



**THE EFFECTS OF PACKAGING ON
OVER THE COUNTER MEDICINE BUYERS BEHAVIOR:
A CASE STUDY IN CHAIN COMMUNITY PHARMACIES OF ADDIS ABABA**

BY: Biruk Mengistu

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa University
School of Commerce in Partial Fulfillment for the Award of Masters of Arts
degree in Marketing Management**

Advisor: Getie Andualem (Phd)

Addis Ababa.

May, 2017

**THE EFFECTS OF PACKAGING ON
OVER THE COUNTER MEDICINE BUYERS BEHAVIOUR:
A CASE STUDY IN CHAIN COMMUNITY PHARMACIES OF ADDIS ABABA**

**Addis Ababa University
College Of Business and Economics
School Of Commerce
Department Of Marketing Management
Graduate Program Unit**

**BY
Biruk Mengistu**

**May 2017
Addis Ababa, Ethiopia**

**THE EFFECTS OF PACKAGING ON
OVER THE COUNTER MEDICINE BUYERS BEHAVIOUR:
A CASE STUDY IN CHAIN COMMUNITY PHARMACIES OF ADDIS ABABA**

**Addis Ababa University College of Business and Economics School of
Commerce Marketing Management Graduate Program Unit**

**A Thesis Submitted to the School of Graduate Studies of Addis Ababa University
School of Commerce in Partial Fulfillment for the Award of Masters of Arts
degree in Marketing Management**

**By
Biruk Mengistu**

**ADVISOR:
Getie Andualem (Ph.D.)**

May 2017

Addis Ababa, Ethiopia

Addis Ababa University
College Of Business and Economics
School of Commerce

Marketing Management Graduate Program Unit

This is to certify that the thesis is prepared by Biruk Mengistu, entitled; The effects of packaging on over the counter medicine buyers behavior: a case study in chain community pharmacies of Addis Ababa: In partial fulfillment of the requirements for the award of the Degree of Master of Arts in Marketing Management with the regulation of the University and the accepted standards with respect to originality.

Approved by Board of Examiners

Thesis Advisor	Signature	Date
----------------	-----------	------

Internal Examiner	Signature	Date
-------------------	-----------	------

External Examiner	Signature	Date
-------------------	-----------	------

Declaration

I, Biruk Mengistu, hereby declare that this research paper entitled “**The effects of packaging on over the counter medicine buyers behavior: a case study in chain community pharmacies of Addis Ababa**” is my original work and has not been used by others for any other requirements in any other university and all sources of information in the study have been appropriately acknowledged.

Biruk Mengistu

Student

Signature

29th May 2017

Date

Letter of Certification

This is to certify that Biruk Mengistu has carried out his thesis on the topic entitled: The effects of packaging on over the counter medicine buyer's behavior: a case study in chain community pharmacies of Addis Ababa. This work is original in nature and suitable for the award of Masters of Arts (MA) in Marketing Management.

Getie Andualem (Ph.D.)**29th May 2017**

Table of Contents

Table of Contents	I
Acknowledgment	IV
Acronyms/ Abbreviations	V
List of Tables	VI
List of Figures	VII
Abstract	VIII
Chapter one	1
Introduction.....	10
1.1 Background of the study	10
1.2 Background of over the counter medicine	12
1.3 Statement of the problem	14
1.4. Research questions.....	15
1.3.1 Main Research Question	15
1.3.2 Sub-Research Questions.....	15
1.5 objective of the study	16
1.5.1 General objective of the study.....	16
1.5.2 Specific objective of the study	16
1.6 Definition of terms	16
1.6.1 Conceptual Definition	16
1.6.2 Operational Definition.....	17
1.7 Significance of the study.....	17
1.8 Scope of the study	17

1.10 Organization of the study.....	18
2.1.3 Concept of Consumers' Buying Behavior	23
2.2 Empirical studies.....	25
2.2.1 Components of Packaging	26
2.2.1.1 Visual Element of Packaging	26
2.2.1.2 Verbal Elements of Packaging.....	29
2.3 conceptual framework.....	31
Chapter 3.....	32
Research Design and Methodology	32
3.1 Research reasoning approach.....	32
3.2 Research Design.....	32
3.3 Research Design.....	33
3.4 Research Method	33
3.5 Sampling Design.....	34
3.6 Research Instrument.....	36
3.7 Procedures of Data Collection	36
3.8 Reliability Test.....	37
3.9 Validity Test.....	38
3.10 Method of Data Analysis	39
3.11 Ethical consideration.....	41
Chapter four	44
Data presentation and Analysis.....	44
4.1 Introduction.....	44

4.2 Demographic Profile of Respondents	44
4.3 Descriptive Analysis	46
4.3.1 Descriptive analysis of Packaging element dimensions.....	47
4.3.2 Demographic variables and consumer buying behavior	54
4.4 Inferential Statistics	55
4.4.1 Correlation Analysis.....	55
4.4.2 Test for Linear Regression Model Assumptions.....	60
4.4.2.1 Normality Assumption	60
4.4.2.2 Homoscedasticity.....	61
4.4.2.3 Multi collinearity Test Assumption.....	62
4.3.3 Regression Analysis	63
4.3.4 Validating the proposed hypothesis	66
Chapter five.....	69
Summary, Conclusion and recommendation of the study	69
5.1 Introduction.....	69
5.2 Summary of the Major Findings	69
5.3 Conclusion drawn from the study.....	70
5.4 Recommendation of the study	71
5.5 Limitations and future research	72
5.5.1 Limitations of the Study.....	72
5.5.2 Future area of study.....	73
Reference	74
APPENDIX 1: Questionnaire in English (adopted from Zekiri and Hasani, 2015)	81
APPENDIX 2: Questionnaire in Amharic	86

Appendix 3: Histogram for Normality Test of the Data	92
APPENDIX 4: Normal P- P Plot to Test Normality of the Data	93
APPENDIX 5: Correlation matrix	94
APPENDIX 6: ONEWAY ANOVA of consumer buying behavior by age	95
APPENDIX 7: ONEWAY ANOVA of consumer buying behavior by gender.....	95
APPENDIX 8: ONEWAY ANOVA of consumer buying behavior by level of education	95
APPENDIX 9: ONEWAY ANOVA of consumer buying behavior by marriage	96
APPENDIX 10: Scattered Plot	97

Acknowledgement

First and foremost I would like to express my deepest gratitude to the almighty God for his blessing and for making me accomplish this huge achievement. Secondly, I am greatly indebted to my thesis advisor Getie Andualem (Ph.D.) for his unreserved attention and support in advising me for the better improvement of this thesis.

Thirdly, I am very grateful for my family who has been supporting me in every step of my life. I am very blessed to have you in my life. All my friends, especially Bisrat Birhanu, you have played a great role in accomplishing this thesis, I have no words to express my heartfelt thanks.

Last but not least, I would like to thank my friends and colleagues who made it their assignments to help collect the data I needed for this work. I honestly don't know what I would do without you and I cannot even begin to thank you enough for your kind assistance. May God bless you all!

Acronyms/ Abbreviations

A	Agree
ANOVA	Analysis of Variance
COO	Country of Origin
DA	Disagree
FMHACA	Food, Medicine & Health Care Administration & Control Authority
N	Neutral
OTC	Over The Counter
PC	Package Color
PD	Package Design
PG	Package Graphics
PI	Product Information
PM	Packaging Material
PS	Package Size
R	Overall correlation
R ²	Correlation Coefficient
SA	Strongly Agree
SDA	Strongly Disagree
SPSS	Statistical Packages for Social Science

List of Tables

Table 3.1: Reliability Analysis of the Variables.....	29
Table 3.2: overall Reliability Statistics.....	30
Table 4.1: Summary of Demographic Profile of Respondents.....	35
Table 4.2: Descriptive Statistics packaging element dimensions.....	37
Table 4.3: Descriptive statistics of package size.....	38
Table 4.4: Descriptive statistics of package graphics.....	39
Table 4.5: Descriptive statistics of package material.....	40
Table 4.6: Descriptive statistics of package design.....	41
Table 4.7: Descriptive statistics of package color.....	42
Table 4.8: Descriptive statistics of product information on package.....	43
Table 4.9: Descriptive statistics of country of origin.....	44
Table 4.10: Correlations analysis of package size and consumer buying behavior.....	46
Table 4.11: Correlations analysis of package graphics and consumer buying behavior.....	46
Table 4.12: Correlations analysis of packaging material and consumer buying behavior.....	47
Table 4.13: Correlations analysis of package size and consumer buying behavior.....	47
Table 4.14: Correlations analysis of package color and consumer buying behavior.....	48
Table 4.15: Correlations analysis of product information and consumer buying behavior.....	49
Table 4.16: Correlations analysis of country of origin and consumer buying behavior.....	49
Table 4.17: Skewness and Kurtosis checking for normality of the data.....	51
Table 4.18: Muticollinearity.....	52
Table 4.19: Model Summary.....	53
Table 4.20: ANOVA.....	53
Table 4.21: Regression analysis of packaging elements.....	54

List of figure

Figure 2.1 Silayoi & Speece model.....	23
--	----

Abstract

Companies in order to create the right packaging for their products, they must understand the consumer buying process and understanding the role and the impact of packaging as a variable that can influence the purchase decision. So, by understanding what factors influence the buying behavior and what packaging elements are most important help companies making the right decisions about packaging their products. The purpose of this study is to explain the effect of packaging on buyers buying behavior of over the counter medicines. Using judgmental sampling a structured questionnaire written in Amharic was distributed personally to 384 over the counter medicine buyers in chain community pharmacies of Addis Ababa. 360 responses were found to be workable by this study. SPSS V 20.0 was used to analyze the data collected and to test the hypotheses put forward. The finding shows that age of respondents and marital status have statistically significant association with consumer buying behavior of OTC medicine while gender and level of education don't have statistically significant association with consumer buying behavior. The finding also shows that Package size, packaging material, package design, packaging color, package product information and country of origin were found to be positively and significantly affecting overall buyers buying behavior respectively as they were hypothesized. While graphics of the package did not have a significant effect on buyers buying behavior of OTC medicines. Based on the result of the study, it was recommended that pharmaceutical companies should pay proper attention for good and innovative package.

Key Words: Packaging, Buyers Buying behavior, over the counter medicine, community pharmacy

Chapter one

Introduction

1.1 Background of the study

In the ever increasing competition of today's world market the requirement for effective product promotion is crucial, and the product packaging has return to play a lot of vital role as a complete communication vehicle. Now, packaging has become itself a sales promotion tool for the organizations. The consumer's buying behavior also stimulated by the packaging quality, color, wrapper, and other characteristics of packaging (Shruti, 2014).

Packaging is a whole package that becomes an ultimate selling proposition, which stimulates impulse buying behavior. Packaging increases sales and market share and reduces market and promotional costs. Package appeals consumer's attentiveness towards a certain brand, increases its image, and stimulates consumer's perceptions about product. Furthermore, packaging conveys distinctive value to products, packaging works as an instrument for differentiation, and helps consumers to decide the product from wide range of parallel products, packaging also stimulates customer's buying behavior (Rizwan, Vishnu, and Muhammad, 2014).

Product package systems can be designed for one-time use or multiple-use purposes. The choice of one or the other can be a function of perception of individual convenience or cultural acceptance. Package design has been determined to be one of the main factors in the consumer purchase decision. Product packaging is an essential aspect of projecting a firm's brand's image, which is sometimes designed to convey images of high quality, while at other times signaling affordable price (Urich and Malkewitz, 2008). In the retail environment, packaging represents one of the first points of contact between the product and consumer. Packaging influences consumers' perception for a particular product brand and consumers most times are attracted at first sight to the packaging style of a product .The consumer develops an impression of the product based on the package's presentation, which may or may not lead to a sale. Packaging can act as a voiceless salesperson that projects an image, purpose, and functionality of the product (Romica, Fritz, Lucy, 2015).

Packaging can dissuade customers from buying the product irrespective of its quality. Good and attractive packaging may add value to the product and attract a trial from customers. A package that plays a promotional role needs prominent design features to capture and hold attention, making the product stand out on the shelf (Williams, 1982). A product that is well packaged is self-advertising and serves as a purchase appeal. A poorly packaged product poses serious problem to the salesmen, as it will require a lot of explanations to persuade the customers (Romica, Fritz, Lucy, 2015).

In a survey by Silayoi & Speece (2004) the impact of packaging on consumers buying decisions was studied based on two variables, including: complexity level of purchase and the time pressure when purchasing food products. In this study, the packaging factors were classified into two categories of visual factors (i.e. size, shape and the color of packaging), and informational factors of packaging (i.e. information on the packaging and type of packaging such as technologies used in the packaging). They introduced packaging as one of the most important factors in selling products with high involvement potential and admitted that packaging of food and skin care medications (products with high involvement) has been effective to provide information to the customers and has encouraged them to buy the product (Silayoi P.&Speece, M., 2004).

Pharmaceutical industries represents one of the industries where packaging as a marketing instrument plays a significant role. Packaging is responsible for providing lifesaving drugs, medical devices, medical treatments, and products like medical nutritionals in every imaginable dosage forms to deliver every type of supplement, poultice, liquid, solid, powder, suspensions, or drop to people the world over (Zadbuke et.al 2013). Every one of the manufacturer comes with his own brand to the market, and more so to force his own brand into the customers (Bernard R. and Olivier D., 2005).Owning to this fact, pharmaceutical sector is preferred to evaluate consumers' assessment of packaging value.

The consumer buying behavior is dependent on the packaging and on its features. Packaging elements like color, background image, material, font style, design of wrapper, are taken as predictors. The aim of this research is to investigate the role of packaging on buyer's behavior.

How big is the importance of package in marketing communications, especially in the point of sale and how much it influences consumer's purchase decision.

1.2 Background of over the counter medicine

The history of over-the-counter medicines has been a roller-coaster. The Rose case, which culminated in a decision from the House of Lords in 1704, established that apothecaries could prescribe and dispense medicines, breaking the monopoly of the College of Physicians. After that, over-the-counter medicines continued to be generally available in Britain until 1860, when drugs of abuse were designated as prescription-only medicines. However, most other medicines remained generally available until the 1960s, when, in the hope of improving safety, most of them became prescription-only medicines, following a report of the Interdepartmental Committee on Drug Addiction. Now the roller-coaster is tumbling down the slope again, and more and more medicines are becoming available over the counter (Aronson J K, 2004).

Illness or symptoms of an illness are a common human experience for which the actions taken vary depending on the perceptions and experiences of individuals and other factors. Self-care is the major form of care in illness, which is the oldest and most widely used behavior that affects the health of individuals. Self-medication is the selection and use of medicines by individuals to treat self-recognized illnesses or symptoms. Recognition of the responsibility of individuals for their own health and the awareness that professional care for minor illness is often unnecessary have contributed to the concept of self-medication (Dessalegn A.G., 2017).

The mechanisms by which individuals can obtain medicines include not only their traditional prescribing by doctors, but also the ability to purchase medicines directly. The most obvious example of this is the community or retail pharmacy, where the metonymic term over-the-counter (OTC) originates and is used to describe such medicines. Such availability has been argued to offer benefits in terms of convenient access to, and choice of, medicines as well as involving individuals as active participants in their own health and the treatment of illness. The range of medicines available is often more restrictive compared to prescribed medicines, and there are often limitations to indications and doses, although there has been a trend towards increasing deregulation of medicines from prescription to OTC supply and most recently availability from Internet pharmacies. There has been a tendency for the public to perceive OTC

medicines to be safer than prescription medicines, but it has been recognized that OTC medicines have the potential for harm as well as benefit (Richard J. Cooper, 2013).

In economically deprived countries most episodes of illness are treated by self-medication. Different factors at individual level such as age, sex, income, self-care orientation, education level in general and medical knowledge in particular, access to drugs, and exposure to advertisements also influence the practice. While appropriate and responsible self-medication practice is good in that it can save time and readily relieve acute health problems and may save life in such serious conditions and may be economical too for the individual as well as the health care system, it can however also bring several harms when practiced inappropriately. The nonseverity of the health problem, previous experience, and friends' suggestion as well as inexpensiveness were identified to be the reasons for practicing self-medication (Dessalegn A.G., 2017).

As a general rule, over-the-counter medicines have to be used primarily to treat a condition that does not require the direct supervision of a doctor and they are proving to be reasonably safe and well-tolerated. The Food, Medicines and Healthcare Administration and Control Authority (FMHACA) of Ethiopia decide whether a medicine is safe enough when used without prescription. FMHACA in 2012 has identified lists of medicine that are classified as OTC medicines. This includes antacids, Antispasmodics, medicine to be used for diarrhea, Antiemetic, Laxatives, Antihemorrhoidal Agents, antiasthmatics, Expectorants/Mucolytics, Analgesics, Anthelmintic, Vitamins, Antihistamines, Dermatologicals, Contraceptives and condoms (FMHACA, over the counter medicine list, 2012).

During the last decade, packaging was considered as a secondary priority for many pharmaceutical companies, and was thought as only as the last step in the process of production. However, recently companies consider the packaging of pharmaceutical products prior to product development process and pharmaceutical packaging has undergone a great deal of change. This can be attributed to the production of sensitive pharmaceutical products, development of new diagnostic agents, and stringent government requirements, as well as the growth of the middle classes and the organized retail sector worldwide (Solmaz S.N.A., Habibollah D. and Mehdi N.k., 2015).

One of the most common definitions of pharmaceutical packaging is a cost-effective tool which provides a pharmaceutical product with protection, presentation, identification, and notification, as well as ease of use for the consumer from production to consumption (Kumbhar, Choudhary, Dighe and Singh, 2012). Various forms of pharmaceutical products need different types of packaging. Three types of packaging may be considered for drugs. Primary package only covers the product. Secondary Impact of Innovation Variables on Quality of Pharmaceutical Product Packaging plays an intermediary role. Tertiary or outer packaging, which includes labels, cartons and containers (Verma A., 2012).

