
| Occupation |  |  |  |  |  |  |
| Employee | 36 (52.9\%) | 55 (67.9\%) | 11 (61.1\%) | 102 (61.1\%) | 12.575 | . 127 |
| Business <br> Owner | 16 (23.5\%) | 8 (9.9\%) | 3 (16.7\%) | 27 (16.2\%) |  |  |
| Gov. Employee | 4 (5.9\%) | 1 (1.2\%) | 1 (5.6\%) | 6 (3.6\%) |  |  |
| Freelance | 4 (5.9\%) | 10 (12.3\%) | 0 (0.0\%) | 14 (8.4\%) |  |  |
| Multiple Occ. | 8 (11.8\%) | 7 (8.6\%) | 3 (16.7\%) | 18 (10.8\%) |  |  |
| Monthly Personal Income (THB) |  |  |  |  |  |  |
| < 20,001 | 5 (7.4\%) | 6 (7.4\%) | 0 (0.0\%) | 11 (6.6\%) | 3.480 | . 901 |
| 20,001-40,000 | 20 (29.4\%) | 24 (29.6\%) | 6 (33.3\%) | 50 (29.9\%) |  |  |
| 40,001-60,000 | 21 (30.9\%) | 25 (30.9\%) | 6 (33.3\%) | 52 (31.1\%) |  |  |
| 60,001-80,000 | 9 (13.2\%) | 16 (19.8\%) | 3 (16.7\%) | 28 (16.8\%) |  |  |
| > 80,000 | 13 (19.1\%) | 10 (12.3\%) | 3 (16.7\%) | 26 (15.6\%) |  |  |
| Type of dwelling |  |  |  |  |  |  |
| Single house | 25 (36.8\%) | 31 (38.3\%) | 9 (50.0\%) | 65 (38.9\%) | 11.112 | . 195 |
| Townhouse | 13 (19.1\%) | 17 (21.0\%) | 3 (16.7\%) | 33 (19.8\%) |  |  |
| Condominium | 25 (36.8\%) | 24 (29.6\%) | 4 (22.2\%) | 53 (31.7\%) |  |  |
| Comm. bldg. | 5 (7.4\%) | 9 (11.1\%) | 1 (5.6\%) | 15 (9.0\%) |  |  |
| Other | 0 (0.0\%) | 0 (0.0\%) | 1 (5.6\%) | 1 (0.6\%) |  |  |
| Location |  |  |  |  |  |  |
| Bangkok | 64 (94.1\%) | 67 (82.7\%) | 15 (83.3\%) | 146 (87.4\%) | 4.678 | . 096 |
| Suburban | 4 (5.9\%) | 14 (17.3\%) | 3 (16.7\%) | 21 (12.6\%) |  |  |

Note: The numbers in the table indicate means, with standard deviations in parentheses.

