



**ST. MARY'S UNIVERSITY COLLEGE
SCHOOL OF GRADUATE STUDIES**

**PHYSICIANS' ATTITUDE TOWARDS PROMOTIONAL
ACTIVITIES OF PHARMACEUTICAL COMPANIES: A CASE
OF YEKATIT 12 HOSPITAL**

BY: MULUSEW YOHANNES (SGS 0264/2005B)

**JULY, 2017
ADDIS ABABA, ETHIOPIA**

**PHYSICIANS' ATTITUDE TOWARDS PROMOTIONAL
ACTIVITIES OF PHARMACEUTICAL COMPANIES: A CASE
OF YEKATIT 12 HOSPITAL**

BY: MULUSEW YOHANNES (SGS 0264/2005B)

**A THESIS SUBMITTED TO ST. MARY'S UNIVERSITY COLLEGE,
SCHOOL OF GRADUATE STUDIES IN PARTIAL FULFILLMENT
OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF
BUSINESS ADMINISTRATION (GENERAL MANAGEMENT)**

**JULY, 2017
ADDIS ABABA, ETHIOPIA**

BOARD OF EXAMINERS APPROVAL SHEET

**ST. MARY'S UNIVERSITY
SCHOOL OF GRADUATE STUDIES
FACULTY OF BUSINESS**

**PHYSICIANS' ATTITUDE TOWARDS PROMOTIONAL
ACTIVITIES OF PHARMACEUTICAL COMPANIES: A CASE
OF YEKATIT 12 HOSPITAL**

BY: MULUSEW YOHANNES (SGS 0264/2005B)

APPROVED BY BOARD OF EXAMINERS

Dean, Graduate Studies

Signature

Advisor

Signature

External Examiner

Signature

Internal Examiner

Signature

DECLARATION

I, the undersigned, declare that this thesis is my own original work, prepared under the guidance of Dr. Getie Andualem. All resource of materials used for the thesis have been duly acknowledged. I further confirm that the thesis has not been submitted either in part or in full to any other higher learning institution for the purpose of earning any degree.

Mulusew Yohannes

Name

St. Mary's university college, Addis Ababa

Signature

July, 2017

ENDORSEMENT

This thesis has been submitted to St. Mary University College, School of Graduate studies for examination with my approval as a university Adviser.

Dr. Getie Andualem

Name

St. Mary's university college, Addis Ababa

Signature

July, 2017

ACKNOWLEDGMENTS

First and for most, I would like to give my glory and praise to the Almighty GOD for his invaluable supports throughout the course of my life.

Next, I'm grateful to appreciate my Advisor Dr. Getie Andualem who has taken all the trouble with me while I was preparing the paper. Especially, his valuable and prompt advice, his tolerance guidance and useful criticisms throughout the course in preparing the paper, constructive corrections and insightful comments, suggestions and encouragement are highly appreciated.

My sincere gratitude goes to the HRM department and physicians of Yekatit 12 Hospital for their frank response to my interview questions and questionnaires without which this paper would not come to life.

Finally, I'm greatly indebted to my families for their encouragement, moral support and suggestions.

Abstract

This paper investigated physicians' attitude toward pharmaceutical companies' promotional activities in Yekatit 12 Hospital. The study uses a cross-sectional survey research. To collect primary data for this study all permanently employed physicians working in the Hospital were requested to respond to the questionnaire i.e. census was performed. The data from the survey was entered and analyzed with the Statistical Package for the Social Sciences (SPSS version 20). The finding of the study show that the overall attitude level of physicians is in the positive range but just a bit above the neutral point. The analysis of independent sample t test and one-way ANOVA on different demographic subgroups reveals that the average attitude score of age and gender group found different, but between groups in educational level is not. Finally, suggestions and recommendations are forwarded for different groups in the study including, pharmaceutical companies marketer, PSRs, and policymakers in the country for ensuring the effective and ethical pharmaceutical promotion.

Key words: Pharmaceutical Promotion, Pharmaceutical sales representatives, Detailing, Sample drug, Gifts, Attitude, physicians, Ethiopia

Table of content

<u>Content</u>	<u>Page</u>
Table of content.....	i
BOARD OF EXAMINERS APPROVAL SHEET.....	iv
DECLARATION.....	v
ENDORSEMENT.....	vi
Acknowledgement	vii
<i>Abstract</i>	viii
List of Tables.....	ix
List of Figure.....	x
List of acronyms/abbreviations	xi
CHAPTER ONE	1
INTRODUCTION.....	1
1.1. Background of the study.....	1
1.2. Statement of the Problem.....	3
1.3. Research Questions.....	4
1.4. Objectives of the Study.....	4
1.5. Significance of the Study	4
1.6. Scope and limitation.....	5
1.7. Limitation of the research.....	5
CHAPTER TWO.....	6
REVIEW AND RELATED LITERATURE.....	6
2.1. Theory of Attitude.....	6
2.2. Pharmaceutical Marketing and Market.....	6
2.3. Pharmaceutical Sales Representatives and Physicians Attitude towards them.....	7
2.4. Detailing by PSRs and Physician Attitude toward it.....	8
2.5. Promotional Gifts by Pharmaceutical Companies and Physician Attitude toward the Gifts...9	9
2.6. Sample Drugs as Promotional Tool and Physician Attitude toward it.....	9

2.7. Overall Attitudes level toward pharmaceutical Promotion.....	10
2.8. Hypostasis	11
CHAPTER FOUR	12
RESEARCH DESIGN AND METHODOLOGY.....	12
3.1 Introduction.....	12
3.2 Research design and Approach.....	12
3.3. Sampling Design.....	12
3.4. Sources of data.....	12
3.5. Data Collection Methodology.....	12
3.6. Data Analysis Techniques.....	13
3.7. Ethical considerations & Confidentiality.....	13
CHAPTER FOUR	14
DATA PRESENTATION, ANALYSIS AND DISCUSSION.....	14
4.1. Descriptive analysis of the Study	14
4.1.1. Demographic characteristics.....	14
4.1.2. Descriptive analysis on item to measure Attitude towards PSRs	15
4.1.3. Descriptive analysis on item to measure Attitude towards Gifts	19
4.1.4. Descriptive analysis on item to measure Attitude towards Detailing.....	21
4.1.5. Descriptive analysis on item to measure Attitude towards Sample drug.....	23
4.2. Testing Hypotheses of the Study	25
4.2.1. Comparison of average attitude score between male and female respondents.....	26
4.2.2. Comparison of average attitude score between general practitioners and specialists.....	27
4.2.3. Comparison of average attitude score between age groups	28
CHAPTER FIVE	30
SUMMARY AND RECOMMENDATION.....	30
5.1. Conclusion.....	30
5.2. Recommendations.....	31
REFERENCES	32

APPENDIXES	I
Appendix A. Definition of terms	I
Appendix B. Consent form	II
Appendix C Questionnaire	III
Appendix D The result of Reliability Test	VIII

List of Tables

Table 1 Gender of respondents'.....	14
Table 2 Age of respondents'.....	14
Table 3 Percentage responded of each item to measure attitude towards PSRs by agreement Scale.	16
Table 4 Means of the respondents' response to items to measure attitude towards PSRs.....	17
Table 5 Physicians' attitudes toward PSRs based on Gender	18
Table 6 Physicians' attitude toward PSRs based on Age	18
Table 7 Physicians' attitudes toward PSRs based on Educational level.....	18
Table 8 Physicians' attitudes toward the gifts based on gender, age and educational level.....	19
Table 9 Percentage of Physicians receives gifts/ participates on event and their rating of gift/ event appropriateness.....	20
Table 10 Mean score of Physicians' attitudes toward detailing by demographic characteristics..	22
Table 11 Physicians' average attitude score toward sample drug by demographic characteristics....	24
Table 12 Independent Samples Test of equality of attitude mean score of male and female Physicians.....	26
Table 13 Independent Samples Test equality of attitude mean score of General practitioners & Specialists.....	27
Table 14 ANOVA equality of attitude means score of age group.....	28
Table 15 Multiple Comparisons of mean of age group.....	29

List of Figure

Figure 1 Educational level and Department of the Respondents..... 15

Figure 2 The effect of gift on prescribing behavior of the physicians.....20/21

Figure 3 Percentage of respondents rating the benefit of detailing (drug information) by PSRs for physicians and patients..... 23

Figure 4 the overall attitude of physicians' attitude towards pharmaceutical promotional activities.....25

List of acronyms/abbreviations

ANOVA: Analysis of Variance

PSRs: Pharmaceutical Sales Representatives

CHAPTER ONE

INTRODUCTION

1.1. Background of the study

Companies ranging from large multinational corporations to small retailers increasingly rely on promotion to help them market products and services. Evidences show that there is an increase in promotional expenditure in global marketplace year to year. The growth in promotional expenditures also reflects the fact that marketers around the world recognize the value and importance of promotion. Promotional strategies play an important role in the marketing programs of companies as they attempt to communicate with and sell their products to their customers. Promotional mix has included major elements like advertising, sales promotion, publicity, public relations, personal selling, direct marketing, and interactive media that modern-day marketers use to communicate with their target markets. Among major promotional mix elements one is personal selling. It is a form of person-to-person communication in which a seller attempts to assist and/or persuade prospective buyers to purchase the company's product or service or to act on an idea (Belch and Belch, 2003)

According to Limu & Mark (2010) personal selling is a critical component of pharmaceutical marketing that is why pharmaceutical companies have engaged in extensive personal selling. Saurabh, S. K (2015) stated, in pharmaceutical industry, the patient is end customer and the doctor is direct customer, especially for those pharmaceutical companies which sell prescribed medicines. Pharmaceutical companies typically direct their marketing activities toward physicians (Manchanda & Honka, 2005). Limu & Mark (2010) & Zaki (2014) identified that, the marketing activities towards practicing physician and trainee physician include: pharmaceutical sales representatives (PSRs) communicate pharmaceutical and marketing information to physicians (detailing), Provision of drugs at no cost (sampling), Provision of different kinds of gifts, and etc.

