

The copyright © of this thesis belongs to its rightful author and/or other copyright owner. Copies can be accessed and downloaded for non-commercial or learning purposes without any charge and permission. The thesis cannot be reproduced or quoted as a whole without the permission from its rightful owner. No alteration or changes in format is allowed without permission from its rightful owner.



**THE IMPACT OF MARKETING MIX ELEMENTS ON CONSUMER
PREFERENCE TOWARDS SUPPLEMENT PRODUCT AMONG UUM
STUDENTS**



UUM
By
MAISARAH BINTI MASRI

Universiti Utara Malaysia

**Thesis Submitted to
School of Business Management
Universiti Utara Malaysia
In Partial Fulfillment of the Requirement for the
Degree of Master Science (Management)**

PERMISSION TO USE

In presenting this project paper in partial fulfilment of the requirement for a postgraduate degree from Universiti Utara Malaysia, I agree that the University Library may make it freely available for inspection. I further agree that permission for copying of this project paper in any manner, in whole or in part, for scholarly purposes may be granted by my supervisor or in their absence, by the Dean of School of Business Management. It is understood that any copying or publication or use of this project paper or parts thereof for financial gain not be allowed without my written permission. It is also understood that due recognition shall be given to me and Universiti Utara Malaysia for any scholarly use which may be made of any material from my project paper.

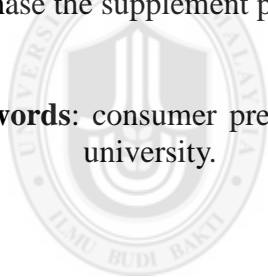
Request for permission to copy or make other use of material in this thesis, in whole or in part, should be addressed to:

Dean of School of Business Management
University Utara Malaysia
06010 UUM Sintok,
Kedah Darul Aman

ABSTRACT

Nowadays, we can see the entrepreneurs of supplements and cosmetics are also expanding rapidly. Various traditional plant commercialized and adapted to market needs. Supplement product marketing activities in Malaysia showed significant growth over the past few decades. This strong growth has led to questions about the true potential of marketing to further improve the reliability of the product on the consumer preferences of supplements among university students. Therefore, this study aimed to study the relationship between the consumer preferences with the marketing mix (product, price, promotion and distribution) towards supplement products. Research conducted at Universiti Utara Malaysia (UUM) and sample size in this study is 397 samples. The study used SPSS 22.0 to analyze the data. The methodology used in this research is method descriptive and inferential statistical analysis that involves the use of frequencies and percentages for analyzing the demographics of respondents, independent t-test samples, test the connection one-way ANOVA, Pearson correlation analysis and multiple regression analysis. Overall findings based on the analysis of the Pearson correlation test found the analysis shows the three hypotheses were supported and all independent variables named product, promotion and place distribution, is significant, while the hypothetical price is not significantly associated with elections with consumer to purchase the supplement products. The next discussion is provided in this study.

Keywords: consumer preferences, marketing mix (4Ps), supplement products, student university.



UUM
Universiti Utara Malaysia

ABSTRAK

Pada masa kini, kita dapat melihat usahawan makanan tambahan dan kosmetik juga berkembang dengan cepat. Pelbagai tumbuhan tradisional dikomersialkan dan disesuaikan dengan keperluan pasaran. Aktiviti pemasaran produk makanan tambahan di Malaysia menunjukkan pertumbuhan ketara sejak beberapa dekad yang lalu. Pertumbuhan yang kuat telah mencetuskan beberapa soalan mengenai potensi sebenar pemasaran untuk terus meningkatkan kebolehpercayaan terhadap pilihan pengguna keatas produk makanan tambahan dalam kalangan pelajar Universiti. Oleh itu, kajian ini bertujuan untuk mengkaji hubungan di antara pilihan pengguna dengan campuran pemasaran (produk, harga, promosi dan pengedaran) terhadap produk makanan tambahan. Penyelidikan yang dijalankan di Universiti Utara Malaysia (UUM) dan saiz sampel dalam kajian ini adalah 397 sampel. Kajian ini menggunakan SPSS 22.0 untuk menganalisis data. Kaedah yang digunakan dalam kajian ini adalah kaedah deskriptif dan analisis statistik inferensi yang melibatkan penggunaan frekuensi dan peratusan untuk menganalisis demografi responden, bebas sampel ujian-t, menguji sambungan sehalu analisis korelasi ANOVA, Pearson dan analisis regresi berganda. penemuan berdasarkan analisis ujian korelasi Pearson mendapati analisis menunjukkan tiga hipotesis dibina disokong dan semua pembolehubah bebas dinamakan produk, promosi dan pengedaran tempat, adalah penting, manakala harga hipotesis tidak dikaitkan dengan ketara dengan pilihan oleh pengguna untuk pembelian produk makanan tambahan. Perbincangan berikut disediakan dalam kajian ini.

Kata kunci: pilihan pengguna, campuran pemasaran (4P), produk makanan tambahan, pelajar universiti.

ACKNOWLEDGEMENT

“ In the name of Allah The Most Gracious and the Most Merciful”

First and foremost, Thank God, uttered deepest gratitude to Allah, Most Gracious, Most Merciful as with the consent and favor of God, finally I can prepare my thesis perfectly. And with His permission, this thesis also can benefit and knowledge to all readers or researchers.

On this occasion also, humbly dam sincerely, I want to say a big thank you to my supervisor because Dr Yaty binti Sulaiman has provided very good guidance, motivation constructive and creative ideas to be translated through this thesis. In addition, thanks to thousands of academic and administrative staff to have worked very well, especially in the preparation of this thesis. A big thank you also goes to Sultanah Bahiyah Library, UUM and Business School of Management (SBM) for providing the best service in terms of information and guidelines for the completion of this thesis.

In addition, thanks to my beloved father and mother, Masri bin. Wandi and Maimunah binti Abdullah, my sibling and also my friends Siti Hanis Jamail, NorFadhilah Jauhari, and others that has a lot of moral support, ideas, and pray to me from the beginning of this thesis so perfect. With the help of your prayers and blessings have enabled me to continue writing with diligence, passion and quality.

My deepest gratitude to all the truth, only God is able to return the favor and sacrifice you. Thanks.

Maisarah Masri
Master of Science (Management)

TABLE OF CONTENTS

CERTIFICATION OF RESEARCH PAPER	i
PERMISSION TO USE	ii
ABSTRACT	iii
ABSTRAK	iv
ACKNOWLEDGEMENT	v
TABLE OF CONTENT	vi
LIST OF TABLES	x
LIST OF FIGURES	xii
LIST OF ABBREVIATIONS	xiii
CHAPTER 1 INTRODUCTION	1
1.1 Introduction	1
1.2 Background of Study	4
1.3 Statement of the Problem	8
1.4 Research Objectives	11
1.5 Research Questions	12
1.6 Scope of Study	13
1.7 Significant of Study	13
1.8 Limitation o Study	14
1.9 Organization of Study	15
CHAPTER 2 LITERATURE REVIEW	16
2.1 Introduction	16
2.2 Consumer Preferences	16
2.3 Definition of Supplement	17
2.4 The Concept of Marketing Mix	19
2.5 Related Research	21
2.5.1 Product	21
a. Packaging	22
b. Quality Product	24

c. Label	25
2.5.2 The Relationship between Product and Consumer Preferences towards Supplement Product	28
2.5.3 Price	32
2.5.4 The Relationship between Price and Consumer Preferences towards Supplement Product	34
2.5.5 Place	35
2.5.6 The Relationship between Place and Consumer Preferences towards Supplement Product	37
2.5.7 Promotion	39
2.5.8 The Relationship between Promotion and Consumer Preferences towards Supplement Product	40
2.6 Conclusion	43
CHAPTER 3 METHODOLOGY	44
3.1 Introduction	44
3.2 The Theoretical Framework	44
3.3 Hypothesis	46
3.4 Research Design	46
3.5 Sampling Technique	48
3.5.1 Sampling Procedure	49
3.5.2 Sampling Size	49
3.5.3 Sampling Method	50
3.6 Target Population	51
3.7 Questionnaire Design	51
3.7.1 Demographic Segmentation	54
3.7.2 Consumer Preferences	54
3.7.3 Product	55
3.7.4 Price	56
3.7.5 Place	57
3.7.6 Promotion	58

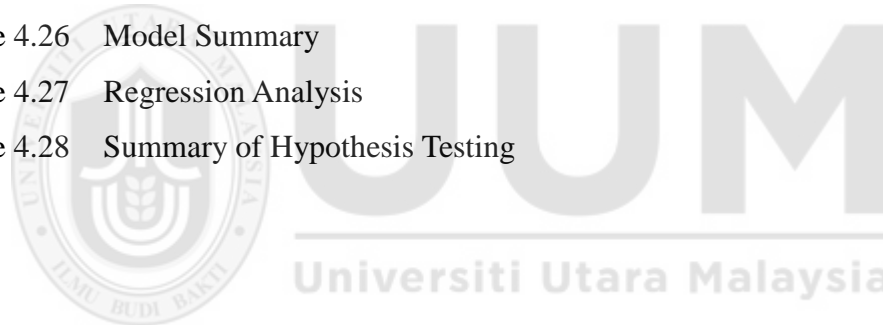
3.8	Data Collection Procedures	60
3.8.1	Primary Data	60
3.8.2	Secondary Data	60
3.9	Data Analysis Technique	61
3.10	Pilot Test	61
3.11	Reliability Test	63
3.12	Validity Test	64
3.13	Factor Analysis	64
3.14	Data Screening	66
3.14.1	Missing Value	66
3.14.2	Multivariate Outliers Test	67
3.14.3	Normality Test	67
3.15	Inferential Analysis	67
3.15.1	Pearson's Correlation Analysis	68
3.15.2	Multiple Regression Analysis	69
3.16	Conclusion	69
CHAPTER 4 FINDINGS AND DISCUSSION		70
4.1	Introduction	70
4.2	Rate of Reaction of Respondents	70
4.3	Reliability Test	71
4.4	Screening Data	72
4.4.1	Outlier Data	73
4.4.2	Normality Test	74
4.5	Factor Analysis	77
4.5.1	Analysis Consumer Preferences	77
4.5.2	Analysis Product	80
4.5.3	Analysis Price	82
4.5.4	Analysis Place	84
4.5.5	Analysis Promotion	86

4.6	Analysis Descriptive Statistics	89
4.6.1	Profile of the Respondents	89
4.7	Mean and Standard Deviation	95
4.8	Statistical Analysis Inference	96
4.8.1	<i>Pearson Correlation</i> Analysis	96
4.8.2	Multiple Regression Analysis	98
4.9	Summary of Hypothesis Testing	100
4.10	Conclusion	101
CHAPTER 5	DISCUSSION AND CONCLUSION	102
5.1	Introduction	102
5.2	Discussion of the Finding	102
5.3	Summary of Finding	103
5.3.1	There is a Relationship between Product with the Consumer Preferences to use Supplements Product	103
5.3.2	There is a Relationship between Price with the Consumer Preferences to use Supplements Product	104
5.3.3	There is a Relationship between Place with the Consumer Preferences to use Supplements Product	105
5.3.4	There is a Relationship between Promotion with the Consumer Preferences to use Supplements Product	106
5.4	Implication of Research	107
5.4.1	Implications of Research on Entrepreneur Products Supplements	108
5.4.2	Implications of Research on Consumer	110
5.4.3	Implications of Research on Government Planning	110
5.5	Limitation of Research	111
5.6	Future research	111
5.7	Conclusion	112
REFERENCES		113
APPENDIXES		125

LIST OF TABLES

Table 3.1	Sample Size	50
Table 3.2	Rating Scale	52
Table 3.3	Distribution of Variables and Measurement	53
Table 3.4	Measurement for Consumer Preferences	55
Table 3.5	Marketing Mix (Product)	56
Table 3.6	Marketing Mix (Price)	57
Table 3.6	Marketing Mix (Place)	58
Table 3.7	Marketing Mix (Promotion)	59
Table 3.8	The Cronbach Alpha for Pilot Test.	62
Table 3.9	Explanation of Cronbach Alpha (α)	63
Table 3.10	KMO value and Variance Level	65
Table 3.11	Strength Relationship for Correlation	68
Table 4.1	Total Rate of Reaction of Respondents	71
Table 4.2	Reliability Test Result in Pilot Test and Real Test	72
Table 4.3	KMO and Bartlett's Test of Consumer Preferences	78
Table 4.4	Eigenvalues and Cumulative Percentage Variance For Consumer Preferences	78
Table 4.5	Matrix Components of Consumer Preferences	79
Table 4.6	KMO and Bartlett's test of Marketing Mix (Product)	80
Table 4.7	Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Product)	80
Table 4.8	Matrix Components of Marketing Mix (Product)	81
Table 4.9	KMO and Bartlett's test of Marketing Mix (Price)	83
Table 4.10	Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Price)	83
Table 4.11	Matrix Components of Marketing Mix (Price).	84
Table 4.12	KMO and Bartlett's Test of Marketing Mix (Place)	85
Table 4.13	Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Place)	86

Table 4.14	Matrix Components of Marketing Mix (Place)	86
Table 4.15	KMO and Bartlett's test of Marketing Mix (Promotion)	87
Table 4.16	Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Promotion)	87
Table 4.17	Matrix Components of Marketing Mix (Promotion)	88
Table 4.18	Gender of the Respondents	89
Table 4.19	Age of the Respondents	90
Table 4.20	Race of the Respondents	91
Table 4.21	Marital Status of the Respondents	92
Table 4.22	Education of the Respondents	93
Table 4.23	Monthly Income of the Respondents	94
Table 4.24	Statistical Analysis Descriptive Variables	95
Table 4.25	Result of Pearson Correlation Analysis	97
Table 4.26	Model Summary	98
Table 4.27	Regression Analysis	99
Table 4.28	Summary of Hypothesis Testing	100



LIST OF FIGURES

Figure 2	Examples of Labeling Rules Supplement Products Manufactured by U.S. Food and Drug Administrative	26
Figure 3.1	Research Framework	45
Graph 4.1	Histogram Normality Test for Consumer Preferences	74
Graph 4.2	Histogram Normality Test for Marketing Mix (Product)	75
Graph 4.3	Histogram Normality Test for Marketing Mix (Price)	75
Graph 4.4	Histogram Normality Test for Marketing Mix (Promotion)	76
Graph 4.5	Histogram Normality Test for Marketing Mix (Place)	76



LIST OF ABBREVIATIONS

RNI	Recommended Nutrient Intake
MOH	Ministry of Health
OTC	Over-the-counter
GDP	Gross Domestic Product
WHO	The World Health Organization
DCA	The Drug Control Authority
SOFA	State of Food and Agriculture
NPANM	National Nutrition Action Plan
FDA	Food and Drug Administrator
GMP	Good Manufacturing Practice
DSHEA	Dietary Supplement Health and Education
FDA	Food and Drug Administration
TCC	Tribunal for Consumer Claims Malaysia
KMO	Kaiser-Meyer-Olkin
IV	Independent Variable
DV	Dependent Variable
UUM	Universiti Utara Malaysia

CHAPTER 1

INTRODUCTION

1.1 Introduction

There are a lot of successes have been achieved by Malaysia and received recognition from the international community, particularly in the economic sector. With the advancement of technology today, Malaysia's economic progress can be further extended to various sectors such as the services sector in Malaysia. Malaysia market's ability to compete with the overseas market in view of the serious need for various initiatives has been undertaken by the government in Malaysia as a country not only able to compete at the international level but even produce a healthy and productive citizens towards ensuring accelerated development of the country. A healthy lifestyle is very important in life to face the days ahead.

The World Health Organization (WHO, 1948) defines health as a state of physical, mental and social well-being and freedom from disease. This definitely confirms that the three aspects are important in living a healthy and prosperous. Improved health product industry, we can see today it become popular among the public in line with the requirements of the supplement itself in accommodating the requirements necessary in our body.

The emergence of various types of products gives users the option to choose a product that meets their tastes and needs. Therefore, taking a supplement that has become a trend to the extent that people affected indirectly because it is said to appear in all kinds of products that supposedly able to cure chronic diseases. Users need to be wise in making the choice to understand the holistic supplement products, namely, whether through its own studies or reading about something related products.

Based on the Euromonitor, (2015) consumer health in Malaysia experienced slower Gross Domestic Product (GDP) growth of 5% in 2015 compared with a 6% increase in 2014. The slower economic growth resulted in cautioning spending, especially in OTC (Over-the-counter) product. Moreover, when the rising cost occur, this also caused consumers to be more price sensitive when purchasing consumer health products.

In Malaysia the top ranking direct selling consumer health companies such as Amway and Herbalife Product benefited from the consumer high confidence in the quality of their product due to long brand history in the market. Nevertheless, the segmentation by product and analysis of the health supplement market share of around 49% during 2014 and is expected to lead the market by the end of 2019. However, consumers will be still selective when purchasing consumer health products as they are unlikely to spend on OTC drugs when they are not needed. Although, the demand for vitamin and dietary supplement will remain strong as consumer perceive to be important for maintaining good health and lowering the risk of developing chronic illnesses.

The rise in the aging population and the awareness of the benefit itself is the key driver for the growth in Malaysia economic. Consumers may express their needs and desires and still may act in a totally opposite way, at times, it's possible that they aren't even aware of the true motivations behind their buying behaviour, or they could react to factors determining last minute changes to their buying decision. Although the consumer decisions are relatively easy to notice and quantify, the psycho physiological processes behind them are very difficult to take into account. Therefore, the features of the consumer's preferences mark the conducted studies with certain specific features in this sense, which we must take into considerations when elaborating and conducting these studies. In view of observation the essence of this dimension of the consumer behaviour itself.



1.2 Background of Study

Malaysia is the one of the key markets for health supplement business in Southeast Asia. To develop an effective business marketing strategy in Malaysia, it is important to understand the country's regulatory framework for health supplement product. The supplements we see more popular among people nowadays. This matter has also become their lifestyle. This is because nowadays people live a hectic lifestyle when too busy work and personal commitments. This condition causes they have no time to cook or eat healthy food. Thus, most Malaysians think that taking vitamin or mineral supplements can compensate for lack of nutrients in their daily diet. In Malaysia, health supplement product was regulated as pharmaceutical products by The Drug Control Authority (DCA).

Moreover, it can be classified as a dietary supplement or traditional medicine, is depending on the type and dosages of the ingredients in the formulation. According to the Thai Ministry of Public Health (2005), defines supplement as a product to be taken or consumed as an addition to conventional foods that contain nutrients or other substances either in the form of tablets, capsules, liquids, powders and others. If before this product only supplements available in pharmacies, but has is now widely sold supplement products. Marketing has evolved and allows users to get the same supplies in health food stores, supermarkets or online. The significant increase in sales to supplement its product users began to care about the health and take supplements as a means to prevent disease and maintain health (Natila, 2002) for example vitamin A helps to maintain growth, vision and tissue development. So, dietary supplements have to

comply with the general safety and quality requirement of pharmaceutical product under the pharmaceutical category in Malaysia regulation. But, this becomes an issue from a health perspective due to lack of scientific evidence and documentation about security, interaction and effectiveness against certain diseases.

Intake of food quality and regularly is essential to provide the human body with nutrients and maintain a healthy body. For a student, the awareness of health food and health food intake to give a good impression of life as it affects the development or physical and mental reactions of a student who is the backbone of the country's human capital for the future. Intake of a balanced diet and regular feeding schedule will assure long-lasting health. For a student who needs physical and mental activity, of course, very important nutrients in an effective learning activities. However, the level of awareness of student health food is still less because they are more likely to eat simple food like snacks and fast food containing substances harmful to health in the long term. As a result of improper diet, students may not be in optimal physical condition to give full attention to learning.

In fact, the students are very prone to making unhealthy food as the easy lure of advertising on television and print media on the food fun. While many people still do not practice self health care, but there are still health conscious food intake for their survival. While average people now have less rest time of 5 hours a day. Therefore, they are aware of taking supplements can help them keep fit. But, it must be remembered, taking supplements not only provide benefits but also give a bad impression to the user.

Health food intake can increase the level of intelligence. Health foods will positively impact current enlargement process both physically and mentally. It is thus, as a health food supplement containing nutrients could fuel all day. Additional nutrients such as calcium, iron and fiber can help grow physically. As a result, the bones will become stronger. In addition, health food such as ginkgo leaf and starch cod can strengthen a person's memory. Therefore, the planned recruitment of health food can provide benefits to its users.

Consumption of health also negatively affect the cause of illness. Excessive consumption of health will lead the cause of diseases such as diabetes, cancer and heart disease. This is so, because food intake for unplanned health will impact negatively on the body. Decentralization, health food containing excess sugar causes diabetes. Excessive nutrients in the body such as proteins, carbohydrates and iron will cause cancer cells to become active. A hormone also becomes unstable as a result of the election is not exactly health food. Therefore, choosing the right health food can prevent someone affected by the disease.