According to Pilchik (2000) pharmaceutical packaging is considered as an essential part of the drug delivery systems and is distinguished as a key marketing mix element through which manufacturers can differentiate their products from their competitors' (Pilchik R., 2000). Drug packaging is regarded as effective and useful in the development of the market and customers satisfaction all over the world (Jafari R., 2012). Magnusson (2012) believes that, the most effective way to satisfy the consumers is to involve them in the real process of packaging, which may lead to various ideas of packaging and enhance the possibility of relationship that consumers may develop with packaging (Magnusson, 2012)

1.3 Statement of the problem

The ever increasing competition of today's global market, the need for effective product promotion is crucial, and the product packaging has come to play a more important role as a brand communication vehicle. Multiple factors (e, g, color, package size, design, price and cultural norms) can influence a purchasing decision. It stands to reason that physical package design can be modified for the purpose of appealing to the differing preferences and values of various cultures. An understanding of the multiple subtle messages that a package design can convey is therefore likely to influence the success of a product in the market place (Romica, Fritz, Lucy, 2015).

Pharmaceutical markets are expanding considerably due to the aging population, higher development costs and also direct-to consumer advertising which entails more demands from consumers and prescriptions from physicians. Pharmaceutical packaging as a visual communication tool is promised to a mounting importance, because of growing blister

packaging, safety standards upgrading, expansion of OTC drugs and developing television advertising (Bernard R. and Olivier D., 2005).

Previous studies indicated that influence of packaging elements in consumer buying behavior has been extensively examined in other countries. A number of studies have been conducted on the impact of general product packaging (Lifu, 2012; Ladipo and Rahim, 2013; Nayyar, 2012; Kumar and Bishnoi, 2011; Underwood et al, 2001) very few have been product specific. However, concern for such study has been neglected in Ethiopia. The information on package of most of medicines in Ethiopian pharmaceutical market are not clear to the customer because of the language used is English. Even the expiry date is written by using western calendar. Having a difficulty in pronunciation of English words and many names of medicines that have little difference (some vary with vowels only) makes it more difficult to most of Ethiopian customers to easily communicate with the pharmacists and get what they want in case of over the counter medicine. In narrowing this information gap package elements plays a great role. Understanding how Ethiopians buyer behavior is related to the packaging elements helps marketers to better understand in which way the packaging influences behaviors of buyer while buying a certain product. In Ethiopia as over the counter medicines are mostly used medicines with low level of involvement of health professionals this project is therefore look at the effects of packaging on the over the counter medicine buyers buying behavior in chain community pharmacies of Addis Ababa, Ethiopia.

1.4. Research questions

Using the previous problem statement as a foundation, this study poses the following questions to get a clearer picture and correct answer about the effect of packaging on buyers buying behavior of over the counter medicines.

1.3.1 Main Research Question

- i. What is the impact of packaging on buyers buying behavior of OTC medicines?

1.3.2 Sub-Research Questions

- i. How does visual elements of package influence OTC medicines buyers buying behavior?

- ii. What influence does verbal elements of package have on OTC medicines buyers buying behavior?
- iii. Is there any relationship between buyers' buying behavior and their demographic profile?

1.5 objective of the study

1.5.1 General objective of the study

This study considers the essence of packaging in terms of packaging information conveyed to the consumer which seeks to assist the consumers in arriving at informed decision. So it is going to find out the effect of packaging on OTC medicines buyers buying behavior.

1.5.2 Specific objective of the study

The specific objective of the study is:

- To assess the effect of visual elements of package on OTC medicines buyers behavior.
- To assess the effect of verbal elements of package on OTC medicines buyers behavior.
- To assess the relationship between buyers' buying behavior and their demographic profile?

1.6 Definition of terms

1.6.1 Conceptual Definition

Product information: Includes any legend, word, or mark attached to, included in, belonging to, or accompanying any drug including: 1) the immediate container label; 2) cartons, wrappers, and similar items; 3) information materials, such as instructional brochures and package inserts (FMHACA guideline for registration of medicine, 2014).

Country of origin: is defined as a combination of country of assembly, country of design and country of manufacture (Netsanet A, 2014).

1.6.2 Operational Definition

Packaging: is any container or closed that a product by it will be offered to the market for sale or by which necessary information about the product is transmitted to the consumer (Shahram, Hossein & Saeid M, 2013).

Over the counter (OTC) medicines: are medicines that may be sold directly to a consumer without a prescription (FMHACA, Over the counter medicine list, 2012).

Community pharmacy: is a healthcare facility that provides pharmaceutical service to specific community (FMHACA, List of medicines for community pharmacy).

Pharmacist: is a professional who has a bachelor degree in pharmacy from a recognized institution, registered by a licensing authority to practice pharmacy services (FMHACA, Scope of practice for health professional, 2014).

1.7 Significance of the study

This research work is significant in many ways. Academically, the findings in this research will contribute to the existing body of knowledge as a referral material and will help illuminate on the role of packaging and how it influences behavior pattern of consumers. Scholars and future researchers will find this work beneficial because it is bound to contribute information, and enlighten them on the usefulness of packaging. By investigating the role of packaging on buyer behavior this study will help marketers to realize in which way the packaging influences behaviors of buyer while buying a certain product.

1.8 Scope of the study

The study is delimited to only customers purchasing OTC medicines in chain community pharmacies of Addis Ababa. Due to time constrain and financial limitations other pharmacies and retail outlets are excluded from it. And also this study is limited only in capital city of Ethiopia, Addis Ababa. Future research may embody different retailers and institutions that sells OTC medications. Choosing only over the counter medicines may limit the generalization of the findings. Prescription medicines especially those that are taken for long period of time for chronic illnesses are not included. Having many consumer buying behavior models but

examining the packaging elements in the OTC medicine market in Ethiopia using only Silayoi & Speece model and testing the effect of packaging elements only from buyer's perspectives can be seen as limitations of this study.

1.10 Organization of the study

As shown below the study has organized into five chapters. The chapters are comprised of: Introduction, Review of related Literature, research design and methodology, Results and Discussions and, Summary, conclusions and recommendations.

The first chapter is provide a general introduction of the study including background of the study, Statement of the problem, Research questions, Objectives of the study, Significance of the study, Scope and limitation of the study, organization of the study and Definition of key Terms.

Chapter two covered the literature relevant to the study .It includes concepts and theoretical framework, empirical literature as well as discussions on the packaging elements and Hypotheses and conceptual framework.

Chapter three has elaborated research design and methodology: the type and design of the study .It include research method sampling technique, data collection method and method of data analysis that has been used in the study and reliability and validity tests and Ethical considerations has included.

Chapter four has been summarized the findings of the study and discuss in detail.

Finally chapter Five has comprised of conclusions and recommendation of the study and suggestions for potential future research.

Chapter two

Literature review

Packaging has existed since the beginning of civilization. Early in time, man used natural containers' such as barks, shells, and leaves to gather and store food. As time passed, containers were constructed from resources provided by nature: hollowed logs were fashioned into large bowls, fibers from animal were matted, woven into felts and stitched into bags and grasses and reeds were woven into baskets. Consequently, hunting habits changed as less time was needed for seeking and gathering food because food surpluses could be saved in these containers, as human intelligence developed and compounds were discovered and metals and pottery were developed which led to other packaging forms some of which are still in use today (Molokwu C., 2013).

2.1 Theoretical Review

This sub topic goes through different theories in packaging, functions of packaging and consumer buying behavior.

2.1.1 What is packaging?

Packaging can be defined as an extrinsic element of the product. It is the container for a product. According to Williams (1982), packaging is part of the product which encloses and protects. It is the final stage of production. Packaging helps consumers to choose from a wide range of similar products; and that it also stimulates customers buying behavior (Wells et al, 2007).

Packaging is 'any physical container or wrapper that bears the manufacturer's label and within which the product is contained, protected and offered for sale' (Brassington & Pettit, 2003). It consists of variety of materials such as paper, glass, metal or plastic and allows a product to be handled, delivered and presented from the producer to the retailer down to the consumer. However, packaging is more than just a means of containment.

Brassington and Pettit (2003) claimed that it acts as a method of communicating product information, both product and brand character to the consumer. In effect, packaging is the integral part of the product and the visual identity of the brand (Molokwu C., 2013).

2.1.2 Functions of packaging

According to Charles W. Lamb et al., (2011), in their book “Essentials of Marketing” think that packaging has four distinct marketing functions. It contains and protects the product. It promotes the product. It helps consumers use the product and finally, packaging facilitates recycling and reduces environmental damage. Therefore, packaging does more than just protecting the company’s products. It also helps in developing the image of the product in consumer mind.

Protection:

Packaging protects products by providing a barrier to maintain quality in foods, sterility of medical devices/pharmaceuticals; and a shield from various manual, mechanical, and microbiological hazards. Packaging can act as a barrier to protect food products from deterioration and contamination. The container can also provide a suitable environment for its product, so as to preserve color, smell or taste of a food product. The package system can provide a barrier to restrict movement of gases or water vapor coming in or out of the package, as gas exchange in certain food items can result in spoilage to certain foods or drugs, and the gain or loss of moisture can dramatically affect a product. Overall the package system helps extend the shelf life of many foods, as well as insuring the sterility of a food or medical device, and maintaining product quality by acting as a barrier to slow down or eliminate degenerative reactions.

Transportation:

A package system not only protects the quality of its product on retail shelves or in consumers’ homes, it also helps protect the product from the stresses inherent in the distribution system, allowing the product to reach its destination undamaged. The package may encounter various atmospheric conditions, storage conditions or stresses during warehouse and vehicle stacking in delivery trucks. The stresses of shock from vibration produced during transport and handling, and compression during vehicle stacking, are just a few examples of the hazards that the package system may encounter during distribution. Because of these stresses, technical packaging functions are designed into packaging, so as to facilitate safe distribution of the product (Soroka, 1995).

Mechanical Handling:

Distribution packaging can be described as the movement of individual units combined into a unit load that can be moved around mechanically using a forklift or pallet jack through a warehouse and distribution systems. A palletized unit load provides shipment of package systems consisting of many subsystems through the physical distribution environment, such as transporting, mechanical handling, and warehousing. Not only does the package provide multiple levels of protection for the product, it also helps market the product inside to potential consumers (Soroka, 1995).

Marketing function:

Packaging is an important marketing variable. It is also a vital instrument in modern marketing activities for consumer goods (Rundh, 2009). To be successful in today's increasingly competitive marketplace, the product design, namely appearance, should include the preferences of consumers (Creusen & Veryzer & Schoormans 2010, pp. 1437 - 1438). Packaging provides an attractive method to convey messages and information about the product attributes to customers (Silayoi & Speece 2007, p. 1495).

Bloch (1995) says that the importance of product design is crucial to the success of a product. It ensures consumer attention for the product, communicates information, and it provides sensory stimulation (Holmes et al. 2012, p. 109.). According to Berkowitz (1987), an exclusive and unique package design is a way for a new product to be noticeable among familiar packages offered by competitors (Holmes et al. 2012, p. 109.).

Packaging plays a critical role in the purchasing decision. Silayoi and Speece (2007) deem that in cases when the consumer is undecided, the package becomes a vital factor in the buying choice because it communicates to the consumer during the decision making time. The way how the consumer perceives the subjective entity of a product through communication elements conveyed by the package, also influences the choice and is the key factor for successful marketing strategies (Silayoi et al. 2007; Gofman & Moskowitz & Mets 2010, p. 157).

Murphy (1997) indicates the importance of package design and its influences on consumer decision making process. Murphy distinguishes a two-step decision process the consumer follows during shopping for convenience-packaged products. First step is to decide to examine the product carefully after finding it on the supermarket's shelf. Here, the package design has the power to initiate consumer examination of the product. The second step includes direct experience with the product where the package becomes a "salesman". Hence, the package and packaging design are involved in the consumer selection and purchasing intent (Holmes et al. 2012, p. 110.).

The functionality of a package is one of the most important areas of packaging design. It has started from simple product identification and has moved to creating branding and communicating imagery in powerful and interesting ways. This communication starts at the point of purchase where the buyers begin to make their choices based on several criteria such as product category, product variety, product size, quantity or volumes, influence of advertising, and many others. All these criteria are dependent on time, browsing or product comparison. However, if none of these factors take place, the purchasing decision will be partly analytical and partly emotional. (Stewart 2004, pp 5 - 6.)

Packaging design impacts the consumer at the point of sale as well as at the point of future handling and using the product. It becomes a part of the consumers' experience and influences the future purchasing decisions. The way the package can be opened and closed, the way it fits neatly onto the refrigerator, all these factors and qualities can provide emotional feedback which reinforces the brand value and assists product satisfaction (Stewart, 2004).

The packaged product communicates not only through its appearance elements but even more through the overall experience with the whole package. The packaging design includes many features that give the complete picture of the product. Kupiec & Revell (2001) suggest that consumers' intention to purchase is dependent on the degree to which consumers suppose that the product will satisfy their expectations about its use (Silayoi et al. 2007). Therefore, the task of package communication is to deliver the right message in order to meet the buyer's needs and emotional desires for purchase.

According to Nancarrow & Wright & Brace (1998), in order to achieve the communication goals and objectives efficiently and to optimize the potential of packaging, companies and manufacturers of fast moving consumer goods need to take into consideration consumer response to the packages they produce, and to integrate the perceptual processes of the consumer into design (Silayoi, 2007).

Silayoi and Speece (2007) suggest that marketers and designers need to consider consumers past experiences, needs, and wants; understand how packaging design elements get customers attention to the product and get them to notice message on the package; and evaluate packaging design and labeling their effectiveness in the communications effort (Silayoi, 2007).

2.1.3 Concept of Consumers' Buying Behavior

Consumer is one who consumes the product or goods and services. The aim of marketing is to meet and satisfy target customers' needs and wants. The modern marketing concept makes customers the center stage of organization efforts. The focus, within the marketing concepts is to reach target and largest customers, sets the ball rolling for analyzing each of the conditions of the target market (Sonkusare, 2013).

Consumer is a person who buys or uses things (goods) or services. Marketers are the persons who provide these services. The most challenging questions for marketers are why buyers do what they do (or do not do). Such knowledge is critical for marketers, since having a strong understanding of buyer's behavior will shed light on what is important for the consumer and also suggest the important influences on consumer decision-making. Factors affecting consumers' buying decisions are extremely complex. It is deeply rooted in psychology with dashes of sociology thrown in just to make things more interesting. It explains the influences on the consumer from groups such as family, friends and society in general. Consumers' buying behavior result from deeply held values and attitudes, their perception of the world, their place in it, from common sense, from impulse or just plain take. Consumers mainly face two types of purchase decisions: 'New Purchase' —these purchases are very difficult to be made by consumer due to lack of confidence in decision-making; and 'Repurchase'— consumer feels confident in

making these decisions since they have previous experience in purchasing the product (Patwardhan , Flora and Gupta, 2010) .

Consumer behavior can be defined as the decision-making process and physical activity involved in acquiring, evaluating, using and disposing of goods and services. This definition clearly brings out that it is not just the buying of goods/services that receives attention in consumer behavior but, the process starts much before the goods have been acquired or bought. A process of buying starts in the minds of the consumer, which leads to the finding of alternatives between products that can be acquired with their relative advantages and disadvantages. This leads to internal and external research. Then follows a process of decision-making for purchase and using the goods, and then the post purchase behavior which is also very important, because it gives a clue to the marketers whether his product has been a success or not (Baheti, Jain and Jain, 2012).

Consumer behavior can be defined as the process and activities people engage in when searching for, selecting, purchasing, using, evaluating, and disposing of products and services so as to satisfy their needs and desires. For many products and services, purchase decisions are the result of a long, detailed process that may include an extensive information search, brand comparisons and evaluations, and other activities. Other purchase decisions are more incidental and may result from little more than seeing a product prominently displayed at a discount price in a store. Think of how many times you have made impulse purchases in stores (Susilawati, 2001).

Consumer buying behavior refers to the buying behavior of final consumers—individuals and households that buy goods and services for personal consumption. Marketers' success in influencing purchase behavior depends in large part on how well they understand consumer behavior. Marketers need to know the specific needs customers are attempting to satisfy and how they translate into purchase criteria. They need to understand how consumers gather information regarding various alternatives and use this information to select among competing brands. They need to understand how customers make purchase decisions. Where do they prefer to buy a product? How are they influenced by marketing stimuli at the point of purchase? Marketers also need to understand how the consumer decision process and reasons for purchase vary among

different types of customers. For example, purchase decisions may be influenced by the personality or lifestyle of the consumer (Belch & Belch, 1990).

2.2 Empirical studies

Research has shown that product packaging has assumed a role of strategic importance by becoming both a brand communication vehicle as well as an integrative aspect of the product which determines the success or failure of a given product (Schoell, 1985). To this end, it is imperative to emphasize that in order to derive competitive advantage firms should consider packaging decisions as a critical component of the total marketing strategy (Panwar, 2004). According to Panwar (2004) packaging can be defined as, "...the act of containing, protecting and presenting the contents through the long chain of production, handling and transportation to their destinations in as good a state, as they were, at the time of production". However, beyond these functional roles that packaging plays in product management, there exists the communication role where packaging becomes the voice and face of the image and company identity.