Donohue, J. M., Marsa, C. & Resenthal, M. B., (2007) pinpoint that direct-to consumer advertising (DTCA) of prescription medicines was introduced to USA and other developed countries in early 1990s. But in Ethiopia DTCA is not started yet. According to the regulation of

pharmaceutical promotion companies are prohibited from promotional activities directed to general public, especially for prescribed medicine. Companies are only allowed personal selling activities by certified pharmaceutical company representatives (PCRs) only to health professionals (FMHACA, 2012) i.e. In Ethiopia, to promote prescribed medicines, activities directed to health professionals is the only and legal promotional strategy used by the industry. Hence pharmaceutical companies in Ethiopia should give appropriate care when communicating their target customer. However, in Ethiopia personal selling is the only means of promotion for pharmaceutical products. Even other countries those have options of promotional techniques employ representatives as the best and most efficient means of convincing practicing physicians to prescribe certain medication (Lexchin, 1993).

According to Eagly & Chaiken (1993) attitude defined as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor”. If we want to alter the way people act, we need to change their hearts and minds (Anon., 2014). In this context the act needed is prescribing company’s product by physician based on information from PSRs (detailing), sample drugs, and other promotional activities.

Hence, it is important to assess the attitude of physicians towards promotional activities directed to them. This survey will attempt to assess the physicians’ attitudes towards promotional activities by Pharmaceutical Sales Representatives (PSRs) in Yekatit 12 Hospital. It is important to study physician because we can determine the effectiveness of the implemented promotional strategy from the firms’ perspective.

Yekatit 12 Hospital is established in February 1923 by Emperor Haile Selasie. For a number of years, the hospital has been serving as a referral center for different catchment areas. However the hospital is well known for treating referred patients of burn and neonatal. In February 2012, the hospital opened its medical college and changed its name to Yekatit 12 hospital medical college. Currently the hospital is organized in five major service providing departments: Emergency, out patient, Inpatient, Gynecology & obstetrics and Infection prevention. The hospital has 101 permanently employed physicians working in the respective departments and the medical college. All physicians working in the medical college are also working in the

Hospital. The hospital has 40 permanently employed specialists (27 male & 13 Female) and 61 General practitioners (31 male & 30 Female).

1.2. Statement of the Problem

In pharmaceutical industry firm tries to convince physicians to prescribe certain medication by communicating them through pharmaceutical sales representatives (PSRs) (Lexchin, 1993). Business communications promote goodwill, inform and persuade or request - often simultaneously. Because a sender can only accomplish successful communication with a receiver's cooperation, an appropriate attitude is essential (Sophie, 2015).

Although many researches attempted to assess the attitudes of physicians (Deborah, et al., (2010), Karayanni, (2010), & Lieb & Brandtönies, (2010)) towards promotional activities by pharmaceutical companies most of them focused on its impact on medical ethics rather than in marketer's perspective.

There is a growth of investment by pharmaceutical companies in Ethiopia. The existing and the newly companies made additional investment in expanding their sales force and creating clients. The currently existing marketing techniques and strategies are adopted from experience gained from foreign countries. Companies do not have the answer for which strategies best fits to gain more market share. In order to answer the questions, pharmaceutical marketers should know what holds in the hearts and minds of customers (physicians) towards their promotional activities (i.e. the attitudes towards pharmaceutical companies' promotional activities) to act accordingly. In best knowledge of the investigator, in Ethiopia enough attention is not given to assess the attitude of physicians towards promotional activities by pharmaceutical companies from both ethical and/or marketing perspective. According to Eagly & Chaiken (1993) attitude is defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor". If we want to alter the way people act, we need to change their hearts and minds (Anon., 2014). Therefore, this survey attempted to assess the physicians' attitudes towards promotional activities by pharmaceutical companies in Ethiopia.

1.3 Research Questions

The researcher has formulated the following research questions based on the background of the study and the statement of the problem addressed above.

- What are the attitudes of physicians towards promotional activities by pharmaceutical companies?
- Is there any difference on attitude based on demographic differences (age, sex, and educational level) of physicians toward pharmaceutical promotion?

1.4. Objectives of the Study

1.4.1 General Objective

The main objective of the study is to assess the attitude of physicians towards promotional activities by pharmaceutical companies.

1.4.2 Specific Objectives

- To assess the attitude of physicians towards pharmaceutical sales reps, gifts, detailing, and sample drug.
- To assess the difference/similarity of attitudes of physicians based on demographic difference (age, sex and educational level).

1.5. Significance of the Study

This study will contribute to managers in charge of promotional activities in pharmaceutical companies in Ethiopia, helping them in grasping what attitudes physicians hold towards promotional activities by the companies directed to physicians. It is important to study physicians' attitudes because it helps the marketers to design their promotional activities in efficient and effective manner. The study might also pave the way for further study on the effect of attitude on the prescribing behavior of physicians and thereby track for possible remedy to change, reduce even eliminate the negative attitude physicians have. This study also has its own contribution for both decision makers and researchers in field of medical ethics.

1.6. Scope of the Research

This study focus on assessment of physicians' attitude towards promotional activities by Pharmaceutical companies in Yekatit 12 Hospital. It will be directed towards examining whether physicians attitude towards detailing, sample drugs, promotional gifts from pharmaceutical industry and attitudes towards PSRs is favorable or not due to large amount of money invested by pharmaceutical companies for promotion. It is also directed at finding out which demographic variable among; gender, age, and education level, affects attitude of physicians toward pharmaceutical promotional activities.

1.7. Limitation of the Research

The limitations of this study is that the data collection was performed at single site, this is because to conduct research in health facilities it needs the approval of IRRB of each hospital (for federal hospitals) and regional health bureaus.

CHAPTER TWO

REVIEW OF RELATED LITERATURE

2.1. Theory of Attitude

Attitudes are often defined in terms of mood, thought processes, behavioral tendencies and evaluation (Hernandez et al, 2000). Cognitive evaluations refer to thoughts people have about the attitude object. Affective evaluations refer to feelings or emotions people have in relation to the attitude object. Behavioral evaluations refer to people's actions with respect to the attitude object. The attitude object in this literature review and in this Survey is physicians Attitudes toward pharmaceutical companies' promotional activities (PSRs, Detailing, Promotional Gifts, and Drug Samples).

According to Baron and Byrne (2010) Attitudes are important because strongly influence our social thought, help to organize and evaluate stimuli (e.g., categorizing stimuli as positive or negative), presumably have strong effects on behavior, and help to predict people's behavior in wide range of contexts.

The literature review done on researches on pharmaceutical promotion concludes, that, 'there is a wide range of evidence on different topics, using a range of different designs, suggesting that promotion affects attitudes and behavior. However there are gaps in the evidence and more high-quality studies are needed to establish causal relationships between promotion and attitudes and behavior of doctors and others (WHO/Health Action International, 2009).

2.2. Pharmaceutical Marketing and Market

Bates, A., Bailey, E., and Rajyaguru, I. (2002) describe pharmaceutical marketing as a synergistic integrated activity. Activities work in tandem with each other to drive prescribing behaviors. S. Vasiljev and D. Pantelic (2010) also present that based on specific nature of its products and in the complex interests of the main constituents of market demand the pharmaceutical market represents one of the most dynamic and controversial markets. And they recommend the understanding of marketing theory and best practice logic and comparing it with on-going everyday practice to improve marketing practice in the pharmaceutical sector.

According to Y.B. Limbu & M.Kay (2010) personal selling is a critical component of pharmaceutical marketing. Pharmaceutical companies have engaged in extensive personal selling. The type of personal selling employed in this industry is commonly referred to as “missionary selling” due to the fact that salespeople inform and instruct physicians on their products, while they do not take specific orders or attempt to elicit sales. Their primary role is one of providing information to assist doctors in understanding specific patient therapeutic options. Given this role, pharmaceutical sales people have a critical information diffusion function.

As Manchanda and Honka (2005) reviewed many research works and point out that pharmaceutical companies directing all their marketing activities towards doctors and Dr. Neeti Kasliwal (2013) also present Indian practice that pharmaceutical companies directing all their marketing activities towards doctors to influence them to prescribe their products.

The marketing activities towards physician comprise: Face to calls, where pharmaceutical sales representatives (PSRs) communicate pharmaceutical and marketing information to physicians (detailing) Y.B. Limbu & M.Kay (2010), Provision of drugs at no cost (sampling) Zaki, N.M. (2014), Provision of different kinds of gifts, and etc.

2.3. Pharmaceutical Sales Representatives and Physicians Attitude toward them

Pharmaceutical sales representative (formerly detail man) is salespeople employed by pharmaceutical companies to persuade doctors to prescribe their drugs to patients (Wikipedia, 2015). Senders, in this case PSRs, can only accomplish successful communication with a receiver’s (medical doctors) cooperation, an appropriate attitude is essential (Sophie, 2015).

One study in northwestern Pennsylvania suggest that physicians' attitudes were influenced by the information and educational support they received from PSRs, selling techniques used by PSRs to promote their products, and the volume of patients they saw (Andaleeb & Tallman, 1995).

Of the internal medicine faculty and residents surveyed by McKinney et al., 52% of faculty and 66% of residents agreed that presentations by sales representatives should be banned at their institutions. Study from Turkey by GÜLÖKSÜZ, et al., (2009) more than 75% of the physicians thought that PSRs didn't provide accurate information and used marketing techniques.