Excessive intake of healthy food will cause damage to internal organs. Effects of excessive chemicals in certain products or health food can damage vital organs like the brain, kidneys and liver. This is so, because these chemicals will dissolve in the blood. Blood flow to the brain along with the chemical solution. This situation will affect brain function. Additionally, users who are not very suitable for products or food supplements such as vitamin pills, collagen and slimming pills can have side effects to the user. Therefore, health food abuse can cause severe complications in the internal organs.

Health food intake can also cause people to become passive exercises. People feel that making healthy food can ensure good health. Therefore, people will not be doing exercises for the muscles to move their bodies. Originally, the food is actually health food intake side to increase energy after a hard work. The public will be more dependent on vitamin pills, spirulina and collagen that may cause harm to consumers if taken in excess. The public will get obesity when not exercising will lead the cause of many diseases.

In conclusion, the intake of food can provide health benefits to users. Thus, health food intake uncontrolled or excessive would give a bad impression to the user. This is because the health food such as vitamin pills and spirulina contain chemicals that control. Health effects of food intake in excess can cause damage to the kidneys, intestines and unstable hormone. While eating healthy is a new alternative community now to take care of their health, but health can also be compromised if nutrition is not practiced.

1.3 Statement of the Problem

University life is an overflow challenging, especially for students who are far from where they live with their parents and families where different environment for them. Unfamiliar environment affects personality, attitude and behaviour, particularly on their food choices that influence by their nutritional status. According to Isa & Masuri, (2011) the dietary pattern of young adults has been extensively studied and reported in the literature as associated with obesity, frequent snacks, and skipping meals.

Furthermore, about their nutritional status, students themselves can make a bad choice on preliminary studies at the university and this may continue throughout the life of the university. This has been studied by previous researchers from their observation of the daily routine of students such as busy class schedules, peer pressure, some female students tends to buy fast foods from different food joints around the university while others eat from the university cafeteria as others can afford to cook in their hostels. In these foods outlets same kind of foods is prepared daily, therefore students tend to consume same diet repeatedly and thus denies them a variety of choices (Cruz, 2000; Isa & Masuri, 2011).

Some female students have reported to skip meals in order to achieve and maintain their desired body size. In these circumstances, these routines can give an impact on nutritional status since they feel safe or not for their healthy lifestyle (Manwa,2013). Therefore, it was necessary to investigate their dietary patterns, assess their nutritional status and how dietary patterns influence nutritional status. There was prevalence of

physical signs of malnutrition, which indicates that the students were unhealthy and could impact negatively on their academic performance (Manwa, 2013). So, for this impact of their living in university, consume product health bring responsibility for food preparation to avoid affect their dietary habits.

Based on the fact Hughes (2010), the desire to consume products that are practical and can meet the needs of supplement products that demand for food is increasing. However, the use of supplements should be used carefully so as not to harm things like poisoning. So, by researching information about a product before making a decision to buy it seem that for knowledge and can be focused on the major health determinant. Busy with everyday tasks to prevent the students to pick up food for a balanced result in consumers taking vitamin or mineral supplements to replace the lack of nutrients in their daily lives.

This is because, most of the students who study in the city to take supplements on factors such as air pollution, work pressure as well as pesticide contamination around. Nowadays, the quality of the food is also not what it used where the chemicals used in food is high in comparison with the past. For example, fast food all the rage, especially youth and children as a cheap and affordable price. According to the State of Food and Agriculture (SOFA, 2013) showed that 12.5 percent or 868 million people in the world face the problem of malnutrition. Even more so when the majority of whom are children and 70 per cent are children in Africa.

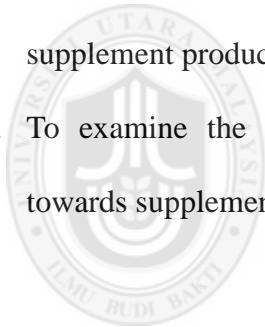
From SOFA (2013), report proves the child also has the potential for a lack of nutrients and substances as experienced by adults. Strategies to improve household food security in Malaysia's National Nutrition Action Plan (NPANM) as stated by the Minister of Agriculture and Agro-Based Industry, Dato 'Sri Ismail Sabri bin Yaakob shows that the issue of food security and nutrition in the country cannot take lightly. According Yetley (2007), supplement the security issues such as bio-availability (bioavailability), bio-equivalence (bioequivalence) and confirmation in vitro and animal studies it is appropriate to reflect the limited human condition. When used in supplements may involve exposure to excessive nutrients or chemicals to normal individual need.

This is because, potentially beneficial supplement product or harm to the user interaction (ADA, 2015). People now believe that lifestyle and poor diet pattern require them to seek the help of nutritional supplement products to meet the needs of the body. It is also a way to maintain health. However, many argue that taking supplements is said to restore and enhance the prevention of illness while getting advice from a qualified doctor. However, according to Ghazali (2016), supplements are not always healthy for the body and always have side effects that need to be taken into account. Therefore, nutritional supplements are taken in every important for us to know and is very important for us to ensure that they comply with the standards of supplements Recommended Nutrient Intake (RNI) Malaysia 2005 and received approval from the Ministry of Health (MOH).

1.4 Research Objectives

This research will be conducted to identify the impacts of marketing mix elements on consumer preference towards supplement product among Universiti Utara Malaysia students. Therefore, there are four research objectives which are:

1. To investigate the relationship between product and consumer preferences towards supplement product among Universiti Utara Malaysia students.
2. To investigate the relationship between price and consumer preferences towards supplement product among Universiti Utara Malaysia students.
3. To identify the relationship between place and consumer preferences towards supplement product among Universiti Utara Malaysia students.
4. To examine the relationship between promotion and consumer preferences towards supplement product among Universiti Utara Malaysia students.

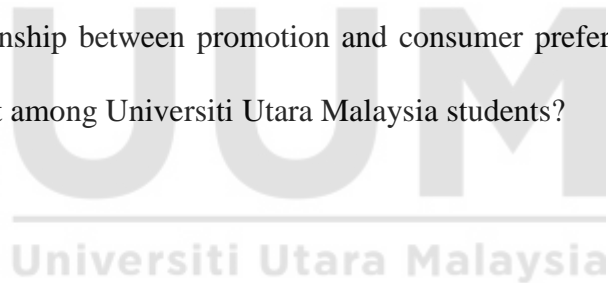
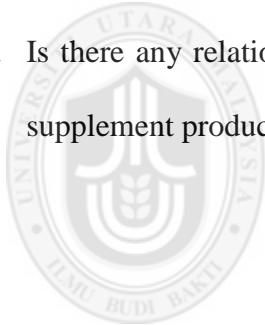


UUM
Universiti Utara Malaysia

1.5 Research Questions

This research has been conducted, followed by the statement of the problems, the study was conducted to answer some questions as stated below:

1. Is there any relationship between product and consumer preferences towards supplement product among Universiti Utara Malaysia students?
2. Is there any relationship between price and consumer preferences towards supplement product among Universiti Utara Malaysia students?
3. Is there any relationship between place and consumer preferences towards supplement product among Universiti Utara Malaysia students?
4. Is there any relationship between promotion and consumer preferences towards supplement product among Universiti Utara Malaysia students?



1.6 Scope of Study

This study is generally conducted to investigate the effect of a supplement product as customer preferences among students. The main scope of the study, which is the respondent in the survey, in which respondents were selected as study sample consisted of students of Universiti Utara Malaysia. The study was conducted at Universiti Utara Malaysia due to the level of consumerism supplement products among students of Universiti Utara Malaysia. In addition, this study is to identify factors that influence purchasing decisions towards supplement products through four marketing factors which are product, price, promotion and location. This study used a questionnaire instrument for obtaining information and data from respondents.

1.7 Significance of Study

The results of this study could help researchers learn more about what level of influence and factors influencing purchasing supplement products among students. In addition, researchers can also determine the average number of buyers supplement products among students of Universiti Utara Malaysia. By using supplement products have tended to increase with the level of a healthy lifestyle, age, education, and physical activity. (Prynne & Wadsworth, 2005). The study of supplements we can see still less a place in Malaysia. Not many studies conducted in the health care industry. Thus, the presence of this study could help support the industry in producing data on factors that influence purchasing supplement products. In fact, it is also important for operators supplement products to use this information to evaluate the user's perspective in decision-supplement

products so entrepreneurs can produce a better product. Accordingly, the results of this study can be beneficial to consumers and sellers in several aspects such as marketing. The findings of this study can improve understanding and knowledge of the product suppliers in producing products that guarantee customer satisfaction. In addition, suppliers can produce a competitive marketing strategy and providing accurate information to consumers about the product supplement (Ghazali et al, 2016). In fact, the findings of this study can provide information and recommendations to buyers of supplements so that they can make a wise and rational purchase.

1.8 Limitation of Study

In preparing this study, there are limitation and constraint faced during the process of preparation of the study include the costs that involved on several fronts which are time, money and energy, particularly in setting up data analysis and data collection. This is because there is limited time in which the researchers have other commitments that must be given priority as well as a student and children. Meanwhile, from a financial perspective, the researchers do not have sufficient financial resources to be spent as the cost of printing and distribution costs survey questions where researchers should move from one area to another to get respondents to answer questions in this survey. In fact, energy constraints should also be taken in the process of getting a response because data collection is not all data obtained in accordance with the specifications desired by researchers such questions not been answered by the respondents.

1.9 Organization of Study

This research consists of the five chapters of the full research paper. The chapters are the introduction, literature review, research methodology, results and finding and lastly, discussion, recommendation and conclusion.

Chapter one, the introduction is the first chapter of writing this paper. It highlights the overview of the research titles and elaborates the title in more details. Meanwhile, the literature review is the second chapter of this paper. Studies of previous researchers, which relate to the present studies are gathered and explained the possibility and appropriateness to carry this research. This secondary source also builds the foundation for the future present studies. The next chapter is the research methodology for this study. Research framework, research design, sampling design, instruments design and data analysis are presented in this chapter. It is the heart of the research where all procedures getting the research correctly are highlighted and explained based on valid citations in order to obtain true and reliable findings.

The next chapter is chapter 4 will highlight the discussion of the result. This chapter will analyze the result of the study. Lastly, chapter 5 is about conclusion and recommendation. The purpose of this research to wrap up the all about this study and recommendation will give the suggestion for improving the study and for the future researcher.

CHAPTER 2

LITERATURE REVIEW

2.1 Introduction

Review the work is an important part of research for helping researchers to make a review of previous studies to obtain information related to the study. The literature review contains statements, facts, theories, opinions, assessments and research reports with respect to the title selected by the investigator based on the writings or natural resources. The literature review also called the attention of the learned and collected from various sources, including journals, articles and research ever carried out in connection with the decision of buying additional food products among consumers. These resources are very useful as an additional reference to researchers so that any research and study have strong evidence to support that argument. The preferences of the consumer are a positive motivation, expressed by the affective compatibility towards a product, services or trading firm.

2.2 Consumer Preferences

Preference is a person's feeling of pleasure, of disappointment resulting from comparing products perceived performance (or outcome) in relation to his or her expectation. Many companies are aiming for high satisfaction because consumers who are just satisfied still find it easy to switch when a better offer comes along. Those who are highly satisfied are

much less to switch. High satisfaction or delight creates an emotional bond with the brand, not just a rational preference. The result is high consumer's loyalty.

The key to generating high consumer's loyalty is delivering high consumer value. Moreover, in delivering profitable value, a company must develop a competitively superior value preferences won't change easily towards the product. The brand must represent a promise about the total resulting experiences that consumers can expect. Whether the promise is kept depend upon the company ability to manage its value delivery systems includes all the communications and channel experiences the consumer's will have on the way to obtaining the offering. Moreover, preferences can be triggered by the features related to the material substances of the goods (shape, size, print, taste, colour, consistency, package, and etc).

2.3 Definitions of Supplements

There are many supplements on the markets; a good product will regulate the product from the beginning until the end. So as the best producer of food supplements will be issued and distributed in the market if companies comply with FDA (Food and Drug Administrator) and GMP (Good Manufacturing Practice) procedures.

The procedures FDA (Food and Drug Administrator) and GMP (Good Manufacturing Practice) is a compulsory subject in the selection of supplements. According Wuri, (2007) supplements are additional products that are used to supplement food containing one or more ingredients such as vitamins, minerals, or substances derived from plants, amino

acids or material to improve Dietary Allowances (RDA), or concentration, extract or a combination of the above materials. Thus, many users take supplements is to fill a need within the lack of nutrients or vitamins.

This definition was agreed by Geoffrey P. Webb (2006) which states that food supplements constitute a pattern for a normal diet and help health by taking important nutrients such as vitamins, macro minerals, trace minerals and others. It is as busy and do not have time to keep the body healthy. While according to the Dietary Supplement Health and Education (DSHEA) of 1994 defines supplements as products other than tobacco are expected to complete food containing one or more of the food ingredients such as vitamins, minerals, herbs, amino acids, the feed to increase nutritional concentrate , substance metabolite, extract, or combinations of these ingredients.

However, according to Devla, R. Acharya, S. Acharya and Kumar, (2011) each country has a different call to the term of supplement. For example, Health Food (China), Health Food Supplement (Korea), Dietary Supplement (United States), Nutraceutical (Canada). Even though, the average Australian used the term complementary product while the Food Supplements (Hardinsyah and Aries. M, 2012) practiced in Indonesia. The term does not distinguish the various internal functions supplement itself generally help users improve the health of the body.

In addition, according to the Food and Drug Administration (FDA) stating that the supplements consist of a variety of forms, including tablets, capsules, powders, energy bars and liquid. Ghazali, Mutum and Lee (2006) argues pleased to supplement available

from pharmacies, health shops, clinics, Chinese medicine shops, supermarkets or from agents selling directly to customers. It is not directly encouraging the purchase and use of supplement products because of its simplicity to be found by users. Moreover, now, up to date technology at their fingertips, where the widespread use of technology allows various products or items purchased on-line.

2.4 The Concept of Marketing Mix

The concept of marketing mix is an activity that can be done by companies to influence the demand for and supply of a product either products or services. Thus, McCarthy has inspired the concept of the marketing mix, known as the "4Ps" of the product, price, promotion and place. The concept is popular among marketers to identify shortcomings and strengths of the factors existing in the marketed product.

The objective of the marketing mix is continuing to perform actions that affect consumer purchasing decisions (Megan J. and Han F. 2012) and the role of the market itself is to align supply and demand in the market. Similarly, Kotler and Keller (2012) defines marketing as a social process that helps the flow of products and services in an economy from the producer to the consumer and at the same time to be able to meet consumer demand and enhance the organization's goals.

Peter and Donnelly (2007) in Mohammad, Wang and Sumayya (2012) states, each element in the marketing mix affect users in different ways. It is thus important to ensure the right product is placed in the right place, at the right price and at the right time.

Similarly, multinational companies, they need to know how to adjust your marketing strategy and how they are to adjust elements of the marketing mix in the market for universal (Vrontis and Thrassou (2009). They need to know the need to adapt the product, price, promotion and location to take into account all the variables of marketing mix (Kotler and Keller, 2009). However, the marketed product will fail if one element in the marketing mix cannot be reached indirectly will affect the profitability and performance of the company that produces the product.



2.5 Related Research

This related research in this study shows the previous research about the relationship between independent variable and dependent variable whether it has a positive effect towards supplement product.

2.5.1 Product

The first element in the marketing mix is the product. There any combination of the goods and services offered to satisfy the needs and wants of consumers. For instance a product is anything tangible or intangible that can be offered for purchase or buy used consumer. Thus, a tangible product is the one that consumer can actually touch, such as a computer, but for an intangible product is a service that cannot be touched, such as computer repair, income tax preparation or an office call. The product is an important factor in the buying process because when users see during the purchasing process is the product. Products can be classified into two main categories that can be touched and cannot be touched. Products that can be touched are the items that can be held like a book, chair, television and so on while the product is not visible to the naked eye categorized as a product that cannot be touched, which can only be measured through delivery, credit and collateral (McColl-Kennedy and Kiel , 2000).

According to Kotler and Keller (2011), the product is something that can be offered to a market for attention, owned and worn or taken in order to meet the wishes or needs of the user. Users will inevitably find a product to suit their own tastes to get self-satisfaction. Various aspects and elements of the product must be taken before they

decided to purchase to ensure satisfaction after buying any product. And, as noted by Alvaro. G. M, Oscar. G. B, and Mercedes. M. P (2016), the physical form of the product, product packaging and labeling information can influence consumers to come into the store, check the product and buy it. Whereas according to Kotler and Armstrong (2008), the factors to be taken into account by the manufacturer before producing a product which includes diversification of products, product design, product features, product brands, product size, packaging, service and warranty after purchase products.

a. Packaging

Prendergast and Pitt (1996) states that the packaging is the most important factor in purchasing decisions at the point of sale, where he became an important part of the sales process (Rettie and Brewer, 2000). According Deliya and Parmar (2012), most marketers believe that packaging is actually more influential than advertising in influencing consumers because it has a direct impact on the perception and experience of a product.

Product packaging serves as the protector of an item to avoid damage and defects to the goods. Packaging also serves as a shield to the product of any circumstances that could alter or damage the product either physical or biological product so that quality and freshness can be maintained. In addition to working to protect products in storage, during the transfer of product and also during use, packaging serves to provide ease and convenience to the user access (Shah, Ahmad and Ahmad, 2013).

Packaging process uses science technology that is designed to protect and ensure the products can attract users to buy it. Pinya and Speece (2007), said packaging consisting of several elements of shape, color, symbol, chart patterns, image and size. Similarly, the study of Pinya and Speece (2007) which states that the user's initial perception of a product is dependent on the style and design of the product packaging. Yonca Limon, Lynn R. Kahle, and Ulrich R. Orth (2009) also states that the packaging design can also be used to identify, build brand identity and image of a product. In addition, the product allows users to choose from various types of the same product depending on the features that are highlighted through product packaging (Wells, Farley and Armstrong, 2007; PiresGon, Calves and Ricardo, 2008).

Based on studies conducted by Henry Morgan and Broadbridge Adelina (2007), indicates if the user considers attractive packaging of a product, then the product is reliable and has a good performance. With the advent of increasingly sophisticated technology nowadays, different sizes and shapes of product packaging supplement issued by the company to compete in the market. Beautiful product packaging can attract users to view and examine the product before deciding to buy it. Accordingly, the design of the product packaging refers to advertising tool last to inform, persuade and convince consumers to help them to distinguish a brand, product and make a final decision based on the design of the packaging during the purchase process, (Well, Moriarty and Bruntt, 2006; Klimchuk and Krasovec (2007).

Several studies conducted on issues such as packaging think it's a great way to attract customers (Underwood, Klein, and Burke 2001; Garber, Raymond, and Jones 2000; Schoormans and Robben, 1997). According to Kotler and Armstrong (2015) the main objective is initially packaged for beauty care goods, but now the concept has evolved with the passage of time. In a marketing environment, now, packing is used as a tool for promotional activities to attract consumers as well as how to identify the user of a product. Panwar (2004) believes growing consumer interest to packaging as a means of stimulating sales promotion and buying behaviour is caused by changes in consumer lifestyles.