According to Shimp (2010), packaging can be described as the least expensive form of advertising, a silent sales man and a five-second commercial. It is fundamental to underline that a package is the product itself as it performs key communication and sales roles at the point of purchase since consumers have limited time at their disposal especially where low involvement products are concerned. The growing importance of packaging has been prompted not only by the need to communicate to customers about the product in the package so as to assist and influence them in making careful and informed decisions (Ahmed, Ahmed & Salman, 2005). In addition, Shimp (2010) argues that the package also serves among other things, to draw attention to a brand, break through competitive clutter at the point of purchase, justify price and value to the consumer, signify brand features and benefits, convey emotionality, and ultimately motivate consumers' brand choices. Packaging is particularly important for differentiating homogenous or unexciting brands from available substitutes by working uninterruptedly to say what the brand is, how it is used, and what it can do to benefit the user. It is also important to note that packaging communicates two very crucial attributes of an offering which include the uniqueness and originality of the product. The latter features in turn influence customers' judgment of a

product's quality and preference (Silayoi & Speece 2004). However, while packaging plays a significant strategic role in communication, it should be noted that if a package holds too much information, misleading or inaccurate information customers may not only be confused but lose interest and trust in the product (Silayoi & Speece 2007).

2.2.1 Components of Packaging

Initially research identified six elements of packaging which includes size of packaging, color of packaging, Text used on packaging, Material of packaging, Graphics used on packaging and Smell. (Smith and Taylor, 2004) But research work conducted afterwards indicates that packaging elements are divided into two categories which are visual elements and verbal elements (Adam and Ali, 2014)

2.2.1.1 Visual Element of Packaging

These elements are the useful tool to influence the emotions of the target market. Marketers can use lot of visual elements of packaging when the product is associated with the category which requires low customer involvement and customer do not want to waste their efforts in searching for products (Silayoi & Speece, 2004).

Size

The research conducted in the year 2008 proves that redesigning of packaging increases the rate of consumption, especially when the product is available in larger size (Kotler, 2008) furthermore increase in size of packaging also indicates better quality (Smith and Taylor, 2004) and influence the desire to consumer (Keller, 2009).

Moreover, access of new markets can easily be done by the change of packaging (Arun; Ankuri; Hitesh; Udit; Deepali, 2012). Furthermore, it has been also proved by the research that consumers having small families does not focuses on large size packs and treat them as waste of product as the amount of product will be more than their requirements (Silayoi & Speece, 2004) and if does not have longer reliability then consumers will not be inclined towards the larger sizes (Golnesa, 2013).

Hypothesis 1: There is a significant positive association between packaging size and consumer buying behavior.

Graphics

It not only helps marketers in making their product unique but also helps them in highlighting their brand name more effectively by maintaining its individuality and identity in shelves. (Smith and Taylor 2004) Use of graphics is helpful in value addition in the physical appearance of the brand and also improves the exterior by enhancing the quality of aesthetics. Not only this graphics has the ability to produce positive impact on consumer mood and sometimes graphics matches with the unseen goals or unseen determination and hence will help marketers in enhancing the recall rate of their bands as compared to the competing ones(Silayoi & Speece, 2004).

A qualitative research conducted in the year 2013 identifies that textual elements associated with graphics are more worthwhile if they are placed on the left side of the packaging and pictorial elements will be considered worthwhile when they are placed on the right side of the packaging. (Silayoi & Speece, 2004)

This is an important indication for marketers that graphics can be made more attractive through the proper placement of elements which are associated with graphics. Graphics are considered important whether consumer have the brand loyalty or not. When consumer are preferring any brand then graphics helps them in eliminating the clutter and when they are not loyal to any of the brand then graphics act as an important tool which can at least grasp their attention. (Silayoi & Speece, 2004) as pictorials on packaging can increases the level of interest and level of curiosity of customers. (Lynsey; Laura; Armstrong; Heather, 2013)

Hypothesis 2: There is a significant positive association between packaging graphics and consumer buying behavior.

Material

As other visual elements, material also communicates, most importantly material affects the perceived quality associated with the product that means consumers thinking regarding material results in change of the perceived quality. Furthermore sometimes marketers use those packaging material which can prevent the freshness of product under extremely high or extremely low temperature. (Smith and Taylor, 2004)

In another study conducted in the year 2013 three types of packaging material including glass, plastic and cardboard were discussed, and finding of research revealed different perception of consumers regarding different types of packaging material, but most of the consumers were found to be in the favor of plastic for the purpose of packaging, as its not heavy and also can retain freshness of the products and chances of leakage are also minimal. (Lynsey; Laura; Armstrong; Heather, 2013)

Hypothesis 3: There is a significant positive association between packaging material and consumer buying behavior.

Design

Research reveals that consumers feeling regarding the product packaging are actually transferred into how they are treating the product that means innovative packaging shapes can create an iconic brand image on consumer's mind, by cutting the clutter at surrounded market place. (Arun; Ankuri; Hitesh; Udit; Deepali, 2012) Moreover research also concludes that beautiful and attractive packaging styles influences the purchase decision, and results in increase purchase of the product. (Golnesa, 2013) Moreover it is a belief of most of the consumers that design of products is directly associated with the ease of use, product storage and its carry from one place to another. (Silayoi & Speece, 2004)

Hypothesis 4: There is a significant positive relationship between wrapper design and consumer buying behavior.

Color

We are living in the modem era and consumers now-a-days also possess color vocabulary and therefore they will evaluate the color of the packaging used with its link with the product, that

means according to the consumers there are some colors which can be used for each product category and all the remaining colors are misfit for that particular product category, that's why color is also treated as the useful element of packaging. Moreover color can make brand distinctive as compared to all the other competing brands, if the company became able to use color which other competing brands cannot opt easily. (Keller, 2009)

Consumer perception related with color varies, with respect to difference in cultures, but as we know that this is an era of globalization and mass competition therefore because of change in demographics and other trends there is a visible change, in the color preferences (Singh, 2006) but the element which can help marketers in selecting the color for their brands is that there are some certain colors which are treated as best suited for particular types of products, therefore marketers must use color associations while selection the color or color combination for their brand instead of general consumer thinking about the color. (Randi & Joseph, 1999)

Hypothesis 5: There is a significant positive relationship between color and consumer buying behavior.

2.2.1.2 Verbal Elements of Packaging

Information conveyed by verbal elements is helpful in initiating or boosting of consumers thought process. (Silayoi and Speece, 2004) there are several components of verbal elements of packaging and each of these components have a significant role in influencing consumer buying behavior. (Adam and Ali, 2014)

Product Information

Increase of concerns towards health also increases the importance of labeling and now it is the duty of manufacturing company and marketers to include product information in order to ease purchase decision. (Silayoi & Speece, 2004)

It is also indicated by research that if company wants to increase the credibility of the product they must jot down accurate information about the product as it will help consumers in making decision, on the other hand if the information is confusing or does not seem to be appropriate then it can create confusion and produces negative impact on the brand. Research also revealed that product information has lesser or no importance to those having low involvement in product purchase, and for those having high involvement with the product, information related with it

having significant importance, and for making appropriate decision the information related with the product will also take into the account, as it has the ability to change or alter the attitude of consumers having high involvement with the product (Silayoi & Speece, 2004).

According to food, medicine and health care administration and control authority of Ethiopia (FMHACA) Package of a medicine must have package with label that at least contains this elements:

- a) The name of the product– brand and generic/International Non-proprietary Name;
- b) Pharmaceutical form and route of administration;
- c) Qualitative and quantitative composition of active ingredient(s), preservative(s), and antioxidant (s);
- d) The volume of the contents, and/or the number of doses, or quantity in container;
- e) Directions to consult the package insert or the carton label for complete directions for use;
- f) Handling and storage conditions;
- g) License number of the manufacturer;
- h) Batch number;
- I) manufacturing date;
- j) Expiry date; and,
- k) Name and address of manufacturer (country of origin). (FMHACA, Guidelines for registration of medicines, 2014)

Hypothesis 6: There is a significant positive relationship between printed product information and consumer buying behavior.

Country of origin

Ghazali, Othman, Yahya, & Ibrahim, (2008) said the influence of the country on buyer's intention is as old as three decades and Consumer choice is one of the most crucial aspect which is to be taken in attention in purchase behavior, a/c to the business literature. Michaelis, Woisetschläger, Backhaus, & Ahlert (2008) & Chen, Wu, & Chen (2011) origin of a country is a symbolic subject when investigating consumer decision to buy as per international products. It's

also a symbol for brands, which comprehends the consumers to get aware of the firm and the origin country of that product.

There are many researchers Bilkey and Nes, & Cattin et al., (1982), Han and Terpstra, (1988), Lee and Schaninger, (1996), Papadopoulos, (1993) and White (1979), describe origin country of the product as “The country of manufacture”. Early researches have concluded that consumers have more positive brand awareness and loyalty for overseas brands as compared to their home country’s brands or products (Lee, Knight and Kim, 2008; Bhardwaj, Kumar and Kim, 2009).

Many researchers believed that the effect of country-of-origin on consumers’ perception of product quality is closely associated with their knowledge of the particular country and, in certain cases, the level of the country’s economic development (Samin et.al, 2012).

Hypothesis 7: There is a significant positive relationship between country of origin and consumer buying behavior.

2.3 conceptual framework

This research model is derived from the Silayoi & Speece model.

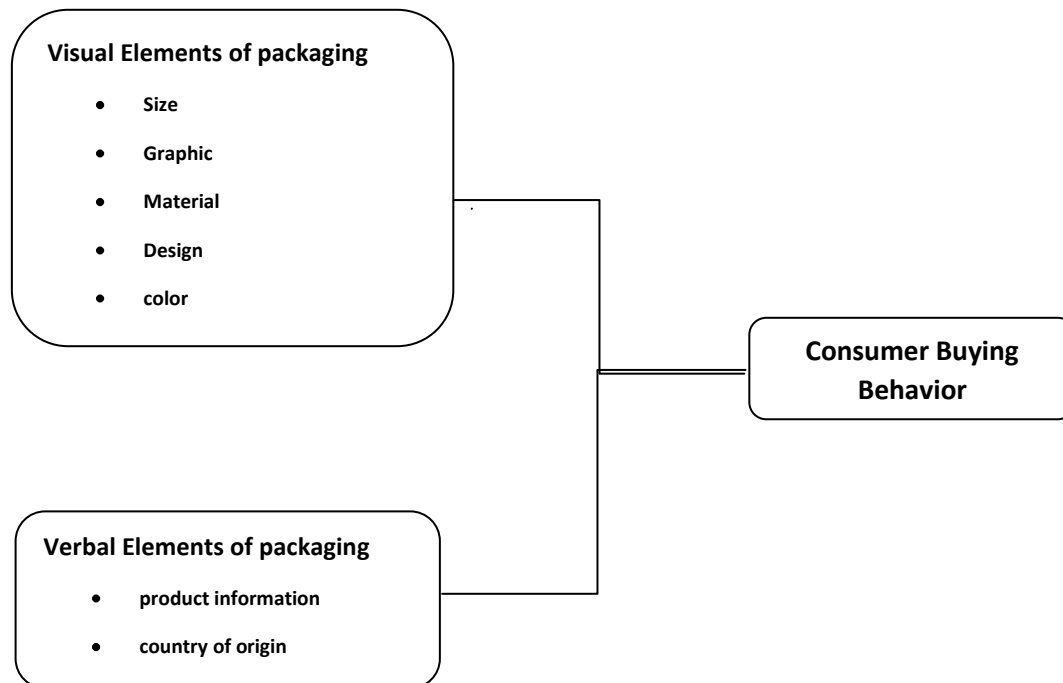


Figure 2.1 Adopted from Silayoi & Speece, 2007

Chapter 3

Research Design and Methodology

There are several methods and procedures that will be used in this study which exist under the following subheading: research approach, type of research, sampling design, research instrument, method of data collection, data analysis method, time schedule & budget schedule.

3.1 Research reasoning approach

According to Bhattacharjee (2012) theories and observations are the two pillars of science, and scientific research also operates at two levels: theoretical level and empirical level (Bhattacharjee, 2012). The theoretical level is concerned with developing abstract concepts about a natural or social phenomenon and relationships between those concepts (i.e., build —theories), while the empirical level is concerned with testing the theoretical concepts and relationships to see how well they match with our observations of reality, with the goal of ultimately building better theories.

According to Bhattacharjee (2012), the goal of deductive research reasoning is to test concepts and patterns known from theory using new empirical data. Hence deductive research reasoning is theory-testing research which is the objective of the research under consideration. The goal of theory-testing is not just to test a theory, but also to refine, improve, and possibly extend it (Bhattacharjee, 2012).

This study has examined the applicability of the Silayoi & Speece (2007) model in the assessment of over the counter medicine buyer's behavior. Hence this study has followed a deductive form of scientific research reasoning approach because at this level building theory is very difficult and beyond the capacity of the researcher at this level. Therefore this researcher has tested Silayoi & Speece model in the pharmaceutical sector in Addis Ababa, Ethiopia.

3.2 Research Design

According to Saunders, Lewis and Thorn hill (2000) as cited by Farhadi (2009) broadly classified the research design as exploratory, descriptive, and explanatory. The author further defined exploratory research as a research approach which has a primary objective to insights

into and understanding of the problem situation tackling the research and descriptive research as a type of a research approach that has a purpose to describe something. Moreover, if the research is concerned with learning of {why (i.e. how one variable produces changes in another)} the research is said to be explanatory.

And hence to addresses the research questions, or to identifying and examining the effect of packaging on buyer's perception of over the counter medicines in Addis Ababa, this study has used both descriptive and explanatory research design.

3.3 Research approach

When conducting a research, there are different ways to consider in approaching the research problem. According to Creswell (2009), there are three research approach which involve quantitative, qualitative and combination of the two. According to Cooper et.al (2003) as cited by Farhadi (2009) quantitative research helps to determine the relationship between an independent variable and a dependent variable in a population. It also used to explain causal relationships to facilitate generalization and to predict the future whereas qualitative research methods provide a complete picture of the situation by increasing the understanding of social process and interrelations.

Based on the objectives of the study and the availability of relevant information, this study has used quantitative research design which helps to arrive at possible research final destination efficiently. The quantitative approach was applied to examine the relationship between the dependent variable (i.e. buyers buying behavior) and the independent variables (i.e. package size, graphics of package, packaging material, package design, package color, product information and country of origin).

3.4 Research Method

Interview, questionnaire and focus group discussions are the three known types of research methods. Focus groups are formally organized, structured groups of individuals brought together to discuss a topic or series of topics during a specific period of time (Marczyk, DeMatteo and Festinger 2005, pp.154). Questionnaire is a method of deciding how the sample is to be surveyed (e.g., by mail, by phone, in person) and developing the specific questions that will be used

(Marczyk, DeMatteo and Festinger, 2005, pp.152). Interview is qualitative data required to understand in-depth motivations for people's behavior or feelings Adams (2007, pp.111).

This study has used questionnaire to conduct information from respondents because it was helpful to collect large amount of information in short period of time with larger sample size. Second, it was also the easiest method to analyze scientifically than other forms of research methods. Finally, this method was a relatively cost effective and also can be carried out by the researcher or by any number of people with limited affect to its validity and reliability.

3.5 Sampling Design

Community pharmacies are a healthcare facility that provides pharmaceutical service to specific community. If the organization contains four or more community pharmacies it is called chain community pharmacy. Addis Ababa has three types of community pharmacies or drug retail outlets namely: pharmacy, drug store/shop and rural drug vendor. This name difference, as listed from highest to lowest level, is indicative of the type of drugs they should dispense and thus the level of services they offer (Gebremedhin and Mirgissa, 2016).

The study was conducted in Addis Ababa, the diplomatic capital of African Union and capital city of Ethiopia. According to Central Statistical Agency's population projection, the population of Addis Ababa is 3.2 million of which 52.6 % are females. Addis Ababa has a total of 308 pharmacies, 249 drug stores, 1 rural drug vendor, 759 clinics, 140 importers and 93 wholesalers of human medicine. Six of the 11 pharmaceutical industries in Ethiopia are also found in Addis Ababa (Gebremedhin and Mirgissa, 2016).

A comprehensive list of community pharmacies in Addis Ababa was generated from Addis Ababa Food, Medicine and Health Care Administration and Control Authority (FMHACA). Of these, the study targeted the chain community pharmacies. This includes 15 Kenema pharmacies (government owned), 11 Gishen pharmacies, 8 Axum pharmacies and 8 Soloda pharmacies. This customers will be selected purposely because of they are located in different parts of Addis Ababa serving large segment of population. The study will be conducted on buyer of OTC medicines from chain Community pharmacies located in Addis Ababa, Ethiopia.

For this research published table was used to provide the sample size by assuming a 95% confidence interval and 5% margin error. Where n_0 is the sample size, Z^2 is the abscissa of the normal curve that cuts off an area α at the tails ($1 - \alpha$ equals the desired confidence level, e.g., 95%). e is the desired level of precision, p is the estimated proportion of an attribute that is present in the population, and q is $1-p$. The value for Z is found in statistical tables which contain the area under the normal curve (Israel, 1992).

$$n_0 = \frac{Z^2 pq}{e^2} = \frac{(1.96)^2 (.5)(.5)}{(.05)^2} = 384$$

As sample size determination was based on the unknown population formula, thus a total of sample size of 384 was employed.

This research is conducted by using a non-probability judgmental sampling technique. Judgmental sampling is the deliberate choice of a participant due to the qualities the participant possesses. It is a nonrandom technique that does not need underlying theories or a set number of participants. Simply put, the researcher decides what needs to be known and sets out to find people who can and are willing to provide the information by virtue of knowledge or experience. It is typically used to identify and select the information-rich cases for the most proper utilization of available resources. This involves identification and selection of individuals or groups of individuals that are proficient and well-informed with a phenomenon of interest. In addition to knowledge and experience, the importance of availability and willingness to participate, and the ability to communicate experiences and opinions in an articulate, expressive, and reflective manner. Unlike random studies, which deliberately include a diverse cross section of ages, backgrounds and cultures, the idea behind judgmental sampling is to concentrate on people with particular characteristics who will better be able to assist with the relevant research (Ilker, Sulaiman and Rukayya, 2016).