2.4. Detailing by PSRs and Physician Attitude toward it

Detailing refers to the activity of pharmaceutical sales representatives (PSRs), when they make calls to physicians and provide them with "details" of approved scientific information, benefits, side effects, or adverse events, related to a drug (Pharma Marketing Network, 2015). The provision of complete and balanced drug information is necessary for rational drug use. Both scientific and commercial information sources can provide doctors with the necessary information to make informed prescribing decisions. It is important, however, that the information provided by PSRs is accurate, complete and balanced Allsageer, M., & Kowalski, S. (2012).

Only thirty-two per cent of the psychiatry trainees surveyed by Hodges agreed that sales representatives provide useful and accurate information on new drugs (25% for established drugs). Fifty-eight per cent of family medicine residents in Sergeant et al.'s study felt that the literature provided by sales representatives was useful. According to the Dr. Shahu Ingole et al (2011) about 95% residents believe that the information given by PSRs is reliable.

Ninety-two per cent of the Canadian doctors surveyed by Strang et al. felt that sales representatives had product promotion as their major goal, and 80% felt they overemphasized medicines' effectiveness. Forty-seven per cent of the physicians in Eaton and Parish's study felt that they were not able to obtain an unbiased assessment of a newly introduced drug. Most of them felt that most drug information was too commercial and therefore biased.

The study by Mikhael et al (2014) report that, physicians believe, medical representatives provide physicians with good information about drug indication and a weak information about drug contraindications and side effects.

Allsageer, M., & Kowalski, S. (2012) concluded that Doctors believe that the provision of drug information by PCR in Libya is incomplete and often exaggerated. Pharmaceutical companies should ensure that their representatives are trained to a standard to provide reliable information regarding the products they promote.

From this also we can conclude that different attitudes are held by physicians in this regard.

2.5. Promotional Gifts by Pharmaceutical Companies and Physician

Attitude toward the Gifts

A gift is understood to mean: A sum of money, or Any physical object, or The possibility to participate for free in events which are open to the public or are private in nature, are only accessible in return for payment and represent a certain value (such as complimentary tickets for sports events, concerts, theatre, conferences etc.), or Any other advantage with a pecuniary value such as transport costs (EMA, 2013).

Study in Libya by Allsageer, M., & Kowalski, S. (2012), report that of the 608 respondents, a quarter of respondents (154; 25.3%) totally disapproved of accepting gifts from PSRs. This was balanced by an approximately equivalent number of respondents (n=152; 25%) who clearly approved. Approximately half the respondents (n=302; 49.7%) would accept gifts in some cases.

Regarding type of gifts preferred by physician one study in Bangladesh indicated that most of the physicians preferred information and desk items from the pharmaceutical companies rather than household items (Sultana and Khosru, 2011)

From this we can understand that the value and type of the gift affects the attitude or appropriateness of accepting of gifts from pharmaceutical companies.

2.6. Sample Drugs as Promotional Tool and Physician Attitude toward it

According to the Prescription Drug Marketing Act of 1987, the term "drug sample" means a unit of a drug, which is not intended to be sold and is intended to promote the sale of the drug. According to this act, the manufacturer or distributor of a drug subject may distribute drug samples by mail or common carrier to practitioners licensed to prescribe such drugs or, at the

request of a licensed practitioner, to pharmacies of hospitals or other health care entities. The recipient of the drug sample must execute a written receipt for the drug sample upon its delivery and the return of the receipt to the manufacturer or distributor (Pharma Marketing Network, 2015). The purpose of supplying drug samples is to gain entry into doctors' offices, and to habituate physicians to prescribing targeted drugs. Physicians appreciate samples, which can be used to start therapy immediately, test tolerance to a new drug, or reduce the total cost of a prescription. Even physicians who refuse to see drug reps usually want samples (these docs are denigrated as "sample grabbers"). (Fugh-Berman A, & Ahari S. 2007)

Many physicians view free samples positively and stock them to provide to patients who would otherwise have to pay for medicines and cannot afford them. A key reason that many physicians see sales representatives is to obtain free samples (WHO/Health Action International, 2009). Providing free drug samples were considered to be the single most important service provided by PSRs; 65% of physicians thought it was very important. Almost all of those who would give a sample (97%) said avoiding cost to the patient was an important or very important reason for their choice (Gaedeke et al. (1999).

2.7. Overall Attitudes level toward pharmaceutical Promotion

Research suggests that doctors' attitudes to promotion vary, and do not necessarily match their behavior. Their opinions differ on the value of sales representatives, on whether they should be banned during medical training, and on whether doctors are adequately trained to interact with them. Most doctors think information from pharmaceutical companies is biased, but many think it is useful. Health professionals find small gifts from drug companies acceptable. Doctors who report relying on promotion tend to be older, and more likely to be general practitioners (WHO/Health Action International, 2009).

From this one can conclude that many factors influence the attitude level of physicians toward pharmaceutical promotion.

2.8. Hypostasis

H1: There is no significant difference between the means of the male physicians' attitude score and female physicians' attitude mean score.

H2: There is no significant difference between the means of the General practitioners' attitude score and Specialists' attitude score.

H3: There is no significant difference among the means of physician's attitude score within the age groups (26-35yrs, 36-45yrs, and 46-55yrs).

CHAPTER THREE

RESEARCH DESIGN AND METHODOLOGY

3.1 Introduction

This chapter explains the research methodologies used and it covers design of the study, sampling design, sources of data, data collection methodology and data analysis methodology.

3.2 Research design and Approach

The study uses a cross-sectional survey research, in order to get quantitative description of physicians' attitude towards pharmaceutical companies' promotional activities and so as to investigate the attitude of physicians' in Ethiopia, towards PSRs, Detailing, promotional gifts, and sample drugs. The study uses physicians' working in Yekatit 12 Hospital as a unit of observation.

3.3. Sampling Design

To collect primary data for this study all permanent physicians working in the Hospital who were willing to participate in this study was requested to respond to the questionnaire i.e. census was performed. This was done before and after morning meeting after getting the consent from both department heads and the physicians. From the total of 101 physicians only 93 (92%) were filled and returned the questionnaire.

3.4. Sources of data

Data collected from physicians working in Yekatit 12 hospital using a survey questionnaire adopted from previous research works was used.

3.5. Data Collection Methodology

A Self-administered survey questionnaire was distributed to physicians working in Yekatit 12 Hospital. The instrument was having five parts that contain a total of 41 items. Part I present questions about demographic characteristics of the respondents 4 items. Part II present questions about attitude towards Pharmaceutical Sales Representatives (PSRs) consist 10 items in 5 point Likert scale style adopted from Guloksuz, et al., (2009) as developed by McKinney et al. (1990) in order to determine physicians' attitudes and behaviors towards the drug industry and was re-adapted by Randall et al. (2005) with cronbach's alpha 0.777 . Part III present items measuring of the attitude toward gifts 5 items adopted from Siddiqui et al. (2014) with cronbach's alpha 0.745 and, 10 items in 5 point Likert scale style (1 strongly disagree to 5 strongly agree, also there is

reverse rating) which ask the exposure of physicians to gifts by receiving/ participating on events with appropriateness rating, and another to items which ask the question whether gift influence their own and/or other physician prescribing decision. Part IV consists four items which measure attitude toward detailing by PSRs 5 point Likert scale style (1 very weak to 5 very good) adopted from Mikhael et al. (2014) with cronbach's alpha 0.721 and 2 items about the benefit of the detailing for physician and patient. Finally part consists 4 items which measure attitude toward sample drug adopted from Shahu Ingole et al (2011) with cronbach's alpha 0.783.

The questionnaires adopted without language translation but the final tool was checked with 5 physicians' pilot test and minor correction was performed (correcting age group, inserting full text for abbreviations were not known by physicians).

3.6. Data Analysis Techniques

The data from the survey was entered and analyzed then performed with the Statistical Package for the Social Sciences (SPSS version 20). Descriptive analysis was used to organize and summarize the demographic data of the respondent which include age, gender, educational level, department type, and the responses of items of the questionnaires. By considering gender, and level of education as the independent variable and overall attitude level as the dependent variables, Independent sample t-test was performed to assess the mean score difference between male and female physicians. By considering age as the independent variable and overall attitude level as the dependent variables, one-way variance (ANOVA) was performed to assess the mean score difference between Age groups. Post hoc test was employed to further examine that which group mean is different.

3.7. Ethical considerations & Confidentiality

Data collection was started after receiving official letter and ethical clearance from St Mary's university graduate of studies. Also permission was requested from the respective departments of the hospital. All participants of the study were volunteers and they signed a written informed consent before going through the questionnaire. Participants were guaranteed confidentiality of the information and had have right to refuse participation or quit participation at any time during their involvement in the study. There were no benefits provided to participate in the study.

CHAPTER FOUR

DATA PRESENTATION, ANALYSIS AND DISCUSSIONS

4.1. Descriptive analysis of the Study

4.1.1 Demographics characteristics

The study focused on physicians working in Yekatit 12 Hospital. For the analysis, physicians were categorized with four demographic variables; gender, age, education level, and department. About 57% of the respondents were males and 43% were female. The total of the respondents categorized into three age groups, 45.2% were 26-35yrs, 36.5% were 36-45yrs and 18.3% were 46-55years. None of the respondents were found under 26 years age and above 53 years of age. The general practitioners take larger portion (60.2%) than the specialists (39.8%). From total number of physicians respond for this survey was Emergency (14.0%), Out patient (41.9%), In patient (32.3%), Obstetrics/Gynecology (9.7%), and Prevention Infection (2.1%).

