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**Addis Ababa University**

**School of Commerce**

**Department of Marketing Management Graduate**

**Program**

***The Influence of Pharmaceutical Sales Representatives'  
Competency & Personality on the Prescribing Decision of  
Doctors in Black Lion Hospital***

**A thesis submitted in Partial Fulfillment of the Requirements for  
Degree of Master of Marketing Management**

**By**

**Abraham Habtamu**

**Advisor**

**Mesfin Workneh (PhD)**

**May 2018**

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## Statement of Declaration

I hereby declare that this study entitled “*The Influence of Pharmaceutical Sales Representatives’ Competency & Personality on the Prescribing Decision of Doctors in Black Lion Hospital*” is my original work prepared under the guidance of my advisor, Mesfin Workneh (PhD). This paper is submitted in partial fulfillment of the requirement for the Award of Master of Arts Degree in Marketing Management and it has not been previously submitted to any diploma or degree in any college or university. I would like also to confirm that all the sources of materials used in this study are duly acknowledged.

Name: - *Abraham Habtamu*

Sig.: \_\_\_\_\_

Date: \_\_\_\_\_

## Statement of Certification

This is to certify that Abraham Habtamu has carried out his research work entitled “*The Influence of Pharmaceutical Sales Representatives’ Competency & Personality on the Prescribing Decision of Doctors in Black Lion Hospital*” in partial fulfillment of the requirement for the Award of Master of Arts Degree in Marketing Management at Addis Ababa University College of Business and Economics School of Commerce. This paper is an original work and has not been submitted to any diploma or degree in any college or university.

Name: - Mesfin Workneh (PhD)

Sig.: \_\_\_\_\_

Date: \_\_\_\_\_

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Finally, I would like to acknowledge all the participants of this study who gave their time and valuable information. Moreover, my heartfelt thanks go to everyone that contributed to this thesis directly or indirectly especially members of Black Lion Hospital Oncology, Surgery and Internal Medicine departments. Thank you!!

## **Abstract**

In recent years, different multinational pharmaceutical companies have been joining the Ethiopian pharmaceutical market. This makes the competition amongst the companies become fiercer. As a result pharmaceutical companies have devised different strategies to earn bigger market share and secure their profitability. Of the strategies, recruiting Medical Sales Representatives is the most common mechanism of addressing their product to doctors. Thus, the competency and personality of pharmaceutical sales representatives could have a paramount importance in creating good image in the eyes of physicians. Hence, this study tries to examine the effect of Pharmaceuticals Sales Representatives' Competency and Personality on the prescribing decision of doctors in Black Lion Hospital.

This study collected primary and secondary data from Physicians using five scale Likert type close ended questionnaire, and different literatures and institutions respectively. The questionnaire were distributed and collected from 132 Physicians that are serving in Black Lion Hospital. After the data collected, it is coded, edited and analyzed by SPSS version 23. The study applied explanatory and descriptive research method to explain and show the relationship between dependent and independent variables respectively.

The findings show that Medical sales representatives lack knowledge about their product, incapable to present product features and benefits, lack knowledge about their companies' vision and their promotional words are not attractive. The commitment and approach have a positive and significant effect on Medical Sales Representatives while skill, Grooming, personality and experience of Medical Sales Representatives have no effect on the prescribing decision of doctors.

Based on the findings, the study commends the pharmaceutical companies have to provide trainings on products feature and presentation skills, enhance the commitment; apply proper dressing code, encourage to use appropriate words and give direction to use the right information to persuade doctors' prescribing decision of medicine.

Key words: Pharmaceutical companies, Medical Sales Representatives, Prescription

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## **Abbreviations**

**WHO** = World Health Organization

**FMHACA**= Food, Medicine & Health Administration and Control Authority

**USD** = United States Dollar

**BLH** = Black Lion Hospital

**MOH** = Ministry of Health of Ethiopia

**MSR** = Medical Sales Representative

**HCP** = Health Care Professional

**CME** = Continuing Medical Education

**IMS** = Intercontinental Marketing Services

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# Chapter One

## Introduction

### 1.1. Background of the Study

Health care is one of the major concerns for countries. They incorporate the health issue in their development agenda, understanding the importance of good health system in their economic development endeavor. Pursuing this, governments have made a range of measures to improve access to health facilities from constructing a number hospitals and health centers to increase the number of health care professionals. Accordingly, the pharmaceutical companies are expanding significantly. World Health Organization (2009) estimated the annual cost of health services reached over 4 trillion USD, of which 750 billion USD was a total expenditure on pharmaceuticals (Kumar et al, 2010). This shows pharmaceutical companies expend a large sum of money in the health system.

In Ethiopia, following the expansion of the health care system, the number of generic as well as innovator companies is growing. As a result, the number of companies working in the pharmaceutical markets reached more than 100. Of which more than 10 are local manufacturing companies and the rest are importers (FMHACA, 2017). These companies have been working to attract health care professionals, influencing their prescribing decisions using different promotional mechanisms such as personal selling.

Personal selling is a one-on-one marketing in the form of Physician- Medical Sales Representative (MSR) interactions, also called as detailing. In detailing, MSRs try to convince the physicians how their company products are the best and need to be prescribed for better treatment outcomes. Marketing the brand is not the sole objective or purpose of detailing. It is also meant to provide busy physicians up-to-date information about the latest innovations and advances in the pharmaceutical market. Most MSRs provide doctors with recent articles published on credible medical journals which endorsed their products. However, the information from MSRs can sometimes be biased and may mislead physicians towards excessive and unnecessary use of their products. This can also be attributed to the gifts and other offers doctors receive from the companies in return. The borderline between genuine recommendation and profit oriented persuasion is thin. Using smart marketing strategies and tactics such as offering

gifts, friendship, and flattery, MSRs can influence physicians to prescribe their brand drugs in excess (Abubakar, Ibrahim and Belanger, 2015).

Most of the pharmaceutical companies devise strategies to their MSRs to visit Black Lion Hospital (BLH) with the presumption of optimizing their product sales. Since, BLH, which is the destination of famous and specialist doctors, is the largest referral hospital in the country with more than 800 beds, 200 doctors, 379 nurses and 115 other health care professionals (Ministry of Health, 2016). In addition, the hospital treats approximately 370 thousand to 400 thousand patients a year (Ministry of Health, 2016). BLH is now the main teaching hospital for both clinical and pre-clinical trainings of most disciplines. It is also an institution where specialized clinical services that are not available in other public or private institutions are rendered to the whole nation. Furthermore, the doctors and other health care professional are working in the hospital giving services in other private clinics and hospitals. Thus, this hospital is the main market for pharmaceutical companies. This study therefore aims to assess the influence of Medical Sales Representatives on BLH doctors' prescribing decisions considering the fact that BLH as a residing place to many doctors and the effect of BLH doctors on the entire market.

## **1.2. Statement of the Problem**

Pharmaceutical companies play a crucial role in updating physicians to be cognizant about new advancements in the pharmaceutical market as well as their products. The endeavor of the companies to provide latest information about the market dynamics and their products enhances their sales volume and the corresponding profit. Different strategies have been deployed by these companies to approach doctors and other Health care professionals. Beside, approaching HCPs the companies invest their time and money to improve the awareness level of the public at large. The strategies are broadly classified by their ways of affecting HCPs decision to prescribe their product, namely pull and push strategies. The former one is increasing the interest of HCPs to prescribe the product especially by admiring the healing capacity of the medicines while the later triggers the HCPs to prescribe the drugs particularly driven by cost of medicines, hospital policies and patients preference. Thus companies design their strategy to persuade HCPs to use their products.

In recent days, the availability of similar purpose medicines and increased number of companies in the pharmaceutical market surge the contest amongst pharmaceutical product vendors more than ever. This leads the companies to spend more money on promotional activities. Sarich

(2016) conveyed that in recent years, pharmaceutical companies are spending 19 times more money on marketing than on Research and Development, indicating the investments simply put behind new drugs is not paying off anymore. For instance, Johnson & Johnson, the manufacturer of Johnson's baby products, recently spent \$17.5 billion on marketing and only \$8.2 billion on research and development. Similarly Pfizer, the US based pharmaceutical company, spent \$11.4 billion on marketing and only \$6.6 billion on research and development (ibid). These investments mainly aim to convince the doctors and the general public towards their medicines. As noted in the preliminary observation, the study understands that in the Ethiopian pharmaceutical market a lot of promotional activities such as personal selling by Medical Sales Representatives (MSRs), providing free medical samples, sponsoring doctors to attend overseas conferences, conducting Continuous Medical Educations (CMEs) and Sponsoring annual conferences of professional associations have been done by generic and innovator pharmaceutical companies. Of which, personal selling by MSRs is the most commonly used.