3.6 Research Instrument

The researcher has used both primary and secondary sources of data in the study. The secondary data was collected from publications including journals, articles, and various materials that have relevance to this study and the sources were used only for literature purpose. In this study, primary data generated and presented through a structured questionnaire was fully applied. A structured questionnaire was prepared based on the works of Zekiri and Hasani, (2015) and scales developed. And the researcher in this study tried to accustom the questionnaire adopted from (Zekiri and Hasani, 2015). This developed questionnaire then arranged in to a five point Likert scale anchored from “strongly disagree” to “strongly agree” on the scale.

The questionnaire has three sections. The first section covers the demographic profile of the participants like age, gender, education level and marital status. The second section composed two screening questions. The third section was structured on a likert scale of 1-5 show their degree of agreement or disagreement to the sentences about the constructs under study.

3.7 Procedures of Data Collection

Over the counter medicine has chosen as the product to investigate for the current study, as this was the medicine that people can buy without a need for a prescription from health professionals. So the level of involvement of health professionals is minimal in purchase of over the counter medicine purchase. In legally operating translation offices that have the experience and proficiency in translation, the questionnaire was translated in to Amharic. The Amharic version of the questionnaire was distributed for respondents.

Data were collected from 10 Kenema pharmacies, 7 Gishen pharmacies, 6 Axum pharmacies and 5 Soloda pharmacies that are selected purposively based on their distribution in the city of Addis Ababa. Representatives of the pharmacies were communicated to get permission for administering the questionnaire. 5 druggist that were willing to participate in the administration of the questionnaire were trained to distribute and collect the self-administered questionnaire. They distribute and collect 350 questionnaires from 25 pharmacies. The remaining 34 questionnaire is collected by the researcher from 3 pharmacies. Judgmental sampling was conducted in the selection of respondents based on their willingness. Up on getting their

approval, they were first asked whether they buy over the counter medicines or not and the questionnaire was given accordingly.

From a total of 384 questionnaire that were distributed 24(6.25%) of them are not valid because they were not fully completed and 360(93.75%) were usable questionnaires.

3.8 Reliability Test

Though, questionnaire which was partially adopted with minor customization from previous research done by Zekiri and Hasani, (2015) a pre-test was made for reliability and validity. In order to ensure the reliability of the study, 20 questionnaires were distributed randomly and Cronbach’s alpha coefficient was computed. The Cronbach Alpha was used to test reliability of the scales used from the pre-test sample.

Cronbach’s alpha is a coefficient of reliability used to measure the internal consistency of the scale; it represented as a number between 0 and 1. According to Zikmund et al., (2010) scales with coefficient alpha between 0.6 and 0.7 indicate fair reliability, a Cronbach’s alpha score of .70 or higher are considered as adequate to determine reliability.

Table 3.1 Reliability Analysis of the Variables

Dimensions	Pilot test		Actual test	
	Number of items	Cronbach's alpha	Number of items	Cronbach's alpha
Package size	5	0.991	8	.771
Graphics of package	5	0.997	8	.739
packaging material	5	0.996	8	.779
Package design	5	0.998	8	.734
Package color	5	0.991	8	.758
Product information	5	0.953	8	.831
Country of origin	5	0.967	8	.794
Consumer buying behavior	8	0.872	8	.732

(Source: Researcher's survey, 2017)

Therefore, as it is shown in the above table 3.1 all dimensions Cronbach's alpha for both the pilot and actual test was by far above the cut point of 0.7. The lowest alpha registered was (0.732) and the highest was (0.831).the overall reliability test result of the whole dimensions was therefore it can be inferred that all measures were internally consistent. As shown in the table 3.2 below overall scale reliability is 0.793 which is also above 0.7.

Table 3.2 overall Reliability Statistics

Cronbach's Alpha	N of Items
.793	8

(Source: Researcher's survey, 2017)

3.9 Validity Test

Validity is the strength of conclusions, inferences, or propositions. Validity is the most critical criterion and indicates the degree to which an instrument measures what it is supposed to measure. In other words, validity is the extent to which differences found with a measuring instrument reflect true differences among those being tested (Kothari, 2004).

Numbers of different steps were used to ensure the validity of the study:

- Data was collected from the reliable sources, from respondents who have experiences in purchasing and using different OTC medicine.
- Survey questions were made based on literature reviews and frame of references to ensure result validity. The language (and writing format) which was used in the questionnaire will be chosen to fit the respondents' frame of reference. The questionnaire is translated to Amharic by professional translator.
- A pilot study was conducted to determine whether the questionnaires were actually measuring what it was intended to measure. 20 respondents were given questionnaires for the different locations to test the research instrument before distributing it to the whole sample. This pilot study enabled the researcher to modify any vague item and to ensure

the full understanding of each one; also difficult words was changed to easier ones in order to facilitate answering the questions.

3.10 Method of Data Analysis

In different research design, data analysis methods should be related with the type of research method chosen for the study. As mentioned in the previous section, primary data was collected in this study. Before analyzing, the collected and coded data was checked for any possible errors while entering or coding the data. This process is essential and will save a lot of headache later, according to (Pallant, 2005).

The data screening process involves a number of steps:

Step 1: Checking for errors. First, one needs to check each of the variables for scores that are out of range (i.e. not within the range of possible scores).

Step 2: Finding the error in the data file. Second, one needs to find where in the data file this error occurred (i.e. which case is involved).

Step 3: Correcting the error in the data file. Finally, one needs to correct the error in the data file itself.

The screened data was then presented using frequency distribution tables to systematically arrange data values with a count of how many times each value occurred in a dataset. Then, Simple mean and tabulation was applied to get clear picture about the first part of the questioner about the respondents. Then after, in order to get inference about the model and its applicability inferential statics was used .By applying a bivariate correlation analysis, the researcher was try to see the influence of package size, graphics of package, packaging material, package design, package color, product information and country of origin on buyers buying behavior. This was accomplished in order to pinpoint the causal relationship of the independent variables in relation to the dependent variable.

After descriptive analysis, the regression model was specified defining the explanatory and the explained variables in the study. This then determined the type of regression the study used, which was multiple regression (where its assumptions were checked with collinearity

diagnostics). The type of relationship for multiple regressions by default was a random or stochastic where for each value of the independent variable X, there will be some values of the dependent variable Y only with some probability. In other words, the model included a stochastic error term or a stochastic disturbance term ϵ .

Model Specification

$$Y = a + b_1x_1 + b_2x_2 + b_3x_3 + b_4x_4 + b_5x_5 + b_6x_6 + b_7x_7 + \epsilon$$

Where, Y = Consumer buying behavior (CBB)

a = y intercept

b1 = the regression coefficient or beta weight of package size

x1= Package size (PS)

b2 = the regression coefficient of package graphics

x2= Package graphics (PG)

b3 = the regression coefficient of packaging material

x3= packaging material (PM)

b4 = the regression coefficient of package design

x4= package design (PD)

b5 = the regression coefficient of package color

x5= package color (PC)

b6=the regression coefficient of product information

x6= product information (PI)

b7= the regression coefficient of country of origin

x7= country of origin (COO)

ε = error term

In order to accomplish all the above requirements, the researcher has used software to analyze the data. As a result, SPSS version 20.0 was applied to analyze the collected mass of data.

3.11 Ethical consideration

Social science research is widely regarded as providing substantial benefits to societies. Usually, these studies are designed to solve problems a given society faces or to influence policy makers to make any policy amendment in favor of the society (Smith, 1998). And these studies largely use survey data collected from the society to carry out their tasks. And gathering information from respondents should be done on an ethical level. The history of the development of the field of ethics in research, unfortunately, has largely been built on egregious and disastrous breaches of human ethical values. A journey through this history can provide valuable insights into the state of contemporary research ethics institutions and codes that currently guide social science and biomedical research. In recent years, ethical considerations across the research community have come to the forefront. This is partly a consequence of legislative change in human rights and data protection (Social Research Association, 2003).

Ethical considerations must be addressed in experiments involving either human subjects or animals. Ethical standards must be observed in designing, conducting and reporting of the research. (MRIA, 2007) forwarded ethical dimensions or principles a researcher should be guided by.

Professional conduct: this is the strongest of all factors and it has implications for the researcher with respect to the respondents, the reporting process and the sponsors of the research. Professional conduct is the combination of following the ethically correct and the methodologically correct process and underpins all other responsibilities.

Pursuit of truth: is the responsibility of the researcher and is reflected in the reporting process. It is also the responsibility of the respondents in their communications with the researcher. Although the researcher must be aware of the issues of bias, the respondent has a moral responsibility to be truthful.

Informed consent: the pursuit of truth does not release us from exercising "due ethical standards in the design, conduct and reporting of the research". Informed consent is a responsibility of the

researcher to inform the subjects of the research. It is also the responsibility of the respondents to be informed before giving consent.

Protection of anonymity: It is an important consideration with bearings upon statements regarding confidentiality and anonymity. Promises of confidentiality should not be readily made if verbatim comments are to be the source of evidence for the research. Anonymity can be more easily achieved by not associating the comments with a named individual but the contextualization may imply the identification of the person. There are legal and professional issues related to the promises of anonymity that cannot be achieved because of the nature of the reporting of research.

Disclosure of public interest: there is a conflict of interest between the two dimensions “public interest” and “pursuit of truth”. This is a moral dilemma – is the disclosure of truth more important than the public interest when that disclosure may mean suffering? There is a conflict of interest between the two dimensions “public interest” and “protection of anonymity” - is the protection of the individual more important than the public interest when that disclosure may mean suffering by the individual? If the research did not take place then the information would not be in the “public domain” and therefore, it could be argued, that not disclosing a discovered fact is not putting the public in a less favorable position. The counterargument may be that because no disclosure was made that the “public” is falsely confident that no area of concern exists.

Equivalent to the US Department of justice on human subjects protection issues related to sample surveys, the Federal Democratic Republic of Ethiopia, Ministry of Science and Technology also developed a national research ethics review guideline mainly for health related researches carried out in the country (Federal Democratic Republic of Ethiopia, 2014). But this guide has an overall applicability to social science studies.

Following the rules of ethical considerations provided above and that of (Creswell, 2009), this work has fulfilled all ethical considerations a researcher has to follow by notifying respondents the purpose of the survey, asking the permissions of respondents before they fill in the questionnaire given to them and assuring them the information they provide will be confidential and will be used only for academic purposes. Respondents will also be notified that no part of

their response will be given to a third party without their consent. The result of the survey was analyzed collectively without giving out the names of respondents

Chapter four

Data presentation and Analysis

4.1 Introduction

This chapter presents the data analysis and discussion of the research findings to test stated hypotheses. Both descriptive, focusing on the description of the sample population as well as inferential statistics, which makes inferences about the population based on the data from the sample population, are presented in this chapter. The data analysis was undertaken with the help of computer statistics package (IBM SPSS version 20.0). The demographic profile of the study sample and the effect of each packaging elements on consumer buying behavior are discussed in this chapter.

This chapter is organized in a format to present the characteristics of the sample population. To test the hypotheses and achieve objectives of the study, a multiple linear regression analysis was employed. Pearson's Correlation Coefficients were also calculated to observe the relationships between the various variables influencing buying behavior and to see the internal consistency of the measures.

The data collected from the sample population was screened for missing values, extreme responses and only complete questionnaires were considered for the data analysis. From among the 384 questionnaire that were distributed 24(6.25%) of them are not valid because they are not fully completed and 360(93.75%) workable or valid responses were found.

4.2 Demographic Profile of Respondents

The researcher made sure before giving out questionnaires that respondents do actually involve in the purchasing and consumption of the products under consideration. Hence, the profile of respondents can be taken as being representative of OTC medicine buyers and consumers in Addis Ababa.

Table 4.1: Summary of Demographic Profile of Respondents

#	Demographic Characteristic	Frequency	Percentage
1	Gender		
	Male	191	52.8
	Female	171	47.2
2	Age in years		
	18-25	68	18.8
	26-30	86	23.8
	31-35	57	15.7
	36-40	58	16
	>41	93	25.7
3	Education level		
	No education	76	21.0
	Primary education	58	16.0
	Secondary education	72	19.9
	College Diploma	67	18.5
	First Degree	62	17.1
	Postgraduate Degree	27	7.5
4	Marital status		
	Married	182	50.3
	Single	149	41.2
	Divorced	20	5.5
	Widowed	11	3.0

Source: Researcher's survey (2017)

Gender

Referring to the above table 4.1, we can see that out of the total respondents of the survey which were 360, male respondents were found to be 191 or 52.8% while female respondents were 171

or 47.2%. This shows that male respondents in this research are well above female respondents by 5.6% or male respondents were 20 times greater in number than female counters.

Age of respondents

Table 4.1 shows that a large group of respondents were of the age above 41 years which in percent were 25.7%.the second large group of respondents were within the age bracket 26-30years which were 23.8%.the third large group which was 18-25 years consists only of 18.8% respondents. The fourth age group are those between 36 and 40years which consist 16% of the respondents. And the last age group which age bracket 31-35 years represented only 15.7% of the total respondents of this research.

Education level

From among the 360 valid respondents, 76 or 21% of them were not educated followed by respondents who have gone through secondary education which were 72 in number and represents 19.9% of the total respondents. Sample respondents who have a college diploma were found to be 67 in number or 18.5% and those with first degree were 62 in number and were 17.1% of the respondents. Respondents who have gone through elementary education which were 62 in number and represents 16.0 % of the total respondents and those with postgraduate degree were only 27 in number and were 7.5% out of the total respondents.

Marital status

Table 4.1 shows that a large number of respondents (50.3%) are married followed by respondents that are single which were found to be 41.2%. the third group respondents are those that are divorced which consists of 5.5% of the respondents. Finally the remaining 3% of the Respondents are widowed.

4.3 Descriptive Analysis

The first section of the questionnaire asked demographic information of respondents and the second section asked screening question regarding the whether or not the respondents purchase OTC medicines. The third section asked basic research questions that intended to acquire information regarding the effect of packaging elements in buyers buying behavior of OTC medicines.

4.3.1 Descriptive analysis of Packaging element dimensions

The mean scores of each dimensions of packaging elements were calculated.

Table 4.2 Descriptive Statistics packaging element dimensions

	N	Mean	Std. Deviation
package size	360	3.3667	1.31246
Package graphics	360	2.9250	1.34427
Packaging material	360	3.4328	1.30041
Package design	360	3.0550	1.33159
Package color	360	3.9317	1.14551
Product information	360	3.5590	1.16003
Country of origin	360	4.0861	.88857
Valid N (listwise)	360		

Source: Researcher's survey (2017)

As shown in table 4.2 the mean score values of packaging element dimensions for OTC medicines buyers ranges between 2.92 (mean score value of package graphics) with standard deviation of 1.34 and 4.08 (mean score of country of origin) with standard deviation of 0.89. these scores are also the minimum and maximum mean score values of packaging element dimensions respectively. The overall packaging element dimensions as measured by buyers of OTC medicine buyers is well above average.

Descriptive analysis for package size

As shown in the table 4.3 below package size is measured by five items for which the frequency and percentage were calculated. Most of the respondents agree and neutral with all questions about package size of OTC medicines. 55.6 % of the respondents agree with the importance of package size when deciding which medicine to buy. For those OTC medicines that the respondents have little experience most of the respondents agree and neutral in the use of package size to make them a more informed decision. 48.9 % of the respondents also agrees that packaging size is important for them to make a more informed decision. Also 55.6% of the

respondents agrees in the use of packaging size as a criteria in the selection of best medicine from the product class. In a similar manner 53.4% of the respondents refuse to purchase a product without knowing packaging size.

Table 4.3 Descriptive statistics of package size

Statements	Disagree		Neutral		Agree	
	No.	%	No.	%	No.	%
I feel like it is important to look for packaging size when deciding which product to buy	101	28	59	16.4	200	55.6
If I have a little experience with a product ,I search for products using packaging size to help me make a more informed decision	111	30.8	61	16.9	188	52.2
I find out a packaging size is important to determine the quality of a product	117	32.5	67	18.6	176	48.9
I look for product packaging size to choose the best product available in a product class	101	28.1	59	16.4	200	55.6
I refuse to purchase a product without knowing its packaging size	103	28.6	63	17.5	192	53.4

Source: Researcher's survey (2017)

**No. - Number of respondents

Descriptive analysis for Graphics of the package

As shown in the table 4.4 below, 40.5 % of the respondents agree with the importance of graphics of the package when deciding which medicine to buy. For those OTC medicines that the respondents have little experience most of the respondents (58.9%) agree and neutral in the use of graphics of package to make them a more informed decision. 39.4 % of the respondents also agrees that graphics of the package is important for them to make a more informed decision. Also 37.7 % of the respondents agrees in the use of graphics of package as a criteria in the

selection of best medicine from the product class. In a similar manner 40% of the respondents agrees that they refuse purchase of OTC medicine without knowing graphics of the package.

Table 4.4 Descriptive statistics of package graphics

Statements	Disagree		Neutral		Agree	
	No.	%	No.	%	No.	%
I feel like it is important to look for graphics of the package when deciding which product to buy	137	38	77	21.4	146	40.5
If I have a little experience with a product ,I search for products using graphics of the package to help me make a more informed decision	148	41.1	73	20.3	139	38.6
I find out a graphics of the package is important to determine the quality of a product	147	40.8	71	19.7	142	39.4
I look for graphics of the package to choose the best product available in a product class	143	39.7	81	22.5	136	37.7
I refuse to purchase a product without knowing graphics of package	145	40.3	71	19.7	144	40

Source: Researcher's survey (2017)

**No. - Number of respondents

Descriptive analysis for Packaging material

As shown in the table 4.5 below, 55% of the respondents agree with the importance of packaging material when deciding which medicine to buy. For those OTC medicines that the respondents have little experience most of the respondents (74.7%) agree and neutral in the use of packaging material to make them a more informed decision. 51.4% of the respondents also agrees that packaging material is important for them to make a more informed decision. Also 53.6 % of the respondents agrees in the use of packaging material as a criteria in the selection of best medicine from the product class. In a similar manner 51.1% of the respondents agrees that they refuse purchase of OTC medicine without knowing packaging material.