The following tables (Table 1 & 2) and figure 2 depict the descriptive data of the physicians based on the above demographic variables.

Table 1 Gender of respondents'

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Male	53	57	57	57
Female	40	43	43	100
Total	93	100	100	

Table 2 Age of respondents'

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 26-35	42	45.2	45.2	45.2
36-45	34	36.5	36.5	81.7
46-55	17	18.3	18.3	100
Total	93	100	100	

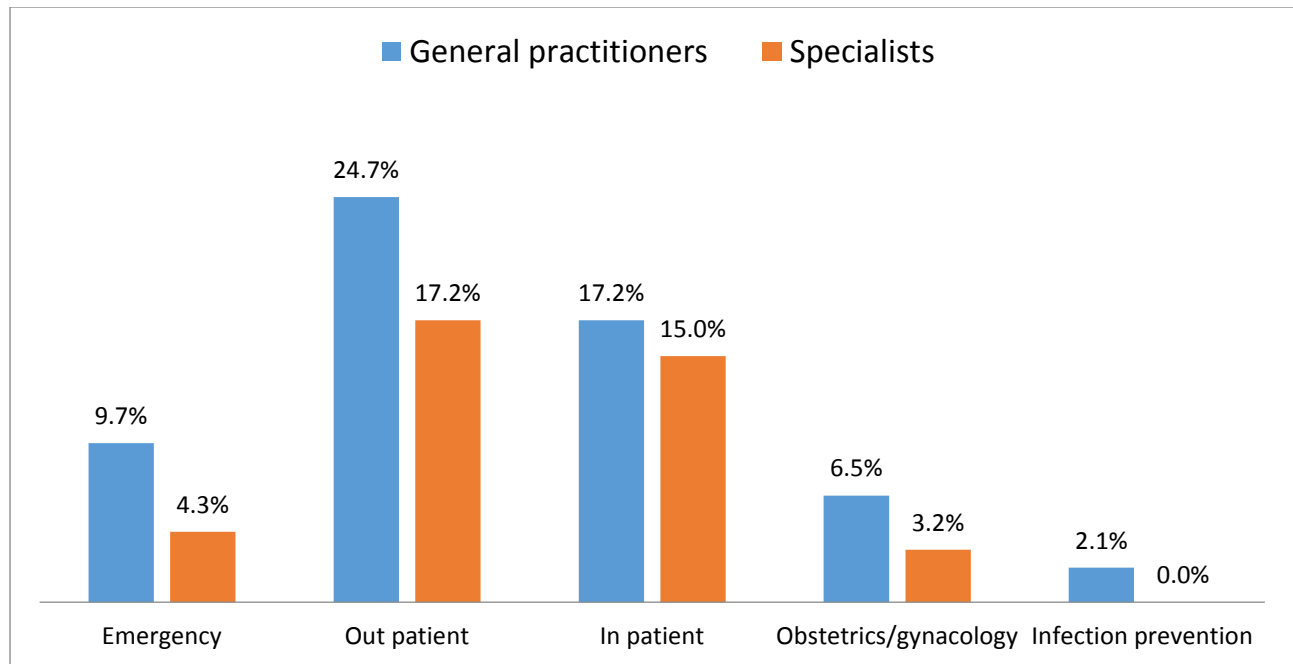


Figure 1 Educational level and Department of the respondent in percentage

4.1.2 Descriptive analysis on item to measure Attitude towards PSRs

physicians response to item to measure Attitude towards PSRs were reported as percentages of those surveyed who Strongly agree, agree, neutral, disagree, and strongly disagree on table 3 and mean of each of the items in table 4.

For the statement ‘PSRs provide accurate and useful information about drugs’ 61% of the respondents positively agree with the statement and 19% neutral and the remaining 20% negatively agree with the statement. Majority of the physicians positively agree with the statements: PSRs use marketing techniques in their interactions with physicians (78%), I believe that PSRs, I met, were competent professionally and in their communication skill (52%), an educator that works in my institution should participate as an observer in all presentations made by PSRs (52%), I would keep my relationship with PSRs on the same level, even without the promotional activities, including social gatherings for dinner (65%).

Table 3 Percentage responded of each item to measure attitude towards PSRs by agreement Scale

Parameter	Strongly disagree	Disagree	Neutral	Agree	Strongly Agree	Total
PSRs provide accurate and useful information about drugs.	1.6	18.4	19.2	53.6	7.2	100
Interactions with PSRs don't influence physicians' prescribing behavior.	1.6	43.2	31.2	18.4	5.6	100
PSRs took over an important educational role in my institution.	20.0	28.8	8.8	2.4	40.0	100
PSRs use marketing techniques in their interactions with physicians.	0.0	0.8	21.6	60.0	17.6	100
I believe that PSRs, I met, were competent professionally and in their communication skill	0.0	10.4	37.6	41.6	10.4	100
Presentations made by PSRs should be forbidden in my institution.	0.0	51.2	27.2	12.8	8.8	100
An educator that works in my institution should participate as an observer in all presentations made by PRs.	0.0	15.2	33.0	36.6	15.2	100
I'd keep my relationship with PSRs on the same level, even without the promotional activities, including social gatherings for dinner.	0.0	4.8	30.4	52.0	12.8	100
Interactions with PSRs don't influence my prescribing practice.	7.2	44.0	12.0	29.6	7.2	100
PSR promotional activities don't influence my prescribing practice.	0.8	46.4	19.2	28	5.6	100

For other statements the majority of the physicians negatively agree with statements. For statements: PSRs took over an important educational role in my institution (49%), Presentations made by PSRs should be forbidden in my institution (51%), and interactions with PSRs don't influence my prescribing practice (49%), and PSR Promotional activities don't influence my prescribing practice (47%).

The highest mean score given to the statement I would keep my relationship with PSRs on the same level, even without the promotional activities, including social gatherings for dinner (3.73) and the second mean score given to the statement I believe that PSRs, I met, were competent Professionally and in their communication skill (3.52). The least mean score given to the statement PSRs use marketing techniques in their interactions with physicians (2.06) but for this statement the rating was reversed, 1 given for absolutely agree and 5 for absolutely disagree.

Table 4 Means of the respondents' response to items to measure attitude towards PSRs

Parameter	N	Mean	Std. deviation
PSRs provide accurate and useful information about drugs.	93	3.46	.929
Interactions with PSRs don't influence physicians' prescribing behavior.	93	2.83	.940
PSRs took over an important educational role in my institution.	93	3.22	.947
PSRs use marketing techniques in their interactions with physicians.	93	2.06	.651
I believe that PSRs, I met, were competent professionally and in their communication skill	93	3.52	.819
Presentations made by PSRs should be forbidden in my institution.	93	3.21	.978
An educator that works in my institution should participate as an observer in all presentations made by PRs.	93	2.51	.930
I would keep my relationship with PSRs on the same level, even without the promotional activities, including social gatherings for dinner.	93	3.73	.745
Interactions with PSRs don't influence my prescribing practice.	93	2.86	1.141
PSR promotional activities don't influence my prescribing practice.	93	2.91	1.000
Valid N (list wise)	93		

The mean of the dependent variable attitude of physicians toward PSRs shown on tables below (Table 5-7) based on the demographic variables. The mean score between male respondents and

female respondents are different. The mean score of male respondents is 3.0872 which above the neutral point and in the range of positive attitude. The mean score of female respondents is 2.9362.

Table 5 Physicians' attitudes toward PSRs based on Gender

Sex of Respondents	Mean	N	Std.deviation
male	3.0872	53	.44499
Female	2.9362	40	.35474
Total	3.0304	93	.41837

The mean score between different age group respondents are also different. The mean score of youngest respondents (26-35) is 2.9264 which below the neutral point and in the range of negative attitude. The mean score of age groups 36-45 and 46-55 are above the neutral point and in the range of positive attitude 3.0333 and 3.4750 respectively.

Table 6 physicians' attitude toward PSRs based on Age

Age of Respondents	Mean	N	Std. Deviation
26-35	2.9264	42	.26250
36-45	3.0333	34	.49768
46-55	3.4750	17	.22613
Total	3.0304	93	.41837

The mean score of both General practitioners and specialists are above the neutral point and in the range of positive attitude 3.0169 and 3.0424 respectively.

Table 7 physicians' attitudes toward PSRs based on Educational level

Educational level of respondent	Mean	N	Std. Deviation
General practitioners	3.0169	56	.41488
Specialists	3.0424	37	.42429
Total	3.0304	93	.41837

4.1.3 Descriptive analysis on item to measure Attitude towards Gifts

Descriptive analysis was performed for dependent variable physicians' Attitude towards Gifts in relation to demographic characteristics of the respondents as depicted on table 8. The average attitudes toward gift level of both male and female respondents are below the neutral point and in negative attitude range. However the females' attitude little bit above the males' attitude level 2.80 and 2.76 respectively.