However, packaging is not simply a factor that is seen by the user, whereas the desire to buy depends on the extent to which consumers expect products to satisfy consumers when they take it (Kupiec and Revell, 2001).

b. Quality Product

Product quality is an important element in the production of a product because it can determine the position of the product in the market. Quality products also have a major influence in the interest of consumers in the purchase process. Accordingly, need for employers to check the product carefully to ensure quality assurance products are marketed. According Budiyono (2004), can guarantee the product quality user trust for the use of a product, and indirectly also affects the position of the product in the long-term.

c. Label

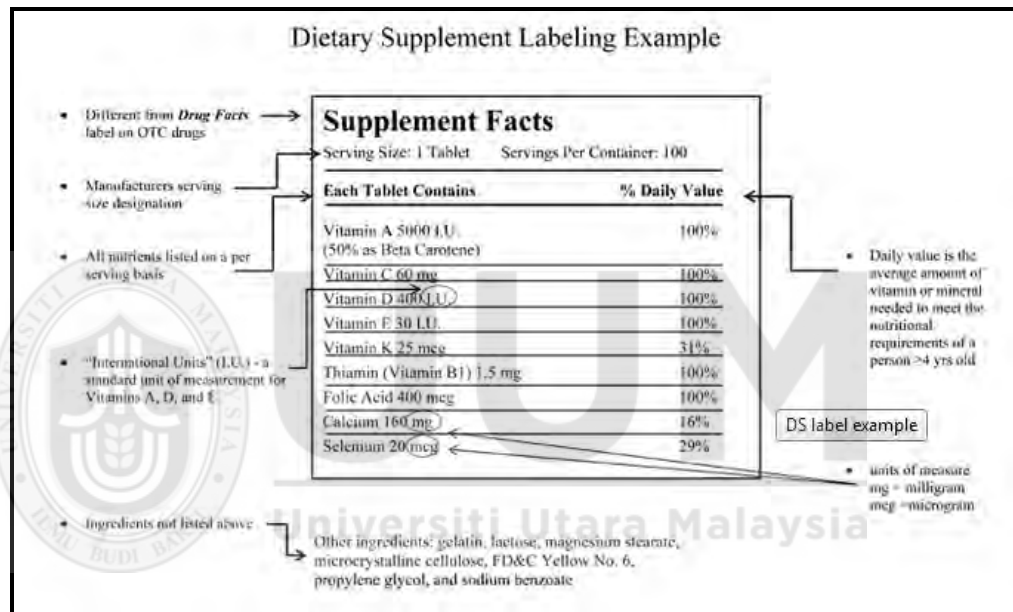
Increased awareness of the importance of checking the label of an item or product before buying it increases user understanding of the importance of these things than the time before. Consumers are likely to collect information from various sources before making any purchase to ensure the quality and effectiveness of a product. It is as described by Hawkes (2004), information on the nutritional content and health benefits can be found on the nutrition label of a product. In addition, the nutritional label is not only serves as a channel that shows the nutritional properties of a product, but also enable to consumers to make food choices and also works to create demand for healthy food products and encourage competition on the nutritional quality (Baltas, 2001).

Labeling give a more detailed description of the product, the manufacturer, methods of use, the materials used to produce the product and the use of supplementation. Ministry of Health (MOH) also explains that food labeling is to provide correct and clear information about a product. The label shall comply with the Malaysian Food Regulations 1985 (PPM 1985) and not to mislead or deceive consumers. Various types of labels used to make the products more attractive in the eyes of consumers. This is consistent with the form of packaging, which also performs the transformation in line with current technological advances. The label is used for patching material or adhesive stickers, labels hung on product, print directly on the container or packaging and so on.

Here is an example of a label issued by the U.S. Food and Drug Administration in which each supplement product label must follow the rules that have been set. Supplement

product label should be a descriptive name of the product states that it is a supplement, the name and place of the manufacturer, packer or distributor, a list of materials used and the net contents of the product.

Figure 2: Examples of labeling rules supplement products manufactured by U.S. Food and Drug Administrative (Source of the Association of Consumer Health Care Products)



In recent years the issue of product safety is a serious concern consumer health. By seeing this, reports in this press to some extent preventing their interest to buy the product supplement. This occurs because the act of a brave marketer to sell counterfeit products to consumers. The immoral acts that can cause consumers face higher risks such as disability or death.

As a consumer, it is important for individuals to ensure their own security by complying the criteria need to buy a product such as reading the label before make a decision making. For Davies, Titterington and Cochrane (1995) stated that health and environmental factors are the main factors in determining the purchase of a food product. Therefore, users should be aware that the product is safe to be taken should have features like high quality sanitary products, good processing and working environment clean.

Consumers also play a role in ensuring supplement products obtained approval from the Ministry of Health (MOH). If the product has been registered, the registration number beginning with 'MAL' followed by 8 digits and end with a letter describing the product registration category. The registration number is usually located on the label or packaging of a product. This code is important because the product has received approval from the Ministry of Health and the ingredients are allowed in food.

For a company perspective, they are responsible for guaranteeing security through advertising, labeling, and promotion so that consumers believe the product will be used. As noted by Chebat (1995), they have an effect on a person's memory and can affect the public's confidence in the product being advertised. Users must be aggressive in knowing their rights and role as consumers to protect themselves from being manipulated by the global market. Based on the Ministry's website in the national Trade, Co-operatives and Consumerism Ministry (Ministry), consumer means a person who buys goods and services for personal use or for domestic or household. Smart consumers know their rights as consumers to demand any compensation if there are items that are defective, dangerous or misleading trade description. Fraud or does not conform to the service agreement. Complaints and claims can be made on matters relating to the

Tribunal for Consumer Claims Malaysia (TCC), an independent body set up by the ministry.

2.5.2 The Relationship between Product and Consumer Preferences towards Supplement Products

The increasing demand for products that are healthy and good nutrition from an educated consumer is more demanding and lead to the need for it to be more flexible and to be distinguished (Linnerman et at, 1999). In fact not only that, as their users want quality products that provide special benefits in terms of health and safety, and assure the quality of the environment (Van der Heuvel et al., 2007). Several studies have been conducted to examine how consumers evaluate the properties of different products in many food products. Health, nutrition, taste, price, facilities are some of the criteria that consumers use to determine which products are more attractive (Bech-Larsem et al., 1999). Consumers face a lot of balance in their food choices, for example between nutrition and price, nutrition and facilities (Blaylock et al., 1999).

Development of healthy food has been rated as the most important area in the research, followed by developing natural food (Katz, 2000). According Baltas (2001), users pay much attention to their diet, and especially to the information printed on the package label, such as nutrition and health claims. In response to consumer demands healthy and nutritious products, manufacturers should highlight these claims on the front label their packages. Other features such as the production of organic and locally may provide additional benefits to users who are concerned about environmental care.

Think globally, act locally,” long the maxim for successful politics stressing a preference for all things local, is emerging as a global trend. According to Alexander, (2014) users sometimes find local product and interested through regional and traditional food. But for some people label "local" to be strong buying options from "organic". In a world that has become globally linked, and often somewhat confusing, a search for a regional and local identity is emerging. The desire for traceable products is a by-product of a never-ending series of food scandals, and it comes alongside a growing ethical outlook that embraces organic food production, ethical consumption and a concern for animal welfare.

For domestic manufacturers, there is an increase in consumers prefer products manufactured in the country than outside the city where he showed consumer buying habits that can improve the national economy (Strasek, 2010). These advantages have given users the ability to make a purchase decision and also supplement their products more attentive to nutrition, health and food quality than ever before (Strasek, 2010). For example, a product marketed in the famous brand will have a shelf life longer than the similar market products but with lesser known brands. The product planning and research and development activities must be focused on resource and product brands to further strengthen product positioning in the market and become the consumer preferences.

Attraction senses something visual appearance of food products and packaging is a powerful influence on consumer acceptance (Tuorila and Pangborn, 1988; Cardello, 1994). In fact, the properties of the packaging also can persuade consumers to buy a

product, and sensory properties will confirm if they like. This may give the desires and determination to users and will repeat purchases (Munrray and Delahunty, 2000). Package and label only have a few seconds to make an impression on the minds of consumers (Dantas et al., 2004) at that time, it must draw the user's attention, and convince buyers that it is the optimal choice on the shelf (Rowan, 2000).

Next, through color and graphics package fruit juice represents a key element of art in the design of the package. According to Hutchings (2003), intensifying the color of the fruit may reinforce expectations for taste juice. Deliza (2003) suggest that package designers need to take into account consumer expectations about the sensory properties of this product when designing labels.

In order to achieve the needs of users and successful in the market, manufacturers need to try to understand the sensory characteristics and packaging of food products (Munrray and Delahunty, 2000). Users usually do not choose one of the features that at one time, instead they chose a group of attributes that make them the best utility in the process of selecting a product.

Some literature has been devoted to consumer perceptions labeling and packaging, and the role of information about consumer intent to purchase. For example, in Roe, Levy and Derby (1999) study, nutrition and health claims set out in next label is more important than back-label nutrition facts. Bond, Thilmany, Keeling (2007), recognizing that the health benefits of a diet rich in fruits and vegetables, and the power of these products reduce the risk of coronary disease and cancer, a claim proved to be most

effective when attracting users. Teisl, Bockstael and Levy (2001) studied the effects of nutritional claims on the label next to several retail products, and determine that the text needs to change consumer behavior.

However, they noted that alternative health does not always increase in market share. The choice of product can give a lot of influence by the packaging material. Beverage package is of particular interest, because they can not be distributed without the former (Van Dam and Van Trijp, 1993). Since their creation in 1960, aluminum can be listed as the most desirable package, convenient, and environmentally friendly these days. The literature review shows that the packaging and labeling of the properties of the most visible to users is important before launching the product. In the case of 100% fruit juice, packaging and labeling can influence consumers to buy the product. Features such as packages and nutritional claims plays a key role in the purchase decision.

Information about the content and benefits for consumers should be highlighted on the package. In order to get an edge in this competitive market, manufacturers should try to engage users in the creation of the product before actually introduced into the market. Several studies have been conducted about the package and label fruit juice. However, few have examined the effect of lifestyle segmentation that includes behavior and consumer preferences and opinions about 100% fruit juice packages, to identify homogeneous user segments share the same pattern of social behavior.

2.5.3 Price

The second element in marketing mix is price. Price is simply the amount of money that consumers are willing to pay for a product or service. In price setting, companies should estimate customer reactions to possible prices. Companies should also estimate the preferable profit margin and possible discounts in the future. Companies must be aware of legal restrictions on pricing. The price is the amount charged for a product. Factors to keep buying, suspend or cancel the purchase directly influenced by the price of a product.

Generally, all grades given by customers to benefit from owning or using a product. According Tjiptono (2008), the price is a marketing aspect which is flexible in where it can be changed quickly. According to the researchers (Johnson and Gustafsson, 2000; Morgan, 1996; Zeithaml and Bitner, 1996; Hill, 1996; Dutka, 1995, and Giel Naumann, 1995), said the price is a factor influencing customer satisfaction. However, users also use price as a gauge to see the quality of a product. For those who want more expensive product quality and reliability. Similarly (Hawkins, Best, and Coney, 2001; Schiffman and Kanuk, 2010) stated price is a service to the quality of the signal. Depending on the product, consumers prefer to buy products at a cheaper price with the quality and the criteria that they need. In this case, employers should be more sensitive products because of the competition, competitors will lower prices cheaper than what is sold by the producers. Lupiyoadi (2001) say that the pricing is very significant in providing value to the consumer in making and influencing decisions.

In addition, users tend to evaluate a product based on the price if they are not used for such products to assess the quality of the product. For consumers, if the product is expensive, this indicates the product is high quality and secure. According Wathieu and Bertini (2007), there is evidence to suggest that the higher price of the product, believed the higher the quality of a product. There are also a handful of marketers who produce misleading information related to the user. For example, the label on the supplement products, *halal* label, expiry date, or the price tag on the shelf.

Product purchase decisions are not solely dependent on the product but the price factor also plays a role in influencing consumer decisions. Product price must be appropriate to the materials used in the manufacturing process of the product. Therefore, users need to check information or label before purchasing to ensure that products sold on the basis of a reasonable price for the materials used. The other alternative for marketers such as discounts or special prices only to increase the desire of buyers to buy a product and products that get discount can change the minds of consumers where previously about to buy because the price is expensive. This proves the price of a product has the potential to change consumer purchasing decisions on a product.

2.5.4 The Relationship between Price and Consumer Preferences

Willingness to pay is the one medium that is important in the purchase of a product. Pay the maximum price, one that makes it as one who is willing to acquire goods and services to the needs of a more secure. Consumer are more likely to use price as a benchmark to measure the quality (Mowen, 1993). According to Atanasoiaie (2012) mention that price is a marketing variable that can be easily modified unlike the three marketing variables, when the marketing conditions require it. Consumers are willingness to pay the price difference only if they are convinced that these products are better. Also that how the price of supplement products can be compare to the traditional product health and supplement product. This price differences can be seen as an investment in human health. Other than that, given that price is a factor hindering market development it is very important when buying for the first time these products, consumers to be fully satisfied so that their satisfaction to lead to new acquisitions (Aertsens, et al., 2009).

Moreover, when we talk about the students budget regarding about buying the supplement between their food, textbooks and tuition and money can a bit tight when it come to college. Some of them, which struggle to spend extra cash on pre-workout. Then, for those of students who love working out and using supplements they can figure out the needed plus to decrease the expenses itself. According to Goldstein, 2015 he mention a few tips to buy supplement such as buying what need, buying in bulk, and get a membership plus they can give the special offer and also the coupons for the best deal.

The reason the researchers tested whether the price is due to the price factor is the price level actually relevant to a product of high quality supplements. This problem occurs when there are cases where users are fooled by an expensive price but getting a product that is quality and also dangerous to them. Price is one of the items that affect the election results and the user of a product. But if consumers tend to choose quality as a priority, and higher prices would have compared low price. This is because a product is expensive because of high quality through a variety of manufacturing processes and more perfect. However, the problems that occurred in Malaysia is a product that has been blacklisted had sued the trust of consumers in respect of pricing power. The extent of management efficiency aspects of the marketing mix in the price of food supplements in Malaysia? Is it true that Malaysian consumers do not trust the power price as the level of quality? This study will seek to answer such questions to delve into the issue price of food supplements.

2.5.5 Place

Place refers to having the right product, in the right location, at the right time to be purchased by consumers. This proper placement of products is done through middle people called the channel of distribution. The channel of distribution is comprised of interdependent manufacturers, wholesalers, and retailers. These groups are involved with making a product or service available for use or consumption. Jones (2007) defines it as any way in which consumers can get the products or services. Location factors also play a role in influencing consumer purchasing decisions in buying a product. It is important to ensure the functioning of product distribution channels to deliver products to target

consumers. Among the criteria for the location of choice among consumers and is close to them go. Accordingly, the selection of appropriate locations need to employers because a wrong decision can lead to failure in business. A good location can guarantee the arrival and attract many users to change the shopping patterns and purchase (Tjiptono, 2000).

Therefore, it is important for marketers to ensure the products made and distributed it easy for users to get it. Put the product in the right place and at the right time is necessary because when people come to the store to buy the product, the product can be obtained without problems such as out of stock. If not, they certainly will be elsewhere that supply the same product at the same time causing marketers to lose customers. The marketing of products is important because generally people tend to business location to location and facilities available and give satisfaction to the users. According to a study made by Chung and Lee (2003), the position of the image or place is an important factor in the marketing mix affects purchasing supplement products. The choice of location was good to have a positive effect in raising supplement product. According Anntha Raj (2012), an efficient distribution channel can help producers, manufacturers and users in carrying out the tasks of distribution.

2.5.6 The Relationship between Place and Consumer Preferences

According to previous results (Patterson, 1999; Loureiro and Hine, 2001; Brown, 2003), marketing locally grown products should stress quality, freshness and price competitiveness. Although, Kotler and Armstrong (2006), define place or distribution as a set of interdependent organizations involved in the process of making a product available for use or consumption by consumers. Place strategy calls for effective distribution of products among the marketing channels such as the wholesalers or retailers (Berman, 1996). Results in the marketing of products is important because in general the user will tend to business locations convenient and easily available and give satisfaction to the users. According to a survey conducted by Chung and Lee (2003), the position of the image or place is an important factor in the marketing mix which affects the purchasing of products.

Place strategy in retail stores includes more than the question of how consumers access the stores, it also includes the availability of products in such stores (Kotler, 2013). A store can position or reposition a product by locating that product within a store. The dimensions of place are channels, coverage, assortment, location, inventory, and transport (Borden, 1984). Thus, the above studies imply that place or distribution considerations play a major role in influencing consumer motives.

A marketer's strategy for distributing products can influence consumers in several ways. First, products that are convenient to buy in a variety of stores increase the chances of consumers finding and buying them. When consumers are seeking low-involvement

products, they are unlikely to engage in an extensive search, so ready availability is important. Second, products sold in exclusive outlets may be perceived by consumers as having a higher quality. In fact, one of the ways marketers create brand equity - that is favourable consumer perceptions of brands is by selling them in prestigious outlets. Third, offering products by non store methods, such as on the internet or in catalogues, can create the consumer perception that the products are innovative, exclusive, or tailored for specific target markets.

Role in marketing management in place is very important aspect. Convenient location and attractive grant will encourage consumer loyalty to a product or service. In line with this, the industry is seen as the best platform for promoting local herbal products. Synonymous with nature that exists in Malaysia and became a focal point for foreign tourists enjoy the natural beauty and comfortable air. Furthermore, most of the plants that live have properties that can be used to treat a variety of diseases such as cancer. Malaysia has an interesting ecosystem and places like national parks, bird parks, etc. Interesting locations is very convenient for foreign tourists enjoy the benefits of herbal medicine approved MOH as well as conducting tourism activities. Previous studies have found that the distribution factor is the basic thing that needs to be studied and given attention to the operators of products to achieve customer loyalty. This is because, the distribution is the last thing to get the product and the determination to make a repeat user of the product purchase.

2.5.7 Promotion

Promotion is a communication process that takes place between a business and its various publics. Publics are those individuals and organizations that have an interest in what the business produces and offers for sale. In order to be effective, businesses need to plan promotional activities with the communication process in mind. The elements of the communication process are: sender, encoding, message, media, decoding, receiver, feedback, and noise.

Promotion is the element in the marketing mix of organizations that serve to inform, persuade and remind the market of the product in the hope of influencing the feelings, beliefs and behaviour of consumers (Stanton, Etzel and Walker, 2007). The promotional activities include advertising, sales promotion, public relations, direct marketing and word of mouth (word-of-mouth). Through the campaign, marketers can attract the attention of consumers and give them information about products to enhance consumer buying interest. Promotion is important in sales as a way to reach consumers with information about products. It is also an alternative to bring awareness to the users of the existence of a product. When the product is known, is increasing consumer demand for products and increase product sales. Moreover, promotion normally leads to significant changes in sales of the brand being promoted.

2.5.8 The Relationship between Promotion and Consumer Preferences

Advertising, sales promotions, personal selling and publicity can influence what consumers think about products, what emotions they experience in purchasing and using them, and what behaviours they perform, including shopping in particular stores and purchasing specific brands. Promotions such as price discounts and buy one get one free are effective promotional tools for encouraging consumers to buy more (Shi, Ka-Man and Gerald, 2005). In fact, with extensive advertising to change perception and encourage them to try the product. In response to consumer advertising can be influenced by several factors such as charging ads, ads influence something with taste, culture, and people's emotions (Simamora, 2001).

Hung, L. H (2005) recommends that plans for promotions should be top-down strategy built plans with tactical bottom-up purchase analysis and that they should be monitored frequently. Moreover, consumer get so much information from marketers and communication is essential to formulate a seller offers a consistent message about their products. Marketing communications play an important role in informing consumers about products and services that are running, including where they can buy and establish a good image and perception. Related promotional laughing stock prices have affected consumer behaviour in retail. According to Grunert , Wills and Celemin (2010) a number of studies have been conducted showing that the pricing information is essential for consumers to make a purchase decision. The effectiveness of product advertising in television or social media plays an important role to popularize the products sold.

In terms of advertising spend, the selection of creative and effective replenishment is important. The ads should be removed according to the pattern that is being experienced by the country concerned. Malaysia among the countries that have a strong influence on celebrities. It turns out that this is true when the most famous products using celebrities as ambassadors business. The use of celebrities (public figure) in a variety of advertising, especially for new products, is one of the effective marketing strategies to gain or maintain market (Mc Crackern 1989).

By definition, a celebrity is a character (actor, entertainer or athlete) were known to the public because of his achievements in different fields of various products (Shimp, 2003). One creative way to advertise is to use endorser. Celebrity endorsers are figures of modern marketing. Celebrity endorsement is one of the most popular methods of promotion in the world, using celebrities are beautiful, interesting, and demand by the public so that products promoted in the popular and famous (Noyer C. and Dimajo.S. (2015) Nevertheless, the rules should have been interesting and what is most important is the management of the campaign in terms of consumer loyalty to a product. Since herbal products are not something to be sought after by the public wisdom in managing the campaign is very important.

Advertising emphasis should be continually in a long period with according to the situation at the time. In this context, the notion that herbal products are not able for rival other types of businesses in the promotional aspect is not fair. Herbalife is a company known around the world conducting business based health products. What is interesting in Herbalife is a way to run a campaign using "spokeperson". Sponsorships to athletes

who star has raised the Herbalife brand on par with other goods brands such as Nike and Disney. Way these companies do not emphasize the product but stressed the logo or name of the product (Herbalife Annual Report, 2015). In line with this, the important thing in product promotion is effective promotion management.

So far, companies from Malaysia herb has not recognized internationally. Therefore, management techniques and promotion of creative and innovative so that consumer loyalty to local herbal product can be produced. Things important in producing effective promotion is a consistent increase in trade and germination good idea of the company itself to promote the company's brand brought. For example, Herbalife company also emphasizes training for its distributors in promoting the products of Herbalife products through media advertising techniques (Herbalife Annual Report, 2015).

