ST. MARY'S UNIVERSITY

SCHOOL OF GRADUATE STUDIES,

DEPARTMENT OF MARKETING MANAGEMENT

ATTITUDES OF POSTGRADUATE STUDENTS TOWARDS PROMOTIONAL EFFORT BY PHARMACEUTICAL COMPANIES IN ADDIS ABABA: A CASE OF TIKUR ANBESSA SPECIALIZED HOSPITAL.

By

Animaw Sintayehu

ID NO.: SGS/00321/2010A

JUNE 2019

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Thesis submitted to St. Mary's university, school of graduate studies, and department of marketing management in Partial Fulfillment of the Requirements for the Degree of Master of Art in Marketing Management.

ADVISOR

GASHAW TIBEBE (PhD)

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Attitudes of postgraduate medical and pharmacy students towards promotional effort by pharmaceutical companies in Addis Ababa: a case of Tikur Anbessa specialized hospital.

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Approved by the Examining Board

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External Examiner ……. Signature……..

DECLARATION

I, Animaw Sintayehu declare that this work entitled "**Attitudes of postgraduate medical and pharmacy students towards promotional effort by pharmaceutical companies in Addis Ababa: a case of Tikur Anbessa specialized hospital**", is the outcome of my own effort and study and that all sources of materials used for the study have been acknowledged. I have produced it independently except for the guidance and suggestions of the Research Advisor. This study has not been submitted for any degree in this University or any other Universities. It is offered for the partial fulfillment of degree of Masters of Art in Marketing Management.

By: Animaw Sintayehu
Signature _____
Date _____

STATEMENT OF CERTIFICATION

This is to certify that the undersigned **Animaw Sintayehu** had carried out his research work on the topic entitled **" Attitudes of postgraduate medical and pharmacy students towards promotional effort by pharmaceutical companies in Addis Ababa: a case of Tikur Anbessa specialized hospital ".** The work is original in nature and is suitable for submission for the award of Master's Degree in Marketing Management.

Advisor: Gashaw Tibebe (PhD) _____

Date: _____

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LIST OF ACRONYMS/ABBREVIATION

CAGR: cumulative aggregate

CME: continuous medical education

DACA: drug administration and control authority

DTCA: direct to consumer advertising

EIC: Ethiopian investment commission

GC: Gregorian calendar

IMS: information management system

ITA: international trade association

OTC: over the counter

PSR: pharmaceutical sales representative

TASH: Tikur Anbessa Specialized hospital

USD: United States dollar

WHO: world health organization

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ABSTRACT

Drug promotion has to contribute to a more rational use of drugs. Concerns arise if promotion negatively influences prescribing/dispensing pattern. It is warranted to assess attitudes to promotional effort among pharmacists and physicians. This study is to describe the attitudes of post graduate pharmacy and medical students towards pharmaceutical sales representatives, promotional gifts, promotional detailing and drug sample. Descriptive study design Adopting a systematic randomized, single site cross-sectional survey, questionnaires were completed by the students. More students were agree pharmaceutical sales representatives used marketing techniques and competent professionally and in their communication skill. Medical pocket book and Medical text book were the most appropriate promotional gift. Drug sample was considered the source of medication for patient who cannot afford them and fulfill an educational role through demonstration*. The majority of the students participating in this study had a favorable attitude towards pharmaceutical sales representatives even though interaction with them and their activity influences their prescribing or dispensing behavior. Regarding the acceptability of gifts, gifts were considered unacceptable by the physicians and pharmacists with high percent given to expensive gifts. The Office supplies and Educational meeting with lunch were the most widely accepted gifts. The detailing benefit both the patient and professionals, despite accurate information were not given about drug side effect and contra indications. It is recommended pharmaceutical sales representatives should communicate unbiased scientific information. Their drug information should by balance to all needed information of the medicine like side effect and contraindication*

Keywords: attitude, promotional effort, post graduate medical and pharmacy students

CHAPTER ONE

INTRODUCTION

1.1. BACKGROUND

Drug promotion refers to all informational and persuasive endeavors by manufacturers and distributors, ultimately leading to provoke the supply, purchase and/or use of medications (WHO, 1998). 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. According to John Mack (2014), the 20 pharma companies that spent the most on total promotion, spent a total of $14,178 billion in 2014. 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 Eagly & Chaiken (2007) attitude defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor". Attitudes may be changed or developed during clinical practice. According to study by Austad, Avorn & Kesselheim (2011), certain attitudes appeared to change during medical school, though a time trend was not performed; for example, clinical students were more likely than preclinical students to report that promotional information helps educate about new drugs. Health professionals′ attitudes to promotion effort vary. Their opinions differ on the value of sales representatives, most doctors think information from pharmaceutical companies is biased, but