Table 8 Physicians' attitudes toward the gifts based on gender, age and educational level

Physicians' Attitudes toward the gifts		
Sex of Respondents	Mean	Std. deviation
Male	2.7641	.73837
Female	2.8000	.63657
Total	2.7776	.69941
Age of respondents	Mean	Std. deviation
26-35	2.9170	.60311
36-45	2.6800	.81445
46-55	2.6500	.27136
Total	2.7776	.69941
Educational level of respondent	Mean	Stan. deviation
General practitioners	2.7017	.80719
Specialists	2.8455	.58472
Total	2.7776	.69941

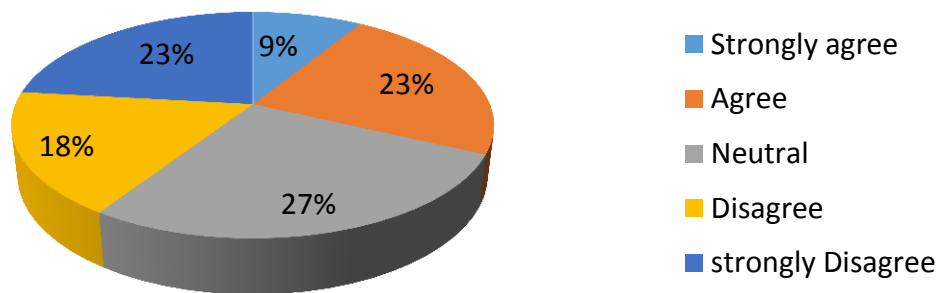
Table eight shows the average attitude score by age group, the youngest group (26-35) has the highest average score 2.91 and from educational level category specialists have the high average score compared to the General practitioners. Table nine also present Percentages of respondents receives gifts /participates in event and those rate receiving gift or participate in event as appropriate/ not appropriate. The most accepted gifts by the physicians are drug sample for

patients & office supplies (pen, cup, notebook, etc.) both received by 62% of the physicians and none of the physicians participate and/or receive both social gathering for dinner in a restaurant and airline ticket to vacation spot 94% of the physicians' rate that it is appropriate to receive drug sample for patients and 59 % rate that it is not appropriate to receive airline ticket to vacation spot form pharmaceutical company.

Table 9 Percentage of Physicians receives gifts/ participates on event and their rating of gift/event appropriateness

Type of Gift or Event	Did you ever received		Appropriateness of receiving	
	Yes	No	Appropriate	Not-appropriate
Drug sample for patients	62%	37%	94%	6%
Medical textbook	6%	94%	77%	14%
Medical pocket book	14%	86%	85%	6%
Office supplies (pen, cup, notebook, etc.).	62%	38%	89%	7%
Paid for trip to an educational conference	2%	98%	63%	30%
Educational meeting with dinner	16%	84%	51%	33%
Educational meeting with lunch (pizza, etc.)	22%	78%	62%	34%
Drug sample for individual use	17%	83%	32%	49%
Social gathering for dinner in a restaurant	0%	100%	17%	49%
Airline ticket to vacation spot	0%	100%	19%	59%

Five drugs from five different companies are identical in terms of price, efficacy and effectiveness. I would preferentially prescribe a drug from one of the companies that provided me any gifts or incentives over those from companies that did not.



In my opinion if five drugs from five different companies are identical in terms of price, efficacy and effectiveness. Other physician would preferentially prescribe a drug from one of the companies that provided me any gifts or incentives over those from

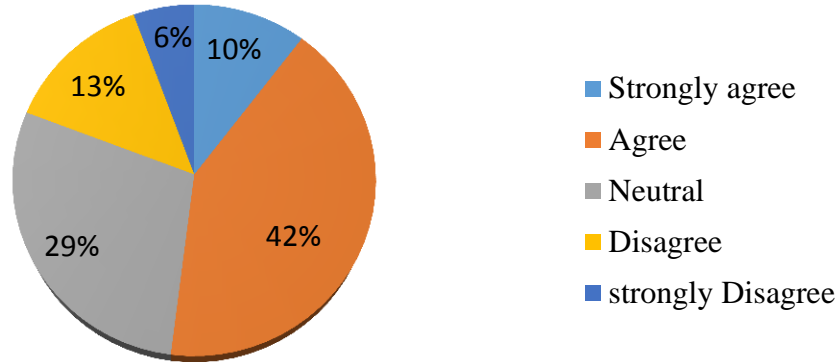


Figure 2 The effect of gift on prescribing behavior of the physician

For the questions asking the influence of gift on physician prescribing behavior:

- Influence on own prescribing decision 40% disagreed, 27% neutral, and 32% of the respondents admit the influence.
- Influence on others physicians prescribing behavior 19% disagree, 29% neutral, and 52% believe that gift influence others prescribing decision.

4.1.4 Descriptive analysis on item to measure Attitude towards Detailing

Table ten shows that the mean score of Physicians' Attitudes toward Detailing of different group based on demographic characteristics. The mean score of attitude to detailing of both male and female is almost the same 3.55 & 3.54 respectively. Under Age category and Educational level, we can observe that there is slight difference in mean score of different groups. 26-35yrs age (3.4), 36-45yrs age (3.6), 46-55yrs age (3.8), and General Practitioners (3.5) and Specialists (3.59). (3.55) is the mean score of overall attitude level Physicians' hold toward detailing.

Table 10 Mean score of Physicians' attitudes toward detailing by demographic characteristics

Sex of Respondents	Physicians attitude towards detailing
male	3.55
Female	3.54
Age of respondents	
26-35	3.4
36-45	3.6
46-55	3.8
Educational level of respondent	
General practitioners	3.50
Specialists	3.59
Total	3.55

The following figure (fig.4) depicted the percentage of respondents rating of the benefit of detailing for physician and patient.

- 22% rate (very low and low), 12% moderate, and 66% rate as (high and vary high) the benefit of detailing for the physician.
- 18% rate (very low and low), 24% moderate, and 58% rate as (high and vary high) the benefit of detailing for the patient.

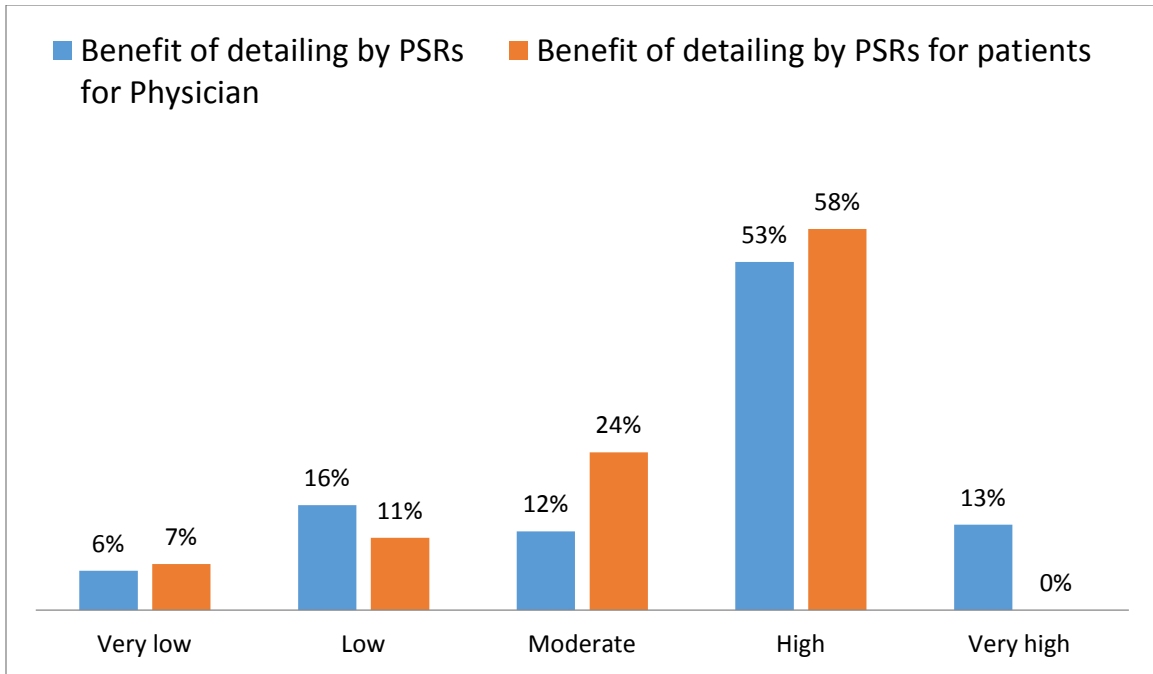


Figure 3 Percentage of respondents rating the benefit of detailing (drug information) by PSRs for physicians and patients

4.1.5 Descriptive analysis on item to measure Attitude towards Sample drug

The table below show that the mean score of physicians' Attitudes toward sample drugs of different group based on demographic characteristics. The mean score of attitude to sample drug of male and female is different 3.66 & 3.21 respectively. The average score of attitude to sample drug increase, though it gets up though age level. 26-35yrs age (3.4198), 36-45yrs age (3.5042), 46-55yrs age (3.75), and General practitioners (3.4619) and Specialists (3.5189). (3.4920) is the mean score of overall attitude level Physicians' hold toward sample drugs.

Table 11 Physicians' average attitude score toward sample drug by demographic Characteristics

Physicians' Attitudes toward sample drug			
Sex of Respondents	Mean	N	Std. deviation
male	3.6603	53	.58245
Female	3.2128	40	.51862
Total	3.4920	93	.59816
Age of respondents	Mean	N	Std. deviation
26-35	3.4198	42	.63506
36-45	3.5042	34	.59924
46-55	3.7500	17	.31980
Total	3.4920	93	.59816
Educational level of respondent	Mean	N	Std. deviation
General practitioners	3.4619	56	.64296
Specialists	3.5189	37	.55869
Total	3.4920	93	.59816

The overall attitude of physicians' attitude towards pharmaceutical promotional activities illustrated on (fig 5)

- The average score of physicians' attitude toward PSRs is 3.03, and it is in positive attitude range.
- The average score of physicians' attitude toward the gift is 2.78, and it is in negative attitude range.
- The average score of physicians' attitude toward detailing is 3.55, and it is in positive attitude range.
- The average score of physicians' attitude toward PSRs is 3.49, and it is in positive attitude range.