The researchers concluded that the promotion of local herbal products have a relationship with a customer loyalty Malaysia. So in this study, the researchers will unravel all the items under promotion factors such as personal selling, sales promotion, public relations and advertising aspects other than the product itself.

2.6 Conclusion

In this chapter, the relevant literature review has shown even it helps in the formation and development of the concept of an authentic framework through a survey instrument. Moreover, this study help in the framing work of this to implement he strength and a better understanding of research conducted. The framework of this study and research hypothesis will be discussed in the next chapter.



CHAPTER 3

METHODOLOGY

3.1 Introduction

Methodology is the one of the techniques used to conduct a research. There are two types of research methodology that are the quantitative and qualitative method. This research will use the quantitative method. This research method will gather information by using the numerical analysis. This chapter highlights how the research problem was explored, how the participants were selected and the procedure followed to gather the data. The chapter concludes with time frame the completeness of the study.

3.2 The Theoretical Framework

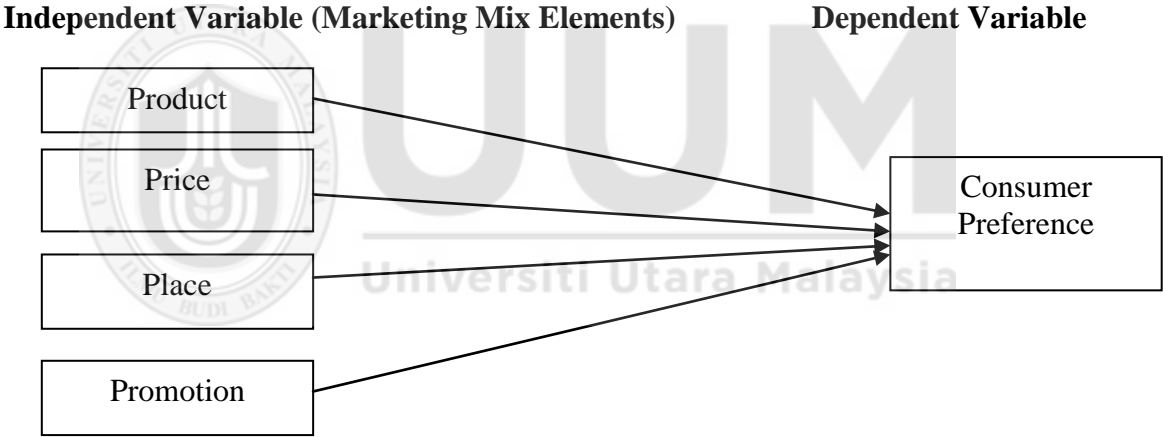
The theoretical framework used to compile systematically related variables and theories used by researchers in drawing a theoretical framework adapted from previous studies that Kotler (1997) to draw up theories that are used to measure the relationship between the effects of the marketing mix element towards consumer preference in buying supplements.

According to Kotler (1997) marketing management is described as the framework of the implementation of ongoing and covers the marketing mix 4P which is a process of planning and implementation of the concept, pricing, promotion and distribution of

ideas, goods and services by an organization to consumers in order to produce the measure can satisfy consumers and meet the goals of the organization. Thus, the researchers discovered that the management of the marketing mix 4P efficiently can impact achievement in the generic industry of health for the better in future.

In Chapter 2 mentioned the literature review on dependent variable and independent variable.

Figure 3.1 :
Research Framework



3.3 Hypothesis

In this study, the researcher would like to study the relationship between independent variable and dependent variable.

H₁: There is significant relationship between product and consumer preferences towards supplement product among Universiti Utara Malaysia students.

H₂: There is significant relationship between price and consumer preferences towards supplement product among Universiti Utara Malaysia students.

H₃: There is significant relationship between place and consumer preferences towards supplement product among Universiti Utara Malaysia students.

H₄: There is significant relationship between promotion and consumer preferences towards supplement product among Universiti Utara Malaysia students

3.4 Research Design

A research design can be referring to the overall approach that researcher chooses to combine the different components of the study in a logical and coherent methods and procedures for collecting and examining the information. The design is to confirm that all information gathered is applicable for solving the research problem. According to Sekaran (2007), research design will examine six basic aspects of research design.

This section comprises successor explanation of methodology chosen for study based on the Gillham (2000) states that one of the strategies the researchers is a case study design that can be positivist or interpretive in nature but also depends on the method of data

collection and analysis methods. As a case study, the researchers did not pay attention and focus to explore certain issues. There are two designs data collected are used depending on the case study, namely through experiments and the design is not experimental. For example, the design of experimental studies conducted by Wagner & Fard (2009) is to study the factors that affect the education of students chose to perform with higher experimental research.

In addition, problems exist in the controller to create the replication when it comes to experimentation. A study in other words the design is not an experiment in which he helped the researchers to get information and details about the practice, condition or opinions at a point in time distributing questionnaires or personal interviews. In order to carry out this approach, the selection of some very important things such as the area to be inspected, the variables and their size before the data collection is performed. The issue of data instability can occur when using approach and leads to reduce the validity of the findings (Burns & Grove, 2007).

The question can be answered in this study using information based on the study design. In order to gain a deep understanding of the influences of variable such as in research objective and quantitative research. The researchers chose to use quantitative descriptive through it only describes what is happening in the data. It also helps researchers to describe the importance of the characteristics of variables according to the situation. Due to a limited number, by previous research on this field in Malaysia, researchers using exploratory approach to study the effect of the marketing mix on supplement product among the students of the university.

In addition, it is a suitable method to understand and predict this topic and relationships between variables. Thus, some theoretical research and exploration framework or model is very important to understand and predict relationships between variables (Fletcher 2004; Zepke & Leach, 2005). Moreover, Sekaran & Bougie (2013) states that the research design is an action plan for collecting, measuring and analyzing data on the question of a study released in this investigation.

The design of this study was made after researchers have identified variables within the framework of the theory. In this study, the researchers decided to use a descriptive study in which the aim of this descriptive study is to collect data that describes the characteristics of the individual, event or situation. The study was carried out to get a clear understanding of the impact of the marketing mix of supplements to students.

3.5 Sampling Technique

Sample refers to the subset of population which is part of members from a population. Sampling method can be referred as a technique or by process that analyse the characteristics of the identified population which by selecting a sufficient number of the right elements from the population. Sekaran & Bougie (2010) mention that there are two categories of sampling which are probability and non probability sampling. Probability sampling was adopted when elements in the population have a known chance of being chosen as subjects in the sample. Then, the researcher can use sample that is obtained randomly to achieve this probability, and this sampling has least bias and offer more general. Probability sampling designs can be divided into four different types of

sampling which are (1) Simple random sampling, (2) Cluster random sampling, (3) Stratified random sampling and (4) Systematic sampling, (5) Proportionate stratified random sampling, (6) Disproportionate stratified random sampling, (7) Double sampling (Sekaran, 2003). According to this research, the researcher has been decided students in Universiti Utara Malaysia were chosen to participate in this study.

3.5.1 Sampling Procedure

To answer the research questions through data collection and subsequence analysis, survey method is powerful and useful in finding the answers. If the population is not correctly targeted, they can do more harm than good in the study. Besides that, the survey would be in vain if data are not collected from the right people that can provide the correct answer to solve the problem.

3.5.2 Sampling Size

Based on Krejcie & Morgan (1970) table to determine the sample size, if the size of population 27,945 students then the sample size will be 379 students. The sample sizes for this study will focus on to the students in UUM Sintok. In this study, the population has been determined in which students at UUM and the sample size is 400 respondents. Of the 400 respondents, a total of three hundred and ninety-seven randomly selected to answer a questionnaire about this study. The respondents were selected through the class schedule issued obtained from Student Affairs and Academic Affairs UUM and they are selected based on the time of learning for some time has been set. All selected

respondents were given a period of thirty (30) minutes to complete this questionnaire. Meanwhile, of the 400 questionnaires distributed, only 397 were returned and 3 were incomplete and did not respond according to the required specifications.

Table 3.1
Sample Size

Population size (N)	Sample Size (S)
10,000	370
15,000	375
20,000	377
30,000	379
40,000	380

Source: Krejcie & Morgan (1970)

3.5.3 Sampling Method

The sampling technique used in this study is probability sampling technique. This is because the elements in the population have any probabilities to be chosen as sample subject. Under the probability sampling technique, the sampling design chosen is Simple Random Sampling since every element in the population has equal chances to be selected as a subject.

3.6 Target Population.

This research has been conducted in a form of research case due to the research focused only on one population in institution of higher learning. Population basically refer to the total of collection on elements or cases which can be comparable and population include group of people, or goods. Identifying the target population that researcher wishes to investigate was one of the process of sampling (Sekaran,2005). Moreover, identifying the correct population very important to prevent invalid data and limit generalization of the finding of the study. The researcher has been chosen Universiti Utara Malaysia, Sintok, Kedah as a research venue. This venue has been chosen for this study because it is easy for researcher to cooperate with the students in order to get the data.

3.7 Questionnaire Design

This study will use the questionnaire as a medium to obtain the data needed. Data for this study is collected through a survey questionnaire that was distributed to the students in UUM Sintok. A survey questionnaire is a set of written and given to the respondent in which it allows respondents to record their answers. In fact, this survey is an efficient data collection tool when used in descriptive studies or research description (Sekaran & Bougie, 2013). In addition, questionnaires typically used to save time and lower costs. The main reason for the design of the questionnaire used for collect a large amount of quantitative data.

In this study, a questionnaire was designed to investigate the impact of marketing mix on the consumer preferences of supplement product among students. Respondents were asking to rate as their level of agreement on a five–point Likert scale, where 1 represents "strongly disagree" followed by "disagree", "neither agree nor disagree", "agree", and 5 for "strongly agree" as indicate in Table 3.2 below. This scale is used because it is suitable for measuring the magnitude of individual preferences (Sekaran, 2003). The questionnaire used in this study is attached in Appendix A.

Table 3.2
Rating Scale

Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1	2	3	4	5

Source: Zikmund et al (2010)

The measurement of the variable used in this study was adapted from relevant previous literature with essential changes. The questions have been provided to the respondents in bilingual which is English and Malay. Table 3.2 shows the distribution of variables and measurement of the past research have been used in this study.

There are three sections in this questionnaire. In the first part, the respondents were asked about their common background such as gender, age, race, marital status, educational background, and monthly income. Meanwhile, part two and part three, the respondents were asked about questions related to the dependent and independent variables which have been adapted from some previous researchers. Table 3.3 below shows a summary of which were asked in the questionnaire that was used in this study.

Table 3.3
Distribution of Variables and Measurement.

Variable	No. Items	Section I	
Gender	1	Item 1	
Age	1	Item 2	
Race	1	Item 3	
Marital Status	1	Item 4	
Education Level	1	Item 5	
Monthly Income	1	Item 6	
			Section II & III
Variable	Total no of items	Scales	Sources
<u>Dependent</u>	7	Likert Scales 1-5	Anantha,2012, Doroodgar, Nazari & Emami,2012; Akgam, 2013
Consumer preference			
<u>Independent</u> (Marketing Mix)			
Product	9	Likert Scales 1-5	Sudarin. A ,2008
Price	7	Likert Scales 1-5	Sudarin. A ,2008;
Place	9	Likert Scales 1-5	Sudarin. A ,2008
Promotion	8	Likert Scales 1-5	Sudarin. A ,2008
Total	40		

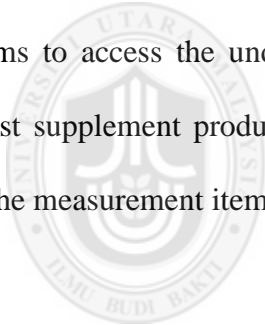
There are three sections in the questionnaire, consisting of Section I: Demographic Segmentation, Section II: Consumer Preferences, Section III: Marketing Mix (Product, Price, Place and Promotion)

3.7.1 Demographic Segmentation

In this section consists of five question and will asking about the respondents' demographic data such as their gender, age, race, marital status, education level and monthly income.

3.7.2 Consumer Preferences

In this research, the item used for dependent variable were adopted from Anantha (2012), Doroodgar, Nazari & Emami,2012; Akgam, 2013. The questionnaire consists of 7 items to access the understanding of the respondents about the criteria preferences against supplement products. The researcher used the Likert scales for respondents to rate the measurement item with 1 = strongly disagree and 5 = strongly agree.



UUM
Universiti Utara Malaysia

Table 3.4
Measurement for Consumer Preferences

Items
1) Quality is one of the factors that influence my purchasing decisions on supplement products.
2) Brand products into my concerns when I buy supplement products.
3) I should always buy supplement products made from Malaysia compared to imported products
4) Supplement products sold in Malaysia is the best.
5) I will take the time to look at the label to find out about supplement products
6) I would recommend to others to buy supplement products.
7) My lifestyle choices will affect my purchase of supplement products

Source: Anantha, 2012, Doroodgar, Nazari & Emami, 2012; Akgam, 2013

3.7.3 Marketing Mix (Product).

The measurement for variable product was derived from Sudarin.A (2008); The questionnaire consists of 9 items to identify what kind of product that students consume to purchase against supplement products. The researcher used the Likert scales for respondents to rate the measurement item with 1 = strongly disagree and 5 = strongly agree.

Table 3.5
Marketing Mix (Product)

Items
1) I feel supplements are effective in solving health problems that I face.
2) I feel there are side effect when using local supplement products.
3) All products are supplement s that I've seen have the approval of the Ministry of Health (MOH).
4) I know that the local supplement products have a wide range of output.
5) A supplement that I use has a well known brand.
6) I often observe supplements are recommended on packaging product.
7) Supplement packaging of products is satisfactory
8) My priorities in selecting quality health supplement products that I use.
9) I believe supplements are guaranteed effectiveness.

Source: Sudarin. A ,2008

3.7.4 Marketing Mix (Price).

The measurement for variable product was derived from Sudarin.A (2008) ;The questionnaire consists of 7 items to identify the price that students consume to purchase against supplement products. The researcher used the Likert scales for respondents to rate the measurement item with 1 = strongly disagree and 5 = strongly agree.

Table 3.6
Marketing Mix (Price)

Items

- 1) I found the supplement product price are expensive
 - 2) I feel the price is reasonable.
 - 3) I found the price supplements are consistent last year to this year.
 - 4) Supplement product prices are compatible with satisfaction that I got.
 - 5) Dealer supplements offer discounts at certain seasons.
 - 6) I do not feel the price as a burden to me to continue to use supplements.
 - 7) To me, the price supplement product is cheaper compared with the cost of others supplement products from abroad.
-

Source: Sudarin. A ,2008

3.7.5 Marketing Mix (Place)

The measurement for variable product was derived from Sudarin.A (2008); The questionnaire consists of 7 items to investigate the place or location that students consume to purchase against supplement products. The researcher used the Likert scales for respondents to rate the measurement item with 1 = strongly disagree and 5 = strongly agree.

Table 3.6
Marketing Mix (Place)

Items

- 1) I'm easy to buy supplement products in any premises sales.
 - 2) I easily get in touch with distributors to supply supplement products
 - 3) Distribution of supplement products that I use provides after-sales service quickly.
 - 4) I'm easy to retrieve local supplement products that have been used up.
 - 5) The image store supplement products that often I visit are interesting.
 - 6) I thought the location of the purchase of supplement products are suitable
 - 7) I get that supplement products are sold to foreigner
 - 8) Purchase location factors influenced me to buy supplement products.
-

Source: Sudarin. A ,2008

3.7.6 Marketing Mix (Promotion)

The measurement for variable product was derived from Sudarin.A (2008). The questionnaire consists of 8 items to identify the promotion give to students and they consume to purchase against supplement products. The researcher used the Likert scales for respondents to rate the measurement item with 1 = strongly disagree and 5 = strongly agree.

Table 3.7

Marketing Mix (Promotion)

Items

- 1) Medium advertising through print media influence me to use supplements.
- 2) Medium advertising through electronic media influenced me to use supplements.
- 3) I feel the lack of advertising methods lead to supplement products lukewarm.
- 4) I am interested in advertising supplements televised.
- 5) I am interested in direct sales promotion technique by the salesman supplements.
- 6) I found that most product advertising supplement is intended to affect the user than the benefit of consumers.
- 7) I feel the direct selling technique gave me a clear understanding of the supplement products.
- 8) I once saw a supplement product sales promotion through social sites.
- 9) I have recommended any supplements to others to try.

Source: Sudarin. A ,2008

3.8 Data Collection Procedures

In this study, the data is collected through two sources which are primary and secondary data.

3.8.1 Primary Data

The primary data will be collected through structured questionnaire and it would be collected through personally administered questionnaire because this is the best way to get the full response from respondents in a short period of time. It also helps the respondents if they have any doubtful question might be clarified on the spot. The primary data of this study will be gathered through 400 sets of questionnaires. The questionnaire will be distributed according to the number of students in UUM. This questionnaire contains structured or closed-ended question that is a rating scale or Likert Scale to provide answers for organization.

3.8.2 Secondary Data

This study will use two types of research data, which are internal and external sources. The data available outside the organization which comes from one main resource which is from the library is the external secondary data. For this study the research will use the data from UUM's library, internet journals, articles, online publications and internal data's that are saved by the organization such as the background of the university.

3.9 Data Analysis Technique

The collected data will be analysed by using IBM Statistical (SPSS) version 22. In this study, the reliability of the test will be used to determine the value Cronbach Alpha for each variable used. In addition, data were analyzed using several statistical techniques such as descriptive statistics which describe the frequency, mean, median, mode, standard deviation and variance. While the other is a technique whereby the frequency statistics about the reliability of data, correlation and regression. Additionally, SPSS can also help researchers to analyze more accurately and can interpret the data from the questionnaires were made.

3.10 Pilot Study

A pilot study can be referring to a small scale scientific research that gathers data from respondent similar to the respondent that will be used in the actual study. The aim of carrying out the pilot study is to make sure whether the respondents understand with the items in the instrument. By performing a pilot study, the reliability of the measuring tools and its acceptability of the study were examined. So that, the potential problems could be recognized and classify before begin the actual study. The procedure of the pilot study is necessary before the process of collecting the actual data. The detail gathered was used to improve the instruments or method used where appropriate.

The pilot study was conducted based on 30 respondents who is the students in UUM 11th September until 21th September 2016. The researcher chooses the student at UUM because to know their preferences towards supplement product based on marketing mix

elements. The results of the pilot study in Table 3.8 will help the researcher in the modified and elimination the questions that are considered to be unclear to the participants. Essentially, to ensure that the questionnaire is fully understood by the respondents the alterations and improvement will be done on the questionnaire.

Table 3.8
The Cronbach Alpha for Pilot Test.

Variables	Pilot Test (<i>n</i>=30)
Section II:	
Consumer Preferences	0. 578
Section III: Marketing Mix	
Product	0.759
Price	0. 640
Place	0. 904
Promotion	0. 700

3.11 Reliability Test

The reliability is a test of how reliably a measuring instrument measures whatever concept it is measuring. The reliability of the questionnaire has been verified by using Cronbach's Alpha or called Alpha Coefficient to display the internal dependability of the questionnaire. Sekaran (2009) state that the reliability of the questionnaire is better if the value of reliability coefficient closer to 1.00. Commonly, the acceptable alpha coefficient should be more than 0.7 and it is still acceptable if the value of Cronbach Alpha of 0.6 but is poor.

Table 3.9
Explanation of Cronbach Alpha (α)

Cronbach Alpha (α)	Explanation
<0.6	Weak
0.6 to <0.7	Medium
0.7 to <0.8	Good
0.8 to <0.9	Very Good
>0.9	Excellent

Source: Hair et al., (2007)

3.12 Validity Test

Validity test is a proof that the technique, process or instrument used to measure a concept does really measure the intended concept (Sekaran, 2009). Validity test help to recognize whether the variables studied in this research are measurable and valid. In this study, the researcher performed face validity and congruent (construct) validity. The result obtained from congruent validity test will show how well the use of the measure fit the theories around which the test is designed. For congruent validity, the researcher will depend on the results of factor analysis because congruent validity is performed to identify the discriminate validity and the convergence validity. The relationship between two variables which are the direction of the relationship and its magnitude. The relationship is statistically significant if the value of r closer to 1.00 (Muchinsky, 1993).

3.13 Factor Analysis

By Zikmund & Partners (2013), factor analysis is a statistical technique that can identify a number of factors that reduced the number of major factors of the variables measured. The purpose of the analysis is to summarize the information in a large number of variables to a smaller number of variables. Normally, the information obtained from the variables is very large and spacious. In addition, factor analysis can also help in easing the great information on factors which could translate into a smaller and more meaningful data to achieve the objectives. However, in the factor analysis, factors determined by the mathematical model while the only variant with only analyzed (Tabachnich & Fidell, 2013). In addition, according Tabachinich & Fidell (2013), Value

Index Kaiser-Meyer-Olkin (KMO) is between 0 and 1, where 0.6 is the minimum value of the factor analysis is good. While for the Bartless's Test of Sphericity must be significant or significant (sig.) ($P < 0.05$) for analysis and the factors considered appropriate.