MSRs are recruited most commonly to contact physicians and other HCPs to detail the product features. These companies spend a great deal of money to MSRs with the expectation of higher sales volume and return. However, the study in its preliminary observation noted that most MSRs' competency and personality is not well fitted with the required professional expectation. MSRs are not detailing product features and advantages properly and lack compelling communication skills. Even though, some of them are doing well with the product knowledge in conveying to doctors, their grooming and other personality associated issue should be considered. These engender the companies to spend money on things that do not bear fruit and thereby the profit of the companies might be critically hurtled. These MSRs are not only affecting the company only but also their improper promotion might misled doctors and bring damage at the public at large. This study, thus, focuses on how well the MSRs' competency and personality to convince doctors and other HCPs. As the researcher's knowledge merely few researches have been done in this area such as Vancelik et al., (2007); Leonard (2016); Patwardhan (2016) etc. Therefore, this study may fill observed gap in this area.

### **1.3. Research Questions**

The main research question of this study is;

How pharmaceuticals sales representatives' Competency and Personality affect the prescribing decision of Doctors?

Specific questions are:

1. What is the effect of MSRs' Skill & Expertise on the prescribing decision of Doctors?
2. What is the effect of MSRs' Experience on the prescribing decision of Doctors?
3. What is the effect of MSRs' Personality on the prescribing decision of Doctors?
4. What is the effect of MSRs' Commitment on the prescribing decision of Doctors?
5. What is the effect of MSRs' Grooming on the prescribing decision of Doctors?
6. What is the effect of MSRs' Approach on the prescribing decision of Doctors?

## **1.4. Objective of the Study**

### **1.4.1. General Objective**

The general objective of the study is to examine the effect of Pharmaceuticals Sales Representatives' Competency and Personality on prescribing decision of Doctors.

### **1.4.2. Specific Objectives**

To achieve the general objective of the paper, the study seeks to pursue the following specific objectives.

1. To identify the effect of MSRs' Skill & Expertise on the prescribing decision of Doctors.
2. To analyze the effect of MSRs' Experience on prescribing decision of Doctors.
3. To examine the effect of MSRs' Personality on the prescribing decision of Doctors.
4. To examine the effect of MSRs' Commitment on prescribing decision of Doctors.
5. To examine the effect of MSRs Grooming on the prescribing decision of Doctors.
6. To examine the effect of MRSRs' Approach on the prescribing decision of Doctors.

## **1.5. Significance of the Study**

This study provides valuable information to the pharmaceutical companies and the academia. It helps the pharmaceutical companies to know the hearts of their customers (doctors) and make informed decisions regarding their promotion practice. Additionally, the output of the study can be used as stepping stone for other researchers that have a desire of working on similar topic. The study benefits the pharmaceutical companies as well as pharmaceutical representatives to be aware of the level of influence they have on physicians' prescribing decisions.

## **1.6. Scope of the study**

The study has physical and theoretical scope. Physically, the study only covers doctors that are currently working in Black Lion Hospital. Even if, there are so many factors that affect doctors' prescribing decisions, this study mainly examines the influence of Medical Sales Representatives' competency and personality on doctors' prescribing decision.

## **1.7 Limitation of the Study**

This study employed both probability and non-probability sampling techniques. Non probability sampling may result in samples that may not represent the population. The researcher considered only six independent variables which were mentioned in most related literatures. The researcher didn't include other variables as they were not mentioned as in many literatures as the ones used in this study.

## **1.8 Definition of terms**

**MSR:** is a sales person employed by pharmaceutical companies to persuade doctors to prescribe his/her drugs to patients. Customers can include doctors, nurses and pharmacists. The medical representative will increase product awareness, answer queries, provide advice and introduce new products.

**Personal Selling:** is where business use people (sales force) to sell the product after meeting face-to-face with the customer. The sellers promote the product through their appearance and specialist product knowledge.

**Sales Call:** Usually pre-arranged and face-to-face meeting between a sales person and a customer or prospect for the purpose of generating sales.

**Competency:** the ability to do something successfully or efficiently

**Personality:** the combination of characteristics or qualities that form an individual's distinctive character.

## **1.9 Organization of the study**

This research proposal has five chapters. The first chapter is introduction which includes background of the study, statement of the problem, research questions, objective of the study, significance of the study, scope of the study and organization of the paper. The second chapter focuses on review of related literatures. Here it tries to review previously conducted studies with



the subject matter from different sources. The third chapter focuses on research methodology, research design and research approach. The fourth chapter focuses on analysis and discussion. Finally, conclusion and recommendation are included in the fifth chapter of the study.

# Chapter Two

## Review of Related Literatures

### 2.1. Theoretical Review

#### 2.1.1 Personal Selling

Unlike other marketing communication tools, personal selling always involves interaction with the customer and face-to-face contact. Depending on target groups there can be different forms of personal selling such as trade selling, missionary selling, retail selling, and business-to-business selling, professional selling and direct selling (Mathangini, 2010). Personal selling is a direct communication between a sales representative and one more prospective buyer in attempt to influence each other in purchasing situation. Personal selling refers to the personal communication where one unselfishly persuades a prospective customer to buy something a good or a service, an idea, or something else that satisfy the individual. Personal selling is the most effective tool at certain stage of the buying process, particularly in building up buyers' preference, convictions, and actions. It involves personal interaction between two or more people, so each person can observe the other needs and characteristics and make quick adjustments (Muchina and Okello, 2016).

Past studies have shown that empathy can have beneficial influence on the personal selling in service quality, sales performance and successful selling. Personal selling helps, in other words a service skill may have an influential impact on customer emotions and further lead to customer loyalty. If customers perceive a salesperson acts trustworthy they are likely to think the behavior is praise worthy, thus creating positive relationship and brand performance (Muchina and Okello, 2016).

Personal selling will affect the way they feel about the salesperson. When interacting with a salesperson possessing good expertise, customers are likely to feel fulfilled, pleased and comfortable. Friendliness is also important as it is crucial in increasing satisfaction. The amount of salespeople's increase personal selling and thus positively related to buyer satisfaction. By this is meant the way a salesperson is animated, motivated and excited (Muchina and Okello, 2016).

### **2.1.2. Medical Sales Representatives' (MSRs)**

This Study was conducted to unveil the effect of MSRs on physicians. So, understanding the activities and the possible effects of MSRs on physicians has a paramount of importance. In doing so, the study discusses about MSRs and their effect on doctors decision behavior. The chief reasons for pharmaceutical companies to recruit MSRs are to reach out doctors through one to one marketing. Some people call it detailing. (Muchina and Okello, 2016) In the process MSRs try to convince the physicians, showing the importance of their medicines although selling their products is not the sole purpose of detailing. The MSRs provide up to date information for busy doctors in the field of Pharmaceuticals (Patwardhan, 2016). Overall, people and physicians have the same attitude towards Medical representatives. Physicians believed that they offer precise data regarding the medicines that they promote. They also believe that Medical Representatives may perhaps offer precise data on recognized or substitute medicines. On the other hand, the majority considers that representative's preference the promotion of product over the wellbeing of the patient and use unethical practices to do this (Tomlinson H., 2004).

### **2.1.3. How MSRs Affect Doctors' Decision**

As discussed on the aforementioned section, MSRs are affecting doctors' decision, using various techniques. The first and the most used techniques by MSRs is detailing through which the MSRs provide information about their products and insist the doctors to apply their medicines by giving samples. The other mechanism is giving materials such as stationery, bags, books, folders, office-desk, medical, household, personal and innovative items in the form of gift (Patel JC, 1992). Providing gifts is a debatable issue by scholars. The gift usually reminds the doctor about the brand-name of the drug and results in a prescription (Patel JC, 1992). But, others argued the idea, saying whenever a physician accepts a gift, an implicit relationship is established between the doctor and the company or its representatives and there is an obligation to respond to the gift (Zaidi et al., 1995). Additionally, the cost of gifts is ultimately passed to the patients without their explicit knowledge. Due to the above argument, some countries develop their own policies and guidelines to reduce the drawback of gifts. For instance, the American Medical Association and US Pharmaceutical Manufacturers Association guidelines suggest that the gifts should involve a benefit for the patients and should not be of a substantial value and should not be accepted if there are "strings" attached for prescriptions. (Waud, 1992). However, there are no universally accepted norms regarding gifts. Thus, MSRs try to convince doctors providing information as well as gift although there is a debate.