Table 4.5 Descriptive statistics of package material

Statements	Disagree		Neutral		Agree	
	No.	%	No.	%	No.	%
I feel like it is important to look for packaging material when deciding which product to buy	84	130.4	78	21.7	198	55
If I have a little experience with a product ,I search for products using packaging material to help me make a more informed decision	91	25.3	85	23.6	184	51.1
I find out a packaging material is important to determine the quality of a product	92	25.6	83	23.1	185	51.4
I look for product packaging material to choose the best product available in a product class	87	24.2	80	22.2	193	53.6
I refuse to purchase a product without knowing its packaging material	89	24.7	87	24.2	184	51.1

Source: Researcher's survey (2017)

**No. - Number of respondents

Descriptive analysis for Package design

As shown in the table 4.6 below, 47.8% of the respondents agree with the importance of Package design when deciding which medicine to buy. For those OTC medicines that the respondents have little experience most of the respondents (63.4%) agree and neutral in the use of Package design to make them a more informed decision. 44.7% of the respondents also agrees that Package design is important for them to make a more informed decision. Also 42.2 % of the respondents agrees in the use of Package design as a criteria in the selection of best medicine

from the product class. In a similar manner 44.2% of the respondents agrees that they refuse purchase of OTC medicine without knowing Package design.

Table 4.6 Descriptive statistics of package design

Statements	Disagree		Neutral		Agree	
	No.	%	No.	%	No.	%
I feel like it is important to look for packaging design when deciding which product to buy	118	32.8	70	19.4	172	47.8
If I have a little experience with a product ,I search for products using packaging design to help me make a more informed decision	132	36.7	72	20	156	43.4
I find out a package design is important to determine the quality of a product	134	37.2	65	18.1	161	44.7
I look for product package design to choose the best product available in a product class	126	35	82	22.8	152	42.2
I refuse to purchase a product without knowing its packaging design	130	36.1	71	19.7	159	44.2

Source: Researcher's survey (2017)

**No. - Number of respondents

Descriptive analysis for Package color

As shown in the table 4.7 below, 72.2% of the respondents agree with the importance of Package color when deciding which medicine to buy. For those OTC medicines that the respondents have little experience most of the respondents (86.9%) agree and neutral in the use of Package color to make them a more informed decision. 70% of the respondents also agrees that Package color is important for them to make a more informed decision. Also 72.2 % of the respondents agrees in the use of Package color as a criteria in the selection of best medicine from the product class. In a

similar manner 72.8% of the respondents agrees that they refuse purchase of OTC medicine without knowing Package color.

Table 4.7 Descriptive statistics of package color

Statements	Disagree		Neutral		Agree	
	No.	%	No.	%	No.	%
I feel like it is important to look for packaging color when deciding which product to buy	46	12.8	54	15	260	72.2
If I have a little experience with a product ,I search for products using packaging color to help me make a more informed decision	47	13.1	54	15	259	71.9
I find out a packaging color is important to determine the quality of a product	53	14.7	55	15.3	252	70
I look for product packaging color to choose the best product available in a product class	47	13.6	53	14.7	260	72.2
I refuse to purchase a product without knowing its packaging color	46	12.8	52	14.4	262	72.8

Source: Researcher's survey (2017)

**No. - Number of respondents

Descriptive analysis for Product information on package

As shown in the table 4.8 below, 82.9% of the respondents agree with the importance of Product information on package when deciding which medicine to buy. For those OTC medicines that the respondents have little experience most of the respondents (70.5%) agree and neutral in the use of Product information on package to make them a more informed decision. 52.5% of the respondents also agrees that Product information on package is important for them to make a more informed decision. Also 50% of the respondents agrees in the use of Product information on package as a criteria in the selection of best medicine from the product class. In a similar

manner 50.2% of the respondents agrees that they refuse purchase of OTC medicine without knowing Product information on package.

Table 4.8 Descriptive statistics of product information on package

Statements	Disagree		Neutral		Agree	
	No.	%	No.	%	No.	%
I feel like it is important to look for product information when deciding which product to buy	33	9.2	29	8.1	298	82.8
If I have a little experience with a product ,I search for product information about the product to help me make a more informed decision	106	29.5	72	20	182	50.5
I find out product information on the package is important to determine the quality of a product	95	26.4	76	21.1	189	52.5
I look for product information to choose the best product available in a product class	104	28.9	76	21.1	180	50
I refuse to purchase a product without knowing package product information	102	185.8	77	21.4	181	50.2

Source: Researcher's survey (2017)

**No. - Number of respondents

Descriptive analysis for Country of origin

As shown in the table 4.9 below, 82.2% of the respondents agree with the importance of country of origin when deciding which medicine to buy. For those OTC medicines that the respondents have little experience most of the respondents (93.9%) agree and neutral in the use of country of origin to make them a more informed decision. 76.1% of the respondents also agrees that country of origin is important for them to make a more informed decision. Also 75.5% of the respondents

agrees in the use of country of origin as a criteria in the selection of best medicine from the product class. In a similar manner 76.6% of the respondents agrees that they refuse purchase of OTC medicine without knowing country of origin.

Table 4.9 Descriptive statistics of country of origin

Statements	Disagree		Neutral		Agree	
	No.	%	No.	%	No.	%
I feel like it is important to look for a country of origin information when deciding which product to buy	18	5	46	12.8	296	82.2
If I have a little experience with a product ,I search for country of origin information about the product to help me make a more informed decision	22	6.1	63	17.5	275	76.4
I find out a products country of origin is important to determine the quality of a product	26	7.2	60	16.7	274	76.1
I look for country of origin information to choose the best product available in a product class	30	8.3	58	16.1	272	75.5
I refuse to purchase a product without knowing its country of origin	27	7.5	57	15.8	276	76.6

Source: Researcher's survey (2017)

**No. - Number of respondents

4.3.2 Demographic variables and consumer buying behavior

To check whether there is a significant relationship between consumer buying behavior and demographic variables, analysis by means of one way ANOVA test was undertaken.

As can be referred from appendix 6 and 9, the ANOVA test realized a probability of $p=0.000$, for variables age of respondents and marital status; indicating there is statistically significant association between these two variables and consumer buying behavior at $p<0.05$. The ANOVA test referred from appendix 7 also showed $p=0.895$ for gender, indicating that though there is a positive relationship but there is no statistically significant association between respondents gender and consumer buying behavior in the context of this particular study. Also as shown in ANOVA test found in appendix 8 $p=0.055$ for level of education, which indicates that there is statistically insignificant relationship considered between level of education and consumer buying behavior in the context of this particular study.

4.4 Inferential Statistics

The next paragraphs will deal with testing the hypotheses proposed in the first chapter of this study. To this end, hypotheses one through seven were tested using multiple regression after making sure the model fulfills all the assumptions related with multiple regression .

4.4.1 Correlation Analysis

A correlation coefficient expresses quantitatively the magnitude and direction of the linear relationship between two variables, Pearson correlation coefficient reveal magnitude and direction of relationships (either positive or negative) and the intensity of the relationship (-1 to 1). In this section a correlations analysis were done to establish whether relationships do exist between variables conceptualized in the framework. The results would enable the researcher to determine the regression on the dependent variable. The researcher used one of the most commonly used types of correlation coefficient which is Pearson correlation coefficient methods because of the statistical accuracy that usually results from this method. To interpret the strengths of relationship between variables, the guidelines suggested by field (2005) were followed, mainly for their simplicity. His classification of the correlation coefficient (r) is as follows: 0.1-0.29 is weak; 0.3-0.49 is moderate; and greater than 0.5 is strong.

Package size versus consumer buying behavior

As indicated in the table 4.10 below package size was positively and significantly correlated with consumer buying behavior ($r=0.578^{**}$, $p=0.0001$). In other words the value of ($r=0.578$) indicates that package size and consumer buying behavior have strong and positive relationship

in the context of over the counter medicine purchase and R^2 value of 33.4%, which shows that package size has 33.4% contribution for the model running out and the remaining 66.6% has expressed by other variables.

Table 4.10 Correlations analysis of package size and consumer buying behavior

		Package size	consumer buying behavior
Package size	Pearson Correlation	1	.578**
	Sig. (1-tailed)		.000
	N	360	360
consumer buying behavior	Pearson Correlation	.578**	1
	Sig. (1-tailed)	.000	
	N	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's Survey (2017)

Package graphics versus consumer buying behavior

There was a significant positive relationship between graphics of the package and consumer buying behavior ($r=0.595^{**}$, $p=0.0001$) while over the counter medicine is being purchased. In other words the value of ($r=0.595$) indicates that between graphics of the package and consumer buying behavior have strong and positive relationship in the context of over the counter medicine purchase and R^2 value of 35.4% contribution for the model from graphics of the package and the remaining 64.6% expressed by other variables.

Table 4.11 Correlations analysis of package graphics and consumer buying behavior

		Package graphics	consumer buying behavior
Package graphics	Pearson Correlation	1	.595**
	Sig. (1-tailed)		.000
	N	360	360
consumer buying behavior	Pearson Correlation	.595**	1
	Sig. (1-tailed)	.000	
	N	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's Survey (2017)

Packaging material versus consumer buying behavior

There was a significant positive relationship between packaging material and consumer buying behavior ($r=0.555^{**}$, $p=0.0001$) while over the counter medicine is being purchased. In other words the value of ($r=0.555$) indicates that between packaging material and consumer buying behavior have strong and positive relationship in the context of over the counter medicine purchase and R^2 value of 31% contribution for the model from packaging material and the remaining 69% expressed by other variables.

Table 4.12 Correlations analysis of packaging material and consumer buying behavior

		Packaging material	consumer buying behavior
Packaging material	Pearson Correlation	1	.555**
	Sig. (1-tailed)		.000
	N	360	360
consumer buying behavior	Pearson Correlation	.555**	1
	Sig. (1-tailed)	.000	
	N	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's Survey (2017)

Package design versus consumer buying behavior

As indicated in the table 4.13 above package design was positively and significantly correlated with consumer buying behavior ($r=0.627^{**}$, $p=0.0001$). In other words the value of ($r=0.627$) indicates that package design and consumer buying behavior have strong and positive relationship in the context of over the counter medicine purchase and R^2 value of 39%, which shows that package design has 39% contribution for the model running out and the remaining 61% has expressed by other variables.

Table 4.13 Correlations analysis of package size and consumer buying behavior

	Package design	consumer buying behavior

Package design	Pearson Correlation	1	.627**
	Sig. (1-tailed)		.000
	N	360	360
consumer buying behavior	Pearson Correlation	.627**	1
	Sig. (1-tailed)	.000	
	N	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's Survey (2017)

Package color versus consumer buying behavior

As indicated in the table 4.14 below package color was positively and significantly correlated with consumer buying behavior ($r=0.702^{**}$, $p=0.0001$). In other words the value of ($r=0.702$) indicates that package color and consumer buying behavior have strong and positive relationship in the context of over the counter medicine purchase and R^2 value of 49%, which shows that package color has 49% contribution for the model running out and the remaining 51% has expressed by other variables.

Table 4.14 Correlations analysis of package color and consumer buying behavior

		Package color	consumer buying behavior
Package color	Pearson Correlation	1	.702**
	Sig. (1-tailed)		.000
	N	360	360
consumer buying behavior	Pearson Correlation	.702**	1
	Sig. (1-tailed)	.000	
	N	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's Survey (2017)

Product information versus consumer buying behavior

As indicated in the table 4.15 below product information on package was positively correlated with consumer buying behavior ($r=0.149^{**}$, $p=0.0001$). In other words the value of ($r=0.149$) indicates that product information on package and consumer buying behavior have weak and positive relationship in the context of over the counter medicine purchase and R^2 value of 2%, which shows that product information on the package has 2% contribution for the model running out and the remaining 98% has expressed by other variables.

Table 4.15 Correlations analysis of product information and consumer buying behavior

		Product information	consumer buying behavior
Product information	Pearson Correlation	1	.149**
	Sig. (1-tailed)		.002
	N	360	360
consumer buying behavior	Pearson Correlation	.149**	1
	Sig. (1-tailed)	.002	
	N	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's Survey (2017)

Country of origin versus consumer buying behavior

As indicated in the table 4.16 below country of origin was positively correlated with consumer buying behavior ($r=0.350^{**}$, $p=0.0001$). In other words the value of ($r=0.350$) indicates that country of origin and consumer buying behavior have weak and positive relationship in the context of over the counter medicine purchase and R^2 value of 12%, which shows that country of origin has 12% contribution for the model running out and the remaining 88% has expressed by other variables.

Table 4.16 Correlations analysis of country of origin and consumer buying behavior

		Country of origin	consumer buying behavior
Country of origin	Pearson Correlation	1	.350**
	Sig. (1-tailed)		.000
	N	360	360
consumer buying behavior	Pearson Correlation	.350**	1
	Sig. (1-tailed)	.000	
	N	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

Source: Researcher's Survey (2017)

4.4.2 Test for Linear Regression Model Assumptions

4.4.2.1 Normality Assumption

A normal distribution is one of the importantly assumed statistical procedures. Normality of a data should be test before running the regression analysis because multiple regressions require that the independent variables in the analysis be normally distributed. According to Brooks (2008), as cited by Abate (2012) if the residuals are normally distributed, the histogram should be bell- shaped and thus this study implemented graphical methods to test the normality of data. From the Histogram figure (see Appendix 3), it can be noted that the distribution is normal curve, demonstrating that data witnesses to the normality assumption.

As the assumption holds as the histogram was a bell- shaped and the residuals were normally distributed around its mean of zero. Besides, the normal probability plots were also used to test the normality assumption as shown by the Normal P P-Plot Figure as you can see from Appendix 4.

As shown in the Figures from the appendixes 3 and 4 residuals were normally distributed around its mean of zero which indicates that the data were normally distributed and it was consistent with a normal distribution assumption. As the figures confirmed the normality assumption of the data, this implies that the inferences made about the population parameters from the sample statistics tend to be valid.

Among the others, one of the assumptions was normality of the data should be tested before running the analysis of the data using skewness and Kurtosis. According to Field (2005), normally distributed data assumed that the data are from one or more normally distributed populations. The rationale behind hypotheses testing relies on having normally distributed populations and so if these assumptions are not met then the logic behind hypothesis testing is flawed. Skewness should be within +2 and -2 range, if the data is normally distributed. Kurtosis is the peakedness or flatness of a distribution and this distribution shall also commonly fall between +2 and -2, although a few other authors according to (Garson, 2012), are more lenient and allow kurtosis to fall within +3 and -3. As shown in table 4.17 the data of this study is normally distributed since the skewness and kurtosis values are with in +2 and -2 range.

Table 4.17 Skwness and Kurtosis checking for normality of the data

	N	Skewness		Kurtosis	
	Statistic	Statistic	Std. Error	Statistic	Std. Error
Consumer buying behavior	360	-.607	.129	-.553	.256
Package size	360	-.370	.129	-.974	.256
Package graphics	360	-.014	.129	-1.242	.256
Package material	360	-.450	.129	-.859	.256
Package design	360	-.182	.129	-1.149	.256
Package color	360	-1.041	.129	.304	.256
Product information	360	-.322	.129	-.953	.256
Country of origin	360	-.909	.129	.499	.256
Valid N (list wise)	360				

Source: Researcher's Survey (2017)

4.4.2.2 Homoscedasticity

This assumption tells us that for each value of the predictors the variance of the error term should be constant. Said in another way, Homoscedasticity is an assumption in regression analysis that the residuals at each level of the predictor variables have similar variances. That is, at each point along any predictor variable, the spread of residuals should be fairly constant. For a basic analysis, we first plot *ZRESID (Y-axis) against *ZPRED (X-axis) on SPSS because this plot is useful to determine whether the assumptions of random errors and homoscedasticity have been met (Field, 2009). The graph of *ZRESID and *ZPRED should look like a random array of dots

evenly dispersed around zero. If this graph funnels out, then the chances are that there is heteroscedasticity in the data. If there is any sort of curve in this graph, then, the chances are that the data have broken the assumption of linearity (Field, 2009).

As can be seen in the scattered plot in Appendix 10, the residuals at each level of explanatory variables look like they are evenly dispersed around zero and that the graph is not something like cone shaped. Therefore, it is safe to say that this study has no homoscedasticity problem.

4.4.2.3 Multi collinearity Test Assumption

In regression, multi collinearity occurs when independent variables in the regression model are more highly correlated with each other than with the dependent variable when the independent variables are highly correlated with one another; they are basically measuring the same thing. In other words, when two variables are highly correlated, they both communicate essentially similar information. One way to assess multicollinearity is to examine correlations among the independent variables. If a correlation matrix demonstrates correlations of 0.90 or higher among the independent variables, they may be a problem with multicollinearity. Hair et al. (2006) argued that correlation coefficient below 0.90 may not cause serious multicollinearity problem, cited by Muhammed (2012). Multicollinearity can also be detected using tolerance value and variance inflator factor (VIF) value. An insignificant tolerance value point to the variable under discussion is almost a perfect liner combination of the independent variables already in the equation and that it should be dropped out from to the equation. Multicollinearity does not exist among all the independent variables provided that the tolerance value of all the independent variables was greater than 0.1 and the VIF values of all the independent variables are also less than 10. As you can see from table 4.18 below all independent variables are greater than 0.1 and the VIF value of all the independent variables are also less than 10.