Table 3.10
KMO value and Variance Level

KMO Value	Degree of Common Variance
0.90 to 1.00	Amazing
0.80 to 0.89	Excellent
0.70 to 0.79	Moderate
0.60 to 0.69	Medium
0.50 to 0.59	Not so good
0.00 to 0.49	No factor

Source: Tabachinich dan Fidell (2013)

3.14 Data Screening

Data screening is the process of ensuring the data is reliable, usable, and valid for testing. Data screening process will focus on Missing value, Outlier Test and Normality test.

3.14.1 Missing Value

Missing value is a generally step in before analyze the collected data. Where researcher consider as a extreme part before data collect by researcher be analyze to identify, since the data is often riddled with mistakes during the data entry errors which completely affect the outcome of the analysis results (Hair, Anderson, Babin, & Black, 2010; Pallant, 2013). Before tasting each hypothesis, each variables were tested to identify missing data values and data entry.

Missing data are knows either casese valid values of one variables or more are incorrectly entered or are not available for data analysis (Hair et al., 2007). Generally, lack to understanding questionnaire questions, uninterested to answer or maybe oversight of some items are issues that must be pointed into consideration because it will impact on the result in outcome.

3.14.2 Multivariate Outliers Test

Multivariate Outliers Test can be done to test the extreme or unusual values on a single variable or a combination variable (Meyers, et. al, 2006). To test the multivariate outliers, the researcher evaluates by using Mahalanobis distance values.

3.14.3 Normality Test

Normality test is referring to the distribution of the data for the variables. Function of the normality test is used to identify whether a data is well-modelled by a normal distribution or not, or to analyse how probable an original random variable is to be normally distributed. The researcher will use histogram test to check the normality. If the histogram looks like bell shape, the data is normal.

3.15 Inferential Analysis

This section will discuss the results of data analysis using inferences analysis. The inferential analysis is to test hypotheses is accepted or rejected in this study. In the inferences analysis will conducted the T-test, ANOVA-one-way, Correlation Pearson analysis and Multiple Regression analysis.

3.15.1 Pearson's Correlation Analysis

To examine the relationship between independent and dependent variables understudied the Pearson's correlation analysis will be done. Pearson correlation coefficient is used to illustrate the degree of linear relationship between independent and dependent variables. The symbol of a correlation coefficient is "r" and its range is from -1.00 to +1.00.

Table 3.11
Strength Relationship for Correlation

R Value	Strength Relationship
(-1.0 to 0.5) or (0.5 to 1.0)	Strong
(-0.5 To -0.3) or (0.3 to 0.5)	Medium
(-0.3 To -0.1) or (0.1 to 0.3)	Weak
(-0.1 To 0.1)	Very Weak/ No Relationship

Source: Choudhary (2009) & Pallant (2013)

3.15.2 Multiple Regression Analysis

In this study, standard multiple regression will be used to determine the effect on the dependent variable and independent variables. In addition, this technique can also prove that a strong element will affect consumer attitudes towards mobile banking. Multiple linear regression equation was developed based on the following formula:

$$\text{Multiple Regression: } Y = a + b_1X_1 + b_2X_2 + b_3X_3 + b_4X_4$$

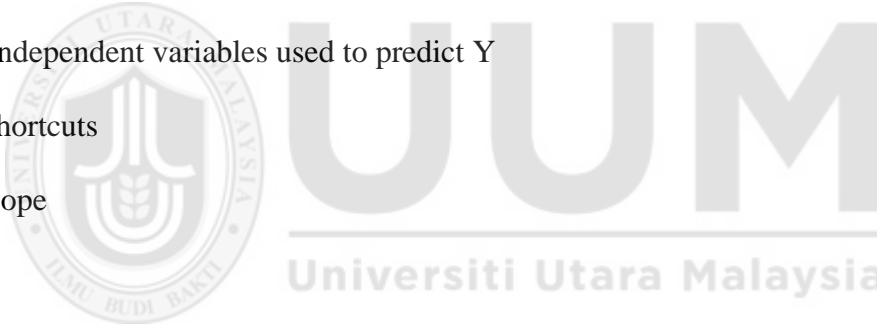
Where:

Y = Consumer Preferences towards supplement products

X = Independent variables used to predict Y

a = Shortcuts

b = slope



3.16 Conclusion

This chapter has designated the progress of the research model for this study. The research framework and research hypotheses have been explained following the research methodology and the research design. Different statistical analysis will be used such as data screening, descriptive analysis and inferential analysis to examine the relationship between Dependent variables and Independent variables.

CHAPTER 4

FINDINGS AND DISCUSSION

4.1 Introduction

This section will explain more about the study that was conducted. In this study, some of the statistical methods were used to analyze the data. The statistical methods used were descriptive statistics and statistical inference.

Descriptive statistics including frequency, mean, mod, median, standard deviation and variance. Meanwhile, inferential statistics also include reliability, ANOVA, correlation and regression. A total of 397 questionnaires were received from 400 questionnaires that were distributed to the respondents. The statistical analysis using SPSS version 22 and the discussion of this study is based on the objectives and hypotheses that have been identified in this study that examines the impact of consumer preferences towards supplement products through marketing factors.

4.2 Rate of Reaction of Respondents

A total of 400 questionnaires were distributed to students at Universiti Utara Malaysia (UUM) and 397 questionnaires were returned in the response rate for this study was 99.2%. According to Sekaran & Bougie (2010), if the reaction is 30%, then it is acceptable. Rate of reaction of respondents described in Table 4.1. An example of the questionnaire in Appendix A.

Table 4.1
Total Rate of Reaction of Respondents

Items	Respondent
The number of questionnaires distributed	400
The number of questionnaires received	397
Complete the questionnaire	397
Questionnaire incomplete	3
Rate of reaction received	99.2%

4.3 Reliability Test

According Sekaran (2003) if the value of *Cronbach's Alpha* is 1.0 it is regarded as highly desirable, while a value greater than 0.89 is considered good. Next, the value of 0.70, it is acceptable and value less than 0.60 was considered weak. Reliability test results between test pilot and the real test is shown in Table 4.2 below.

Table 4.2
Reliability Test result in Pilot Test and Real Test

Variable	No. Item	Cronbach's Alpha	
		Pilot Test N= 30	Real Test N=397
Consumer Preferences	7	0.58	0.66
<u>Marketing mix</u>			
Product	9	0.76	0.77
Price	7	0.64	0.63
Place	8	0.90	0.82
Promotion	9	0.70	0.80

These results reveal that the coefficient of reliability of the independent variables and the dependent variable is 0.58 to 0.90 for pilot test while the real test is 0.66 to 0.82. Therefore, measurement of the independent variables and the dependent variable in this study is considered to be acceptable because it has reached the alpha value of 0.6 and above (Bougie & Sekaran, 2013).

4.4 Screening Data

Data were reviewed to determine the accuracy of data entry, remote data and characteristics of the distribution before running the main analysis. In this study, data screening was conducted by examining the basic descriptive statistics and frequency distribution to determine if there is missing data, outliers, normality and linearity.

Descriptive data results indicate that no data was found missing from the 397 questionnaires that were returned by respondents. However, all the cases that have maintained the same average values and values not very different from the existing distribution. In addition, the normality test is also carried out by using histograms, skewness and kurtosis. For this study, the histogram is used to see normality in which he showed the score is normal and data about the arches with all of the variables.

4.4.1 Missing Data

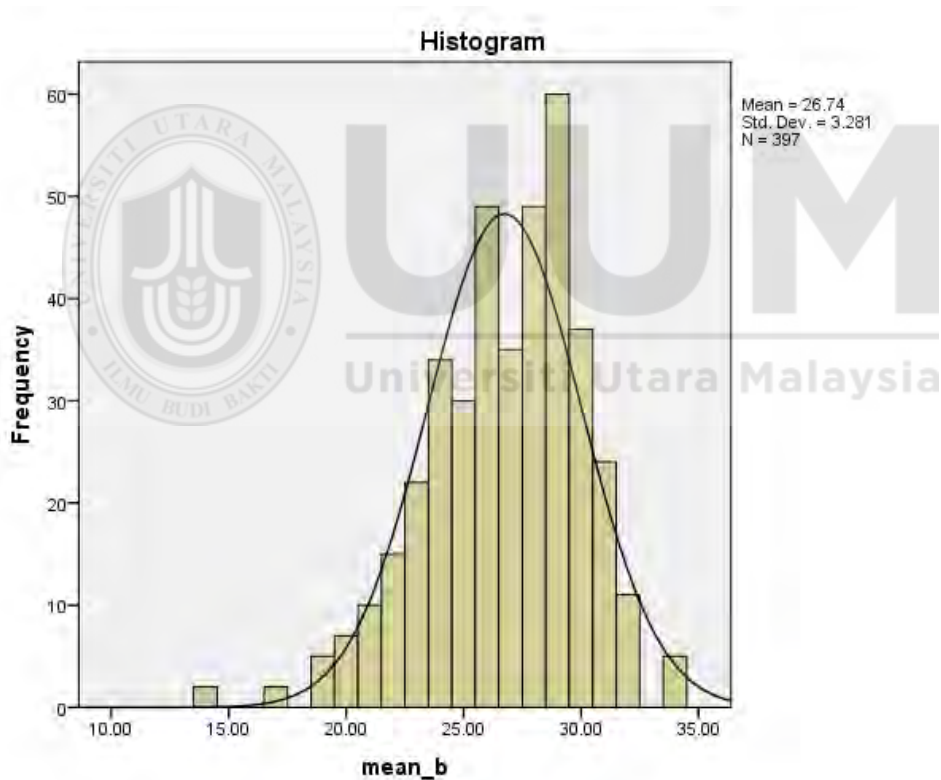
Based on regression analysis there being found no missing data. Therefore, all of the 397 respondents used in the subsequent data analysis.

4.4.2 Outliers Data

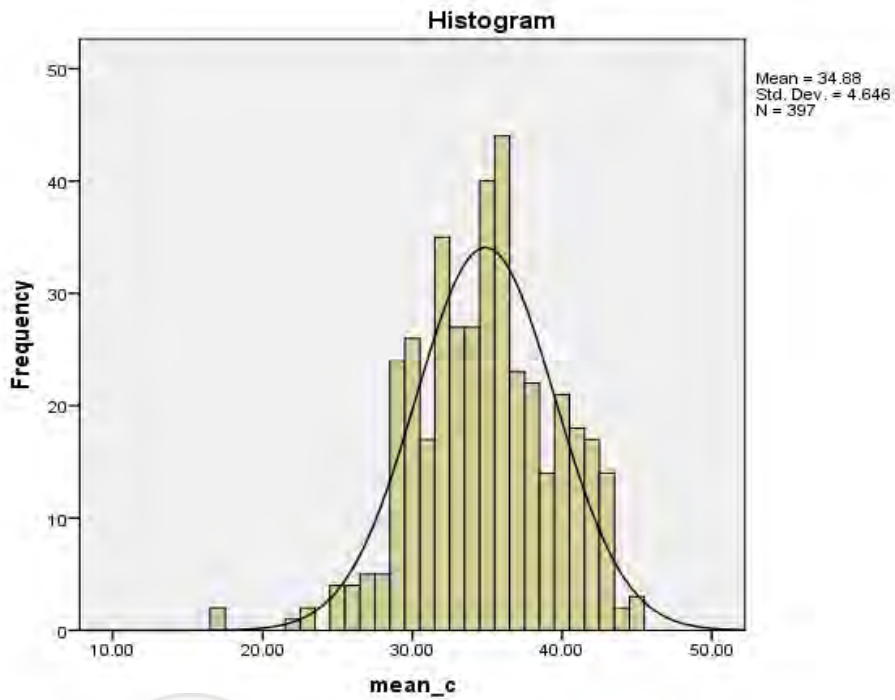
Multivariate Outliers test has to, the Mahalanobis Distance can be referred. The Mahalanobis Distance was examined by Chi-Square distribution Table (X^2) with degrees of freedom equal to the number of independent variables. The study consisted of 4 variables and it is on the schedule for the Chi-Square critical value on the alpha value of $p < 0.001$ (Meyers et, 2006). Thus, according to the distribution schedule X^2 , where cases with Mahalanobis Distance value equal to or greater than 19.104 can be considered as Multivariate Outliers Data. For this study the value of the Mahalanobis Distance does not exceed 19.104.

4.4.3 Normality Test

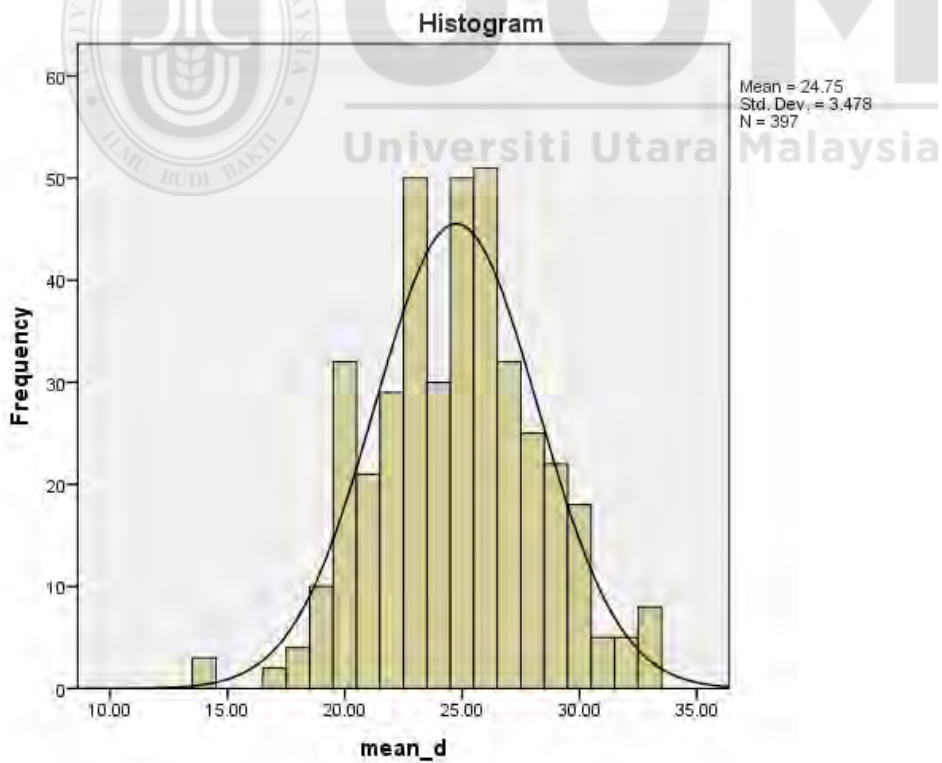
In this study, the histogram was used in which the normality test to show whether are normally distributed or not distributed normally. Distribution of empirical data (histogram) should be bell-shaped and resembles a normal distribution. Graph 4.1, Graph 4.2, Graph 4.3, Graph 4.4 and Graph 4.5 below shows the histograms for all variables used in this study. All histogram graph showing a form of a bell and a normal distribution.



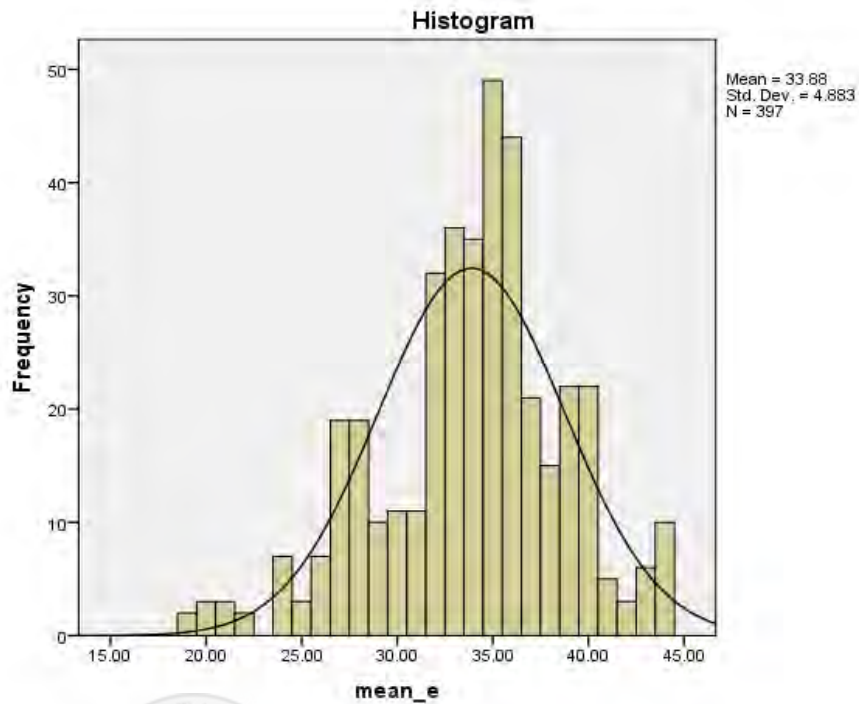
Graph 4.1 : Normality Test for Consumer Preferences



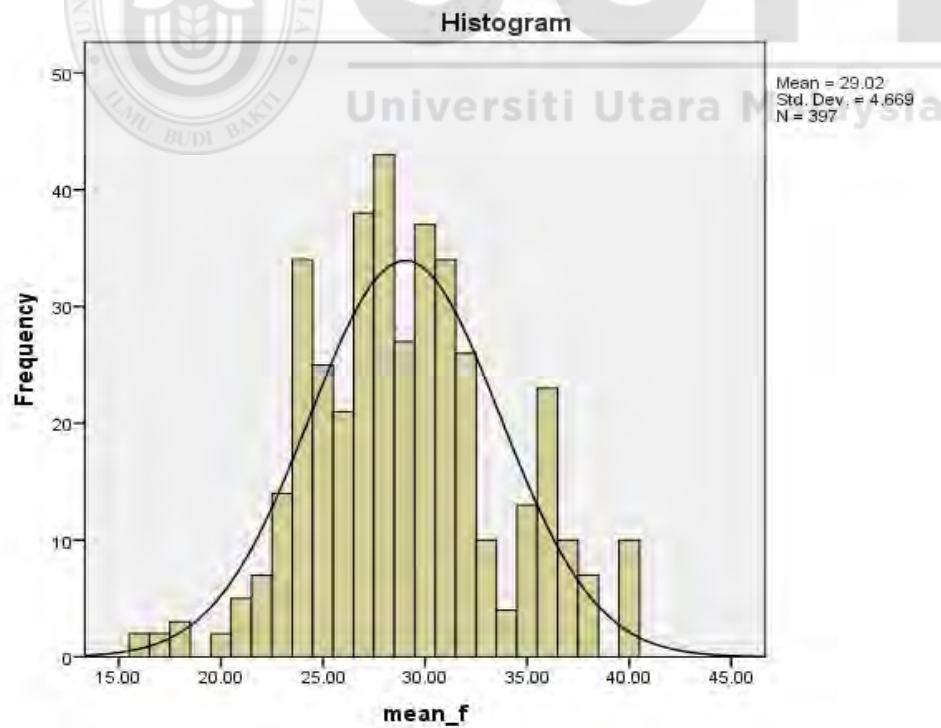
Graph 4.2: Histogram Normality Test for Marketing Mix (Product)



Graph 4.3: Histogram Normality Test for Marketing Mix (Price)



Graph 4.4: Histogram Normality Test for Marketing Mix (Promotion)



Graph 4.5: Histogram Normality Test for Marketing Mix (Place)

4.5 Factor Analysis

Factor analysis is to determine the factors of discrimination and concentration for items clustered in certain dimensions. Before carrying out the analysis, test prerequisites must be done to allow the process of factor analysis. These tests include the *Kaiser- Meyer- Olkin* (KMO) and *Barlett's Test of Sphericity*. KMO test was conducted to measure the ability of sampling whose value must be greater than 0.5 for a satisfactory analysis of factors to continue further measurements. (Meyer et al, 2006).

In addition, to identify a number of fundamental factors, the researchers refer to Eigenvalue and Eigenvalue cumulative. Discriminant factor involved in this study must have Eigenvalue greater than or equal to 1 and cumulative Eigenvalue must be more than or equal to 60%. To show the items that accumulate in certain factors, this study uses 0.5 as the factor loading (Meyer et al, 2006) items score greater than or equal to 0.5 will be collected in the same factor.