#### **2.1.4. Negative Impact of Promotion**

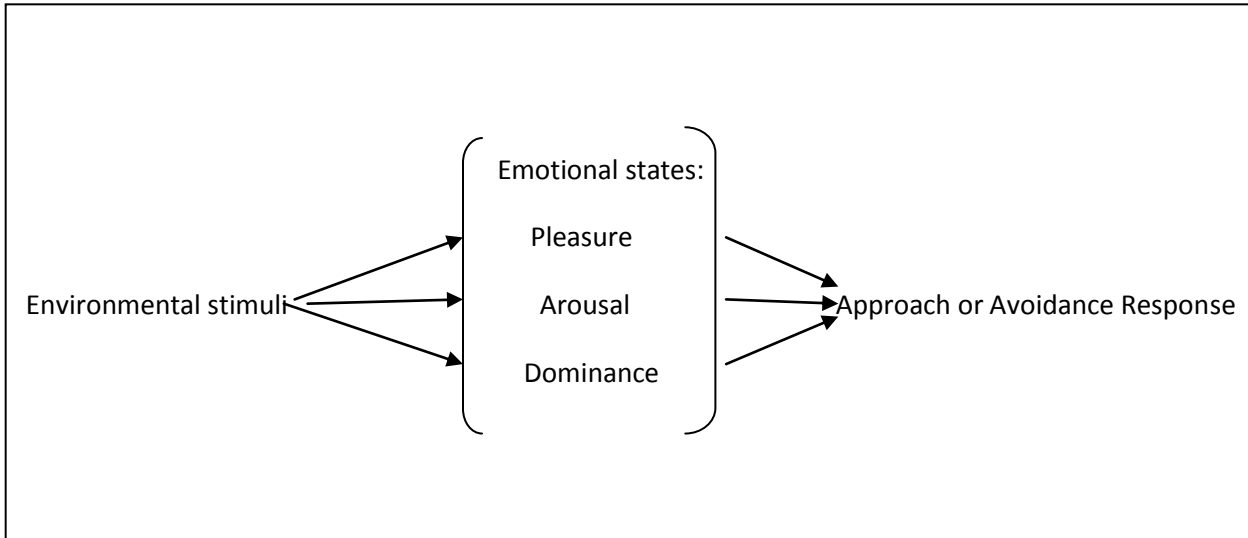
Although the doctors have the sole and absolute power to determine the sales of drugs, which are available on prescriptions, the pharmaceutical marketing and promotion practices are blamed for irrational prescribing habits and their consequences. In a study of large number of prescriptions, found that the nutritional supplements were advised in 53.4%, antibiotics in 31.2% and analgesics in 26.2%. In a study of anti-inflammatory drug usage, the studies found that ibuprofen and combinations were used by over 60% of patients and the use of Aspirin a poor man's drug was quite low. There was no difference in the drug usage in different rheumatic diseases (Krishnaswamy, Dinesinkumar and Radhiah, 1985). Indomethacin or Phenylbutazone is more effective in seronegative arthritis; however, their usage in these disorders was low. There are many examples of misuse of potent drugs like antibiotics, steroids etc. The consequences of such inappropriate drug use are unnecessary adverse effects, increase in antibiotic resistant microorganisms, treatment failures from use of wrong drugs and the waste of the patient's money. There is a need both for the industry and doctor to develop mutually agreeable limits for promotion of drugs. The available codes provided a useful guideline; but they are still considered the beginning rather than the end of this debate. With the medical profession coming under the ambit of consumer protection act, it is likely that industry doctor relationship might come under such scrutiny.

#### **2.1.5. Models for the Effect of MSRs on Doctors' Prescribing Decision**

The study looks for decision making models that are particularly applied in marketing researches. However, the researcher does not find unique model that is used in decision making. In addition, studies often need to view the decision making process of consumers. Although there are a number of models for decision making, the study selected the Stimuli (S), Organism (O) and Response (O) model, shortly named as S-O-R model. This is a general model for decision making developed by considering the change in the environment and the responses of the particular person. This model is developed by Mehrabian and Russel. They conducted a research on the environmental psychology in 1974, putting three emotional dimensions in their work, called pleasure, arousal and dominance. These emotional dimensions are emotional responses that indicate people's state of feeling. Pleasure indicates the degree to which a person is happy, pleased, satisfied, contented, hopeful, and/or relaxed. A person would score high on the Arousal construct if he/she is frenzied, jittery, aroused, stimulated or excited. Dominance refers to the extent to which a person feels in control of the situation and is able to act freely in the

environment (Donovan et al. 1994). The response for the emotional state is either approach or avoidance. The interaction between environmental stimuli, emotional states and responses, namely S-O-R model are described in the figure below as follow:

*Figure 2-1: S-O-R Model*



*Source: Donovan and Rossiter (1982)*

In the original model Mehrabian and Russell endorsed the importance of the dominance as emotional state, most researchers; including Mehrabian and Russell in their separate works give less attention to dominance even not at all (Bakker et al, 2014). Donovan and Rossiter (1982) are the first scholars who introduced the concept of environmental psychology to marketing research. They tested the Mehrabian and Russell environmental psychology model in the retail settings. They acknowledged the importance of Mehrabian and Russell model to understand the consumer's decision making behavior in the retail environment. The study believes that the environment also affect the doctors decision making behavior since there are a number of components in surroundings that affects doctors decisions.

## **2.2 Empirical Literature**

Some empirical works have been carried out on doctors prescribing decision. The study therefore, reviews some empirical investigations that are relevant for our subject matter. The study done by Abubakar, Ishak, Ibrahim and Bélanger in 2015 in Saudi Arabia under the title Pharmaceutical Representatives and Prescription Decisions by Physicians in Saudi Arabia. Their findings reveal that Pharmaceutical sales representatives, medical magazines/journals and the

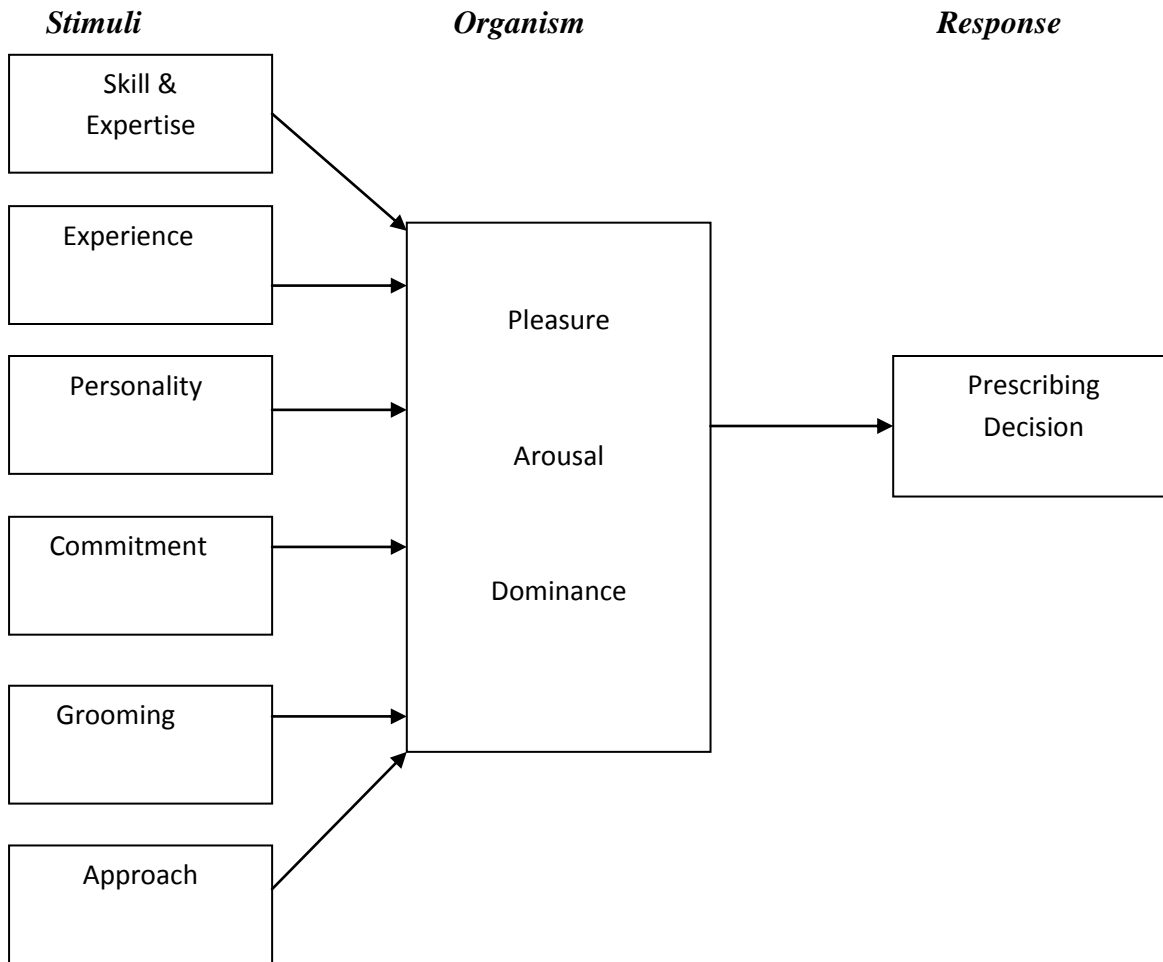
Internet are sources of new drug Information although leaflets, sales rep visits and drug samples are the most effective “reminder methods.” Additionally, they consider patient’s financial situation and prevailing hospital policies; advertising and frequent visits from sales representatives are the most impactful on physicians’ drug selection. Bamoriya (2012) study on Mystery Written on Prescription Pads: Exploring Marketing Factors Influencing Prescription Behavior using the AHP Approach. It indicates India pharmaceutical industries influence the prescribing decision by availing brand, relationship marketing, sampling, regular visits, medical representatives’ knowledge & personality. The other study conducted on Nigeria by Soremekun and Omitiran (2014) shows Clinical effectiveness, cost and recommended daily dose are the main factors. In addition, years of experience had significant effect on prescription of therapeutic quality of generics but frequency of prescription of generic and source of technical information unaffected. Vietnamese study reveals Medical representatives of multinational enterprises persuade doctors by concentrating on building the reputation products’ image with high quality and reliability which is also used to explain the very high cost of their medicines. Moreover, encouragement for prescribing is presented to influence doctors’ prescribing choices (Thu, 2012)

The above reviewed studies basically provide information about the prescribing decision of doctors is affected by different factors including sales representatives’ visit, leaflets, cost of medications, medical representatives’ knowledge and personality and doctors’ experience. This implies the reason of doctors’ prescribing decision varies across place and time.