Table 4.18 Muticollinearity

Model	Collinearity Statistics	
	Tolerance	VIF
1		
Package size	.672	1.489
package graphics	.126	7.906
package material	.730	1.370
package design	.121	8.238
package color	.540	1.852
package information	.621	1.609
Country of origin	.560	1.787

a. Dependent Variable: consumer buying behavior
Source: Researcher's Survey (2017)

Table 4.18 shows that the tolerance values of all the independent variables were greater than 0.1 and the VIF values of all the independent variables were less than 10. This indicates that model I was free from multicollinearity. Hence, there was no problem of multicollinearity between the independent variables in the model. Therefore regression analysis was done.

4.3.3 Regression Analysis

As you can see the Model Summary table 4.19 below the adjusted R Square statistic tells us the proportion of variance in the dependent variable that is accounted for by the independent variables. The adjusted R^2 tells us how much variance in the outcome would be accounted for if the model had been derived from the population from which the sample was taken. In this case the co- efficient of determination adjusted (R^2) was 0.729. This implies that about 72.9% of the dependent variable (i.e. consumer buying behavior) can be explained by the independent variables (i.e. package size, package graphics, packaging material, package design, package color, product information and country of origin), leaving about 27.1% to be explained by other exogenous factors. Adjusted R^2 values also indicate the overall effect size of all the independent variables on the dependent variable.

The assumption of independence errors refers to that errors in regression are independent; this assumption is likely to be met if the Durbin- Watson statistics is close to 2 and between 1 and 3 (Field, 2009). As shown in table 4.19 the Durbin-Watson test for this study found to be 1.88 which indicates that the assumption of independence of errors is met.

Table 4.19 Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	.857a	.734	.729	.46852	1.880

Source: Researcher's Survey (2017)

The next part of the SPSS output reports an analysis of variance (ANOVA). The summary table 4.20 that shows the various sums of squares described and the degrees of freedom associated with each. From these two values, the average sums of squares (the mean squares) can be calculated by dividing the sums of squares by associated degrees of freedom. The most important of the table is the F-ratio, which is a test of the null hypothesis that the regression coefficients are all equal to zero. The ANOVA table shows below that the F value is 138.923, which is significant at p less than 0.001. This result shows that there is less than 0.1% chance that F-ratio this large would happen, if null hypothesis proposed about F-ratio were true. Therefore we can conclude that our regression model results in significantly better prediction of consumer buying behavior of over the counter medicines and that that regression model overall predicts consumer buying behavior significantly well.

Table 4.20 ANOVA

Model		Sum of Squares	Df	Mean Square	F	Sig.
1	Regression	213.462	7	30.495	138.923	.000b
	Residual	77.267	352	.220		
	Total	290.728	359			

Source: Researcher's Survey (2017)

The third outcome of SPSS regression analysis provides details of the model parameters (the beta values) and the significance of these values. The strength of each predictor (independent variable) influencing the criterion (dependent variable) can be investigated via standardized Beta

coefficient. The regression coefficient explains the average amount of change in the dependent variable that is caused by a unit change in the independent variable. The larger value of Beta coefficient an independent variable has, brings the more support to the independent variable as the more important determinant in predicting the dependent variable. From the table below, we can say that α is 0.435, and this can be interpreted as meaning that if all the elements of the package dimensions were to be zero, the model predicts that 43.5% of buyers of OTC medicines purchase the medicines without looking for the package elements.

Table 4.21 Regression analysis of packaging elements

Model	Unstandardized Coefficients		Standardized Coefficients	T	Sig.	95.0% Confidence Interval for B	
	B	Std. Error	Beta			Lower Bound	Upper Bound
(Constant)	.435	.142		3.061	.002	.155	.714
Package size	.129	.023	.188	5.612	.000	.084	.174
Package graphics	.037	.052	.056	.721	.471	-.064	.139
package material	.161	.022	.233	7.240	.000	.117	.205
package design	.149	.053	.221	2.804	.005	.045	.254
package color	.301	.029	.383	10.252	.000	.243	.359
Product information	.119	.027	.153	4.401	.000	.066	.172
Country of origin	.094	.037	.092	2.517	.012	.020	.167

a. Dependent Variable: consumer buying behavior

Source: Researcher's Survey (2017)

From the above table we can have the following general formula for the model under the study.

The regression equation was

$$CBB = \alpha + \beta_1 x_1 + \beta_2 x_2 + \beta_3 x_3 + \beta_4 x_4 + \dots \dots \dots (1)$$

$$CBB = \alpha + \beta_1 PS + \beta_2 PG + \beta_3 PM + \beta_4 PD + \beta_5 PC + \beta_6 PI + \beta_7 COO \dots \dots \dots (2)$$

$$\text{CBB} = 0.435 + 0.188\text{PS} + 0.233\text{PM} + 0.221\text{PD} + 0.383\text{PC} + 0.153\text{PI} + 0.092\text{COO} + \Sigma(\text{error term}) \dots \dots$$

(3)

The regression model from table 4.11 above result shows that keeping other variables constant 0.188 unit increase in Package size will bring a unit increase in the consumer buying behavior of OTC medicines in Addis Ababa. Also 0.233 unit increase of packaging material will have a unit increase impact on consumer buying behavior of OTC medicines in Addis Ababa. 0.221 unit increase of package design will have a unit increase of consumer buying behavior of OTC medicines in Addis Ababa. 0.383 unit increase in Package color will bring a unit increase in the consumer buying behavior of OTC medicines in Addis Ababa. 0.153 unit increase in product information will bring a unit increase in the consumer buying behavior of OTC medicines in Addis Ababa. 0.092 unit increase in country of origin will bring a unit increase in the consumer buying behavior of OTC medicines in Addis Ababa.

4.3.4 Validating the proposed hypothesis

Hypothesis 1: There is a significant positive association between packaging size and consumer buying behavior OTC medicines.

To test this hypothesis, a multiple regression was run on SPSS which gave the overall fitness of the model which was presented in the previous paragraphs and the significance of each independent variable in affecting the dependent variable.

Based on the tables and justifications provided in the preceding paragraphs, packaging size has a significant and positive relation with the dependent variable buyers buying behavior, where the t-statistics value was calculated to be 5.612 at p value less than 0.05. The value of coefficient of package size was also found to be 0.188 which means that 0.188 unit increase in Package size will bring a unit increase in the consumer buying behavior of OTC medicines in Addis Ababa. Therefore, H1 is accepted.

Hypothesis 2: Graphics of the package has significant importance on the consumer buying behavior of OTC medicines.

The second hypothesis testing provided that the coefficient of graphics of the package was calculated to be 0.056, which indicates that keeping other factors constant 0.056 unit increase in

graphics of the package will have a unit increase impact on consumer buying behavior of OTC medicines. And the relationship of the independent factor graphics of the package (whose t-statistics was found to be 0.721 at p value of 0.471) with that of the dependent variable consumer buying behavior is found to be positive and statistically insignificant (since p is greater than 0.05), which lead to rejection of H2.

Hypothesis 3: There is a significant positive association between packaging material and consumer buying behavior OTC medicines.

As shown in the table above, the coefficient of packaging material was found to be 0.233, which means that 0.233 unit increase of packaging material will have a unit increase impact on consumer buying behavior of OTC medicines in Addis Ababa assuming all other variables constant. The calculated t-statistics value of this independent variable is 7.24 at p value of 0.000, which proves a positive and significant relationship with the dependent variable, consumer buying behavior. Therefore, H3 is accepted.

Hypothesis 4: There is a significant positive relationship between wrapper design and consumer buying behavior OTC medicines.

The coefficient of package design was 0.221, which can tell us that 0.221 unit increase of package design will have a unit increase of consumer buying behavior of OTC medicines in Addis Ababa. The t-statistics value of package design was 2.804 at p value of 0.005, which makes the relationship between this variable and consumer buying behavior positive and statistically significant. Therefore, H4 is accepted.

Hypothesis 5: There is a significant positive relationship between color and consumer buying behavior OTC medicines.

The hypothesis was also accepted because the t-statistics value of package color was 10.252 at p value of 0.000. the coefficient was also computed to be 0.383, which represents the fact that 0.383 unit increase in Package color will bring a unit increase in the consumer buying behavior of OTC medicines in Addis Ababa. Therefore, package color has a positive and significant relationship with consumer buying behavior. Therefore, H5 is accepted.

Hypothesis 6: There is a significant positive association between product information and consumer buying behavior OTC medicines.

As shown in the table above, the coefficient of product information was found to be 0.153, which means that 0.153 unit increase of product information will have a unit increase impact on consumer buying behavior of OTC medicines in Addis Ababa assuming all other variables constant. The calculated t-statistics value of this independent variable is 4.401 at p value of 0.000, which proves a positive and significant relationship with the dependent variable, consumer buying behavior. Therefore, H6 is accepted.

Hypothesis 7: There is a significant positive relationship between country of origin and consumer buying behavior OTC medicines.

The coefficient of country of origin was 0.092, which can tell us that 0.092 unit increase of country of origin will have a unit increase of consumer buying behavior of OTC medicines in Addis Ababa. The t-statistics value of country of origin was 2.517 at p value of 0.012, which makes the relationship between this variable and consumer buying behavior positive and statistically significant. Therefore, H7 is accepted.

Chapter five

Summary, Conclusion and recommendation of the study

5.1 Introduction

The fifth and last chapter of this study revolves around the major findings of the study and what we can conclude from the findings and give recommendation based on this findings. This chapter, moreover, highlighted the limitations of this work and indicated future research areas for anyone interested in the effect of packaging elements in consumer buying behavior.

5.2 Summary of the Major Findings

This study has attempted to examine the applicability of Silayoi & Speece model in the pharmaceutical sector. In trying to examine the replication of the model in the pharmaceutical sector, following that this study tries to identify the key determinants of the market and their association. In addition to this, the study also tries to identify which determinant has the highest influence on the buyers buying behavior of OTC medicines in Addis Ababa, Ethiopia and major results were came in to sight.

- All the respondents were found to be buyers of OTC medicines.
- In order to examine the applicability of Silayoi & Speece model, the study considered seven determinants namely package size, package graphics, packaging color, and product information, packaging material, design of wrapper and country of origin. A judgmental sampling was conducted to contact the sample respondents. Applying a structured questionnaire written in Amharic distributed to 384 peoples personally. The gathered data has analyzed by means of descriptive and inferential statistics using SPSS version 20 software.

In the descriptive statistics part the following results were achieved.

- The ANOVA test realized a probability of $p=0.000$, for variables age of respondents and marital status; indicating there is statistically significant association between these two variables and consumer buying behavior at $p<0.05$. The ANOVA test also referred that

$p > 0.05$ for gender and level of education, indicating that though there is a positive relationship but there is no statistically significant association between these two variables and consumer buying behavior in the context of this particular study. In the inferential statistics part the following results were achieved.

In the inferential statistics part the following results were achieved.

- The results indicates that six out of the seven variables had a positive and significant influence on buyers buying behavior of OTC medicine. Package color, packaging material, package design, package size, product information and country of origin has had influence on OTC medicine buyer's buying behavior respectively.
- The first, third, fourth, fifth, sixth and seventh hypothesis were accepted.
- The second hypothesis which claims that Graphics of the package has significant importance on the buyers buying behavior was rejected.

5.3 Conclusion drawn from the study

All the respondents were found to be all buyers of over the counter medicines in Addis Ababa, Ethiopia. Following this, 384 questionnaires were distributed to buyers of OTC medicines in community chain pharmacies of Addis Ababa, after testing the validity of the instrument. Among the distributed questionnaires, only 360 workable data was added on the SPSS 20.0 program where the descriptive analysis of the data assigned respondents to the different categories of gender, age, education level and marital status.

In this particular study age of respondents and marital status have statistically significant association with consumer buying behavior while gender and level of education don't have statistically significant association with consumer buying behavior.

Coefficient alpha was then used to measure the reliability of respective variables stated to explain the dependent variables, which was well above the threshold level at 0.793. Then regression analysis and independent t test were run to test the acceptance or rejection of the hypotheses that were put forward by this work.

Fitness of the model or the power of the independent variables in explaining consumer buying behavior of OTC medicines has found that the dependent variable was positively explained (72.9%) by the seven elements of package which are known ,for all uses and purposes of this study , as independent variables. The study also shows that a weak, moderate, strong and positive correlation between all the independent variables and the dependent variable.

The findings of hypothesis one through seven were verified by running multiple regression analysis, which then showed that six of the seven elements have a positive and significant effect on consumer buying behavior of OTC medicines in Addis Ababa. The only element that doesn't have a significant effect on consumer buying behavior of OTC medicines in Addis Ababa is graphics of the package. Package size, packaging material, package design, package color, product information and country of origin have positive and significant effect on consumer buying behavior in the model.

Out of all elements of OTC medicine package color was found to be with the highest influence on OTC medicine buyers buying behavior. Packaging material, package design, package size, product information and country of origin has had significant influence on OTC medicine buyers buying behavior respectively. While graphics of package does not have significant influence in OTC medicine buyers buying behavior.

Going back to the objectives of this study, it can be concluded that this study has confirmed the fact that consumer buying behavior of OTC medicines are influenced by six of the hypothesized variables, has given important insights on the existence of a few differences in buying behavior between sub-categories as well as given a good indication of the demographic profile of OTC medicine buyers.

5.4 Recommendation of the study

The general understanding of the influencing factors of consumers buying behavior, needed to be examined and re-examined with the ever changing effects of globalization and technology. Based on the findings proposed in chapter four, this study proposes the following recommendations.

- One, the study gives pharmaceutical companies better understanding of the factors that influences consumer's buying behavior of OTC medicines and makes management of pharmaceutical companies aware of packaging effects on consumer buying behavior of OTC medicines at the point of purchase. Hence, packaging strategies should be factored into their strategies to maximize consumers' interest toward their products and create a competitive advantage.
- Additionally, it could be deduced from the study that except package graphics both visual elements and verbal elements of package have potential importance in distinguishing one OTC medicine from the other. Since these are part of the packaging, management should integrate these two factors into the product's marketing mix to enhance image differentiation for their companies.
- Furthermore, it must be noted pharmaceutical companies that innovation is an idea, a good or a service perceive by consumers as new product. Therefore using different product packaging in terms of color, size, design and material, packages will help to put the company in lime light in the marketing arena.
- Finally, it must be noted that the product information and country of origin on OTC medicines have to be clearly visible that consumers easily read and differentiate it from other OTC medicines.

5.5 Limitations and future research

5.5.1 Limitations of the Study

The research is limited by the following points:

- The absence of adequate studies and organized data especially empirical literatures, both qualitative and quantitative data regarding the study variables, which would be useful to lay a more relevant factual base for the study.
- The respondents' unwillingness to fill the questionnaires due to lack of time, because of the nature of the customers of pharmacies, and lack of understanding the usefulness of the study.
- Since the questionnaires used were closed-ended items, it might lack content coverage or authenticity.

- The sampling source came only from the customers of chain community pharmacies in Addis Ababa. The samples might not be generalized and not have fully display the general characteristics of the consumers.

5.5.2 Future area of study

The domain of this study was OTC medicine buyers in community chain pharmacies of Addis Ababa; as such in any future study of this topic it may be necessary to conduct a comprehensive research which encompasses different buyers of OTC medicine from different regions. It would be also interesting to research on another consumer products that people can buy it in a day to day manner. Future studies are recommended also to include all constructs of product information on the package to better understand which construct have more influence on consumers product evaluation.

Reference

- Abate Ayele, 2012, Factors Affecting Profitability of Insurance Companies in Ethiopia: Panel Evidence, Unpublished Master Thesis, Addis Ababa University, and Addis Ababa, Ethiopia.
- Adam, M Amir & Ali, Kamran, (2014), "Impact of Visual Elements of Packaging of Packaged Milk on Consumer Buying Behavior", *Interdisciplinary Journal of Contemporary Research in Business*, 5(11), 119-160
- Adams, J., Khan, T.A., Raeside, R. & White, D.A., 2007, *Research Methods for Graduates, Business and Social Science Students*, Sage Publication. Inc, California.
- Ahmed. A., Ahmed, N., and Salman, A. (2005), Critical issues in packaged food business; *British Food Journal*, Vol. 107 No. 10 pp. 760-780
- Aronson J K (2004) .Over-the-counter medicines. *Br J Clin Pharmacology* 58(3): 231–234. doi: 10.1111/j.1365-2125.2004.02191.x
- Arun Kumar Agariya; Ankur, Johari; Hitesh, K Sharma; Udit, N S Chandraul, Deepali. Singh (2012). "The Role of Packaging in Brand Communication" *International Journal of Scientific & Engineering Research*, 3 (2), 1-13.
- Baheti G., Jain, K. R. and Jain, N., (2012) 'The Impact of Advertising Appeals on customer Buying Behavior', *International Journal of Research in Commerce & Management*, Volume No. 3, ISSUE NO. 11 (November) ISSN 0976-2183, pp.76
- Barber, N. & Almanza, B. (2006). Influence of Wine Packaging on Consumers' Decision to Purchase, *Journal of Foodservice Business Research*, 9, 83-98.
- Belch, G.E. and Belch. M. A. (1990) *Advertising and Promotion: An Integrated Marketing Communications Perspective*, 6th ed., Irwin/McGraw-Hill, New York.
- Bernard R. and Olivier D. (2005), "Pharmaceutical Packaging Color and Drug Expectancy", in NA. *Advances in Consumer Research* 32: 164-171.
- Bilkey, W. J., & Nes, E. (1982). Country-of-origin effects on product evaluations. *Journal of International Business Studies*, 89-99. <http://dx.doi.org/10.1057/palgrave.jibs.8490539>
- Bhardwaj, V., Kumar, A. & Kim, Y. K. (2009). Brand Analyses of U.S. Global and Local Brands in India: The Case of Levi's. *Journal of Global Marketing*, 23(1), 80-94.