4.5.1 Analysis Consumer Preferences

Based on the analysis performed on the consumer preferences, KMO value was 0.612 and Bartlett's sig is a value of $p = 0.000$. KMO value is significant and can be forwarded to factor analysis.

Table 4.3
KMO and Bartlett's test of Consumer Preferences

KMO and Bartlett's Test		
<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</i>		.612
<i>Bartlett's Test of Sphericity</i>	<i>Approx. Chi-Square</i>	467.103
	<i>Df</i>	21
	<i>Sig.</i>	.000

Table 4.4
Eigenvalues and Cumulative Percentage Variance For Consumer Preferences

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.197	31.389	31.389	1.527	21.808	21.808
2	1.559	22.273	53.662	1.100	15.717	37.525
3	.989	14.127	67.790			
4	.735	10.499	78.288			
5	.627	8.960	87.248			
6	.511	7.301	94.549			
7	.382	5.451	100.00			

Extraction Method: Principle Component Analysis

Table 4.5
Matrix Components of Consumer Preferences

Question (Consumer Preferences)	Loading Factor
Q1) Quality is one of the factors that influence my purchasing decisions on supplement products	0.653
Q2) Brand products into my concerns when I buy supplement products.	0.582
Q3) I should always buy supplement products made from Malaysia compared to imported products.	0.772
Q4) Supplement products sold in Malaysia is the best.	0.656
Q5) I will take the time to look at the label to find out about supplement products.	0.494
Q6) I would recommend to others to buy supplement products.	0.465
Q7) My lifestyle choices will affect my purchase of supplement products	0.494

The above table shows that all the 7 items can be used in the analysis. The results of the analysis of the factors comprising the item Q1, Q2, Q3, Q4, Q5, Q6 and Q7 have *Eigen* value is 2.197 with a cumulative value of 31.389%.

4.5.2 Analysis Marketing Mix (Product)

Based on the analysis performed on the product, KMO value was 0.828 and Bartlett's sig is a value of $p = 0.000$. KMO value is significant and can be forwarded to factor analysis.

Table 4.6
KMO and Bartlett's test of Marketing Mix (Product)

KMO and Bartlett's Test		
<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</i>		.828
<i>Bartlett's Test of Sphericity</i>	<i>Approx. Chi-Square</i>	884.665
	<i>df</i>	36
	<i>Sig.</i>	.000

Table 4.7
Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Product)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.459	38.428	38.428	2.899	32.211	32.211
2	1.251	13.898	52.326	.606	6.737	38.948
3	.847	9.407	61.733			
4	.824	9.516	70.888			
5	.654	7.269	78.157			
6	.629	6.986	85.143			
7	.531	5.897	91.039			
8	.463	5.139	96.178			
9	.344	3.822	100.000			

Extraction Method: Principle Component Analysis

Table 4.8
Matrix Components of Marketing Mix (Product)

Question (Product)	Loading Factor
Q1) I feel supplements are effective in solving health problems that I face.	0.613
Q2) I feel there are side effect when using local supplement products.	0.476
Q3) All products are supplement s that I've seen have the approval of the Ministry of Health (MOH).	0.406
Q4) I know that the local supplement products have a wide range of output	0.563
Q5) Supplements that I use has a well known brand.	0.577
Q6) I often observe supplements are recommended on packaging product.	0.680
Q7) Supplement packaging of products is satisfactory	0.804
Q8) My priority in selecting quality health supplement products that I use.	0.503
Q9) I believe supplements are guaranteed effectiveness.	0.550

The above table shows that all the 9 items can be used in the analysis. The results of the analysis of the factors comprising the item Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8 and Q9 have *Eigen* value is 3.459 with a cumulative value of 38.428 %.

4.5.3 Analysis Marketing Mix (Price)

Based on the analysis performed on the price , KMO value was 0.712 and Bartlett's sig is a value of p = 0.000. KMO value is significant and can be forwarded to factor analysis.

Table 4.9
KMO and Bartlett's test of Marketing Mix (Price)

<i>KMO and Bartlett's Test</i>		
<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</i>		.712
<i>Bartlett's Test of Sphericity</i>	<i>Approx. Chi-Square</i>	453.901
	<i>Df</i>	21
	<i>Sig.</i>	.000

Table 4.10
Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Price)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	2.460	35.141	35.141	1.859	26.563	26.563
2	1.322	18.892	54.033	.686	9.799	36.362
3	.830	11.863	65.897			
4	.794	11.350	77.246			
5	.601	8.591	85.837			
6	.537	7.674	93.512			
7	.454	6.488	100.00			

Extraction Method: Principle Component Analysis

Table 4.11
Matrix Components of Marketing Mix (Price)

Question (Price)	Loading Factor
Q1) I found the price supplements are expensive.	0.475
Q2) I feel the price is reasonable .	0.584
Q3) I found the price supplements is consistent last year to this year.	0.545
Q4) Supplement product prices are compatible with satisfaction that I got.	0.641
Q5) Dealers supplements offer discounts at certain seasons.	0.518

Q6) I do not feel the price as a burden to me to continue to use supplements.	0.652
Q7) To me, the price supplement product is cheaper compared with the cost of others supplement products from abroad.	0.412

The above table shows that all the 7 items can be used in the analysis. The results of the analysis of the factors comprising the item Q1, Q2, Q3, Q4, Q5, Q6, and Q7, have *Eigen* value is 2.460 with a cumulative value of 35.141 %.

4.5.4 Analysis Marketing Mix (Place)

Based on the analysis performed on the place distribution, KMO value was 0.829 and Bartlett's sig is a value of $p = 0.000$. KMO value is significant and can be forwarded to factor analysis.

Table 4.12

KMO and Bartlett's test of Marketing Mix (Place)

<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</i>		.829
<i>Bartlett's Test of Sphericity</i>	<i>Approx. Chi-Square</i>	1074.103
	<i>Df</i>	28
	<i>Sig.</i>	.000

Table 4.13
Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Place)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.668	45.854	45.854	3.179	39.732	39.732
2	1.208	15.094	60.948	.653	47.893	47.893
3	.846	10.571	71.519			
4	.585	7.308	78.827			
5	.565	7.061	85.888			
6	.432	5.394	91.281			
7	.364	4.553	95.835			
8	.333	4.165	100.000			

Extraction Method: Principle Component Analysis

Table 4.14
Matrix Components of Marketing Mix (Place)

Question (Place)	Loading Factor
Q1) I'm easy to buy supplement products in any premises sales.	0.648
Q2) I easily get in touch with distributors to supply supplement products.	0.725
Q3) Distribution of supplement products that I use provides after-sales service quickly.	0.539

Q4) I'm easy to retrieve local supplement products that have been used up.	0.713
Q5) Image store supplement products that often I visit is interesting.	0.601
Q6) I thought the location of the purchase of supplement products are suitable.	0.762
Q7) I get that supplement products are sold to foreigner	0.537
Q8) Purchase location factors influenced me to buy supplement products.	0.451

The above table shows that all the 8 items can be used in the analysis. The results of the analysis of the factors comprising the item Q1, Q2, Q3, Q4, Q5, Q6, Q7 and Q8 have *Eigen* value is 3.668 with a cumulative value of 45.854 %.

4.5.5 Analysis Marketing Mix (Promotion)

Based on the analysis performed on the promotion, KMO value was 0.783 and Bartlett's sig is a value of $p = 0.000$. KMO value is significant and can be forwarded to factor analysis.

Table 4.15
KMO and Bartlett's test of Marketing Mix (Promotion)

<i>KMO and Bartlett's Test</i>		
<i>Kaiser-Meyer-Olkin Measure of Sampling Adequacy.</i>		.783
<i>Bartlett's Test of Sphericity</i>	<i>Approx. Chi-Square</i>	988.790
	<i>Df</i>	36
	<i>Sig.</i>	.000

Table 4.16
Eigenvalues and Cumulative Percentage Variance For Marketing Mix (Promotion)

Component	Initial Eigenvalues			Extraction Sums of Squared Loadings		
	Total	% of Variance	Cumulative %	Total	% of Variance	Cumulative %
1	3.531	39.234	39.234	2.990	33.222	3.222
2	1.213	13.481	52.715	.771	8.571	41.793
3	.930	10.334	63.049			
4	.844	9.374	72.423			
5	.727	8.075	80.498			
6	.593	6.587	87.085			
7	.460	5.107	92.191			
8	.404	4.488	96.679			
9	.299	3.321	100.000			

Extraction Method: Principle Component Analysis

Table 4.17
Matrix Components of Marketing Mix (Promotion)

Question (Product)	Loading Factor
Q1) Medium advertising through print media influence me to use supplements.	0.628
Q2) Medium advertising through electronic media influenced me to use supplements.	0.656
Q3) I feel the lack of advertising methods lead to supplement products lukewarm.	0.541
Q4) I am interested in advertising supplements televised.	0.748
Q5) I am interested in direct sales promotion technique by the salesman supplements.	0.507
Q6) I found that most product advertising supplement is intended to affect the user than the benefit of consumers.	0.462
Q7) I feel the direct selling technique gave me a clear understanding of the supplement products.	0.487
Q8) I once saw a supplement product sales promotion through social sites.	0.615
Q9) I have recommended any supplements to others to try.	0.477

The above table shows that all the 9 items can be used in the analysis. The results of the analysis of the factors comprising the item Q1, Q2, Q3, Q4, Q5, Q6, Q7, Q8 and Q9 have *Eigen* value is 3.531 with a cumulative value of 39.234 %.

4.6 Analysis Descriptive Statistics

Descriptive analysis is used to give an overview of the frequency and percentage of respondents for demographic characteristics such as gender, race, age, marital status, education level, monthly income.

4.6.1 Profile of the Respondents

Below tables shows the analysis of the respondents demographics finding which conducted by researcher in order to understanding the profile of the respondents who participated in this research.

Table 4.18
Gender of the Respondents

Variable	Categories	Frequencies	Percent
Gender	Male	115	29.0
	Female	282	71.0
Total		397	100

In table 4.18 showed details on the gender of respondents who participated in this survey. Based on first detail of demographic information part is male and female. Respondents need to tick chosen answer about the most describing them self, (1) is for male

respondent and (2) is for female respondent. The results showed that female was the majority of participant in this study which were 282 participants with 71.0 %. The number of participant from male students was 115 participants and the percentage was 29.0%. The total number of student participated in this study as respondent was 397 in frequency and 100% in percentage.

Table 4.19
Age of the Respondents

Variable	Categories	Frequencies	Percent
Age	<18-23	75	18.9
	24-34	311	78.3
	35-45	3	0.8
	46>	8	2.0
Total		397	100.0

There are detail about age of respondents who participate in this survey. Table 4.19 showed that majority of the respondents age was 24-34 with frequency of 311 (78.3%). Second highest of frequency were age of <18-23 respondents amount 75 with (18.9%), followed by age 46> respondents with 8 (2.0%) and the least amount of frequency was 3 respondents which from 35-45 with (0.8%).

Table 4.20
Race of the Respondents

Variable	Categories	Frequencies	Percent
Race	Malay	287	72.3
	Chinese	54	13.6
	Indian	16	4.0
	Others	40	10.1
Total		397	100.0

There are many races who participate in this survey. Table 4.20 showed that majority of the respondents was Malay with frequency of 287 (72.3%). Second highest of frequency were Chinese respondents amount 54 with (13.6%), followed by 40 respondents from others race student with (10.1%) and the least amount of frequency was 16 respondents which from Indian student with (4.0%). The total numbers of students participated in this study as respondent was 397 in frequency and 100% in percentage.

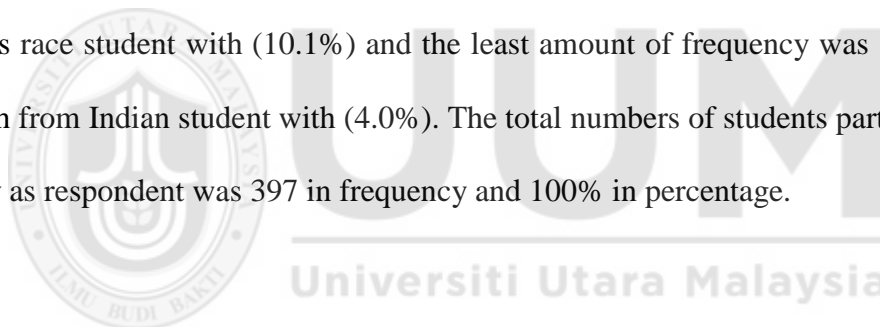


Table 4.21
Marital Status of the Respondents

Variable	Categories	Frequencies	Percent
Marital Status	Single	306	77.1
	Married	83	20.8
	Divorced	8	2.0
Total		397	100.0

There are 3 types of categories in marital status in this survey. Table 4.21 showed that majority of the respondents was single with frequency of 306 with (77.1%). Second highest of frequency were from married respondents amount 83 with (20.8%), followed by 8 respondents from divorced student with (2.0 %).



Table 4.22
Education of the Respondents

Variable	Categories	Frequencies	Percent
Education	Diploma	20	5.0
	Degree	142	35.8
	Master	224	56.4
	Phd	11	2.8
Total		397	100.0

There are 4 types of categories in education in this survey. Table 4.22 showed that majority of the respondents was Master with frequency of 224 with (56.4%). Second highest of frequency were from Degree respondents amount 142 with (35.8%), followed by 20 respondents from Diploma student with (5.0 %) and the least amount of frequency was 11 respondents which from Phd students with (2.8 %). The total numbers of students participated in this study as respondent was 397 in frequency and 100% in percentage.

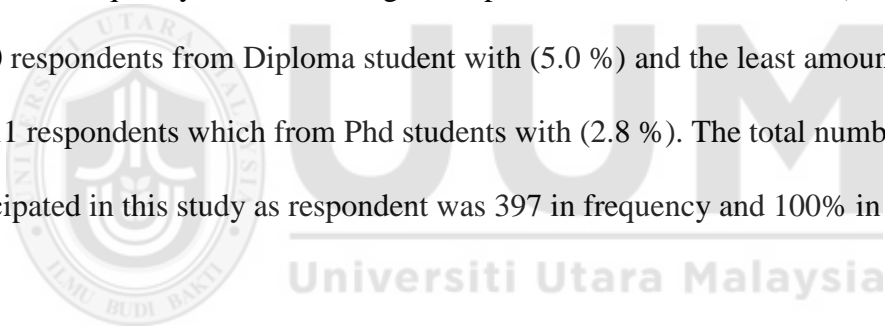


Table 4.23
Monthly Income of the Respondents

Variable	Categories	Frequencies	Percent
Monthly Income	<RM 2000	235	59.2
	RM 2000- RM 4000	39	9.8
	>RM 4000	35	8.8
	Others	88	22.2
Total		397	100.0

There are 4 types of categories in monthly income in this survey. Table 4.23 showed that majority of the respondents who has income <RM 2000 with frequency of 235 with (59.2%). Second highest of frequency were income it from Others respondents frequency 88 with (22.2 %), followed by 39 respondents who has income RM 2000 to RM 4000 with (9.8 %) and the least amount of frequency was 35 respondents which has income >RM 4000 with (8.8 %). The total numbers of students participated in this study as respondent was 397 in frequency and 100% in percentage.

4.7 Mean and Standard Deviation

In this study, the mean and standard deviation were used. According to Fahd and Hoon (2009), the mean is the average value of the data set. The purpose used in this study was to measure the central tendency and is calculated by dividing the sum of all values along with the number of values in the data set. While the standard deviation is a measure of dispersion given by the positive square root of the variance. Where, consult the squared deviations of each value from the mean value and the sum is divided variance and squared positive decision (Gorard, 2005). According to Sekaran (2003), the standard deviation is used to calculate the spread and dispersion. In order to examine the relationship between the dependent and independent variables. Researchers have analyzed using mean and standard deviation.

Table 4.24
Statistical Analysis Descriptive Variables

Variable	Mean	Standard Deviation
Consumer Preference	26.70406	3.28075
Product	34.8791	4.64557
Price	24.7456	3.47840
Place	29.0227	4.66851
Promotion	33.8816	4.88283

Table 4.22 shows the mean and standard deviation for the data dependent and independent variables for this study. The mean value for each score for each question submitted is between 24.7456 to 34.8791. The mean value of the lowest score is the

24.7456 of price under the independent variables while the highest mean score is 34.8791 of product . For promotion, and place recorded 33.8816 and 29.0227.

4.8 Statistical Analysis Inference

Inference statistical analysis is used to present the findings. Rules used for this analysis is to use the test method *Test Independent Sample T-Test, One -Way ANNOVA, Pearson Correlation* and *regression analysis* to test the hypotheses that have been formed. 2-tailed significant level of two-way used to test the correlation is 0.05, 0.025 for independent T- test sample and 0.05 for the test *One- Way ANNOVA*.

4.8.1 Pearson Correlation Analysis

The correlation analysis describes a relationship between the dependent variable and the independent variable whether exist or not. The purpose of this test is to determine whether the objectives are stated in chapter one can be reached. In addition, these tests can prove the hypothesis that has been established in studies either had a significant relationship (significant) with the consumer preferences.

According to Cohen (1988) as cited in Utah (2013), where r is 0.50 to 1.00, it shows the value of r is strong and large. However, if the value of r is 0:30 until 00:49, it is considered moderate. While if the value of r is 0.10 to 0.29, it shows the value of r weak or small. The results of the test are shown in Table 4.9 below:

Table 4.25
Result of Pearson Correlation Analysis

	Product	Price	Place	Promotion	Consumer Preferences
Product	1				
Price	.553**	1			
Place	.559**	.613**	1		
Promotion	.497**	.483**	.541**	1	
Consumer Preferences	.545**	.381**	.494**	.445**	1

** . Correlation is significant at the 0.01 level (2-tailed).

Based on the test results of correlation analysis as table 4.25 above, all the independent variables price, place, and promotion demonstrate the value of r is less than 0.5 in which the price of the variable r is 0.381 and the place is 0.494 while the promotion is 0.445. These three independent variables has a moderate relationship with consumer preferences. Meanwhile, with products with a r value of more than 0.5 which is 0.545, which has a strong correlation with consumer preferences.

4.8.2 Multiple Regression Analysis

To test the effect of the relationship between independent variables and the dependent variable, multiple regression analysis test (Multiple Regression Analysis) was used. The results of multiple regression analysis can determine the strength of the relationship between a independent variable which is more significant (significant) towards consumer preferences. Table 4.26, Table 4.27 and Table 4.28 shows the results of multiple regression analysis tests that have been carried out.

Table 4.26
Model Summary

Model Summary					
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	
1	.604 ^a	.365	.359	2.62677	

Table 4.27
Regression Analysis

Model		Unstandardized Coefficients		Standardized Coefficients	t	Sig.
		B	Std. Error	Beta		
1	(Constant)	10.277	1.149		8.940	.000
	Product	.250	.037	.355	6.746	.000
	Price	-.031	.051	-.033	-.603	.547
	Place	.154	.038	.229	4.074	.000
	Promotion	.113	.035	.161	3.186	.002

Note: R² =0.40; F= 56.433;Sig.= 0.00; **p<0.01 , p<0.05

The results of multiple regression analysis of Table 4.28 shows the product, price, place and promotion of consumer preferences only affect as much as 36.5%. This value is indicated by the variance of R^2 (0.365) as factors that affect the independent variables on consumer preferences. In summary score R^2 by 63.5% representing other factors not analyzed in this study.

Moreover, the overall results of the test results of multiple regression analysis showed that not all independent variables have a relationship with the dependent variable, namely the $F = 56.433$ ($p = 0.000$). The results of this test also found that there are only three independent variables, namely dependent variable product ($\beta = 0.355$) and place ($\beta = 0.229$) and promotions ($\beta = 0.161$) had a positive beta coefficient value. For the dependent variable price rates beta coefficient indicates a negative value which is at $\beta = -0.033$.

From the test results of multiple regression analysis, the independent variables for the product ($p = 0.000$) and place ($p = 0.000$) and promotion ($p = 0.002$) showed a significant relationship (significant) and the dependent variable as the three variable has a value of $p < 0.01$ and $p < 0.05$. However, another independent variable, were the price did not show any effect and influence on consumer preferences for value $p > 0.05$, were 0.547

4.9 Summary of Hypothesis Testing

Summary results of hypothesis testing described in Table 4.29 below.