### **2.3 Conceptual Framework of the study**

The study employed the Mehrabian-Russel Model which also known as the S-O-R model. To develop the conceptual framework, the study decomposes elements that persuade a decision in to six elements as stipulated in the stimuli part. The organism and the possible responses of the consumers are also illustrated in the below figure.

Figure 2-2: Modified S-O-R Model



### 2.3.1. Factors affecting prescribing decision of doctors

The prescribing decisions of doctors are affected by a lot of factors amongst which the study mentioned the most cited factors in the conceptual framework as stimuli. Here, the study describes some variables that are included in the conceptual framework as follows:

- 1. Skill & Expertise of the MSR:** There are several skills expected from a pharmaceutical representative to accomplish tasks effectively. Selling skill, which is obtained through marketing training, is the most important one. Reps with better communication and interpersonal skill are thought to convey the marketing message more effectively to the target customers. To be effective, sales representatives need more intimate knowledge of their products, territories and customers. The majority of the effective representatives in the industry are involved in the organizations outside physician's office. With all the

skills and knowledge needed, marketers must determine whether to retain their existing reps for new developments (Steven, 2009).

A sales rep who doesn't perfectly understand the product they're selling is a completely ineffective rep. Product training should be one of the very first things you teach new reps – they should be able to explain in detail how each product works, what business value it offers, and the reasons it appeals to your company's ideal customers. This helps MSRs craft their sales pitch effectively, and ensure they highlight each product's strongest features. Deep product knowledge is honestly one of the few things that separate the top 1% of reps from the rest (ibid).

- 2. Experience of the MSR:** It has been proposed that experienced MSR have a better understanding of their jobs, customers, and company policies (Churchill, Ford, and Walker 1976). Job tenure, defined as the length of time one has worked for his or her current company, has been studied in relation to a number of important individual variables. In various studies, experience has been found to influence motivation towards one's job, job skills, and role perceptions (Ingram and Bellenger 1983; Walker, Churchill, and Ford 1975). Moreover, salesperson expertise and the ability to present a wide range of alternatives, another factor suggested by Saxe and Weitz (1982), could be related, at least in part, to the experience level of the sales person with the company. In this environment, experienced sales people, familiar with the customer's needs over a long period of time, would likely display higher levels of a customer oriented behavior than a less experienced counterparts. Consequently, we hypothesize that greater job experience will lead to higher levels of customer oriented selling.
- 3. Personality of the MSR:** Personality of the sales representatives is one of the most important factors in personal selling that affects doctor's decision making process. Other researches on personal factors concern with the influence of personality on customer-orientation behavior. Studies such as Brown et al. (2002); Frei and McDaniel (1998); Hogan et al. (1984); Hurley (1998) and Spivey et al. (1979) have explored the relationship between several personality traits such as emotional stability, extroversion, agreeability and need for activity and customer-orientation behavior. For example, Spivey et al. (1979) and Hurley (1998) found that service workers who are high in emotional stability were found to perform higher customer-orientation behavior and willing to spend time dealing with customers' needs and satisfaction. Besides that, employees who are sociable are also reported to reveal higher customer-orientation



behavior (Brown et al., 2002; Hogan et al. 1984; Hurley, 1998; Spivey et al., 1979). Such employees enjoy working with customers and are willing to work with customers long enough to identify and satisfy their needs.

- 4. Commitment of the MSR:** Commitment of the sales person towards his/her job is the other factor which is expected to affect effectiveness for influencing his customer to prescribe the brand. We suggest that the degree of organizational commitment a sales representative exhibits may influence his/her orientation toward the customer. Commitment has been defined as the extent to which employees identify with organizational goals, value organizational membership, and intend to work hard to attain the overall organizational mission (Mowday, Steers, and Porter 1979). Those who value and want to maintain membership within the firm should be willing to exert considerable effort on behalf of the organization (Mowday, Porter, and Steers 1982). Specifically, it has been shown that commitment to one's organization is usually accompanied by greater work motivation (Lee 1971) and a desire to make the firm more effective and prosperous (Lawless 1979).

Despite these results, studies investigating organizational commitment in a sales environment are disappointingly few (Hunt, Chonko, and Wood 1985). However, a number of authors suggest that organizational commitment is related to several outcomes central to the organization (Lucas et al. 1987). In particular, highly committed members of the organization will work harder to carry out its goals and values (Angle and Perry 1981; De Cotiis and Summers 1987). Since companies are now actively encouraging salespeople to focus on customer service (Dubinsky and Staples 1981; Dunlap, et al. 1988; Williams and Seminerio 1985), it would seem likely that salespeople who identify with the organization, that is organizational commitment, will work hard to satisfy their customers. As a result, we hypothesize that a positive relationship will exist between organizational commitment and customer oriented selling.

- 5. Grooming of the MSR:** Every profession has a set of formal or informal expectations about what its practitioners will wear. Every business has a series of working role models for new entrants to emulate. Good grooming in the sales business is essential for creating customer trust. Especially first impression is important for positioning the sales representative in the customer's mind. First impressions last forever (Gibbons, 1987; Korschun, 1992; Peters, 1995). This cliché may not always be correct, but a salesperson cannot afford to test it. The initial meeting does set the impression buyers have about

salespeople and their companies. If the salesperson creates a negative first impression (Gibbons, 1987) the chance of winning a sale is significantly reduced. For this reason, the introduction cannot be taken lightly. A successful introduction should not only enhance trust, but should also establish a fair and level playing field between the buyer and seller. Good grooming encompasses wearing appropriate attire, using cologne or perfume, proper hair style, wearing simple accessories, and wearing correct combination of attire (Ocon and Alvarez, 2014).

6. **Approach of the MSR:** Approach of the pharmaceutical representative matters a lot in the success of the sales call. Sales representatives approach different customers in a different way. No two sales people are alike. Over the years, sales people refine their techniques and methods until they find something that works best for them. And there is no one best sales approach. Your background and personality, as well as your clients and offerings, will help determine the different kinds of sales approaches you should be using in any given selling situation. (Claire McConnachie).
7. **Other factors:** The prescribing decision of doctors is affected by several factors beyond pharmaceutical representatives' efforts. In addition to the above mentioned factors, there are some other external variables which strongly affect doctors prescribing decision such as price of medicines, hospital policies, doctors' experience, patient preference etc.

## 2.4. Hypotheses

H1: There is a positive and significant effect of MSRs' experience on prescribing decision of Doctors.

H2: There is a positive and significant effect of MSRs' commitment on prescribing decision of Doctors.

H3: There is a positive and significant effect of MSRs' Personality on the prescribing decision of Doctors.

H4: There is a positive and significant effect of MSRs' skill & expertise on the prescribing decision of Doctors.

H5: There is a positive and significant effect of MSRs' grooming on the prescribing decision of Doctors.

H6: There is a positive and significant effect of MSRs' approach on the prescribing decision of Doctors.

# Chapter Three

## Research Methodology

### 3.1. Description of the Study Area

The study was conducted in Black Lion Hospital (BLH), which is a well-known hospital in the country. Due to its better capacity in human resource and medical equipment, it has been serving as a referral hospital for all other hospitals and health centers. In addition, a number of physicians are serving in this hospital. Owing to the above reasons, BLH is selected to be the study area of this research.

### 3.2. Research Design

There are a number of research designs such as experimental, exploratory, explanatory, case study, descriptive etc. Of which the study selected descriptive and explanatory research design. Since explanatory study design supports the study to fetch out most determinant factors that have a better persuasion effect on doctors' prescribing decision, the study selected explanatory research design to realize the intended objectives of this study.

### 3.3. Source of Data

The study mainly relied on primary sources of data obtained from distribution of questionnaires. Besides, it utilized observation as a means to secure supplementary information. The study also considered secondary sources of data especially to compare the results with other studies.

### 3.4. Target Population

The study considered all doctors that are working in Black Lion Hospital. The study excluded doctors in internship and doctors within probation period of employment. Finally, the study reaches a total of 200 doctors.