## APPENDIX D <br> CLUSTER DIFFERENCES BY SOCIO-DEMOGRAPHIC

Table D: Cluster Differences by Socio-demographic Characteristics

| Characteristics | Cluster 1 $(n=34)$ | Cluster 2 $(n=87)$ | Cluster 3 $(n=33)$ | Total $(n=154)$ | $x^{2}$ | Sig |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | Time and Convenience | Sport and Nutrition | Weight Control |  |  |  |
| Gender |  |  |  |  |  |  |
| Male | 13 (41.9\%) | 32 (37.2\%) | 6 (20.7\%) | 51 (34.9\%) | 4.242 | . 374 |
| Female | 18 (58.1\%) | 53 (61.6\%) | 23 (79.3\%) | 94 (64.4\%) |  |  |
| Other | 0 (0.0\%) | 1 (1.2\%) | 0 (0.0\%) | 1 (0.7\%) |  |  |
| Age |  |  |  |  |  |  |
| 23-31 years | 25 (80.6\%) | 55 (64.0\%) | 20 (71.4\%) | 100 (69.0\%) | 3.065 | . 216 |
| $32-40$ years | 6 (19.4\%) | 31 (36.0\%) | 8 (28.6\%) | 45 (31.0\%) |  |  |
| Education Level |  |  |  |  |  |  |
| Vocational training | 1 (3.2\%) | 0 (0.0\%) | 0 (0.0\%) | 1 (0.7\%) | 6.804 | . 147 |
| Bachelor degree | 17 (54.8\%) | 48 (55.8\%) | 11 (37.9\%) | 76 (52.1\%) |  |  |
| Master degree | 13 (41.9\%) | 38 (44.2\%) | 18 (62.1\%) | 69 (47.3\%) |  |  |
| Occupation |  |  |  |  |  |  |
| Employee | 20 (64.5\%) | 49 (57.0\%) | 20 (69.0\%) | 89 (61.0\%) | 7.749 | . 458 |
| Business Owner | 5 (16.1\%) | 15 (17.4\%) | 4 (13.8\%) | 24 (16.4\%) |  |  |
| Gov. <br> Employee | 0 (0.0\%) | 5 (5.8\%) | 0 (0.0\%) | 5 (3.4\%) |  |  |
| Freelance | 1 (3.2\%) | 10 (11.6\%) | 3 (10.3\%) | 14 (9.6\%) |  |  |
| Multiple Occ. | 5(16.1\%) | 7 (8.1\%) | 2 (6.9\%) | 14 (9.6\%) |  |  |
| Monthly Personal Income (THB) |  |  |  |  |  |  |
| <20,001 | 2 (6.5\%) | 9 (10.5\%) | 0 (0.0\%) | 11 (7.5\%) | 14.622 | 0.67 |
| 20,001-40,000 | 14 (45.2\%) | 24 (27.9\%) | 5 (17.2\%) | 43 (29.5\%) |  |  |
| 40,001-60,000 | 6 (19.4\%) | 29 (33.7\%) | 11 (37.9\%) | 46 (31.5\%) |  |  |
| 60,001-80,000 | 2 (6.5\%) | 14 (16.3\%) | 7 (24.1\%) | 23 (15.8\%) |  |  |
| > 80,000 | 7 (22.6\%) | 10 (11.6\%) | 6 (20.7\%) | 23 (15.8\%) |  |  |
| Location |  |  |  |  |  |  |
| Bangkok | 26 (83.9\%) | 76 (88.4\%) | 26 (89.7\%) | 128 (87.7\%) | 0.559 | . 756 |
| Suburban | 5 (16.1\%) | 10 (11.6\%) | 3 (10.3\%) | 18 (12.3\%) |  |  |

[^3]
## APPENDIX E

## CLUSTER DIFFERENCES BY CONSUMER'S ATTITUDES

Table 4.5: Results of ANOVA - Cluster Differences by Consumers' Attitudes
$\begin{array}{lcccccc}\hline & \begin{array}{c}\text { Cluster 1 } \\ (n=34)\end{array} & \begin{array}{c}\text { Cluster 2 } \\ (n=87)\end{array} & \begin{array}{c}\text { Cluster 3 } \\ (n=33)\end{array} & \begin{array}{c}\text { Total } \\ (n=154)\end{array} & F & \text { Sig } \\$\cline { 2 - 7 } Attitudes \& $\left.\begin{array}{c}\text { Time and }\end{array} & \begin{array}{c}\text { Sport and }\end{array} & \begin{array}{c}\text { Weight }\end{array} & & & \\ & \text { Convenience } & \text { Nutrition } \\ \text { Control }\end{array}\right)$

[^4]
## APPENDIX F <br> MULTIPLE REGRESSION ON FACTORS INFLUENCING INTENTION TO PURCHASE

Table D1: Multiple Regression on Factors Influencing Intention to Purchase (Total)

| Factors | Variables | Total |  |  |
| :---: | :---: | :---: | :---: | :---: |
|  |  | $\beta$ | $t$ | $p$ |
| (Constant) |  | 1.074 | 1.367 | . 173 |
| Perceived Value |  |  |  |  |
| Functional benefit | (nutrition, 'keep me full') | -. 002 | -. 014 | . 989 |
| Emotional benefit | (feel healthy, feel good) | -. 046 | -. 295 | . 768 |
| Perceived price | (value for the price) | . 124 | 1.034 | . 303 |
| Perceived convenience | (convenience) | -. 103 | -. 856 | . 393 |
| Psychological factors |  |  |  |  |
| Self-perception | ('happy with my body') | -. 241 | -2.981 | . 003 |
| Health consciousness | (Search for healthy alternatives) | . 253 | 2.162 | . 032 |
| Self-efficacy | (Care for own health, pay more for healthier products, consume less delicious products) | . 273 | 1.900 | . 059 |
| Personal diet preference | (Like to try new things, repetitive diet) | . 080 | . 692 | . 490 |
| Situational factors |  |  |  |  |
| Physical wellness | (Physically healthy) | . 186 | 1.794 | . 075 |
| Physical activity | (Exercise) | . 050 | . 680 | . 497 |
| Level of busyness | (Able to manage daily tasks) | -. 128 | -1.695 | . 092 |
| Unhealthy eating habits | (Skip meals, instant meals, snacks) | . 075 | . 659 | . 511 |
| Supplement usage | (Dietary supplements) | . 330 | 2.286 | . 024 |
|  | R |  | . 452 |  |
|  | R Square |  | . 204 |  |
| Adjusted R Square |  |  | . 138 |  |
| $F$ |  |  | 3.08 |  |
| Sig. |  |  | . 000 |  |