many think it is useful. Health professionals find small gifts from drug companies acceptable (Norris et al., 2005). Attitudes towards promotional effort are different for different profession. According to Zaki (2014) higher percentages of physicians than pharmacists were exposed to gifts from Pharmaceutical companies. The promotional gifts most appropriate in the opinion of the majority of physicians were conference registration fees and free drug samples .Whereas for pharmacists, the drug sample was the most suitable donation followed by text book and notepad. As Aliye and Bülent (*2014***)**, most of the pharmaceutical students found the gift articles given by the companies acceptable and think that financing the scientific researches by the pharmaceutical companies is ethical.

This survey attempts to assess postgraduate pharmacy and medical students' attitudes towards promotional effort by Pharmaceutical companies in Tikur Anbessa Specialized Hospital (TASH). TASH has been using as training site for medical doctors since1972.in 1998, the TASH, the largest referral hospital in the country, was transferred to the school by the federal ministry of health, and it has since become university teaching hospital. The TASH is now the main teaching hospital for clinical and preclinical training of most disciplines. It is also an institution where specialized clinical services that are not available in other public or private institutions rendered to the whole nation. The TASH has 200 doctors, 379 nurses, 700 beds and 115 other health professionals dedicated to providing health care service. The hospital has also 950 permanent and contract administrative staffs to support the hospital activities. The various departments, faculties and residents under specialty training in the school of medicine provide patient care in the hospital. In addition, almost all regional and federal hospitals in Addis Ababa are affiliated to school of medicine as clinical service and training site. (College of health science 2019)

Post graduate medical students are residents under specialty training in the school of medicine provide patient care in the hospital. Whereas postgraduate pharmacy students are those students from Addis Ababa University, college of health science, school of pharmacy at different department for master of pharmacy and provide patient care in the hospital.

Donohue, Marsa, & Resenthal, (2007) pinpoint that direct-to- consumer advertising (DTCA) of prescription medicines was introduced to USA and other developed countries in early1990s. But in Ethiopia DTCA is not started yet. According to Guideline for the Regulation of Promotion and Advertisement of Drugs in Ethiopia (2008), advertising prescription only drugs to the public is

prohibited and Advertising of non-prescription drugs intended for the public shall be limited to poster and stickers displays in pharmacies, licensed private and public health institution. Companies are only allowed personal selling effort by certified pharmaceutical company representatives only to health professionals i.e. In Ethiopia, to promote prescribed medicines, effort directed to health professionals is the only and legal promotional strategy used by the industry. In this context the act needed is prescribing and dispensing company's product based on information from pharmaceutical sales representatives (detailing), sample drugs, and other promotional activities. Hence, it is important to assess the attitude of practicing physicians and pharmacists towards promotional effort directed to them. 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. Pharmaceutical companies typically direct their promotional efforts toward physicians (Manchanda & Honka, 2013). Pharmaceutical companies also target the promotional effort towards pharmacist to alter the dispensing pattern, especially for OTC drugs. Pharmaceutical promotion in Egypt is intensely directed at prescribers and dispensers (KamalS.et al., 2015). Zaki (2014) identified that it is warranted to assess exposure and attitudes to, and acceptance of, drug promotion among pharmacists and physicians. As Aliye and Bülent (*2014*), the promotional activity of the pharmaceutical industry affects the behavior of the pharmacist and thus have different attitude towards the promotional effort.

Limu & Mark (2010) & Zaki (2014) identified that, the promotional efforts towards practicing physician and pharmacist include: pharmaceutical sales representatives (PSRs) communicate pharmaceutical and marketing information to physicians and pharmacists (detailing)), Provision of drugs at no cost (sampling), Provision of different kinds of gifts, and etc.

1.2. STATEMENT OF THE PROBLEM

Pharmaceutical manufacturers and distributors spend vast sums of money on promotion, including sales representatives, samples, advertisements in broadcast and print media and sponsorship of educational events and conferences. The detailing visits of pharmaceutical sales representatives to physicians and pharmacists combined with other promotional activities such as gifts, sponsored meetings and advertising might affect the attitudes towards the drug company and its medical products.

According to Zaki (2014), the majority of physicians or pharmacists have received gifts from pharmaceutical companies. As Al-Areefi et al (2013) and Mikhael et al., (2014). majority of practitioners expected both, good communication skills and knowledge from PSRs and at the same time nearly half of prescribers demanded CME and almost a third proportion demanded gifts, incentives and inducements from PSRs i.e. has positive attitude to PSRs. Norris et al., (2005), reviewed that doctors′ attitudes to promotion vary. 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. For pharmaceutical marketers it is important to know what holds in the hearts and minds of both physicians and pharmacists towards their promotional efforts (i.e. the attitudes towards pharmaceutical companies' promotional effort) to act accordingly.