- The overall average score of physicians' attitude toward pharmaceutical promotion is 3.20, and it is in positive attitude range

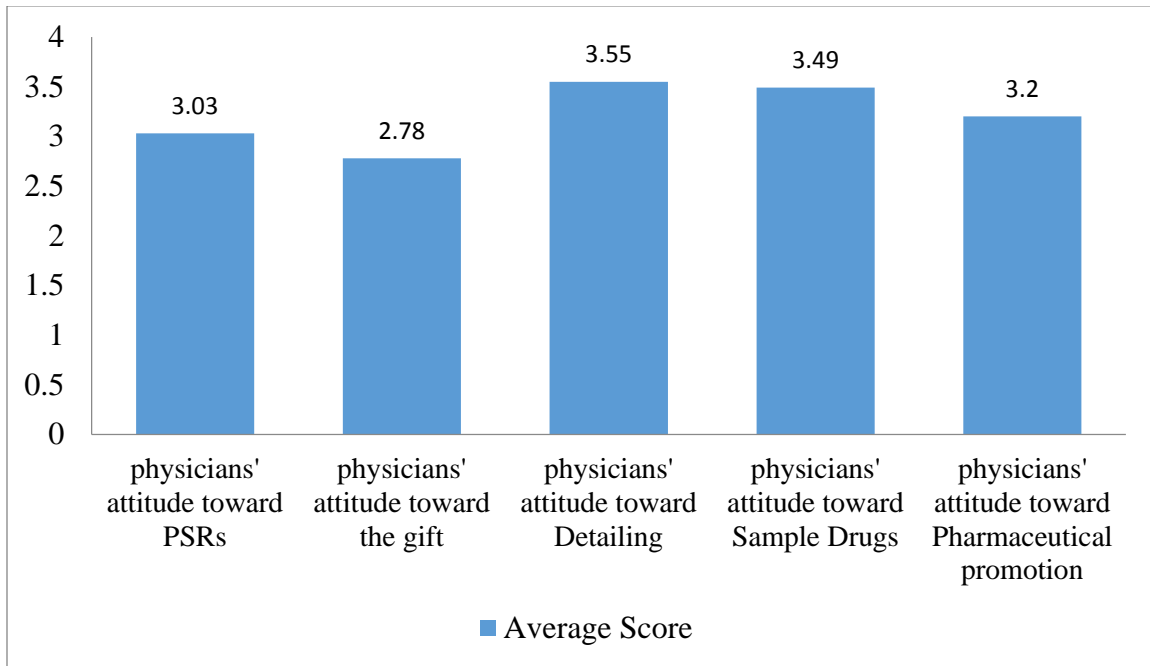


Figure 4 the overall attitude of physicians' attitude towards pharmaceutical promotional activities

4.2. Testing Hypotheses of the Study

The study uses Independent-sample t-test to analysis if significant difference between the mean attitudes scores of (Male physician and Female physician) and (General practitioners' and Specialists'). And one-way ANOVO to analysis if significant difference between the mean attitudes scores of different age groups. The hypotheses are stated as follows:

H1: There is no significant difference between the means of the male physicians' attitude score and female physicians' attitude mean score.

H2: There is no significant difference between the means of the General practitioners' attitude score and Specialists' attitude score.

H3: There is no significant difference among the means of physician's attitude score within the age groups (26-35yrs, 36-45yrs, and 46-55yrs).

4.2.1 Comparison of average attitude score between male and female respondents

The first hypothesis states that there is no significant difference between the means of the male physician's attitude score and female physicians' attitude mean score. To test this hypothesis, the independent sample t-test was conducted for the means of the two categories in the variable Gender.

Ho: There is no significant difference between the means of the male physician's attitude score and female physician's' attitude mean score.

Ha: There is significant difference between the means of the male physician's attitudes score and female physician's attitudes mean score.

Group Statistics

	Sex of Respondents	N	Mean	Std. Deviation	Std. Error Mean
Overall physicians attitude level	Male	53	3.2649	.27921	.03161
	Female	40	3.1229	.30440	.04440

Table 12 Independent Samples Test of equality of attitude means score of male and female Physicians

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		f	Sig.	t	Sig. (2taile)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Overall Physicians Attitude level	Equal variances assumed	0.027	0.869	2.663	0.009	0.14203	0.05334	0.03644	0.24762
	Equal variances not assumed			2.606	0.011	0.14203	0.05451	0.03375	0.25031

The calculated t value (2.663) greater than the critical value (1.9794 when a two tail test), which is the rejection area. Therefore, according to the test result, the null hypothesis is rejected and the alternative hypothesis is accepted, that states there is significant difference between the means of

the male physicians' attitudes score and female physicians' attitudes mean score. The confidence interval for the difference between the two groups' means is (0.03644 to 0.24762). The interval does not include zero, this again indicates that there is a significant difference between the means of the attitude level of the male physicians and the female physicians.

4.2.2 Comparison of average attitude score between General practitioners and Specialists

The second hypothesis states that there is no significant difference between the means of the General practitioners' attitude score and Specialists' attitude mean score. To test this hypothesis, the independent sample t-test was conducted for the means of the two categories in the variable Educational Level.

Ho: There is no significant difference between the means of the General practitioners' attitude score and Specialists' attitude mean score.

Ha: There is significant difference between the means of the General practitioners' attitudes score and Specialists' attitudes mean score.

Group Statistics

	Educational level of Respondents	N	Mean	Std. Deviation	Std. Error Mean
Overall physicians attitude level	General practitioners	56	3.1691	.33773	.04397
	Specialists	37	3.2494	.24930	.03069

Table 13 Independent Samples Test of equality of attitude means score of general practitioners and specialists

		Levene's Test for Equality of Variances		t-test for Equality of Means					
		f	Sig.	t	Sig. (2taile)	Mean Difference	Std. Error Difference	95% Confidence Interval of the Difference	
								Lower	Upper
Overall Physicians' Attitude level	Equal variances assumed	.847	.359	-1.524	.130	-.08036	.05273	-.18475	.02402
	Equal variances Not assumed			-1.499	.137	-.08036	.05362	-.18667	.02594

The calculated t value (-1.5240) less than the critical value (1.9794), when a two tail test is performed, which is the acceptance area of the distribution. The confidence interval for the difference of the means of the two groups is (-0.18475 to 0.02402), which is inclusive of 0. Therefore, the evidence fails to reject the null hypothesis.

4.2.3 Comparison of average attitude score between age groups

The third hypothesis states that the means of Physicians' attitude score of the age groups (26-35yrs, 36-45yrs, and 46-55yrs) are the same. To test this hypothesis, the one way ANOVA was conducted for the means of the age group in the variable Age.

Ho: There is no significant difference among the means of physician's attitude score within the age groups (26-35yrs, 36-45yrs, and 46-55yrs).

Ha: At least one of the means of Physicians' attitude score is different within the age groups

Table 14 ANOVA equality of attitude means score of age group

Overall Physicians' attitude level

	Sum of Squares.	Mean Square	F	Sig
Between Groups	.549	.274	3.246	.042
Within Groups	10.308	.084		
Total	10.857 124	124		

The p-value is 0.042, which is less than the significance level of 0.05, so we reject the null hypothesis.

The null hypothesis is that the means of the three age groups were the same, but we reject that, so at least one age group has a different mean.

The ANOVA doesn't tell which age is different, therefore post hoc tests was performed and determine that mean of age group 26-35yrs is different.

Table 15 Multiple Comparisons of mean of age group

Dependent Variable: Overall physicians' attitude level

Dunnnett t (2-sided)

(I) Age of Respondents	(J) Age of Respondents	Mean Difference (I-J)	Std.	Error Sig	95% Confidence Interval	
					Lower Bound	Upper Bound
26-35	46-55	-.23667*	.09293	.020	-.4381	-.0353
36-45	46-55	-.19667	.09192	.053	-.3959	.0026

*. The mean difference is significant at the 0.05 level.

a. Dunnnett t-tests treat one group as a control, and compare all other groups against it.

CHAPTER FIVE

SUMMARY and RECOMMENDATION

5.1. Summary

The benefit of promotion is indispensable both for marketer and customer as it is to communicate product information between seller and buyer. And it is useless to say that without promotion newly developed treatment options are not easily communicated to prescribers and users. However, in pharmaceuticals (medical) context it requires high ethical standards because decision maker (physician) and user (patient) are different, therefore pharmaceutical promotion may create conflict of interest. To avoid any conflict of interest and to act on medical ethics standards physicians became skeptical to pharmaceutical promotion and hold negative attitudes.

The study was conducted to assess the attitude of physicians toward pharmaceutical promotion. The analysis was performed to assess the overall attitudes of physicians toward pharmaceutical promotion and to each promotional activity (PSRs, Detailing, promotional gifts, and sample drug). The results show that the attitudes of physicians toward promotion are generally positive with a mean score of 3.2, just above the neutral point. Physicians' attitudes toward PSRs (3.03), detailing (3.55) and sample drug (3.49) are positive but toward promotional gifts (2.78) is below the neutral point, which is a mean negative.

The analysis of different subgroups depending on age, gender, and educational level reveals that different student groups have different mean attitude scores toward promotion, except for the group in the educational level.

The study identifies that (62%) of physicians received drug samples for patient use and almost all (94%) rate drug samples for patient use as appropriate gifts.

Gender was found to be significantly affecting the attitude of physicians toward the promotion. Therefore, from the study, it is understood that, however the overall attitude of physicians is in the positive attitude range, it is not strong. The mean attitude score toward gift (2.78) and PSRs (3.03) which is below the neutral point and equal to the neutral point respectively are implications that the promotional strategy used by pharmaceutical companies needs critical evaluation.