Table 4.28
Summary of Hypothesis Testing

	DESCRIPTION OF HYPOTHETICAL	RESULT
H1	There is significant relationship between product and consumer preferences towards supplement product among Universiti Utara Malaysia students.	ACCEPTED
H2	There is significant relationship between price and consumer preferences towards supplement product among Universiti Utara Malaysia students.	REJECTED
H3	There is significant relationship between place and consumer preferences towards supplement product among Universiti Utara Malaysia students	ACCEPTED
H4	There is significant relationship between promotion and consumer preferences towards supplement product among Universiti Utara Malaysia students	ACCEPTED

4.10 Conclusion

Chapter 4 describes the results of the analysis. Data were analyzed using SPSS version 22 and the whole process involves the analysis of the respondent, reliability analysis, filter data, factor analysis, descriptive analysis, analysis, inference and hypothesis testing. This chapter want to shows the relationship between the effects of consumer preferences on supplement product among the students of the University that have a positive relationship. Analysis in this chapter is to examine and determine the relationship between the dependent variable with independent variables and hypotheses. The next chapter will discuss the findings, recommendations and conclusions of the study results.



CHAPTER 5

DISCUSSION AND CONCLUSION

5.1 Introduction

Findings of this study were presents in previous chapter. This chapter will elaborate the discussion and conclusion of the study. In this chapter will seek to summarize the outline the key recommendation that is arrived based on the finding of this research. This chapter will conclude with final conclusion on the overall study at the end.

5.2 Discussion of the findings

From this section initiated the discussion on the factors that have been studied 4P marketing mix and the impact of consumer preferences among students as a source of health in the use of supplements. In particular, the five objectives in this study, namely: -

1. Explain whether the relationship marketing mix give impact with consumer preferences for supplement products.
2. Proving whether the product as a marketing element has a relationship with the consumer preferences in making the product as a health supplement products.
3. Evaluate whether the factor of price marketing of products with a significant supplement to consumer preferences.
4. To prove the suitability of the location or distribution channel had contact with the consumer preferences in term to find the place to get the supplements.

5. Evaluate the effectiveness of the promotion factor has a relationship with the consumer preferences in the supplement products.

5.3 Summary of Finding

5.3.1 There is a Relationship between Product with the Consumer Preferences to use Supplements Product

For the production of a product is through the process of consideration by the manufacturer stating the factors on diversity issues, product design, characteristics of the product, the brand products, product size, packaging, service and warranty upon purchase of a product. Employers should emphasize the following key features in providing the best health products and foster loyalty consumers to choose to buy goods.

The results of this study prove consumer agree on aspects of the product but the average level. The relationship between the product and the consumer preferences of the product is significantly positive. This is because, in terms of acceptance of the product itself, the answer is uncertain election score is the second public after agreeing with the differences were not so significant. The findings support the study Ibrahim Jantan (2006) which mentions the problem of the supply of supplement product. In this study found the product that includes the diversity of products, product design, product features, product brands, product size, packaging, service and warranty upon purchase of a product has a problem and affect the consumer preferences as one of the important things in their lives.

5.3.2 There is a Relationship between Price with the Consumer Preferences to use Supplements Product

In fact, according to Armstrong and Kotler (2000) states that among the items found in the price is the list price, discounts, allowances, payment periods and credit conditions. There is no doubt that if the price factor can be managed properly will give you satisfaction and build customer loyalty to make a choice in which to select the product worth the price offered. Price involves the ability of the consumer to acquire goods or to attract consumers to buy goods in a long time.

Results of this study prove the consumer not agrees with aspects of marketing management in the price. However, the relationship between the price and consumer preferences not significantly. Most respondents were in a state of uncertainty on all matters concerned with price factors such as price lists, discounts, allowances, payment periods and credit conditions on supplement products. In this case has shown that consumers see the product in use supplement product, but at the same time, the price is also a concern for the continued to make a purchase of the product. Moreover, consumers generally make their choices considering the product information, product attributes and evaluating the consequences of using the product. Consumers consider health as an important parameter and then they buy the product. For some reason, when buying the supplement product, the content of chemicals in the product are not known and the risk to consumers. But that does not obtain approval from the Ministry of Health (MOH) has sold widely. This makes the concern for consumers and lead to anxiety to buy the supplement product. Objective price is the actual price of the product while

perceive price is individual believe of the price in relation to the quality of the product (Donald R., Lichtenstein & Scot B., 1989) .Consumer perception with respect to price is different and has a positive and a negative influence on the buying behavior. The results of this study support the research done by Iwan Kurniawan (2008) who found a customer preferences depends on the price.

5.3.3 There is a Relationship between Place or Distribution with the Consumer Preferences to use Supplements Product

According to Kotler and Armstrong (2000) refers to the distribution activities create, maintain, or change attitudes or behavior of customers in an area of the product to be marketed. There are several factors that must be considered in making the choice of such coverage, channel, classification, location, logistics, transport and inventory (Svandson and Gronhoug, 2011). According to Primo and Amundson (2002) manufacturers should consider the various factors before deciding the selection of a place. From these statements clearly indicate that the distribution factor made a significant impact on a product being marketed.

The results of this study show that consumers agree with aspects of marketing management in distribution but in the medium level. However, the relationship between the distribution of consumer preferences is significantly positive. This illustrates that the management of the distribution is not at a good level while the important factors in influencing customer preferences . In this study most evident when the distribution

factors influencing consumer preferences than to factors other marketing. The results of this study support the study by Chung and Lee (2003), the position of the image or place is an important factor in the marketing mix which affects the consumer purchases of products.

5.3.4 There is a Relationship between Promotion with the Consumer Preferences to use Supplements Product

The concept of marketing mix 4P underlined that under the promotion factor containing advertising, personal selling, sales promotion, and public relations (Armstrong & Kotler, 2000). Or a combination of some of these elements are considered as a promotion that gives direct persuasion through the use of various incentives and can be measured to stimulate the purchase of products with charm, reach, and frequency of promotions (Sethi, 2001).

Results of this study prove the user agrees with the marketing management in the aspect of promotion but in the medium level. However, the relationship between the promotion of consumer preferences is significantly positive. Researchers concluded that there are inherent weaknesses in the management factors that undermine customer preferences promotion. The results of this study support the study Ariffin (2010) which calls for effective management of promotional factor is important to ensure that a business is to survive long in the market.

5.4 Implication of Research

In this section, researchers will discuss the implications of the study are divided into several parties. From the beginning of the discussion of this study, the researchers have discussed the importance of the research supported by previous studies, statements from individuals who have an interest in the country, researchers from the Institute of Higher Learning (IPTA), director of health products and so on.

The sequence of the study through questionnaires were carried out and analyzed carefully to see the actual effectiveness 4P marketing mix and the impact on consumer preferences in using supplements. Although the study only focused on the northern areas alone, but respondents in this study are those that are usually exposed to the acquisition of health products, especially in this era are exposed to electronic media about the importance of taking these supplements. The researchers concluded that this study provide useful theoretical implications, entrepreneurs health products supplements, consumers and government. Here is the division of the implications and statements made by some support to strengthen the statement.

5.4.1 Implications of Research on Entrepreneur Products Supplements

Generally these studies have an impact on all employers from a variety of businesses, but in particular the implications of this study is to entrepreneurs health products. Growth entrepreneurs health products is very positive. This is evidenced by the dumping of health products based on herbs and marketed in the market either for beauty of the face, fitness, general health and the treatment of chronic pain.

So with this study, may indicate to the operators health products may be shortcomings in managing the marketing mix 4P wisely. Positive growth should be maintained and a place in the market in a long time. Among the aspects that should be emphasized is health products issued accordingly have the approval of the Ministry of Health to ensure the safety of users. In addition, the packaging of the product should be attractive and have enough information regarding the diet drug ingredients are mixed in a drug, dose, and so on. In addition, the price is also reasonable, flexible and consistent.

Flexible means the prices offered have pieces that draw (Off), installment payments, and so on. With this, users are not burdened with pricing that is placed. Furthermore, according to a study discussed in chapter two, the price is quite expensive health products of modern medicine because of the manufacturing process involves a rigorous process and partly imported from abroad. Consistency also means, pricing is not easily changed in a short time.

In addition, the promotion will also need to be more creative and consistent. For example, the promotion involves celebrities more appealing to consumers through advertisements on television, radio, internet, magazines, and so on. With creative promotions and consistently as indirectly able to win the hearts of consumers to buy local herbal health products. According to Arifin (2010) says that the use of celebrities (public figure) in a variety of advertising, especially for new products, is one of the effective marketing strategies to gain or maintain market. In addition, efficient management and consistent distribution should also facilitate users to obtain local herbal health products. According to Anantha Raj (2012) states that an efficient distribution channel can help producers, manufacturers, and users in carrying out the tasks of distribution. Therefore, employers should be aware of and committed to the distribution either in the selection of a business location, channel, distribution and so on. Efficient distribution management can manage costs while making it easier for users to get local herbal health products easily.

In conclusion, the study of marketing mix 4P have implications for local entrepreneurs herbal health products. The basic things need to be addressed and any shortcomings should be increased to the maximum as the taproot of a business must be strong to keep up a high level with the operators of the supplement products that have been successful, particularly at the international level.

5.4.2 Implications of Research on Consumer

Consumers are the ones who determine what that business continues to get up and go forward. In this case, of course awareness of supplement products as a source of good health and do not have a high risk in the long run is expected. Knowledge about medicine as a source of health indirectly affect consumer preferences in using local health products over a long period. In this study, researchers have been analyzing everything related to supplement products in Malaysia, whether from the cultural aspect of the Malays with herbs, nutrients herbs found in plants that live around us, the reaction treatment using herbal health products and so on . With it, the researchers hope that this study gives inspiration and awareness to appreciate the efficacy of supplement products that actually is one of healthy lifestyle factors.

5.4.3 Implications of Research on Government Planning

In addition, with respect to the speech of the Prime Minister, YAB Dato 'Sri Najib Tun Razak, in his speech to promote health tourism industry further intensified since seen the industry has generated almost RM600 million a year and has a bright future for further development, then this study shows that Malaysia also has a great potential in promoting health tourism industry from a medical point of supplement product from local entrepreneur approved by the MOH. Thus, the tourism industry can be diversified treatment services offered to patients from abroad to improve the health tourism industry more attractive

5.5 Limitation of Research

During this study, there are some limitations to be difficult for researchers to complete the study so perfect. The first limitation is the lack of cooperation from some quarters of the respondents in the data collection process. The main focus is on the student at Universiti Utara Malaysia from undergraduate and postgraduate. However, the assistance given is simple, especially in answering the questionnaire. This is evident when the form is not returned questionnaires completely. The second limitation is the lack of updated information in respect of the issue of supplement products among students. This is quite difficult for researchers to get the latest information on issues that arise in order to strengthen the research problem, especially in the aspect of the marketing mix 4P. The problem seems to get less attention and impact entrepreneurs who are not responsible for selling supplement products without the approval of the Ministry of Health. Without realizing it pose a danger to consumers and bring down the good name of the product itself.

5.6 Future research

The results of this study found that the 4P marketing mix and the impact of consumer preferences in using supplements is 40 percent . This suggests that there are other factors that can improve the methodology of the study so the results of studies. Therefore, the researchers suggested that studies be made in the future to study other aspects such as perception, attitude, culture and others.

In addition, this study is limited in the northern region of Malaysia only, at Universiti Utara Malaysia. Thus, the decision is limited in the range of respondents in the north only. Therefore, researchers are encouraged that so enlarged the scope of the study to other countries so that the consumer preferences of supplements can be identified more precisely.

5.7 Conclusion

Overall this study, have found that robust health product marketing supplements is at an average level either in terms of management of marketing and consumer preferences. However, the results of this study prove that there is a significant and positive relationship between marketing mix 4P and the consumer preferences in using the health supplement products. This shows that the marketing of health products supplements is to support the concept of the marketing mix 4P. The analysis results showed that the theoretical framework developed by the researchers was successful where the consumer preferences in using supplements is influenced by the marketing mix 4P. Thus, the operators and the consumer should take a lesson from this study to support and improve the marketing of supplement products in addition to marketing health products may continue to be marketed more aggressively in the local and international levels.

REFERENCES

- Ab Halim, M. & A. Ahmad, (2012). The possibility of uniformity on halal standards in Organization of Islamic Countries (OIC) country. *17 World Applied Science Journal*: 6.
- Anantha, R. A. A. (2012). The effect of marketing mix and customer perception on brand loyalty. *IOSR Journal of Business and Management*, 4(2), 01–11, 6–10.
- Akgam, H. A. (2013). *Study of customer satisfaction in the banking sector in Libya*.
- Alvaro. G. M, Oscar. G. B, and Mercedes. M. P (2016). Influence of Customer Quality Perception on the Effectiveness of Comemercial Stimuli for Electronic Products: *Front Psychol* (7).
- Arifin, S. (2010). *Pengaruh celebrity endorser ridho rhoma dan rhoma irama terhadap minat membeli kartu As*.
- Armstrong, P. K. (2000). *Prinsip Pemasaran* (Eight ed.). (G. Jaffar, Ed., & N. M. ariffin, Trans.) Selangor: Prentice Hall
- Awais Bhatti,M., & Veera Pandiyan Kaliani Sundram (2015). *Business Research*
- Bakewell, C. & Mithcell, V. W. (2006). Male versus female consumer decision making styles, *Journal of Business Research*, 59, pp. 1297-1300.
- Bennett, A. R. (1997). The five Vs – a buyer’s perspective of the marketing. *Marketing Intelligence & Planning*, 15(3), 151–156.

- Berbard, H. R., P. J. Pelto, O. Werner, J. Boster, A. K. Romney, A. Johnson, C. R. Ember & A. Kasakoff. (1986). *The construction of primary data in cultural anthropology*. *Current Anthropology* 27: 382-396.
- Brewer, P.c.& T.W. Speh, 2000. Using The Balanced Scorecard to Measure Supply Chain Performance. *Journal of Business Logistics*, 21(1): 1-16
- Bernard, H. R. (2002). *Research Methods in Anthropology: Qualitative and quantitative methods*. 3rd edition. AltaMira Press, Walnut Creek, California.
- Boonajsevee, B. (2005). *Relationship marketing: Loyalty intentions in New Era of Thai Bank Marketing*. Nova Southeastern University.
- Chebat, J C., Filiatrault, P., Gelinas-Chebat, C., & Vaninsky, A. (1995). Impact of Waiting Attribution and Consumer's Mood on Perceived Quality. *Journal of Business Research*, (34), pp. 191-196.
- Chung, I.-K., & Lee, M.-M. (2003). A study of influencing factors for repurchase intention in internet shopping malls. In *Parallel and Distributed Processing Symposium Proceedings International* (p. 243a). Nice, France.
- Cruz Amorim, J. (2000). Dietary habits and Nutritional Status of Adolescents over Europe-Southern Europe. *Eur. J. Clin. Nutr.*, 54: (Suppl 1) S29-S35.
- David, M. & C. D. Sutton, (2004). *The Basics*. Thousand Oaks: Sage Publications.
- Davies, A., Titttrington,A.J. & Cochrane, C. (1995) Who buys organics food:A profile or purchasers of organic food in northern Ireland. *British Food Journal*, 97(10), 17-23.

Deliya. M.M & Parmar. J.B (2012). Role of Packaging on Consumer Buying Behaviour-Patan District; *Global Journal of Management and Business Research*. 12(10).

Devla. N. M, Acharya.R. S. Acharya.S N. & Kumar. V. (2011). Dietary Supplements: A Legal Status In India & In Foreign Countries: *International Journal of Pharmacy and Pharmaceutical Sciences* 3 (3).

Dietary Supplement Health and Education 1994. (2015, May 13). Retrieved from <http://www.anh-usa.org/dshea/#What%20is%20DSHEA>

Food and Drug Administration Consumer Health Information. (2015, May 13). Retrieved from www.fda.gov/consumer/updates/supplements080408.html

Doroodgar, M. R., Nazari, K., & Emami, M. (2012). The study of the relation between marketing mix and attract customers. *Journal of Basic and Applied Scientific Research*, 2(8), 7734–7740.

Dutka, A. (1995). *AMA handbook for customer satisfaction: A complete guide to research, planning, & implementations*. Lincolnwood: NTC Business Books

Euromonitor,(2015). Consumer Health in Malaysia. Retrived from <http://www.euromonitor.com/consumer-health-in-malaysia/report>

Geoffrey p. Webb (2006). Dietary Supplements and Functional Foods. The British Dietetic Association, pp.19(4).

Ghazali, E., Mutum, D. and Lee, L. L. (2006). Dietary Supplement Users vs Non-users. Malaysia: Profile Comparisons for marketing Purposes. Eds. Welsh, D.H.B. et al. In: *Proceeding of AGBA 3rd World Congress, Advance in Global Business Research*, 3(1), 4-6 January 2006, Kuala Lumpur, Malaysia, pp. 43-54

- Grunert.G. K, Wills.M.J, and Celemin. F.L (2010). Nutrition knowledge, and use and understanding of nutrition information on food labels among consumers in UK.: *Research Report 13*.
- Hardinsyah dan Aries M., 2012. Jenis Pangan Sarapan dan Perannya dalam Asupan Gizi Harian Anak Usia 6-12 Tahun di Indonesia. *Jurnal Gizi dan Pangan*. Departemen Gizi Masyarakat FEMA-IPB. 7(2),pp 94.
- Haeckel, Stephan H. (1997), "Preface," in *Reflections on the futures of marketing*, Donald R. Lehman and Katherine Jocz, eds. Cambridge, MA: Marketing Science Institute.
- Hair, J.E.; Anderson, R.E.; Tatham, R.L; & Black, W.C. (2007). *Multivariate Data Analysis, 4th Edition*, New York, Prentice-Hall International.
- Hawkins, D. I, Best, R. J., & Coney, K. A. (1995). *Consumer behavior: Building marketing strategy*. Chicago: McGraw-Hill/Irwin.
- Hennig-Thurau, T., Gwinner, K. P., & Gremler, D. D. (2002). Understanding relationship marketing outcomes: An integration of relational benefits and relationship quality. *Journal of Service Research*, 4, 230–247.
- Herbalife Annual Report (2015). Retrived from <http://ir.herbalife.com/annuals.cfm>
- Isa, K. A. M. & Masuri, M. G. (2011). The Association of Breakfast Consumption Habit, Snacking Behaviour and body mass Index among University Students. *American Journal of Food and Nutrition*. 1 (2) pp55-60
- Jones .S (2007), *Exploring corporate strategy: text & cases*. 8th edition.

- Johnson, M. D., & Gustafsson, A. (2000). *Improving customer satisfaction, loyalty, and profit: An integrated measurement and management system* (1st ed.). Francisco: Jossey-Bass.
- Johnson, R. A., & Wichern, D. W. (1992). *Applied multivariate analysis* (3rd ed.). New Jersey: Prentice Hall Inc.
- Krejcie, R. V., & Morgan, D. W. (1970). *Determining sample size for research activities*. *Educational and Psychological Measurement*, 30, 607-610.
- Kotler, P. (2005). *Marketing: an introduction*. New Jersey: Pearson Education Inc.
- Kotler, P. & Amstrong, P. (2008). *Principles of Marketing 12th ed*, New Jersey: Pearson Prentice Hall.
- Kotler, P., & Keller, K. L. (2009). *Marketing management*. Upper Saddle River, N.J: Pearson Prentice Hall.
- Kotler, P. & Keller, K. L (2011). *Marketing Management 14th ed*, New Jersey: Pearson Prentice Hall.
- Leslie, L. Z. (2011). *Celebrity in 21st century. ABC-CLIO, LLC*. California.
- Lamb, C. W., Hair, J.F., & McDaniel, C. (2009). *Essential of Marketing, 6th Edition*. United State of America: Nelson Education, Ltd.
- M. Ariffin, A. A., M. Salleh, A. H., A. Aziz, N. & Asbudin , A. A. (2008). *Service Quality and Satisfaction for Low Cost Carriers. International Review of Business Research Papers*. 6(1), February 2010, pp. 47-56.

- Malhotra, N. (2014). *Marketing Research: An Applied Orientation, 3rd Ed*, Prentice-Hall, Sydney.
- Malaysia Organization of Phamarceutical Industries. 2001 . *14th Asia Phamarceutical Conference*(online) <http://www/mopi.org.my/main.html>
- Martyn Shuttleworth. *Pilot Study*. (2015, May 14). Retrived from <https://explorable.com/pilot-study>
- Mason, M. J., & Scammon, D. L. (2000). Health claims and disclaimers: Extended boundaries and research opportunities in consumer interpretation. *Journal of Public Policy & Marketing*, 19(1), 144–150.
- McCracken, G. (1989). Who is the celebrity endorser? Cultural foundations of the endorsement. *Journal of Consumer Research*, 16(1), 310–321.
- McColl-Kennedy, J. R. and Kiel, G. C. (2000) .*Marketing: A strategic approach*. Melbourne: Nelson Thomson Learning.
- Md. Nor Othman, Ong, F. S. & Wong, H. W. (2008). Demographic and Lifestyle Profiles of Ethnocentric and Non-Ethnocentric Urban Malaysian Consumers: *Asian Journal of Business and Accounting*, 1(1), pp. 5-26.
- Meghan Jain, & Fang Han. (2012). Identifying the essential factors in the marketing design (The case of Personal Protective Equipment), Center of Entrepreneurship, University of Oslo. Pp 18-97.
- Meyer, L. S., Gamst, G., & Guarino, J. (2006). *Analysis of Variance Designs: A Conceptual and Computational Approach with SPSS and SAS*. UK: Cambridge University Press.