According to Ethiopian investment commission 2018, there was a growth of investment by pharmaceutical companies in Ethiopia. Pharmaceutical manufacturing identified as priority sector in the second Growth and Transformation Plan. It is expected to grow at a CAGR of 15% to reach an estimated value of USD 0.9 billion by 2020. Having these plane on hand and assessment of attitude of doctors and pharmacists towards pharmaceutical companies promotional effort is worth full to design the appropriate promotional strategy in line with the target customers attitude. As shown in the studies the attitude of the physicians and pharmacists is not common to different promotional effort. So it is important to describe the attitudes of such target customer based on each promotional effort for the pharmaceutical marketer. It bridges the marketing perspective of the previous researches focused on medical ethical perspectives by proposing the best promotional strategies based on the results of the research. One study by Demeke et al. (2016), assessed only physicians attitude towards promotional effort. However, Pharmacists are important target customers for pharmaceutical firms especially to market OTC pharmaceuticals. This research may bridge this gap by including the pharmacists as target. In addition Demeke et al., (2016), was conducted the research in northern part of Ethiopia. So that, this paper can be used as additional evidence to the body of knowledge and could be the only evidence assessing the attitudes of pharmacists. The marketing managers can be benefited

through knowing the attitude of physicians and pharmacists for developing the marketing strategy and focusing to the specific promotional effort and the budget allocation accordingly.

Sample drug is one type of gifts commonly given to prescribers and dispensers during pharmaceutical promotion. From the researcher's experience, it is the most frequent gift given to prescribers. Researches also showed that most physicians and dispensers accept drug samples as gift. A systematic review by Fickweiler et al., (2017) stated that most common gifts received were drug samples. Most of the physicians who accepted drug samples had a positive attitude towards the pharmaceutical representatives. Accepting samples lead to higher branded drug prescription rather than generic prescribing. A qualitative study done in Yemeni by Al-Areefi et al. (2013,) reported that although physicians were aware that the PSRs could influence their prescribing decision, they welcome PSRs to visit them and consider receiving free samples as a normal practice. According to Zaki, (2014), the promotional gifts most appropriate in the opinion of the majority of physicians were conference registration fees and free drug samples; whereas for pharmacists, the drug sample was the most suitable donation. According to Demeke et al, (2016) study in northern Ethiopia, Mekelle; most of physician respondents reported that they accepted gifts from PSRs and of which, frequently accepted gifts drug sample is one. Based on these it is better to describe the attitude of physicians and pharmacists for drug sample separate from the types of gifts as one of the research objective.

1.3. BASIC RESEARCH QUESTIONS

Based on the back ground of the study and statement of the problem, the researcher formulated the following basic research questions.

- What are the attitudes of post graduate students towards pharmaceutical sales representatives?
- What are the attitudes of post graduate students towards promotional gifts?
- What are the attitudes of post graduate students towards pharmaceutical sales representatives detailing?
- What are the attitudes of post graduate students towards promotional sample drugs?

1.4. RESEARCH OBJECTIVE

1.4.1. GENERAL OBJECTIVE

The aim of the research is

- ✓ To describe the attitudes of post graduate students towards promotional effort by pharmaceutical companies.

1.4.2. SPECIFIC OBJECTIVES

The specific objectives are

- To assess the attitudes of post graduate students towards pharmaceutical sales representatives.
- To describe the attitudes of post graduate students towards promotional gifts
- To explain the attitudes of post graduate students towards pharmaceutical sales representatives detailing
- To assess the attitudes of post graduate students towards promotional sample drugs.

1.5. DEFINITION OF TERMS

Attitude: According to (Eagly & Chaiken, 2007) 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 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 (Limu& Mark, 2010)).

Drug promotion refers to all informational and persuasive endeavors by manufacturers and distributors, ultimately leading to provoke the supply, purchase and/or use of medications (WHO, 1998).

Sample drug: According to DACA of Ethiopia (2008) Guideline for the Regulation of Promotion and Advertisement of Drugs 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. It is prohibited to sell free medical samples. The information on the label of free medical samples should be consistent with the information approved by the Authority.

Gifts: Gifts from the PSR can be as innocuous as pens, note pads, medication samples, and fast food, or as substantial as travel, cash honoraria, and research support. Egregious, and recent noteworthy, examples include trips to lap-dancing clubs and cash awards for active prescribers of target drugs, (Day, 2006).