[^5]Table D2: Multiple Regression on Factors Influencing Intention to Purchase

|  | Current User |  |  | Potential User |  |  | Nonuser |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  | $\beta$ | t | $p$ | $\beta$ | t | $p$ | $\beta$ | t | $p$ |
| (Constant) | 1.186 | 1.435 | . 157 | 3.893 | 2.916 | . 005 | -3.427 | -0.735 | . 495 |
| Perceived Value |  |  |  |  |  |  |  |  |  |
| Functional benefit | . 001 | . 007 | . 995 | -. 057 | -. 293 | . 771 | 1.287 | 2.321 | . 068 |
| Emotional benefit | -. 185 | -1.049 | . 299 | -. 067 | -. 274 | . 785 | . 003 | . 010 | . 993 |
| Perceived price | . 042 | . 283 | . 778 | -. 030 | -. 163 | . 871 | -. 443 | -. 808 | . 456 |
| Perceived convenience | . 175 | 1.209 | . 232 | -. 135 | -. 767 | . 446 | -. 170 | -. 385 | . 716 |
| Psychological factors |  |  |  |  |  |  |  |  |  |
| Self-perception | -. 024 | -. 242 | . 809 | -. 308 | -2.764 | . 007 | -. 038 | -. 148 | . 888 |
| Health consciousness | . 156 | 1.017 | . 314 | . 118 | . 691 | . 492 | . 924 | 1.187 | . 289 |
| Self-efficacy | . 090 | . 534 | . 595 | . 144 | . 686 | . 495 | -1.254 | -1.515 | . 190 |
| Diet preference | . 291 | 2.152 | . 036 | -. 060 | -. 375 | . 709 | 1.395 | 1.067 | . 335 |
| Situational factors |  |  |  |  |  |  |  |  |  |
| Physical wellness | . 270 | 2.265 | . 027 | . 088 | . 583 | . 562 | -. 638 | -. 957 | . 383 |
| Physical activity | -. 171 | -2.239 | . 029 | . 085 | . 772 | . 443 | 1.128 | 1.809 | . 130 |
| Level of busyness | -. 209 | -1.787 | . 079 | -. 287 | -2.561 | . 013 | . 022 | . 047 | . 965 |
| Unhealthy eating habits | . 061 | . 482 | . 632 | . 179 | . 985 | . 328 | -. 551 | -1.233 | . 272 |
| Supplement usage | . 270 | 1.498 | . 140 | -. 054 | -. 253 | . 801 | . 152 | . 285 | . 787 |
| R |  | . 619 |  |  | . 481 |  |  | . 879 |  |
| R Square |  | . 384 |  |  | . 232 |  |  | . 773 |  |
| Adjusted R Square |  | . 238 |  |  | . 087 |  |  | . 034 |  |
| $F$ |  | 2.632 |  |  | 1.600 |  |  | 1.046 |  |
| Sig. |  | . 006 |  |  | . 106 |  |  | . 537 |  |

[^6]
## BIOGRAPHY

| Name | Miss Intuon Israprasas |
| :--- | :--- |
| Date of Birth | February 13, 1988 |
| Educational Attainment | 2011: Bachelor's Degree of Fine Arts |
|  | in Visual Communication Design, |
|  | Silpakorn University |
| Work Experiences | Marketing Communication Executive |
|  | COTTO, Siam Sanitary Ware Industry Co., Ltd. |


[^0]:    Note: The numbers in the table indicate means, with standard deviations in parentheses.

[^1]:    Note: The numbers in the table indicate $n$, with column percentages in parentheses.

[^2]:    Note: The numbers in the table indicate $\beta$, * Significant at $p<0.05$

[^3]:    Note: The numbers in the table indicate $n$, with column percentage in parentheses.

[^4]:    Note: The numbers in the table indicate means, with standard deviations in parentheses.

[^5]:    * Significant at $p<0.05$

[^6]:    * Significant at $p<0.05$