Bhattacharjee, A., (2012). Social science research: principles, methods, and practices, Florida, USA: University Of South Florida.

Brassington, N.M & Pettit A.A (2003) Principles of marketing. Pearson Education ltd London

Charles W. L, Joe F. H, Carl M., 2011. Essentials of Marketing: A Marketing Strategy Planning Approach, Cengage Learning

Creswell, J. W., 2009, Research Design; Qualitative, Quantitative, And Mixed Methods Approaches, 3rd. ed, California: Sage.

Creusen, M.E.H., Veryzer, R.W. & Schoormans, J.P.L. 2010. Product value importance and consumer preference for visual complexity and symmetry. European Journal of Marketing.

Dessalegn A.G. (2017). Self-Medication Pattern among Social Science University Students in Northwest Ethiopia. Journal of Pharmaceutics Volume 2017 (2017), Article ID 8680714, 5 pages <https://doi.org/10.1155/2017/8680714> Department of Pharmacology, College of Medicine and Health Sciences, University of Gondar, Gondar, Ethiopia

Farhadi, M., 2009, Improving Profitability Model In Insurance Industry, Considering Inflation: The Case Study Of Automobile Insurance In Iran. Unpublished Master Thesis, Lulea University of Technology. Iran

Federal Democratic Republic of Ethiopia, M. of S. and T., 2014. National Research Ethics Review, Ethiopia.

Field, (2005).New methods in social science research, New York: Praeger publishers, 1978.

Field, A. (2009). Discovering statistics using SPSS (3rd ed.). SAGE publications Ltd. <http://doi.org/10.1234/12345678>

Food, Medicine & Health Care Administration & Control Authority of Ethiopia (2012). OTC medicine list for Ethiopia

Garson, G.D., 2012b. Testing Statistical Assumptions, North Carolina: Statistical Associates Publishing.

Gebremedhin B. G. and Mirgissa K.S., 2016. Exploration of over the counter sales of antibiotics in community pharmacies of Addis Ababa, Ethiopia: pharmacy professionals' perspective. *Antimicrobial Resistance and Infection Control*. 5(2):1-7. DOI 10.1186/s13756-016-0101-z

Ghazali, M., Othman, M. S., Yahya, A. Z., & Ibrahim, M. S. (2008). Products and country of origin effects: The Malaysian consumers' perception. *International Review of Business Research Papers*, 4(2), 91-102.

Gofman, A., Moskowitz, H.R. & Mets, T. 2010. Accelerating structured consumer-driven package design. *Journal of Consumer Marketing*.

Golnesa Ahmadi, H. R. (2013). "An Investigation of Visual Components of Packaging on Food Consumer Behavior". *Business and Economics Research*, 3 (2), 1-11.

Holmes, G.R. & Paswan, A. 2012. Consumer reaction to new package design. *Journal of Product & Brand Management*.

Ilker Etikan, Sulaiman Abubakar Musa, Rukayya Sunusi Alkassim (2016). Comparison of Convenience Sampling and Purposive Sampling. *American Journal of Theoretical and Applied Statistics*. 5(1), 1-4. doi: 10.11648/j.ajtas.20160501.11

Jafari R. (2012), "A Review of the Pharmaceutical Products Packaging", *Ppackaging Industry*. 87, 18-21, 2012.

Keller, K. L. (2009), "Choosing Brand Elements to build Brand Equity", *Strategic Brand Management*, 3rd Edition, 187-196

Kothari C. (2004), *Research Methodology: Methods And Techniques*, New Age International New Delhi.

Kotler, Philip & Keller, K. L. (2008), *Marketing Management*, New Jersey: Prentice Hall. Pilditch, J., 13th Edition

- Kumar, S. and Bishnoi, V.K. (2011). "Indian Consumer Food Shopping Behaviour and their Choice and Preference for Packaged Food and Food Retailers – An Exploratory Study" e Proceedings for 2011 International Research Conference and Colloquium, 274- 292.
- Kumbhar M.S., Choudhary N.H., Dighe D.A. and Singh M.Ch., 2012. "Tamper Evident Pharmaceutical Packaging—needs and Advances", *International Journal of Pharmaceutical Sciences Review and Research*, 13(2), 141-153.
- Ladipo, P.K. and Rahim, A.G. 2013). "Packaging and the Influence of Information Overload in a Low-risk Market: A Study of Grocery Products" *European Journal of Business and Social Sciences*, 1 (10), 61- 72.
- Lee, M. Y., Knight, D. & Kim, Y. K. (2008). Brand analysis of a U.S. global brand in comparison with domestic brands. *Journal of Product & Brand Management*, 17(3), 163-174.
- Lifu, F.L. (2012). "An Analysis of the Effect of Product Packaging on Consumers' Buying Choice in Calabar Municipality, Cross River State, Nigeria" *Asian Journal of Business Management*, 4 (2), 186- 191.
- Lynsey Hollywood; Laura, Wells; Armstrong, Gillian; Heather, Farley, (2013). "Thinking outside the carton: attitudes towards milk packaging". *British Food Journal*, 115 (6), 899-912.
- Magnusson A., Roesse M. and Olsson A. (2012), "Finding Methods for Innovative Packaging Development: The Card Approach", 1-51, 2012.
- Marczyk, DeMatteo, D; & Festinger, D, 2005, *Essentials of Research design and Methodology*, 1st ed John Wiley & Sons, Inc; Hoboken, New Jersey.
- Mersid Poturak (2014). Influence of Product Packaging on Purchase Decisions. *European Journal of Social and Human Sciences* 3(3): 144-150
- Michaelis, M., Woisetschläger, D. M., Backhaus, C., & Ahlert, D. (2008). The effects of country of origin and corporate reputation on initial trust: An experimental evaluation of the perception of Polish consumers. *International Marketing Review*, 25(4), 404-422. <http://dx.doi.org/10.1108/02651330810887468>
- Molokwu c. (2013). Influence of packaging on consumer choice of beauty products: a study of Marykay, sleek and black opal cosmetics. Master's thesis, university of Nigeria.

MRIA, 2007. Code of Conduct and Good Practice for Members of the Marketing Research and Intelligence Association. , (December), p.48.

Muhammed N. (2012). Determinants of Dividend Policy of Insurance Companies in Ethiopia Unpublished Master Thesis, Addis Ababa University, Addis Ababa, Ethiopia.

Nancarrow, C., Wright, L. T., & Brace, I. (1998). Gaining competitive advantage from packaging and labelling in marketing communications. *British Food Journal*, 100(2), 110-118.

Nayyar, E.V. (2012). “Packaging – An Innovative Source of Impulsive and Abrupt Buying Action” *International Journal of Management and Information Technology*, 1 (1), 13-16.

Netsanet A., 2014. Country of origin effect on Ethiopian consumers’ evaluation of Indian pharmaceutical drug. Unpublished master’s thesis, Addis Ababa university.

Pallant, J., 2005. SPSS survival manual: a Step by Step Guide to Data Analysis Using SPSS for Windows (Version 12)

Panwar, J.S., (2004), “Beyond consumer marketing: sectorial marketing and emerging trends”, Tejeshwar Singh for response books, New Dehli

Patrick O. O., Bisi O., Chibogu N. O. and Ebenezer A. A., 2015. Product packaging as a predictive factor of consumer patronage of toothpaste in ADO-EKITI, NIGERIA. *British Journal of Marketing Studies* Vol.3, No.3, pp.12-28,

Patwardhan, M., Flora, P. and Gupta, A. (2010) ‘Identification of Secondary Factors that Influence Consumer’s Buying Behavior for Soaps and Chocolates’, *The IUP Journal of Marketing Management*, Vol. IX, Nos. 1 & 2, pp. 1-2.

Pilchik R. (2000). *Pharmaceutical Blister Packaging, Part I (Rationale and Materials)*. Pharmaceutical Technology.68-74. Publishing Company.

Randi, Priluck Grossman & Joseph, Z. Wisenblit, (1999), “What we know about color choices” *Journal of Marketing Practice Applied Marketing Science*, 5 (3), 78-88

Richard J. Cooper (2013). Over-the-counter medicine abuse – a review of the literature. *J Subst Use*, 18(2): 82–107. Published online 2011 Oct 3. doi: 10.3109/14659891.2011.615002

Rizwan, R.A., Vishnu, P. and Muhammad, A.A. (2014). Impact of Product Packaging on Consumer’s Buying Behavior. *European Journal of Scientific Research* 120 (2): 145-157

Romica C., Fritz Y., Lucy M. (2015). Consumer Perceptions towards Package Designs: A Cross Cultural Study. *Journal of Applied Packaging Research* 7 (2): 4

Rundh, B. 2009. Packaging design: creating competitive advantage with product packaging. *British Food Journal*.

Samin R., Goodarz J.D., Muhammad S.R., Firoozeh F., Mahsa H. & Sanaz E.,(2012). A Conceptual Study on the Country of Origin Effect on Consumer Purchase Intention. *Asian Social Science* 8(12):205-215

Schoell, W.F., (1985), *Marketing: Contemporary concepts and practices*, 2nd Ed; Allyn and Bacon, USA.

Shahram G., Hossein G. & Saeid M. (2013). Effect of Packaging Elements on Consumer Purchasing Decisions (Case Study Detergent Market). *Universal Journal of Management and Social Sciences* 3(8):10-15

Shimp, T.A., (2010), *Advertising Promotion and other Aspects of Integrated Marketing Communications*; 8th Ed, South Western Cengage Learning; USA

Shruti Chaudhary (2014). The Role of Packaging in Consumer's Perception of Product Quality. *International Journal of Management and Social Sciences Research (IJMSSR)* 3(3):17-21

Silayoi, P. & Speece, M. 2007. The importance of packaging attributes: a conjoint analysis approach. *European Journal of Marketing*.

Silayoi, P., & Speece, M. (2004). Packaging and purchase decisions: An exploratory study on the impact of involvement level and time pressure, *British Food Journal*, 106:607 – 628

Singh, S. (2006). “Impact of Color on Marketing” *Management Decision*, 44 (6), 783- 788.

Smith, P R & Taylor, J., (2004). “Packaging”. *Marketing Communications*, London, 543-574

Smith, V.H., 1998. *Measuring the Benefits of Social Science Research*.

Social Research Association, 2003. *Ethical guidelines*. , (December), p.66.

Solmaz S.N.A., Habibollah D. and Mehdi N.k. (2015). Impact of Innovation Variables on Quality of Pharmaceutical Products Packaging. *Journal of Applied Packaging Research* 7(3):1-22

Sonkusare, G. (2013) 'Impact of Television Advertising on Buying Behavior of Women Consumers [With special reference to FMCG Products] Chandrapur city', International Journal of Business and Management Invention, ISSN (Online): 2319 – 8028, ISSN (Print): 2319 – 801X, Volume 2, Issue 3, PP 31-38

Soroka, W. (1995). Fundamentals of Packaging Technology. Herndon, VA: Richard Warrington

Stewart B. (2004). Packaging Design Strategies. Second Edition. The UK: Pira International Ltd.

Susilawati, C. (2001) Motivation and Perception Factors Influence Buying Home Behavior in Dilly, East Timor, Prres 7th Annual Conference, Surabaya, Indonesia

Underwood, R.L., Klein, N.M. and Burke, R.R. (2001). "Packaging Communication: Attention Effects Product Imagery" Journal of Product and Brand Management, 10 (7), 403- 411.

Urich R., Keven M. (2008). Holistic package design and consumer brand impressions. Journal of marketing 72(3):64-81

Verma A. (2012), The Role of Packaging in the Sales Promotion of Pharmaceutical Products, Ph.D. dissertation, Tibrewal University, Vidyanagari, 2012.

Williams, T.G. (1982). Consumer Behaviour: Fundamentals and Strategies. New York: West

Zadbuke N, Shahi S,Gulecha B, Padalkar A, Thube M(2013). Recent trends and the future of pharmaceutical pacakaging technology. Journal of pharmacy and bioallied sciences 5(2):98-110

Zekiri J., Hasani V.V. (2015). The role and impact of the packaging effect on consumer buying behavior. ECOFORUM 4(1): 232 240.

APPENDIX 1: Questionnaire in English (adopted from Zekiri and Hasani, 2015)
Addis Ababa University School of Commerce

Department of Marketing Management

A Questionnaire to be filled by over the counter medicine buyers in chain community pharmacies of Addis Ababa.

Dear respondents;

This study is to be conducted as part of a research project which shall be submitted in partial fulfillment of Masters of Art Degree in Marketing Management. This questionnaire is meant to collect information about “the effect of packaging on over the counter medicine buyer’s behavior .In the case of Chain community pharmacies of Addis Ababa”.

Your keen participation in supplying the required data is highly essential for successful completion of the study. The information you provide will be kept confidential and be used only for an academic purpose.

I would like to thank you in advance for your participation and sharing your busy schedule. Please do not hesitate to ask me or to call/mail if you have any doubt on the questions.

Biruk Mengistu

Mob. 0913932070

Email: bk.kasaye@gmail.com

Note: kindly put a (v) mark with the option that reflects your level of agreement with the given statement.

Part I: Demographic questions

1. Age: 1. 18-25 2. 26-30 3. 31-35 4. 36-40 5. >41
2. Sex: Male Female
3. Educational level: No education Primary education Secondary education
College Diploma First Degree Postgraduate Degree
4. Marital status: Married Single Divorced Widowed

Part II: Screening questions

1. Do you normally purchase OTC medicines for yourself?
Yes no
2. When you make purchase for over the counter medicine do you take a look on the package of the product?
Yes no
3. If yes, please answer questions in part III and part IV

Part III: Basic information/ packaging dimensions

Direction: Please indicate your degree of agreement/disagreement with the following statements by circling the appropriate number. (1- Strongly disagree; 2-Disagree; 3- Neutral; 4- Agree; and 5-Strongly agree) key SDA=strongly disagree; DA=Disagree; N-Neutral; A=Agree; SA= strongly agree.

S/N		SDA	DA	N	A	SA
I	Packaging Size					
1	I feel like it is important to look for packaging size when deciding which product to buy	1	2	3	4	5
2	If I have a little experience with a product ,I search for products using packaging size to help me make a more informed decision	1	2	3	4	5
3	I find out a packaging size is important to determine the quality of a product	1	2	3	4	5

4	I look for product packaging size to choose the best product available in a product class	1	2	3	4	5
5	I refuse to purchase a product without knowing its packaging size	1	2	3	4	5
II	Graphics of package					
1	I feel like it is important to look for graphics of the package when deciding which product to buy	1	2	3	4	5
2	If I have a little experience with a product ,I search for products using graphics of the package to help me make a more informed decision	1	2	3	4	5
3	I find out a graphics of the package is important to determine the quality of a product	1	2	3	4	5
4	I look for graphics of the package to choose the best product available in a product class	1	2	3	4	5
5	I refuse to purchase a product without knowing graphics of package	1	2	3	4	5
III	Packaging Material					
1	I feel like it is important to look for packaging material when deciding which product to buy	1	2	3	4	5
2	If I have a little experience with a product ,I search for products using packaging material to help me make a more informed decision	1	2	3	4	5
3	I find out a packaging material is important to determine the quality of a product	1	2	3	4	5
4	I look for product packaging material to choose the best product available in a product class	1	2	3	4	5
5	I refuse to purchase a product without knowing its packaging material	1	2	3	4	5
IV	Packaging Design					
1	I feel like it is important to look for packaging design when deciding which product to buy	1	2	3	4	5
2	If I have a little experience with a product ,I search for products using packaging design to help me make a more informed decision	1	2	3	4	5

3	I find out a package design is important to determine the quality of a product	1	2	3	4	5
4	I look for product package design to choose the best product available in a product class	1	2	3	4	5
5	I refuse to purchase a product without knowing its packaging design	1	2	3	4	5
V	Packaging Color					
1	I feel like it is important to look for packaging color when deciding which product to buy	1	2	3	4	5
2	If I have a little experience with a product ,I search for products using packaging color to help me make a more informed decision	1	2	3	4	5
3	I find out a packaging color is important to determine the quality of a product	1	2	3	4	5
4	I look for product packaging color to choose the best product available in a product class	1	2	3	4	5
5	I refuse to purchase a product without knowing its packaging color	1	2	3	4	5
VI	Product information					
1	I feel like it is important to look for product information when deciding which product to buy	1	2	3	4	5
2	If I have a little experience with a product ,I search for product information about the product to help me make a more informed decision	1	2	3	4	5
3	I find out product information on the package is important to determine the quality of a product	1	2	3	4	5
4	I look for product information to choose the best product available in a product class	1	2	3	4	5
5	I refuse to purchase a product without knowing package product information	1	2	3	4	5
VII	Country of origin					
1	I feel like it is important to look for a country of origin information when deciding which product to buy	1	2	3	4	5
2	If I have a little experience with a product ,I search for country of origin information about the product to help	1	2	3	4	5

	me make a more informed decision					
3	I find out a products country of origin is important to determine the quality of a product	1	2	3	4	5
4	I look for country of origin information to choose the best product available in a product class	1	2	3	4	5
5	I refuse to purchase a product without knowing its country of origin	1	2	3	4	5

Part IV: Buying Behavior

S/N		SDA	DA	N	A	SA
1	Overall, the packaging size of over the counter medicine affect my purchase decision	1	2	3	4	5
2	Overall, the graphics of over the counter medicine package affect my purchase decision	1	2	3	4	5
3	Overall, the packaging material of over the counter medicine affect my purchase decision	1	2	3	4	5
4	Overall, the design of over the counter medicine package affect my purchase decision	1	2	3	4	5
5	Overall, the packaging color of over the counter medicine affect my purchase decision	1	2	3	4	5
6	Overall, the product information on over the counter medicine package affect my purchase decision	1	2	3	4	5
7	Overall, the country of origin of over the counter medicine affect my purchase decision	1	2	3	4	5
8	All packaging elements significantly influence me to buy over the counter medicines.	1	2	3	4	5

Thank you!