5.2. Recommendations

The recommendation is heading for the pharmaceutical marketer, pharmaceutical sales representatives, and physician.

- ❖ Pharmaceutical marketers should work to improve physicians' attitude for pharmaceutical promotion and make them have strong and positive attitude by designing standardized promotional activities. And continually assess the attitude of the physician toward the each of their promotional activities. Monitor their PSRs communication to ensure that it is up to standards rather than just look at sales generated. Because of the overall attitude toward pharmaceutical promotion is different between male and female groups and also different age groups marketers should design their approach accordingly.
- ❖ Drug information provided by PSR should be standard and provide all needed information of the medicine like indication, side effect, contraindication, and so on. When approaching the physician they have to consider age and gender to act accordingly.
- ❖ Physician should consider the benefit of the pharmaceutical promotion as easily accessible, cheap, up-to-date, new information source without compromising their professional ethics. Generally further studies needed on practicing physician both in public and private setting, the association between attitude and behavior in this context, factors of positive or negative attitudes by physician toward pharmaceutical promotion.

REFERENCES

Allport, G.W. (1935) Attitudes in C Murchison (Ed.) Handbook of Social Psychology (pp 798-784) Worcester MA: Clark University Press

Allsageer, M., & Kowalski, S. (2012), Doctors' opinions of information provided by Libyan pharmaceutical company representatives, Libyan Journal of Medicine, 7 Doi: <http://dx.doi.org/10.3402/ljm.v7i0.19708>

Anon., (2014). www.studymode.com. [Online] Available at: <http://www.studymode.com/essays/Ch04-Myers3Ce-64475041.html> [Accessed 10 12 2016].

Antonak, R.F. (1988) Methods to measure attitudes toward people who are disabled In H.E. Yuker (Ed.) Attitudes toward persons with disabilities (p 109- 126) New York: Springer Publishing Company

Baron, R. A. & Byrne, D. (1999) Social Psychology 9th edition, Allyn and Bacon

Bates, A., Bailey, E., and Rajyaguru, I. (2002) why pharmaceutical marketers must measure return on investment to ensure profitable e-Detailing campaigns. Journal of Medical Marketing, 2(4), 287-292.

Belch, George E. and Belch, Michael A., (2003). Advertising and promotion an integrated marketing communications perspective. 6th ed. New York: McGraw- Hill.

Deborah, K., Salomeh, K. & Ross, J. S., (2010). Physician attitudes toward industry: A view across specialists. Journal of American Medical Association Surgery, 145(6), pp. 570-577.

Donohue, J. M., Marsa, C. & Resenthal, M. B., (2007). A Decade of Direct-to consumer Advertising of Prescription Drugs. The new England journal of Medicine , 357(7), p. 6730681.

Eagly, A. & Chaiken, S., (1993). *The Psychology of Attitude*. Fort worth, TX: Harcourt Brace Jovanovich.

EMA, (2013). *The European Medicines Agency Code of Conduct*. 7 Westferry Circus , Canary Wharf , London E14 4HB , United Kingdom: European Medicines Agency.

Eaton, Gail and Parish, Peter (1976), General practitioners' views of information about drugs, *Journal of the Royal College of General Practitioners* 1976; 26:64-68.

FMHACA, (2012). *Ethiopian Food, Medicine & Healthcare Administration & Control Authority Directive for the Regulation of Promotion and Advertisement of pharmaceuticals number 15/2005*. Addis Ababa/Ethiopia: FMHACA.

Fugh-Berman, A., & Ahari, S. (2007) following the script: How drug reps make friends and influence doctors. *PLoS Med* 4(4): e150. Doi: 10.1371/journal.pmed.0040150

Gleitman, H. (1991) *Psychology* New York, NY: W.W. Norton & Company, Inc.

Hernandez, B., Keys, C., & Balcazar, F. (2000) Employer attitudes toward workers with disabilities and their ADA employment rights: A Literature Review *Journal of Rehabilitation*, Volume 66 (4) 4-16

Julie, M. Donohue, Marisa, Cevalco , and Meredith, B. Rosenthal, (2007) A Decade of Direct-to-Consumer Advertising of Prescription Drugs *N Engl J Med*; 357:673-681 August 16, 2007 DOI: 10.1056/NEJMsa070502

Karayanni, D., (2010). A cluster analysis of physician's values, prescribing behaviour and attitudes towards firms' marketing communications. *International Journal of Customer Relationship Marketing and Management*, 1(4), pp. 62-79.

Lieb, K. & Brandtönies, S., (2010). A Survey of German Physicians in Private Practice about Contacts with Pharmaceutical Sales Representatives. *Deutsches Ärzteblatt International*, 107(22), pp. 392-398.

Limu, Y. B. & Mark, K., (2010). Hybrid Detailing: A Proposed Model for Pharmaceutical Sales. *i-manager's journal on management*, v(1), pp. 35-41.

Lexchin, J., (1993). Interactions between physicians and the pharmaceutical industry: what does the literature say?. *CMAJ*, 149(10), pp. 1401-1407.

Manchanda, P. & Honka, E., (2005). The Effects and Role of Direct-to-Physician Marketing in Pharmaceutical Industry: An Integrative Review. *Yale journal of health policy, law, and ethics*, v(2), pp. 785-822.

McKinney, W., Paul, Schiedermayer, David, L., Lurie, Nicole, Simpson, Deborah E., Goodman, Jesse L., Rich, Eugene C., (1990) Attitudes of internal medicine faculty and residents toward professional interactions with pharmaceutical sales representatives, *JAMA* ; 264:1693-1697.

Mikhael et al., (2014). THE RELIABILITY AND ACCURACY OF MEDICAL AND PHARMACEUTICAL INFORMATION THAT WERE GIVEN BY DRUG COMPANIES THROUGH MEDICAL REPRESENTATIVES TO IRAQI PHYSICIANS. *International Journal of Pharmacy and Pharmaceutical Sciences*, 6(1), pp. 626-630.

Neeti, Kasliwal (2013) A Study of Psychosocial Factors on Doctors Prescribing Behavior - An Empirical Study in India e-ISSN: 2278-487X, p-ISSN: 2319- 7668. Volume 13, Issue, PP 05-10

Pharma Marketing Network, n.d. The Pharma Marketing Glossary. [Online] Available at: <http://www.glossary.pharma-mkting.com> [Accessed 9 12 2016].

Saurabh, S. K., n.d. iitk.ac.in. [Online] Available at:

<http://www.iitk.ac.in/infocell/announce/convention/papers/Changing%20Playfield-06>

Saurabh%20Kumar%20Saxena.pdf [Accessed 11 12 2016].

Saxena, S., (2015) “A Review Of Marketing Strategies Work By Different Pharmaceutical Companies” (<http://www.iitk.ac.in/infocell/announce/convention/papers/Changing%20Playfield-06-Saurabh%20Kumar%20Saxena.pdf>) access on 11/12/2016

Sergeant, Myles, Hodgetts, P. Geoffrey, Godwin, Marshall Walker, David, M. C., McHenry, Patty, (1996) Interactions with the pharmaceutical industry: a survey of family medicine residents in Ontario. Canadian Medical Association Journal; 155:1243-1248.

Shahu Ingole et al., (2011), Attitudes of Medical Students towards Relationship with Pharmaceutical Company: Do We Need A Change? International Journal of Pharma Sciences and Research (IJPSR) Vol.2 (2), 49-57

Siddiqui, U. T. et al., (2014). Attitudes of medical students towards incentives offered by pharmaceutical companies- perspective from a developing nation- a cross sectional study. BMC Medical Ethics, 15(36).

Sophie,J.,(2015). <http://smallbusiness.chron.com>. [Online] Available at:

<http://smallbusiness.chron.com/attitude-businesscommunication-66988.html>

[Accessed 12 12 2016].

SPHMMC, (2014). www.sphmmc.edu.et. [Online] Available at:

<http://www.sphmmc.edu.et/index.php/academic.html> [Accessed 12 12 2016].

STEVAN, VASILJEV & DARKO ,PANTELIC,(2010),Pharmaceutical Market(ing): Theory and Reality 'Club of Economics in Miskolc' TMP Vol. 6., Nr. 2., pp. 85- 91.

Strang, David, Gagnon, Micheline, Molloy, William, Bédard , Michel, Darzins, Peteris, Etchells, Edward, and Davidson, Warren (1996) National survey on the attitudes of Canadian physicians towards drug-detailing by pharmaceutical representatives, *Annals of the Royal College of Physicians and Surgeons of Canada*; 29:474-478.

Sultana, S. and Khosru, K. H, (2011). Practice of using gifts as promotional materials for marketing of pharmaceutical products in Bangladesh: A survey conducted on general physicians and representatives from pharmaceutical companies, vol 4(2): pp 13-18

Triandis, H.C., Adamopoulos, J., and Brinberg, D. (1984) Perspectives and issues in the study of attitudes In R.L. Jones (Ed.), *Attitudes and attitude change in special education: Theory and practice*. Reston, VA: The Council of Exceptional Children.

WHO and Health Action International , (2005). Drug promotion: What we know, what we have yet to learn *Reviews of materials in the WHO/HAI*. s.l.:s.n.

YAM, B. LIMBU & MARK, KAY (2010) HYBRID DETAILING: A PROPOSED MODEL FOR PHARMACEUTICAL SALES *i-manager's Journal on Management*, Vol. 5 | No. 1

Zaki, N. M., (2014). Pharmacists' and Physicians' Perception and Exposure to Drug Promotion: A Saudi Study. *Saudi pharmaceutical journal*, p. <http://dx.doi.org/10.1016/j.jsps.2014.02.008>.