### 3.5. Sample Size Determination

Scientific sample size determination has a paramount of importance to achieve high precision and efficiency in the research. Too small sample size reduces the precision of the study while too large sample causes unnecessary cost and time. The study, therefore tries to come up with the optimal sample size. In doing so, the study calculates the sample size using the following formula and reached 132 sample sizes.

$$n = \frac{NZ^2 P (1 - P)}{d^2 (N - 1) + Z^2 P (1 - P)}$$

Where,

n = Sample size with finite population correction;

N = Doctors size;

Z = Z statistics for a level of 95% confidence, which is 1.96;

P= Expected proportion (the response distribution);

d= Precision (the acceptable margin of error).

### 3.6. Sampling Technique and Methods

The study employed probability sampling method and it was used to distribute the questionnaire specifically applying simple random sampling method. This enabled the study to provide equal chance to physicians to be a part of research. Furthermore, the study selected doctors that are frequently visited by MSRs for interview using purposive sampling method. This helped the research to triangulate the information collected by the questionnaire and explore ideas that are not clear in the research process.

### 3.7 Econometric Model

The study used regression model to analyze the influence of MSRs' competency and personality on doctors' prescribing decision. This study used the most appropriate data analysis econometrical tool known as ordinary least square (OLS) method. To run the regression, the study decomposed the variables that affect doctors' decisions such as MSRs' commitment, experience, personality, skill & expertise, grooming and approach. Thus, the prescribing decision of doctors was a function of these factors.

$$Pd = F[\text{Skill \& Expertise, Experience, Personality, Commitment, Grooming and Approach}] \dots \dots \dots Q1$$

Prescribing decision of doctors is the sum of the above stipulated independent variables. So, the study puts the formulas in the Q2.

$$Pd = \alpha + \beta_1 X_1 + \beta_2 X_2 + \beta_3 X_3 + \beta_4 X_4 + \beta_5 X_5 + \beta_6 X_6 + e_i \dots \dots \dots Q2$$

$\alpha$  denotes the intercept which is the value of doctors' prescribing decision when all independent variables are zero.  $\beta_i$  is the coefficient of independent variables. It explains the change in prescribing decision due to change in the independent variable.  $X_i$  explains the independent variables and  $e_i$  is the error disturbance term.

*Given:*

#### *Independent Variables*

- Skill & Expertise of MSRs ( $X_1$ )
- Experience of MSRs ( $X_2$ )
- Personality of MSRs ( $X_3$ )
- Commitment of MSRs ( $X_4$ )
- Grooming of MSRs ( $X_5$ )
- Approach of MSRs ( $X_6$ )

#### *Dependent Variable*

- Prescribing decision of doctors ( $Pd$ )

### **3.8. Data Analysis**

The study used descriptive as well as inferential statistics. The data collected from primary sources was coded and analyzed using SPSS version 20 software package and the outputs are presented in the form of tables, graphs and different types of charts.

### **3.9. Reliability Test**

The study conducted a reliability test to measure the internal consistency of the questionnaire using Cronbach's Alpha. It measures a reliability of each constructs and the whole questions. The result of the Cronbach's Alpha indicates that all variables are within the range of 0.76 to 0.93, which is above the traditional cutting edge of the Cronbach's Alpha 0.70.

*Table 3-1: Reliability Test*

<b>Name of Variables</b>	<b>Cronbach's Alpha</b>	<b>N of Items</b>
<b>Skill</b>	0.89	4
<b>Experience</b>	0.773	4
<b>Personality</b>	0.85	3
<b>Commitment</b>	0.873	4
<b>Grooming</b>	0.887	4
<b>Approach</b>	0.939	5
<b>Prescribing Decision</b>	0.764	4
<b>Overall</b>	0.9	30

## **4. Data Analysis and Discussion**

This section of the study presents and discusses the outputs of the data that are gathered from medical doctors working in Black Lion Hospital. The data gathered from doctors that come from different departments in self-administrative way. Of the distributed questionnaires, 132 (100%) of them were returned back. After properly managing and extracting information from the data applying SPSS Version23, the results are presented using descriptive statistics and inferential statistics. Particularly, demographic information and constructs of the prescribing decision is presented in descriptive way while the study applied econometrics model to show the persuasion of the drivers on the prescribing decision of doctors.

### **4.1. Demographic Information**

The study approached a broad spectrum of doctors from various departments. These doctors have access to different medical sales representatives that promote and sell different medicines. However, the perception of doctors towards medicines could vary based on their demographic characteristics. Hence, observing the demographic information of the respondents, comprising gender, age and education has a paramount of importance to understand the composition of the respondents in the study.

#### ***Gender***

The characteristic and role of female and male in the society may reflect on their duty. This might engender the difference in the prescribing decision. A study done by Hong Kong department of health (2012) on antibiotic usage reveals that female physicians tend to prescribe penicillin group more often than males to cure cold/flu diseases. This indicates that there is some difference amongst female and male doctors in the preference of medicines. Table 4.1 depicts the gender of respondents. It reveals that a vast majority of respondents are males (84.8%) and the remaining (15.2%) is female. This is may be due to gender distribution difference in the profession.



*Table 4-1: Gender of Respondents*

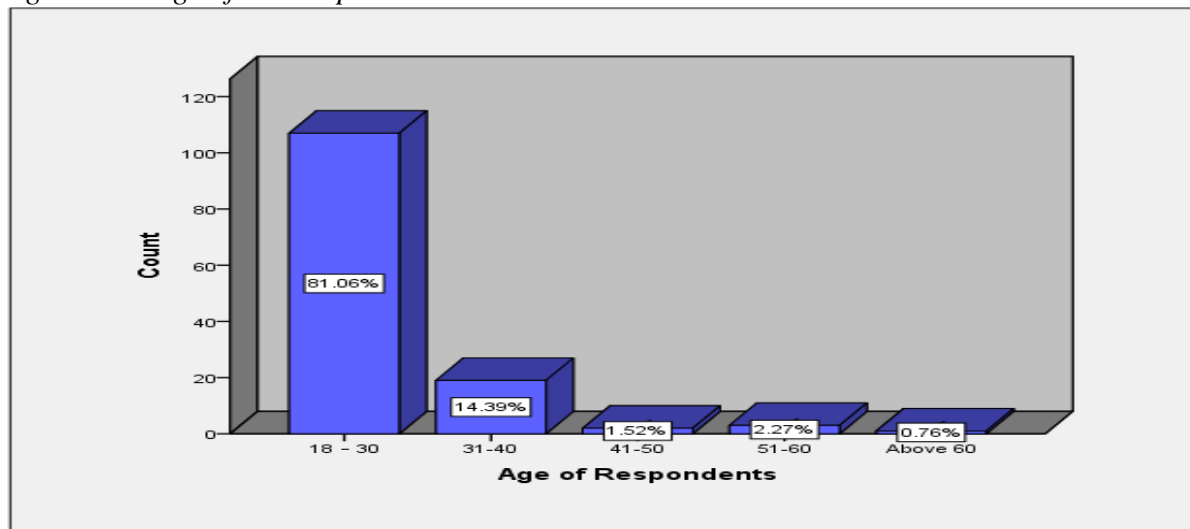
<b>Gender</b>	<b>Frequency</b>	<b>Percent (%)</b>	<b>Cumulative Percent</b>
<b>Male</b>	112	84.8	84.8
<b>Female</b>	20	15.2	100.0
<b>Total</b>	132	100.0	

*Source: Own Computation (2018)*

### **Age**

The study collects information about age of respondents. Age might be one of the factors for prescribing decision. Due to the nature of human beings, young people are more aggressive in searching and adopting new things. Similarly, young doctors are expected to more quickly adopt new medicines than old doctors. Figure 4.1 describes the age of respondents. It indicates that about 80% of the respondents are between 18 to 30 age cohort followed by 31 to 40 and 51 to 60 age category. The least age cohort is registered by above 60 years old, indicating young doctors consists the majority of the respondents.

*Figure 4-1: Age of the Respondents*



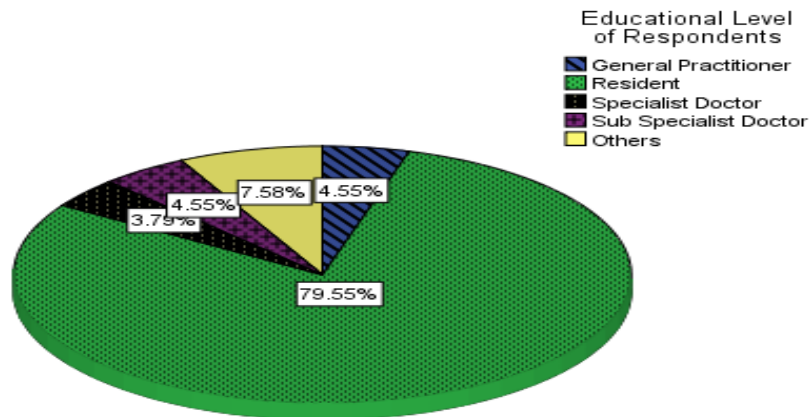
*Source: Own Computation (2018)*

### **Education Level of Respondents**

Education is one of the demographic factors which are collected by this study. Education level of doctors may have its own influence on their prescribing decision. As shown on figure 4.2, majority (79.55%) of the respondents are residents followed by others category, which makes up

7.58% of the respondents. Specialist doctors consists the least number of respondents, scoring about 3.7%.