Meyers, L.S.; Gamst, G. & Guarino, A. (2006). *Applied multivariate research: Design and interpretation research*: Thousand Oaks: SAGE.

Moehji, S. (2003). *Ilmu Gizi 2*. Jakarta: Papas Sinar Sinanti.

Mohd. Najib Ghafar (1998). "Penyelidikan Pendidikan." Skudai: Universiti Teknologi Malaysia.

Mohammad, A.H, Wang, A. & Sunayya, B. (2012). Investigating on Tourist satisfaction: An empirical study on East Lake. *European Journal of Business and Management*. 4(7).

Mowen, J. C. (1993). *Consumer behavior*. New York: McMillan Publishing Company

Mowen, John C dan Michael Minor. (2002). *Perilaku Konsumen*. Jakarta: Erlangga.

Musaiger, A.O. (1993). Socio-cultural and economic factors affecting food consumption patterns in the Arab countries. *Journal of the Royal Society for the Promotion of Health*, 113(2), 68-74.

Murray, H. (2011). Expanding the Malaysia herbal industry by developing the farmer–government University Nexus. In *7th Malaysian Agro –Bio International Conference with the 12th Malaysian International Food and Beverage Trade Fair* (pp. 12–15). Putra World Trade Centre, Kuala Lumpur, Malaysia.

Natila Ahmad. 2002 Nutritional Supplements, Nutraceutical, Herbal Medicines. Retrived on Mac 2015, from <http://strategis.ic.gc.ca/epic/internet/inimr-ri.nsf/en/gr111702e.html>

- Noyer C. and Dimajo.S. (2015). Exploring brands celebrity endorsement on facebook:
Master Thesis Business Administration. Karlstand Busisness School University.
- O. C. Ferrell, M. H. (2010). *Marketing Strategy*. Cengage Learning, 2010.
- Oliver, P., & Jupp, V. (2006). *Purposive sampling*. In: The SAGE dictionary of social research methods. Sage, pp. 244-245.
- Oliver, R. L. (1999). Whence consumer loyalty. *Journal of Marketing*, 63(Special Issue), 33-44.
- Ottley, C. (2001) – Beyond the Balanced Diet. Trends in food Science and Technology.12: 249-251
- Orth, U. R. (2009), 'The Power of Packages – New Insights from Consumer Psychology Research,' *Fruit Processing* 5/2009, p. 234-236.
- Pallant, J. (2013). *SPSS Survival Manual: A Step By Step Guide To Data Analysis Using IBM SPSS (5th ed.)*. New York: McGraw-Hill.
- Papadaki, A., Hondros, G., Scott, J. A. and Kapsokfalou, M. (2007). Eating habits of University students living at, or away from home in Greece *Appetite* Volume 49, Issue 1 pp169-176
- Peter, P.J. & Donnelly, J.H. (2007). *Marketing management: Knowledge and skills* (8th ed.). New York: McGraw-Hill.
- Pinya. S. & Speece.M (2007) The importance of packaging attributes; *A Conjoint Analysis Approach' European Journal Of Marketing* .41 pp.1495-1517.

- Poon, M, W (2010). Guidelines for Entry in Malaysian Supplements Market: Retrieved from <http://newhope.com/news/guidelines-entry-malaysian-supplements-market>
- Polit, DF & Hungler, BP. (1999). *Nursing research: Principles and methods*. 6th edition. Philadelphia: Lippincott.
- Portal Rasmi Kementerian Perdagangan Dalam Negeri, Koperasi dan Kepenggunaan. (2015, Jun 7). Retrieved from <https://tspm.kpdnkk.gov.my/portal/index.php/my/>
- Portal Rasmi Kementerian Kesihatan Malaysia. (2013, Oktober 3). Retrieved from www.moh.gov.my/index.php/pages/view/362
- Prendergast, P.G. and Pitt, L. (1996), "Packaging, marketing, logistics and the environment: are there trade-offs?", *International Journal of Physical Distribution & Logistics Management*, 26(6), pp. 60-72.
- Rozin, P., Fischler, C., Imada, S. & Wrzesniewski, A. (1999). Attitudes to food and the role of food in life in the U.S.A, Japan, Flemish, Belgium and France: Possible implications for the diet-health debate. *Appetite*. 33:163-180
- Roger, K. & Worthington, P. (2004) Young, Middle age and Older Adults, Worthington, P. (ed). *Practical Aspect of Nutritional Support Guide Advanced*, Philadelphia: Saundress.
- Rettie, R. & Brewer, C. (2000). The verbal and visual components of package design. *Journal of Product and Brand Management*. 9(1), pp. 56-70
- Salant, P. & Dilman, D. A. (1994). *How to conduct Your Own Survey*, New York: Wiley
- Schiffman L., Kanuk, L. L. (2010). *Consumer Behaviour*, Global Tenth Edition. United State of America: Pearson Education, Inc.

- Sekaran, U. (2006). *Research method for business: A skill building approach* (4th ed.). New Delhi: Sharda Offset Press.
- Sekaran, U., & Bougie, R. (2009). *Research Methods for Business: A Skill Building Approach*. United Kingdom: John Wiley and Sons Ltd.
- Sekaran, U. & Bougie, R. (2013). *Research Methods for Business: A skill-building approach* (6th ed.). John Wiley & Sons Ltd
- Shah. S, Ahmad .A, & Ahmad.N (2013): Role of Packaging in Consumer Buying Behavior; A study of University students of Peshawar Region KPK Pakiston. *International Review of Basic and Applied Sciences*. 1(2).
- Shimizu, T. (2003): Health Claims and Scientific Substantiation of Functional Foods - Japanese System Aiming the Global Standard, *Current topics in Nutraceutical Research*, 1(2), pp. 1-12.
- Shimp, T. A. (2003). Advertising, promotion and supplemental aspects of marketing communications (6th ed., p. 650). Thomson South-Western
- Schiffman, L. G., & Kanuk, L. L. (1997). Consumer behavior. New Jersey: Prentice Hall.
- Sudarin, A. (2008). A Study of Factor on Buying Decision of Customers towards Dietary Supplement Food Products: *Master Project. Srinakharinwirot University*.
- Simamora, B. (2001). Remarketing for business recovery. Jakarta: Gramedia Pustaka Utama.
- Tabachnick, B.G. & Fidell, L.S. (2013). *Using multivariate statistics* (6th ed.), Boston: Pearson Education.

Tee, E.S. (1999). Nutrition of Malaysians: Where Are We Heading? *Malaysia Journal of Nutrition*. 5: 87-109.

Tjiptono, F (2000), Manajemen Jasa, Penerbit Andi Yogyakarta

Underwood, R. L., Klein, N. M., & Burke, R. R., (2001). Packaging communication: attentional effects of products imagery. *Journal of Product and Brand Management*, 10(7), p. 403-422.

Utah, R., (2013). E-book IBM Statistics for Window Versi 21.0. Pejabat Teknologi Maklumat 19/02/2013.

Van Riel, C.R.A., Mortangers, C.P.de & Streukens, S. (2005). Marketing Antecedents of Industrial Brand Equity: An Empirical Investigation in Special Chemicals. *The Journal of Industrial Marketing Management*, 34(8), 841-847.

Vrontis, D., Thrassou, A. & Lamprianou, I. (2009). 'International marketing adaptation versus standardisation of multinational companies'. *International Marketing Review*, 26(4), pp. 477-500.

Wathieu, L., & Bertini, M. (2007). Price as a stimulus to think: The case for wilfull over pricing. *Marketing Science*, 26(1), 118-129.

Wigunaningsih Wuri, (2007). Salah Konsumsi Suplemen Bisa Keracunan.
(perspektif–koranpakoles2007.blogspot.com20080salah-konsumsi-suplemen-bisa-keracunan.html)

Yonca Limon, Lynn R. Kahle, and Ulrich R. Orth (2009) Package Design as a Communications Vehicle in Cross-Cultural Values Shopping. *Journal of International Marketing*: March 2009, 17 (1), pp. 30-57.

Yoo, B., Donthu, N. & Lee, S. (2000). 'An Examination of Selected Marketing Mix Elements and Brand Equity'. *Journal of the Academy of Marketing Science*, pp. 195-211.

Zailinawati, A. H., Schattner P., & Mazza, D. (2006). *Doing a pilot study: why is it essential?* *Malaysian Family Physician*, 1(2&3), pp. 70-73.

(2013, Jun 26). *Berita Harian*. Retrived in June 23, 2016 from <http://www.bharian.com.my/>

Zikmund, W.; Babin, B. Carr, J. & Griffin, M. (2013). *Business Research Methods*. Canada: South-Western.

Zeithaml, V. A., & Bitner, M. J. (1996). *Service marketing*. New York: McGraw Hill Companies Inc.



Appendix A



BORANG SOAL SELIDIK/ QUESTIONNAIRE

THE IMPACT OF MARKETING MIX ELEMENTS ON CONSUMER PREFERENCE TOWARDS SUPPLEMENT PRODUCT AMONG UUM STUDENTS

Responden yang dihormati,

Saya merupakan seorang pelajar Sarjana (Sains) Pengurusan di Universiti Utara Malaysia. Borang soal selidik ini mengandungi TIGA (3) bahagian iaitu bahagian I, II dan III. Tujuan borang soal selidik ini dibuat adalah untuk mengenalpasti faktor yang mempengaruhi pemilihan pengguna terhadap makanan tambahan. Semua maklumat yang diberikan adalah RAHSIA dan hanya digunakan bagi tujuan akademik sahaja. Kami tidak akan menerbitkan sebarang maklumat yang akan melibatkan sebarang individu atau organisasi bagi tujuan lain. Terima kasih atas masa dan kerjasama anda dalam menjayakan usaha penyelidikan ini.

Dear respondent,

I am a student of Master (Science) Management in Universiti Utara Malaysia. The questionnaire contains THREE (3) parts, I,II and III. The purpose of this questionnaire is to identify the factors that affect the customer preferences towards supplement products. All information provided is CONFIDENTIAL and only used for academic purposes only. We will not publish any information that would involve any individual or organization for other purposes. Thank you for your time and cooperation in the success of this research.

Penyelidik: Maisarah Binti Masri 818172

Sarjana Muda (Sains) Pengurusan. Universiti Utara Malaysia

Email: maisarahmasri@ymail.com

BAHAGIAN I / PART I :

LATAR BELAKANG RESPONDEN/ BACKGROUND OF RESPONDENT

Seksyen ini bertujuan untuk mendapatkan maklumat tentang latar belakang responden. Responden dikehendaki tandakan [√] pada pilihan yang berkenaan. Hanya satu pilihan sahaja yang diperlukan untuk setiap soalan.

This section is intended to obtain information about the background of the respondents. Respondents are required to tick [√] in the appropriate selection. Only one option is only necessary for each question.

1. Jantina / Gender

Lelaki/ Male Perempuan/ Female

2. Umur/Age

<18-23 35-45
 24-34 46>

3. Bangsa/ Race

Melayu/Malay India/ Indian
 Cina/ Chinese Lain-lain/ Others

4. Taraf Perkhawinan/ Marital Status

Bujang/Single
 Berkhawin/ Married
 Bercerai/ Divorce

4. Tahap Pendidikan/ Education Level

Diploma/ Asasi
 Ijazah Sarjana Muda /Bachelor Degree
 Sarjana /Master
 Phd

5. Pendapatan Bulanan/ Monthly Income

≤ RM 2,000 ≥ RM 2,000 – RM 4,000
 ≥ RM 4,000 lain-lain/ others: _____

BAHAGIAN II/ PART II: SOAL SELIDIK BERKENAAN PEMILIHAN PENGGUNA
 Kenyataan berikut merupakan faktor pemilihan pengguna terhadap produk makanan tambahan. / The following is a selection factor for consumer preferences against supplement product.

Sila (bulat) jawapan di ruang yang disediakan mengikut skala penilaian berikut./Please (circle) answer in the space provided in accordance with the following rating scale.

Skala Penilaian/ Rating scale

1- Sangat tidak setuju/ Strongly Disagree: 2- Tidak Setuju/ Disagree: 3- Biasa/ Neutral:
 4- Bersetuju/ Agree: 5- Sangat Bersetuju/ Strongly Agree.

No	Item /Soalan	1	2	3	4	5
1	Kualiti adalah salah satu faktor yang mempengaruhi keputusan pembelian saya terhadap produk makanan tambahan Quality is one of the factors that influence my purchasing decisions on supplement products.					
2	Jenama produk menjadi kebimbangan saya apabila saya membeli produk makanan tambahan. Brand products into my concerns when I buy supplement products.					

3	<p>Saya perlu sentiasa membeli produk makanan tambahan dibuat daripada Malaysia berbanding produk import .</p> <p>I should always buy supplement products made from Malaysia compared to imported products.</p>					
4	<p>Produk makanan tambahan yang dijual di Malaysia adalah yang terbaik.</p> <p>Supplement products sold in Malaysia is the best.</p>					
5	<p>Saya akan mengambil masa untuk melihat label untuk mengetahui mengenai produk makanan tambahan.</p> <p>I will take the time to look at the label to find out about supplement products.</p>					
6	<p>Saya akan mengesyorkan kepada orang lain untuk membeli produk makanan tambahan.</p> <p>I would recommend to others to buy supplement products.</p>					
7	<p>Gaya hidup saya akan mempengaruhi pilihan pembelian saya terhadap produk makanan tambahan.</p> <p>My lifestyle choices will affect my purchase of supplement products</p>					

**BAHAGIAN III/ PART III: SOAL SELIDIK BERKENAAN CAMPURAN
PEMASARAN**

Kenyataan berikut merupakan kesan campuran pemasaran kepada pemilihan pengguna. /
The following is the marketing mix impact on consumer preferences.

Sila (/) jawapan di ruang yang disediakan mengikut skala penilaian berikut./Please (/)
answer in the space provided in accordance with the following rating scale.

Skala Penilaian/ Rating scale

1- Sangat tidak setuju/ Strongly Disagree: 2- Tidak Setuju/ Disagree: 3- Biasa/ Neutral:
4- Bersetuju/ Agree: 5- Sangat Bersetuju/ Strongly Agree.

Produk/ Product

No	Item/ Soalan	1	2	3	4	5
1	Saya merasakan produk makanan tambahan berkesan dalam menyelesaikan permasalahan kesihatan yang saya hadapi. I feel supplements are effective in solving health problems that I face.					
2	Saya merasakan ada kesan sampingan apabila menggunakan produk makanan tambahan tempatan I feel there are side effect when using local supplement products					
3	Semua produk makanan tambahan yang saya lihat mempunyai kelulusan Kementerian Kesihatan Malaysia (KKM) All products are supplement s that I've seen have the approval of the Ministry of Health (MOH).					

4	<p>Saya tahu bahawa produk makanan tambahan tempatan mempunyai pelbagai jenis keluaran</p> <p>I know that the local supplement products have a wide range of output</p>					
5	<p>Produk makanan tambahan yang saya gunakan mempunyai jenama yang terkenal.</p> <p>Supplements that I use has a well known brand.</p>					
6	<p>Saya sering mematuhi cara pemakanan produk makanan tambahan yang disyorkan di bungkusan produk.</p> <p>I often observe supplements are recommended on packaging product.</p>					
7	<p>Pembungkusan produk makanan tambahan adalah memuaskan</p> <p>Supplement packaging of products is satisfactory</p>					
8	<p>Saya mengutamakan kualiti dalam pemilihan produk makanan tambahan yang saya gunakan.</p> <p>My priority in selecting quality health supplement products that I use.</p>					
9	<p>Saya yakin produk makanan tambahan adalah terjamin keberkesanannya.</p> <p>I believe supplements are guaranteed effectiveness.</p>					

Harga/ Price

No.	Item /Soalan	1	2	3	4	5
1	<p>Saya mendapati harga produk makanan tambahan adalah mahal.</p> <p>I found the price supplements are expensive.</p>					
2	<p>Saya merasakan harga adalah berpatutan</p> <p>I feel the price is reasonable .</p>					
3	<p>Saya mendapati harga produk makanan tambahan adalah konsisten dari tahun lepas ke tahun ini.</p> <p>I found the price supplements is consistent last year to this year.</p>					
4	<p>Harga produk makanan tambahan adalah berpadanan dengan kepuasan saya dapat.</p> <p>Supplement product prices are compatible with satisfaction that I got.</p>					
5	<p>Peniaga produk makanan tambahan menawarkan diskaun pada musim- musim tertentu.</p> <p>Dealers supplements offer discounts at certain seasons.</p>					
6	<p>Saya tidak merasakan harga sebagai satu bebanan kepada saya untuk terus menggunakan produk makanan tambahan.</p> <p>I do not feel the price as a burden to me to continue to use supplements.</p>					

7	<p>Pada saya, harga produk suplemen adalah lebih murah berbanding dengan harga produk makanan tambahan dari luar negara.</p> <p>To me, the price supplement product is cheaper compared with the cost of others supplement products from abroad.</p>					

Promosi/ Promotion

No	Item / Soalan	1	2	3	4	5
1	<p>Medium pengiklanan melalui media cetak mempengaruhi saya untuk menggunakan produk makanan tambahan.</p> <p>Medium advertising through print media influence me to use supplements.</p>					
2	<p>Medium pengiklanan melalui media elektronik mempengaruhi saya untuk menggunakan produk makanan tambahan.</p> <p>Medium advertising through electronic media influenced me to use supplements.</p>					
3	<p>Saya merasa kurangnya kaedah pengiklanan menyebabkan produk makanan tambahan kurang mendapat sambutan.</p> <p>I feel the lack of advertising methods lead to supplement products lukewarm.</p>					
4	<p>Saya tertarik dengan iklan produk makanan tambahan yang disiarkan di televisyen</p> <p>I am interested in advertising supplements televised</p>					
5	<p>Saya meminati teknik promosi jualan langsung oleh jurujual produk makanan tambahan.</p>					

	I am interested in direct sales promotion technique by the salesman supplements.					
6	Saya mendapati kebanyakan iklan produk makanan tambahan adalah bertujuan untuk mempengaruhi pengguna berbanding memberi manfaat kepada pengguna. I found that most product advertising supplement is intended to affect the user than the benefit of consumers.					
7	Saya merasakan teknik jualan langsung memberikan kefahaman yang jelas kepada saya berkenaan produk suplemen. I feel the direct selling technique gave me a clear understanding of the supplement products.					
8	Saya pernah melihat promosi jualan produk suplemen melalui laman social. I once saw a supplement product sales promotion through social sites.					
9	Saya pernah mengesyorkan mana- mana produk suplemen kepada orang lain untuk dicuba. I have recommended any supplements to others to try.					

Pengedaran/Place distribute

No	Item/ Soalan	1	2	3	4	5
1	Saya mudah untuk membeli produk makanan tambahan di mana- mana premis jualan. I'm easy to buy supplement products in any premises sales.					

2	<p>Saya mudah berhubung dengan pengedar untuk mendapatkan bekalan produk makanan tambahan.</p> <p>I easily get in touch with distributors to supply supplement products.</p>					
3	<p>Pengedaran produk makanan tambahan yang saya guna menyediakan perkhidmatan selepas jualan dengan cepat.</p> <p>Distribution of supplement products that I use provides after-sales service quickly.</p>					
4	<p>Saya mudah untuk mendapatkan semula produk makanan tambahan tempatan yang telah habis digunakan.</p> <p>I'm easy to retrieve local supplement products that have been used up.</p>					
5	<p>Imej kedai produk makanan tambahan yang sering saya kunjungi adalah menarik.</p> <p>Image store supplement products that often I visit is interesting.</p>					
6	<p>Saya berpendapat bahawa lokasi pembelian produk makanan tambahan adalah sesuai.</p> <p>I thought the location of the purchase of supplement products are suitable.</p>					
7	<p>Saya mendapat bahawa produk makanan tambahan turut dijual kepada pelancong luar negara.</p> <p>I get that supplement products are sold to foreigner</p>					

8	<p>Faktor lokasi pembelian mempengaruhi saya untuk membeli produk makanan tambahan.</p> <p>Purchase location factors influenced me to buy supplement products.</p>					
---	--	--	--	--	--	--

Thank you for your cooperation



UUM
 Universiti Utara Malaysia