APPENDIXES

Appendix A: Definition of Terms

Terms that need definition in this study are described herein under.

- **Attitude:** According to (Eagly & Chaiken, 1993) attitude defined as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor”
- **Detailing:** Detailing refers to the activity of pharmaceutical sales representatives (reps), when they make calls to physicians and provide them with "details" of approved scientific information, benefits, side effects, or adverse events, related to a drug (Pharma Marketing Network, 2015).
- **Detail:** "Detail" means that parts of an in person, face-to-face sales Call during which a Sales Representative, who is trained and knowledgeable with respect to the applicable Product, including its label and package insert, and the use of the applicable promotional materials, makes a presentation of such Product to a medical professional with prescribing authority. When used as a verb, "Detail" means to engage in Detailing activities. (Pharma Marketing Network, 2015)
- **Sample drug:** According to the Prescription Drug Marketing Act of 1987, the term "drug sample" means a unit of a drug, which is not intended to be sold and is intended to promote the sale of the drug. According to this act, the manufacturer or distributor of a drug subject may distribute drug samples by mail or common carrier to practitioners licensed to prescribe such drugs or, at the request of a licensed practitioner, to pharmacies of hospitals or other health care entities. The recipient of the drug sample must execute a written receipt for the drug sample upon its delivery and the return of the receipt to the manufacturer or distributor (Pharma Marketing Network, 2015).
- **Gifts:** A gift is understood to mean: A sum of money, or Any physical object, or The possibility to participate for free in events which are open to the public or are private in nature, are only accessible in return for payment and represent a certain value (such as complimentary tickets for sports events, concerts, theatre, conferences etc.), or Any other advantage with a pecuniary value such as transport costs (EMA, 2013).

Appendix B: Consent form

Consent Form for Participation in a Research Study St. Mary's University School of Graduate Studies

Title of Study “Attitudes of physicians towards Promotional Activities by Pharmaceutical Companies in Ethiopia: A Case of Yekatit 12 Hospital”

Description of the research and your participation

You are invited to participate in a research study conducted by Mulusew Yohannes. The purpose of this research is to understand the attitude of physicians to the pharmaceutical industry and recommend appropriate strategies. Your participation will involve filling the questionnaire and returning to the investigator.

Risks and discomforts

There are no known risks associated with this research.

Potential benefits

There are no known benefits to you that would result from your participation in this research.

Protection of confidentiality

There is no means to identify the individual respondent. However I will do everything I can to protect your privacy and your identity will not be revealed in any publication resulting from this study.

Voluntary participation

Your participation in this research study is voluntary. You may choose not to participate and you may withdraw your consent to participate at any time. You will not be penalized in any way should you decide not to participate or to withdraw from this study.

Contact information

If you have any questions or concerns about this study or if any problems arise, please contact Mulusew Yohannes at yohannesmulusew88@gmail.com cell Phone 0913312186

Consent

I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study.

Participant's signature _____ Date: _____

A copy of this consent form should be given to you.

Appendix C: Questionnaire

A Survey on Attitudes of physicians towards Promotional Activities by Pharmaceutical Companies in Ethiopia: A Case of Yekatit 12 Hospital

Dear Respondent,

The objective of this survey is to gather, analyze, and synthesize relevant, accurate, sufficient, and timely information that will provide insights about the.” Attitudes of physicians towards Promotional Activities by Pharmaceutical Companies in Ethiopia: A Case of Yekatit 12 Hospital:” The collected data will be applied for the study of leading to master’s thesis requirement in Business Administration.

This questionnaire consists of three sections: Section I deals with the general profile of the respondents, section II covers Attitude of physicians towards Pharmaceutical Sales Representatives (PSRs), section III Attitudes of physicians towards acceptability of gifts from pharmaceutical companies, section IV Attitudes of physicians towards Information from pharmaceutical (Detailing) and section V Attitudes of physicians towards Drug Samples

The information you provide in this survey will be used for the stated purpose and it will be held confidential. I appreciate your voluntary and valuable participation in this survey. I also thank you in advance for sharing your valuable experience and time in completing the questionnaire.

If you have any query you can contact me via Mob No: +251913312186

Sincerely

Mulusew Yohannes

1. General Information

Direction: Please select the appropriate response category by encircling the number against each question.

1.1 Sex 1.Male 2. Female

1.2 Age 1. 26-35 2. 36-45 3.46-55

1.3 Educational Level 1. General practitioner 2.Specialist

1.4. Department 1.Emergency 2. Out patient 3.Prevention infection

4. Inpatient 5.Gynecology & obstetrics

2. Attitude towards Pharmaceutical Sales Representatives (PSRs)

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	Parameter	SDA	DA	Neutral	DA	SA
2.1	PSRs provide accurate and useful information about drugs.	1	2	3	4	5
2.2	Interactions with PSRs don't influence physicians' prescribing behavior.	1	2	3	4	5
2.3	PSRs took over an important educational role in my institution.	1	2	3	4	5
2.4	PSRs use marketing techniques in their interactions with physicians.	1	2	3	4	5
2.5	I believe that PSRs, I met, were competent professionally and in their communication skill	1	2	3	4	5
2.6	Presentations made by PSRs should be forbidden in my institution.	1	2	3	4	5
2.7	An educator that works in my institution should participate as an observer in all presentations made by PRs.	1	2	3	4	5
2.8	I would keep my relationship with PSRs on the same level, even without the promotional activities, including social gatherings for dinner.	1	2	3	4	5
2.9	Interactions with PSRs don't influence my prescribing practice.	1	2	3	4	5
2.10	PSR promotional activities don't influence my prescribing practice.	1	2	3	4	5

3. Attitudes of Acceptability of gifts from pharmaceutical companies

3.1. Attitude towards appropriateness of accepting gifts

Direction: Please complete the following by ticking the appropriate box

S.N	Parameter	Absolutely Agree	Agree	Neutral	Disagree	Absolutely Disagree
3.1.1	Unacceptable for physician to receive gift	1	2	3	4	5
3.1.2	I would feel comfortable accepting gifts	1	2	3	4	5
3.1.3	It is appropriate to accept expensive gifts	1	2	3	4	5
3.1.4	It is appropriate to accept moderate gifts	1	2	3	4	5
3.1.5	It is appropriate to accept cheap gifts	1	2	3	4	5

3.2. Types of Gifts or Events accepted at least once and whether it is appropriate or not appropriate.

Direction: Please complete the following by ticking the appropriate box

S.N	Type of Gift or Event	Did you ever received (Yes/No)	Appropriateness of receiving	
			Appropriate	Not-appropriate
3.2.1	Drug sample for patients			
3.2.2	Medical textbook			
3.2.3	Medical pocket book			
3.2.4	Office supplies (pen, cup, notebook, etc.).			
3.2.5	Paid for trip to an educational conference			
3.2.6	Educational meeting with dinner			
3.2.7	Educational meeting with lunch (pizza, etc.)			
3.2.8	Drug sample for individual use			
3.2.9	Social gathering for dinner in a restaurant			
3.2.10	Airline ticket to vacation spot			

3.3. Five drugs from five different companies are identical in terms of price, efficacy and effectiveness.

I would preferentially prescribe a drug from one of the companies that provided me any gifts or incentives over those from companies that did not.

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

3.4. In my opinion, if five drugs from five different companies are identical in terms of price, efficacy and effectiveness. Other physician would preferentially prescribe a drug from one of the companies that provided them any gifts or incentives over those from companies that did not.

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

4. Attitudes towards Information from pharmaceutical (Detailing)

Direction: Please select the appropriate response category by encircling the number against each question.

4.1. Reliability and accuracy of medical representatives' information about promoted drugs

S.N	Type of Gift or Event	Very Weak	Weak	Moderate	Good	Very Good
4.1.1	Drug indication	1	2	3	4	5
4.1.2	Drug side effects	1	2	3	4	5
4.1.3	Drug contraindication	1	2	3	4	5
4.1.4	Drug dosing and route of administration	1	2	3	4	5

4.2. Benefit from drug promotion information to the Physician & Patient

Please complete the following by ticking the appropriate box

S.N	Parameter	Very Low	Low	Moderate	High	Very High
4.2.1	Benefit to physician	1	2	3	4	5
4.2.2	Benefit to patient	1	2	3	4	5

5. Attitudes towards Drug Samples

Direction: Please select the appropriate response category by encircling the number against each question.

S.N	Parameter	Strongly Disagree	Disagree	Neutral	Agree	Strongly agree
5.1	Drug sample permit quicker of therapy	1	2	3	4	5
5.2	Drug sample fulfill an educational role through demonstration	1	2	3	4	5
5.3	Drug sample are a source of medication for patients who cannot afford them	1	2	3	4	5
5.4	Drug samples serve to check the effectiveness of the medicine	1	2	3	4	5

Appendix D: The result of Reliability Test

Scale: ALL VARIABLES (PSRs)

Case Processing Summary

		N	Percent
Cases	Valid	93	100
	Excluded ^a	0	.0
	Total	93	100

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.777	10

Scale: ALL VARIABLES (Gift)

Case Processing Summary

		N	Percent
Cases	Valid	93	100
	Excluded ^a	0	.0
	Total	93	100

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.745	5

Scale: ALL VARIABLES (Detailing)

Case Processing Summary

		N	Percent
Cases	Valid	93	100
	Excluded ^a	0	.0
	Total	93	100

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.721	4

Scale: ALL VARIABLES (Sample Drugs)

Case Processing Summary

		N	Percent
Cases	Valid	93	100
	Excluded ^a	0	.0
	Total	93	100

a. Listwise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.783	4