Figure 4-2: Educational Level of Respondents



Source: Own Computation (2018)

## 4.2. Drivers of Prescribing Decision

Pharmaceutical companies have employed various strategies, ranges from lowering the price of medicine to preparing vacation program at abroad to attract doctors to prescribe their medicines. Amongst the strategies, recruitment of medical sales representatives (MSRs) is the most usual form of strategy the companies has used to promote and selling their products. These MSRs are frequently meeting the doctors to provide information, remained the existing medicines and persuade the doctors. So, among others, the competency and personality of MSRs could have significant effect on the prescribing decision of doctors. Thus, the study discusses chief factors such as the skill, experience, personality, commitment, grooming and approach of medical sales representatives are listed as the most essential factors that enable the doctors to persuade their medicines.

### *Skill*

Skill is one of the qualities the MSRs should have to influence the prescribing decision of doctors. The study assessed the chief feature of skills including MSRs have a good communication skill and interpersonal skill; their product knowledge, presentation of product features and benefits. Khan (2016) describes that majority of doctors expect good communication skill as well as product knowledge from MSRs, implying MSRs skill is crucial

for doctors prescribing decision. Table 4.2 below indicates the score of doctors on the skill of medical sales representatives. The average score of skill explains that 50.1% and 24.5% of the doctors are moderately pleased and delighted on medical sales representatives' skill respectively. Good interpersonal skill got a highest strong agreement level (29.8%), which indicates that pharmaceutical companies recruited MSR's who have a better communication skill. Proper product knowledge and the presentation of product features and benefit have scored the least agreement level, registering 20.9% and 18.3% respectively. This implies that although the MSR's have a good communications skill, they lack knowledge about their products and mostly they are not capable enough to present the products feature and benefits.

*Table 4-2: Skill of Medical Sales Representatives*

Attributes	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
<b>The Medical Sales Representatives (MSR's) have appropriate communication skill</b>	2.3%	7.6%	11.4%	50%	28.8%	3.95	.956
<b>The MSR's have good interpersonal skill</b>	1.5%	6.9%	12.2%	49.6%	29.8%	3.99	.916
<b>The MSR's have proper product knowledge</b>	3.1%	7%	19.4%	49.6%	20.9%	3.78	.960
<b>The MSR's present product features &amp; benefits adequately</b>	1.5%	10.7%	18.3%	51.1%	18.3%	3.74	.933
<b>Average Score</b>	2.1%	8%	15.3%	50.1%	24.5%	3.87	0.94

*Source: Own Computation (2018)*

### ***Experience***

Experience of MSR's is one of the intended factors for prescribing decision of physicians. Experienced MSR's are expected to understand the product features and the method of convincing doctors. The study listed four attributes for experience dimension, which includes the MSR's are well experienced; the MSR's with longer tenure detailing their medicine well; high experienced MSR's are almost a friend with me and I prefer to work with experienced MSR's. Table 4.3 below explains the attributes of experience. The average score of experience attributes indicates that 26% and 36.8% of doctors are delighted and moderately pleased by MSR's experience. Looking at individual attributes, 52.3% and 32.6% of physicians are delighted and

moderately pleased to work with experienced MSRs respectively. However, they recorded low strong agreement (14.6%) on MSRs with longer tenure detailing their medicine well.

*Table 4-3: Experience of Medical Representatives*

Attributes	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
<b>The MSRs are well experienced.</b>	3.1%	9.3%	31.8%	37.2%	18.6%	3.59	.997
<b>The MSRs with longer tenure detailing their medicine well</b>	2.3%	8.5%	21.5%	53.1%	14.6%	3.69	.905
<b>High experienced MSRs are almost a friend with me</b>	10.7%	12.2%	34.4%	24.4%	18.3%	3.27	1.209
<b>I prefer to work with experienced MSRs</b>	4.5%	1.5%	9.1%	32.6%	52.3%	4.27	1.010
<b>Average Score</b>	5.2%	7.9%	24.2%	36.8%	26%	3.71	1.03

*Source: Own Computation (2018)*

### **Personality**

The study assessed the perception of physicians towards the personality of MSRs, mentioning major and expected important attributes of personality such as the respect of MSRs for their profession; the provision of appropriate information by MSRs; the ability of MSRs to communicate and interact with doctors easily; and their politeness. As stipulated on table 4.4, the dimension has four attributes. Overall, the average score of the personality dimension indicates that 41.8% of doctors agreed on the positive personality of MSRs and 33.4% strongly agreed on the MSRs have a good personality. Comparing the attributes, majority of the physicians said that the MSRs are polite enough, scoring 43.8% agree and 38.5% respectively. However, doctors are skeptical about on the provision of the right information. They scored merely 39.7% agree and 24.4% strongly agreement level on the MSRs provide the right information.

*Table 4-4: Personality of Medical Representatives*

Attributes	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
<b>The MSRs have a respect for their profession</b>	2.3%	0.8%	16.9%	41.5%	38.5%	4.44	3.607
<b>The MSRs provide the right information</b>	1.5%	12.2%	22.1%	39.7%	24.4%	3.73	1.014

<b>MSRs can easily communicate and interact with doctors</b>	3.1%	6.9%	15.4%	42.3%	32.3%	3.94	1.017
<b>The MSRs are polite enough</b>	3.8%	1.5%	12.3%	43.8%	38.5%	4.12%	.953
<b>Average Score</b>	2.7%	5.4%	16.7%	41.8%	33.4%	4.06%	1.65

Source: Own Computation (2018)

### **Commitment**

It is one of the most important factors which help the MSRs to persuade doctors to prescribe their medicine. The study forwarded four questions with the intention of measuring how the MSRs are committed to achieve their company vision and goals, which comprise the MSRs ability to mention their companies vision to doctors; the effort of the MSRs to accomplish their company goals; MSRs' motivation; the ability of MSRs to make extraordinary effort on the behalf of the company. Table 4.5 below shows the attributes of commitment, which has the average score of 21.5 strongly agree and 45.8% agreement level. Regarding the attributes of commitment, the effort of MSRs to exert considerable effort on the behalf of the company has a better strong agreement level, scoring 26.7%. MSRs with greater work motivation have the highest agreement level of 51.1%. However, the MSRs provision of information about their companies vision has the lowest score (42.4 agree and 13.6% strongly agree).

Table 4-5: Commitment of Medical Sales Representatives

<b>Attributes</b>	<b>Strongly Disagree</b>	<b>Disagree</b>	<b>Neutral</b>	<b>Agree</b>	<b>Strongly Agree</b>	<b>Mean</b>	<b>Std. Deviation</b>
<b>The MSRs clearly mention their companies' vision to doctors</b>	1.5%	12.9%	29.5%	42.4%	13.6%	3.54	.936
<b>The MSRs work hard for the accomplishment of their company goals</b>	1.5%	5.3%	23.5%	46.2%	23.5%	3.85	.895
<b>The MSRs have greater work motivation</b>	0.8%	5.3%	20.6%	51.1%	22.1%	3.89	.838
<b>The MSRs exert considerable effort on behalf of the company</b>	0.8%	6.9%	22.1%	43.5%	26.7%	3.89	.908
<b>Average Score</b>	1.1%	7.6%	23.9%	45.8%	21.5%	3.79	0.89

Source: Own Computation (2018)

## Grooming

Grooming is expected to attract the physicians to stay long time with the MSRs and thereby can be influenced to prescribe a particular medicine or brand of medicine. The study used five attributes to describe the grooming dimension, comprises the MSRs are dressing formal professional suit, they are neatly dressed, they use perfume, they have proper hair style and wear correct combination of costume. Table 4.6 below describes the attributes of grooming. The result indicates that on average 22.4% of doctors are strongly agree and 38.3% are agree on the MSRs have a good grooming. The results are varying amongst attributes. The attribute that explains the MSRs formal and professional dressing has the highest agreement level of 40.8% while the MSRs are neatly dressed scored the highest strongly agreement level of 34.1%. The attribute that measures the usage of perfume by MSRs registered the least agreement level (27.7% strongly agree and 40.8% agree)

Table 4-6: Grooming of Medical Representatives

Attributes	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
The MSRs follow formal and professional dressing code	0.8%	14.6%	16.2%	40.8%	27.7%	3.80	1.030
The MSRs are neatly dressed	3.8%	4.5%	18.9%	38.6%	34.1%	3.95	1.029
The MSRs use perfume/cologne	0.8%	5.4%	55.4%	30%	8.5%	3.71	3.640
The MSRs have proper hair style	2.3%	3.1%	26.9%	45.4%	22.3%	3.82	.893
The MSRs wear correct combination of costumes	0.8%	9.2%	33.8%	36.9%	19.2%	3.65	.922
Average Score	1.7%	7.4%	30.2%	38.3%	22.4%	3.78	1.50

Source: Own Computation (2018)

## Approach

Approach is one of the factors which are expected to affect the prescribing decision of doctors. The study assessed the approach dimension using five attributes such as the MSRs approach the doctors in professional manner; the MSRs are always smiley; present themselves friendly; use attractive words and salute warmly. Table 4.7 indicates the attribute of approach. It reveals that the highest strongly agreement level goes to the MSRs presents themselves friendly while the

highest agree level goes to the MSRs salute warmly. However, the least strong agreement level is registered by the MSRs use attractive words, which is 23.1%.