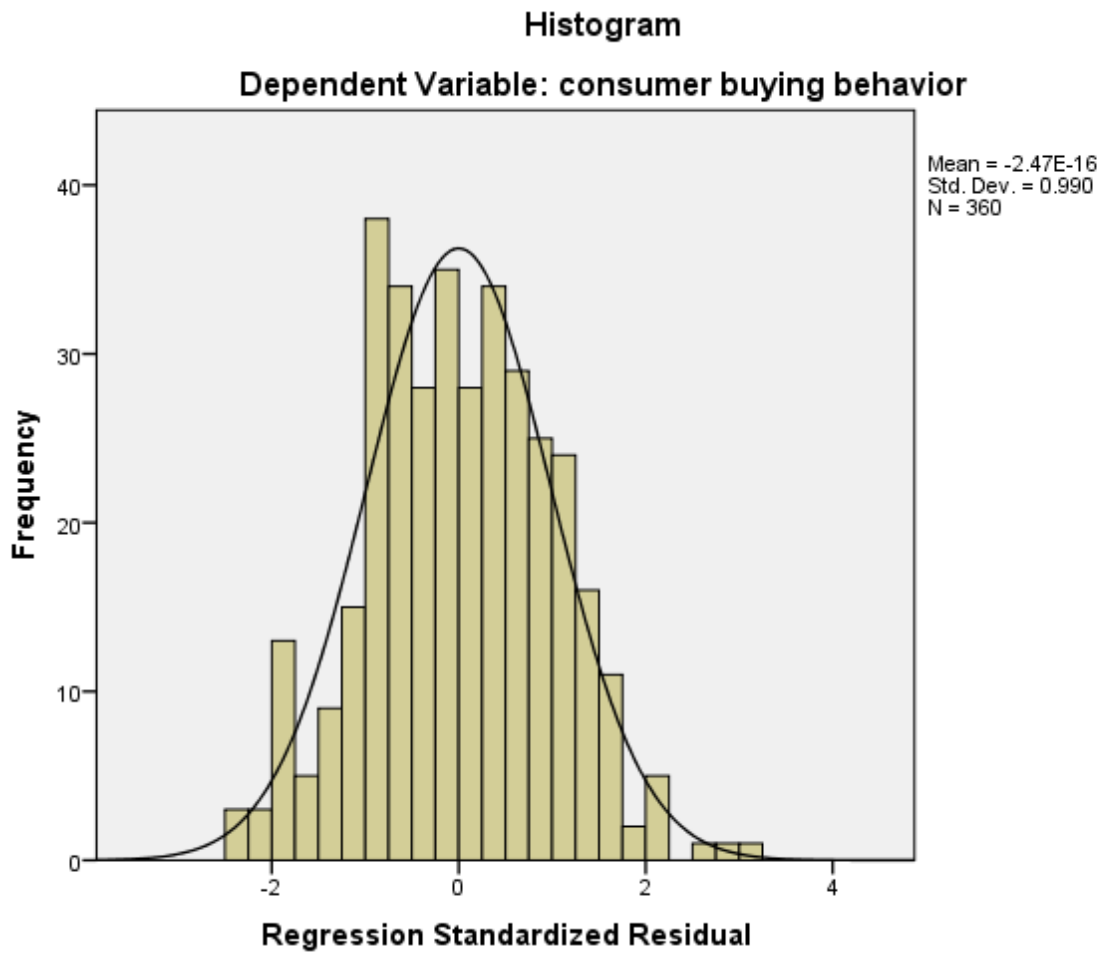
I	ግንባታ ስራዎች					
1	ግንባታ ስራዎች እንደምግብ በምወስንበት ጊዜ የማሽኒያውን መጠን ማየት አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
2	ግንባታ ስራዎች ያለኝ እውቀት ጥቂት ከሆነ የበለጠ በመረጃ ላይ የተመሰረተ ውሳኔ ላይ ለመድረስ የማሽኒያውን መጠን በመጠቀም ምርቱን አፈላልጋለሁ።	1	2	3	4	5
3	ግንባታ ስራዎች ጥራት ለመወሰን የመድሃኒቱን ማሽኒያ መጠን ማወቅ አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
4	ግንባታ ተመሳሳይ መድሃኒቶች መካከል ጥሩ የሆነውን ለመለየት የመድሃኒቱን የማሽኒያ መጠን እንደ አንድ መስፈርት አጠቀምባለሁ።	1	2	3	4	5
5	ግንባታ ስራዎች መጠን ሳላይ የመግዛት ውሳኔ ላይ አልደርስም።	1	2	3	4	5
II	ግንባታ ስራዎች እና ስዕል አጣጣል					
1	ግንባታ ስራዎች እንደምግብ በምወስንበት ጊዜ የማሽኒያውን የዕቃ ስዕል አጣጣል ማየት አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
2	ግንባታ ስራዎች ያለኝ እውቀት ጥቂት ከሆነ የበለጠ በመረጃ ላይ የተመሰረተ ውሳኔ ላይ ለመድረስ የማሽኒያውን የዕቃ ስዕል አጣጣል በመጠቀም ምርቱን አፈላልጋለሁ።	1	2	3	4	5
3	ግንባታ ስራዎች ጥራት ለመወሰን የመድሃኒቱን ማሽኒያ የዕቃ ስዕል አጣጣል ማወቅ አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
4	ግንባታ ተመሳሳይ መድሃኒቶች መካከል ጥሩ የሆነውን ለመለየት የመድሃኒቱን የማሽኒያ የዕቃ ስዕል አጣጣል እንደ አንድ መስፈርት አጠቀምባለሁ።	1	2	3	4	5
5	ግንባታ ስራዎች የዕቃ ስዕል አጣጣል ሳላይ የመግዛት ውሳኔ ላይ አልደርስም።	1	2	3	4	5
III	ግንባታ ስራዎች ጥሬ ዕቃ					
1	ግንባታ ስራዎች እንደምግብ በምወስንበት ጊዜ የማሽኒያውን ጥሬ ዕቃ ማየት አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5

2	፳፻ መድሃኒቱ ያለኝ እውቀት ጥቂት ከሆነ የበለጠ በመረጃ ላይ የተመሰረተ ውሳኔ ላይ ለመድረስ የማሸጊያውን ጥሬ ዕቃ በመጠቀም ምርቱን አፈላልጋለሁ።	1	2	3	4	5
3	፳፻፳፻ ጭድህኒት ጥራት ለመወሰን የመድሃኒቱን ማሸጊያ ጥሬ ዕቃ ማወቅ አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
4	፳፻፳፻ ተመሳሳይ መድሃኒቶች መካከል ጥሩ የሆነውን ለመለየት የመድሃኒቱን የማሸጊያ ጥሬ ዕቃ እንደ አንድ መስፈርት አጠቀምባለሁ።	1	2	3	4	5
5	፳፻፳፻ ጭድህኒት ጥሬ ዕቃ ሳላይ የመግዛት ውሳኔ ላይ አልደርስም።	1	2	3	4	5
IV						
፳፻፳፻፳፻ ጌድፎች						
1	፳፻፳፻፳፻ ጭድሃኒት እንደምግብ በምወሰንበት ጊዜ የማሸጊያውን ንድፎች ማየት አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
2	፳፻ መድሃኒቱ ያለኝ እውቀት ጥቂት ከሆነ የበለጠ በመረጃ ላይ የተመሰረተ ውሳኔ ላይ ለመድረስ የማሸጊያውን ንድፎች በመጠቀም ምርቱን አፈላልጋለሁ።	1	2	3	4	5
3	፳፻፳፻፳፻ ጭድህኒት ጥራት ለመወሰን የመድሃኒቱን ማሸጊያ ንድፎች ማወቅ አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
4	፳፻፳፻ ተመሳሳይ መድሃኒቶች መካከል ጥሩ የሆነውን ለመለየት የመድሃኒቱን የማሸጊያ ንድፎች እንደ አንድ መስፈርት አጠቀምባለሁ።	1	2	3	4	5
5	፳፻፳፻፳፻ ጭድህኒት ንድፎች ሳላይ የመግዛት ውሳኔ ላይ አልደርስም።	1	2	3	4	5
V						
፳፻፳፻፳፻ ቀለም						
1	፳፻፳፻፳፻ ጭድሃኒት እንደምግብ በምወሰንበት ጊዜ የማሸጊያውን ቀለም ማየት አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
2	፳፻ መድሃኒቱ ያለኝ እውቀት ጥቂት ከሆነ የበለጠ በመረጃ ላይ የተመሰረተ ውሳኔ ላይ ለመድረስ የማሸጊያውን ቀለም በመጠቀም ምርቱን አፈላልጋለሁ።	1	2	3	4	5
3	፳፻፳፻፳፻ ጭድህኒት ጥራት ለመወሰን የመድሃኒቱን ማሸጊያ ቀለም ማወቅ አስፈላጊ ነው ብዬ አምናለሁ።	1	2	3	4	5
4	፳፻፳፻ ተመሳሳይ መድሃኒቶች መካከል ጥሩ የሆነውን ለመለየት	1	2	3	4	5

፩.፩		፩ ፩ ፩ አልስማማም	፩ ፩ ፩ ፩ ፩	፩ ፩ ፩ ፩ ፩	፩ ፩ ፩ ፩ ፩ ፩	፩ ፩ ፩ ፩ አስማማ ለሁ
1	በአጠቃላይ የመድሃኒቱ ማሸጊያ መጠን በግዥዬ ላይ ጫና ያሳድርብኛል	1	2	3	4	5
2	በአጠቃላይ የመድሃኒቱ ማሸጊያ የዕሁፍ እና ስዕል አጣጣል በግዥዬ ላይ ጫና ያሳድርብኛል	1	2	3	4	5
3	በአጠቃላይ የመድሃኒቱ ማሸጊያ ጥሬ ዕቃ በግዥዬ ላይ ጫና ያሳድርብኛል	1	2	3	4	5
4	በአጠቃላይ የመድሃኒቱ ማሸጊያ ንድፎች በግዥዬ ላይ ጫና ያሳድርብኛል	1	2	3	4	5
5	በአጠቃላይ የመድሃኒቱ ማሸጊያ ቀለም በግዥዬ ላይ ጫና ያሳድርብኛል	1	2	3	4	5
6	በአጠቃላይ የመድሃኒቱ ማሸጊያ ላይ ያለው መረጃ በግዥዬ ላይ ጫና ያሳድርብኛል	1	2	3	4	5
7	በአጠቃላይ መድሃኒቱ የተሰራበትን ሀገር በግዥዬ ላይ ጫና ያሳድርብኛል	1	2	3	4	5
8	፩ ፩ ፩ የማሸገው ሁኔታዎች ያለሀኪም ትእዛዝ የሚወሰዱ መድሃኒቶች ለመግዛት በምወሰንበት ጊዜ በእኔ ላይ ከፍተኛ ተጽእኖ ይኖራቸዋል።	1	2	3	4	5

፩ ፩ ፩ ፩ ፩ ፩ ፩

Appendix 3: Histogram for Normality Test of the Data



Source: Researcher's Survey (2017)

APPENDIX 4: Normal P- P Plot to Test Normality of the Data



Source: Researcher's Survey (2017)

APPENDIX 5: Correlation matrix

		Correlations							
		package size	package graphics	package material	package design	package color	package information	Country of origin	consumer buying behavior
Package size	Pearson Correlation	1							
	Sig. (1-tailed)								
	N	360							
Package graphics	Pearson Correlation	.391**	1						
	Sig. (1-tailed)	.000							
	N	360	360						
Package material	Pearson Correlation	.371**	.389**	1					
	Sig. (1-tailed)	.000	.000						
	N	360	360	360					
Package design	Pearson Correlation	.393**	.933**	.413**	1				
	Sig. (1-tailed)	.000	.000	.000					
	N	360	360	360	360				
Package color	Pearson Correlation	.516**	.398**	.388**	.428**	1			
	Sig. (1-tailed)	.000	.000	.000	.000				
	N	360	360	360	360	360			
package information	Pearson Correlation	-.093*	.024	-.053	.047	-.092*	1		
	Sig. (1-tailed)	.040	.327	.158	.187	.041			
	N	360	360	360	360	360	360		
Country of origin	Pearson Correlation	.128**	.141**	-.019	.135**	.310**	.533**	1	
	Sig. (1-tailed)	.007	.004	.357	.005	.000	.000		
	N	360	360	360	360	360	360	360	
consumer buying behavior	Pearson Correlation	.578**	.595**	.555**	.627**	.702**	.149**	.350**	1
	Sig. (1-tailed)	.000	.000	.000	.000	.000	.002	.000	
	N	360	360	360	360	360	360	360	360

** . Correlation is significant at the 0.01 level (1-tailed).

* . Correlation is significant at the 0.05 level (1-tailed).

Source: Researcher's Survey (2017)

APPENDIX 6: ONEWAY ANOVA of consumer buying behavior by age
ANOVA

consumer buying behavior

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	45.375	4	11.344	16.413	.000
Within Groups	245.354	355	.691		
Total	290.728	359			

Source: Researcher's Survey (2017)

APPENDIX 7: ONEWAY ANOVA of consumer buying behavior by gender
ANOVA

consumer buying behavior

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	.014	1	.014	.018	.895
Within Groups	290.714	358	.812		
Total	290.728	359			

Source: Researcher's Survey (2017)

APPENDIX 8: ONEWAY ANOVA of consumer buying behavior by level of education
ANOVA

consumer buying behavior

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	8.736	5	1.747	2.193	.055
Within Groups	281.992	354	.797		
Total	290.728	359			

Source: Researcher's Survey (2017)

APPENDIX 9: ONEWAY ANOVA of consumer buying behavior by marriage

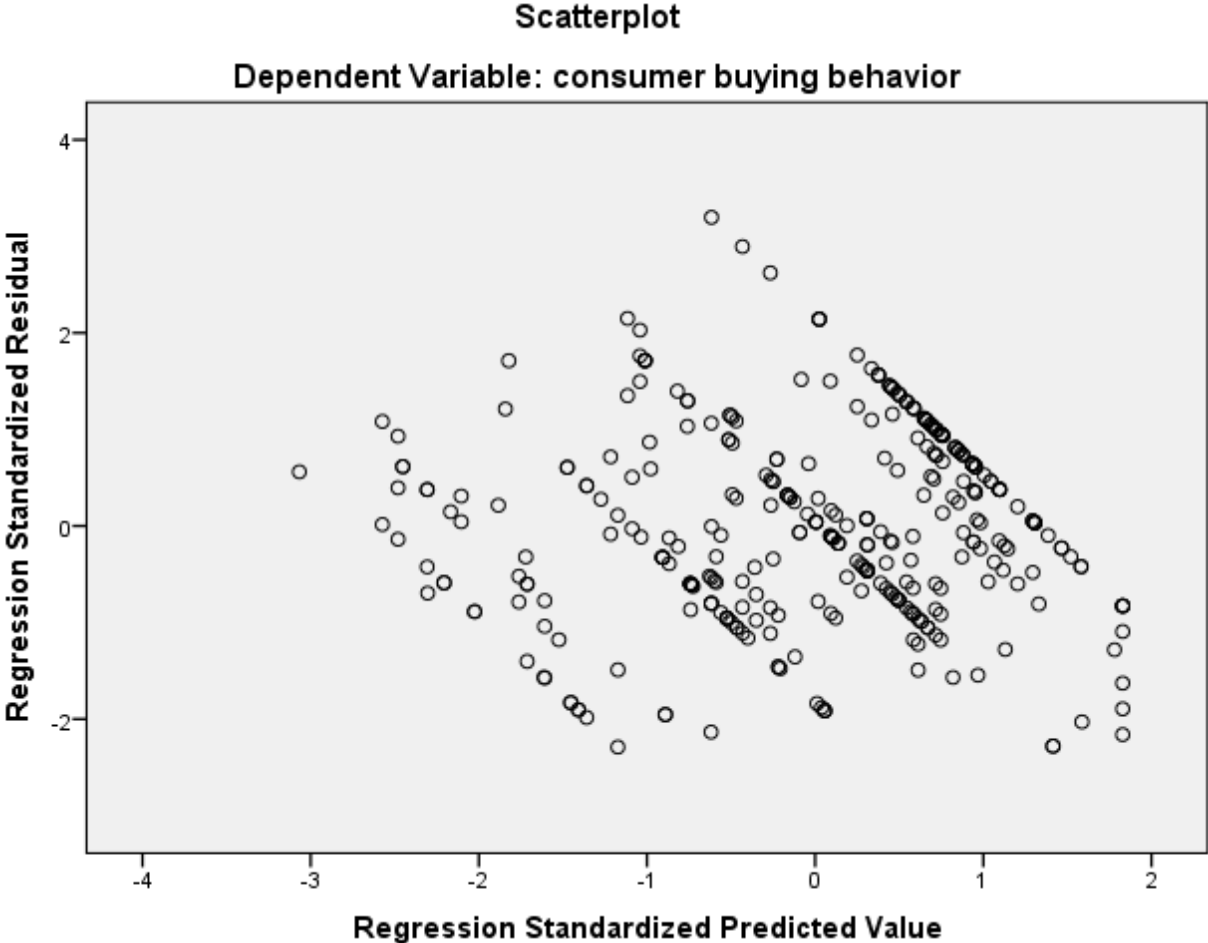
ANOVA

consumer buying behavior

	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	13.328	3	4.443	5.702	.001
Within Groups	277.400	356	.779		
Total	290.728	359			

Source: Researcher's Survey (2017)

APPENDIX 10: Scattered Plot



Source: Researcher's Survey (2017)