*Table 4-7: Approach of Medical Sales Representatives*

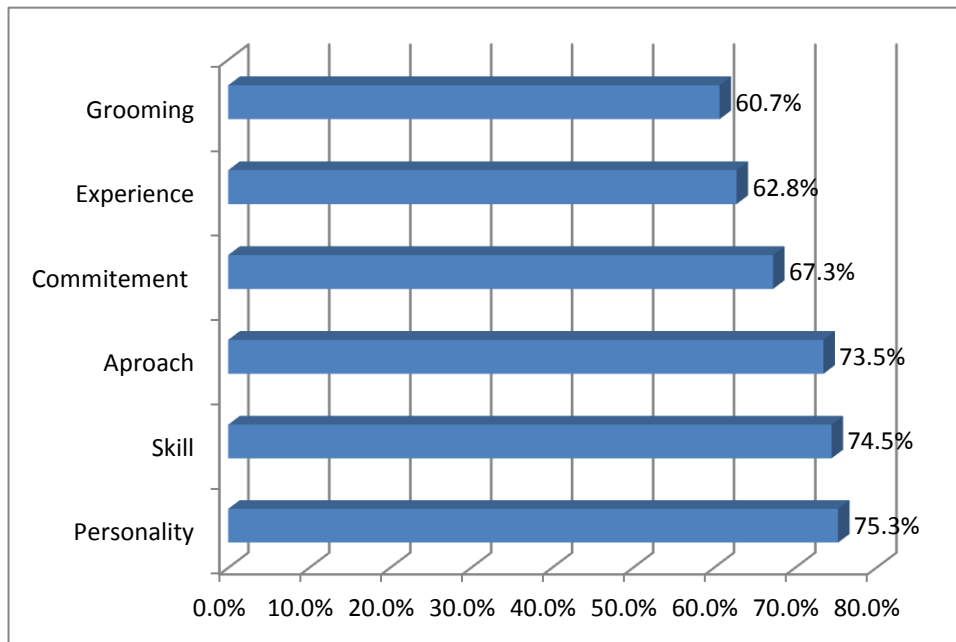
Attributes	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Mean	Std. Deviation
The MSRs approach me in a professional manner	1.5%	4.5%	10.6%	50%	33.3%	4.09	.869
The MSRs are always smiley	4.6%	6.2%	16.9%	38.5%	33.8%	3.91	1.082
The MSRs present themselves friendly	3.8%	3.1%	11.5%	47.3%	34.4%	4.05	.963
The MSRs use attractive words	3.8%	6.2%	19.2%	47.7%	23.1%	3.80	.991
The MSRs salute warmly	3.9%	3.1%	10.2%	52.3%	30.5%	4.02	.943
<b>Average Score</b>	3.5%	4.6%	13.7%	47.2%	31%	3.98	0.97

*Source: Own Computation (2018)*

### 4.3. Comparison of Prescribing Decision Attributes

The comparison of the agreement level of different drivers is important to observe the concentration of respondents and give attention to the dis satisfied areas. Figure 4-3 shows comparison among the builders of employee satisfaction by their respective general average agreement level. Low average level of agreement is observed in Grooming (60.7%), experience (62.8%) and Commitment (67.3%). The highest level of agreement is observed with personality (75.3%) followed by skill (74.5%) and approach (73.5%).

Figure 4-3: Comparison of Constructors



Source: Own Computation (2018)

#### 4.4. Diagnostic Tests

##### *Multicollinearity Test*

Multicollinearity measures the association between independent variables. This assumption restricts the study from using correlated independent variables, thereby which reduces the multiple effect of independent variables on dependent variable. The cutting edge of multicollinearity statistics is 10. So, the VIF value has to be less than 10. As indicated below, all VIF value is less than 5, indicating the variables have no multicollinearity problems.

Table 4-8: Multicollinearity Test

	Collinearity Statistics	
	Tolerance	VIF
<b>Skill</b>	.264	3.787
<b>Exp</b>	.301	3.320
<b>Personality</b>	.236	4.230
<b>Commit</b>	.264	3.793
<b>Grooming</b>	.349	2.862
<b>Approach</b>	.254	3.935

Source: Own Computation (2018)



#### 4.4. The Relation between Prescribing Decision and its Drivers

The study used correlation coefficient to understand the relationship between doctors' prescribing decisions and its constructs. Correlation is a bivariate analysis which indicates the association amongst variables, providing the coefficient that shows the strength and direction of their relationship. The correlation between variables ranges from 1 to -1. If the value of the correlation is 1 or -1, it shows perfect association between the variables. 0 indicates no association between variables.

Table 4.9 below indicates the relationship between doctors prescribing decision and other variables that related to MSRs competency and personality. As stipulated on the table, the relationship of all variables against prescribing decision is statistically significant at 1%. The coefficient of the correlation shows that all variables except commitment score less than 50%, suggesting doctors prescribing decision has not strong association with medical sales representatives' competency and personality.

*Table 4-9: Correlation*

		Prescribing Decision
Skill	Pearson Correlation	.460**
	Sig. (2-tailed)	.000
	N	132
Exp	Pearson Correlation	.448**
	Sig. (2-tailed)	.000
	N	132
Personality	Pearson Correlation	.467**
	Sig. (2-tailed)	.000
	N	132
Commit	Pearson Correlation	.500**
	Sig. (2-tailed)	.000
	N	132
Grooming	Pearson Correlation	.343**
	Sig. (2-tailed)	.000
	N	132
Approach	Pearson Correlation	.493**
	Sig. (2-tailed)	.000
	N	132
PDfi1	Pearson Correlation	1
	Sig. (2-tailed)	
	N	132

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

#### 4.5. Econometrics Model Result

This study used Ordinary Least Square (OLS) regression model to explain the relationship between dependent variable: Prescribing decision of doctors and independent variables such as skill, experience, personality, commitment, grooming and approach. This section of the study therefore tries to present and interpret the result of the regression model.

##### *Model Summary*

It is one of the outputs of the regression model, which describes how much the independent variables explain the dependent variable (Goodness of Fit). In the model summary, the value of R, R Square, Adjusted R square and standard error of the estimate is shown. As stipulated in table below, the result of R and R Square is .555 and .308. The result of the R indicates that 55.5% of variation in dependent variable is explained by independent variables. However, the result of R and R Square is 55.5% and 30.8% respectively. The threshold of R is 0.5, which suggests that the model is good.

*Table 4-10: Model Summary*

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.555 <sup>a</sup>	.308	.275	.69156

a. Predictors: (Constant), Exp, Grooming, Personality, Skill, Commit, Approach

##### ANOVA

It is the analysis of variance of the econometric model, which explains how much of the variation in the model is due to the regression. ANOVA table presents the regression and residual sum of square, degree of freedom, mean square, F and P value of F test. Most literatures have suggested observing the P value of F test to be interpreted. The sig value of is less than the traditional threshold of 0.05, which indicates the regression accounts most of the variation in the dependent variable.

*Table 4-11: ANOVAa*

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	26.577	6	4.429	9.262	.000 <sup>b</sup>
	Residual	59.783	125	.478		
	Total	86.359	131			

a. Dependent Variable: PDf1

b. Predictors: (Constant), Exp, Grooming, Personality, Skill, Commit, Approach

### Coefficients<sup>a</sup>

Coefficients are the value attached with specific variable, which explain the variation in the dependent variable due to one unit change in independent variable. Coefficient table has five outputs for each variable such as B, Std. Error, Beta, t and Sig. Additionally, it depicts six variables, of which four variables are statistically insignificant and the remaining two variables are statistically significant at 5%.

Table 4-12: Coefficients

Model		Unstandardized Coefficients		Standardized Coefficients	T	Sig.
		B	Std. Error	Beta		
1	(Constant)	1.046	.331		3.157	.002
	Skill	.104	.145	.104	.715	.476
	Commitment	.314	.155	.293	2.023	.045
	Grooming	-.230	.122	-.237	-1.885	.062
	Approach	.315	.138	.336	2.274	.025
	Personality	.010	.142	.011	.071	.944
	Exp	.056	.138	.055	.402	.688

a. Dependent Variable: PDfi1

Table 4-12 above describes the significant level of each independent variables relating with the hypothesis as well as the literatures:

- ✓ **Constant:** it is the coefficient that mostly described as the value of dependent variable when all variables have zero value. As indicated from the table above, the coefficient of the constant is 1.046 and the p value of the constant is 0.002, which is less than the traditional threshold limit of 0.05, implying constant is statistically significant. If the value of all variables is zero, the value of the dependent variable is 1.046.
- ✓ **Skill:** skill of medical sales representatives is thought to convey the marketing message of the MSRs more effectively to target customers (Steven, 2009). This apparently indicates that the skill of MSRs has a positive and significant effect on the prescribing decision of doctors. The result reveals that skill has positive coefficient, which is 0.104. But, the p

value of skill is .476, which implies that the study skill has no significant effect with prescribing decision of doctors. So, the study accepts the null hypothesis of skill.

- ✓ **Commitment:** Mowday, Steers and Porter (1982) conveyed that those who value and want to maintain relationship within the firm should be willing to exert considerable effort on the behalf of the organization. Thus, this commitment of the employees could attract the customers to achieve the target set by the organization. Considering this, the study believes that MSRs commitment to promote their medicine has a positive and significant effect on the prescribing decision of doctors. As indicated from the table, commitment has a positive coefficient of 0.314 and the sign value has also 0.045, which is lower than the cutting edge of 0.05. This indicates commitment has a positive and significant effect on the prescribing decision of doctors. In other words, it fails to accept the null hypothesis. A one unit change in the commitment has 0.314 unit changes in the prescribing decision of doctors.
- ✓ **Grooming:** it is associated with cleanness and tidiness of the MSRs when informing, reminding and persuading doctors. Ocon and Alvarez (2014) support the idea of neat and tidy employees have the potential of attracting their customers. So, the study assumed the MSRs who have a good look can easily persuade doctors. The result of the variable indicates that the coefficient of the variable is negative albeit the p value is insignificant at 5%. This indicates the grooming of the MSRs has not a significant effect on the prescribing decision of doctors by accepting the null hypothesis.
- ✓ **Approach:** the other variable listed out as the determinant of prescribing decision is approach. The MSRs who have better approach techniques has a positive and significant effect on the prescribing decision of doctors. The coefficient of approach variable is positive and sig. value is also less than 0.05, implying that approach has a positive and significant effect on the prescribing decision of doctors.
- ✓ **Personality:** several literatures including Spivey et al (1979) and Hurley (1998) explain the positive effect of personality on the customer orientation behavior indicating the positive associations of sales personals on their customers. However, the study finds that MSRs personality has insignificant effect on the prescribing decision of doctors although the coefficient is positive.
- ✓ **Experience:** The MSRs experience is mentioned as one of the important variable, which affect the customers decision making (Saxe and Weitz, 1982). This implies that the experience assist the MSRs to persuade doctors prescribing decision. However, the result

of the model indicates that experience has not significant effect on the prescribing decision of doctors.

## Chapter Five

### 5. Summary of Findings, Conclusion and Recommendation

In the previous sections, the study tried to address the major objective of the research. The issues discussed in the previous sections are summarized and concluded in this section. Additionally, based on the findings, the study forwarded some recommendations as follows.

#### 5.1. Summary of Findings

Based on the analysis, the study summarized the findings of the study in the following manner.

- ✓ The result of the regression model indicates that the skill of MSRs has no significant effect on the prescribing decision of doctors. However, the respondents conveyed that MSRs lack knowledge about their products and are not capable enough to present the products feature and benefits.
- ✓ Commitment of MSRs has a positive and significant effect on the prescribing decision of doctors. But, the MSRs do not work hard to provide information about their companies' vision.
- ✓ Grooming of the MSRs has no significant effect on the prescribing decision of doctors. Comparing with other variables, most of the attribute of grooming got low average score
- ✓ Although approach has a positive and significant effect on the prescribing decision of doctors, most respondents' compliances is the MSRs do not use attractive words to influence doctors.
- ✓ Personality has not significant effect on the prescribing decision of doctors. However, majority of the respondents do not believe that the MSRs are giving the right information.
- ✓ Majority of the respondents conveyed that the experience has no effect on the performance of MSRs in detaining of their medicine.

## 5.2. Conclusion

In this dynamic and competitive business environment, the competition amongst pharmaceutical companies is becoming stiff. One medicine can be manufacturing by more than one company using different brand name. Additionally, some medicines can be substituted by similar medicines within the same or different class. These and other factors make the ground more competitive. Pharmaceutical companies have devised various strategies to win the market and thereby have a better market share and profit. Amongst their strategies, recruiting medical sales representatives is one of the common trends. At the beginning, the study assumed the competency and personality of medical sales representatives could have a significant effect on the prescribing decision of doctors. To empirically investigate, the relationship between prescribing decision and the main variables i.e. competency and personality, the study pursued various techniques and methods from sampling to regression models. Finally, the study concluded that competency and personality have no significant effect on the prescribing decision of Black Lion Hospital doctors. However, Commitment and approach of MSRs have found to be a significant factor to persuade the prescribing decision of Black Lion Hospital doctors.

## 5.3. Recommendation

This section of the study forwarded some solution for the problems that are discussed in the summary of findings and conclusion part of this study.

- ✓ The skill of the MSRs will have a positive effect if the pharmaceutical companies well equip the MSRs with the product knowledge and skills how the products are presented to doctors. Thus, the pharmaceutical companies have to provide training to their MSRs about the products and presentation skills.
- ✓ Commitment has a positive effect on the prescribing decision of doctors. The provision of information about the company vision will enhance the commitment of MSRs and thereby increases their influence.
- ✓ Grooming will be a means of attracting doctors if it is properly implemented. Therefore, the pharmaceutical companies have to apply proper dressing code for their MSRs.
- ✓ Whatever the MSRs do if they are not use attractive words, the doctors could not be interested to hear their promotional message. Thus, the pharmaceutical companies have to train the MSRs to use appropriate words when contacting the physicians.

- ✓ As indicated in the conclusion part, the respondents do not believe the information provided by the MSRs. Thus, the pharmaceutical companies have to give direction to the MSRs to provide the right information to their clients.
- ✓ The pharmaceutical companies have to work on the MSRs to grow by knowledge and skill with their experience.



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## Annex 1

### Questionnaire

*Dear respondent,*

My name is Abraham Habtamu. I am doing a paper for the fulfillment of a Master of Arts degree in Marketing Management in Addis Ababa University, School of Commerce. The title of my study is ‘‘The Influence of Medical Sales Representatives’ Competency and Personality in the Prescribing Decision of Doctors in Black Lion Hospital’’, aiming to understand the persuasion power of personality and Competency in the selling process of medicines. I therefore, kindly request your cooperation to fill this questionnaire. The information you provide is only used for this study purpose and it is strictly confidential. Please do not write your contact details on the questionnaire. Thanks for your cooperation.

For any queries please contact the investigator.

Address: Abraham Habtamu, Tel. +251911176230

#### Part I: General Information

**Please put an ‘‘X’’ mark of your choice on the space provided**

##### 1. Age

A. 18 – 30

E. 51 – 60

B. 31 – 40

F. Above 60

C. 41 – 50

**2. Gender**

A. Male  C. Female

**3. Educational Level**

A. General Practitioner  D. Sub Sp    
 B. Resident  E. Other, specify.....  .....  
 C. Specialist Doctor

**4. Work Experience**

A. Below 1 Year  D. 11 – 15 Years   
 B. 1 – 5 Years  E. 15 – 20 Years   
 C. 6-10 Years  F. Above 25 Years

**Part II: MSRs Competency and Personality in Doctors’ Prescribing Decision**

**Instructions:** Please indicate your degree of agreement or disagreement against each question by ticking on the appropriate number (where, *1- Strongly Disagree, 2- Disagree, 3- Neutral, 4- Agree, and 5- Strongly agree*).

S.N	Factors	1	2	3	4	5
1	The Medical Sales Representatives (MSRs) have appropriate communication skill					
2	The MSRs have good interpersonal skill					
3	The MSRs have proper product knowledge					
4	The MSRs present product features & benefits adequately					
5	The MSRs are well experienced.					
6	The MSRs with longer tenure detailing their medicine well					
7	High experienced MSRs are almost a friend with me					

<i>S.N</i>	<i>Factors</i>	<b>1</b>	<b>2</b>	<b>3</b>	<b>4</b>	<b>5</b>
8	I prefer to work with experienced MSR's					
9	The MSR's have a respect for their profession					
10	The MSR's provide the right information					
11	The MSR's can easily communicate and interact with doctors					
12	The MSR's are polite enough					
13	The MSR's clearly mention their companies' vision to doctors					
14	The MSR's work hard for the accomplishment of their company goals					
15	The MSR's have greater work motivation					
16	The MSR's exert considerable effort on behalf of the company					
17	The MSR's follow formal and professional dressing code					
18	The MSR's are neatly dressed					
19	The MSR's use perfume/cologne					
20	The MSR's have proper hair style					
21	The MSR's wear correct combination of costumes					
22	The MSR's approach me in a professional manner					
23	The MSR's are always smiley					
24	The MSR's present themselves friendly					
25	The MSR's use attractive words					
26	The MSR's salute warmly					
27	I usually adopt new drugs					
28	I often switch drugs					
29	I tend to prescribe drugs that are promoted by MSR's					
30	I advocate the MSR's' medicines to my colleagues					

*Thank you for your participation!!*