1.6. SIGNIFICANCE OF THE STUDY

This study will contribute to pharmaceutical companies specifically managers in charge of promotional activities in Ethiopia, helping them in grasping what attitudes physicians and pharmacists hold towards promotional activities. It is important to study physicians and pharmacists attitude because it helps the marketers to design their promotional activities in efficient and effective manner. Despite the numerous contributions on effect of promotional effort to attitudes of prescribers and pharmacists, to our knowledge, little research exists on attitude towards promotional effort here in Ethiopia in pharmaceutical markets, and the study could be regarded as body of knowledge for researchers. The study might also pave the way for further study on the effect of promotion on the prescribing and dispensing behavior of physicians and pharmacists respectively, thereby track for possible remedy to change, reduce even eliminate the negative attitude physicians and pharmacists had.

1.7. SCOPE OF THE STUDY

1.7.1. GEOGRAPHICAL SCOPE

The study had done in single site. It was done in TASH which is one of the largest referral public hospitals in Ethiopia. TASH is located in Addis Ababa, capital city of Ethiopia. All postgraduate medical students and post graduate pharmacy students who were practiced in the hospital were included. TASH was selected because not only its size, but also most of the students in TASH especially post graduate medical students were working in other private hospitals and clinics so that had exposures to promotional efforts. Most of the pharmacy students were also working in other private community pharmacies.

1.7.2. CONCEPTUAL SCOPE

The scope of the study is to describe the attitude of postgraduate medical and pharmacy students towards pharmaceutical company promotion effort. It was directed towards describing whether post graduate medical students (residents) and post graduate pharmacy students (pharmacists) attitude towards detailing, sample drugs, promotional gifts from pharmaceutical company and attitudes towards PSRs is favorable or not.

1.7.3. METHODOLOGICAL SCOPE

The study was conducted through self-administered survey questioners to post graduate medical and pharmacy students. After selecting the students through systematic sapling technique, a cross sectional survey technique was employed.

1.8. ORGANIZATION OF THE STUDY

The study was organized in the following ways. The first chapter has discussed introduction/background to the study, statement of problem, basic research questions, objective of the study, significance of the study, scope of the study, organization of the study and conceptual definition of terms. The second chapter has discussed review of related literatures from both theoretical frame work and empirical findings in addition to conceptual frame work. The third chapter has discussed research methodologies including research approach, research method and design, population, sampling technique and sample size, instrument of data collection, data collection procedure, methods of data analysis, reliability and validity and ethical considerations. Chapter four has presented results, analysis and discussions of the data; while chapter five was include conclusion of the study findings, recommendation of the study, limitation and future research area of the study.

CHAPTER TWO

LITERATURE REVIEW

2.1. THEORETICAL REVIEW

2.1.1. ATTITUDE AND ITS DEFINITION

There is no universally accepted and agreed definition of what attitudes are. Definitions of attitudes include the following: according to Eagly & Chaiken (2007) attitude is defined as "a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor". "Attitudes are relatively stable mental positions held toward ideas, objects or people" (Gleitman 1991).Attitude is an idea charged with emotion which predisposes a class of actions in particular class of social situations" (Antonak, 1988, p.109). An attitude is a mental or neural state of readiness, organized through experience, exerting a directive or dynamic influence on the individual's response to all objects and situations to which it is related (Allport, 1935). "An attitude is an idea (cognitive component) charged with emotion (affective component) which predisposes a class of actions (behavioral component) to a particular class of social situations" (Triandis et al, 1984, p. 21).

Several attitude change categorization schemes have been proposed in the literature and most are similar. Vishal (2014) stated attitude as positive or negative mental and neural readiness towards a person, place, thing or event. It consists of three components: Affective component, Behavioral component and Cognitive component. A proposed 3D (Three-Dimension) model of attitude is based on the various combinations of Affect (Feeling), Behavior (Dealing), and Cognitive (Meaning) components of attitude. These three components of attitude are essential and must be taken into consideration. When these three components join together, they construct an overall attitude about an object.

Attitudes are a popular research topic in advertising/marketing studies for at least two reasons: First, they are useful in predicting consumer behavior and second, several theoretical frameworks for the study of attitudes are available from social psychology researchers. Attitude toward the brand and purchase intentions are two pivotal and popular constructs that have been routinely

used by advertising scholars and practitioners. (Nancy and Surendra (2004)). As Norris et al.,(2005) reviewed researches on pharmaceutical promotion**,** 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.

2.1.2. PHARMACEUTICAL MARKET AND MARKETING

The pharmaceutical industry is comprised of companies engaged in researching, developing, manufacturing and distributing drugs for human or veterinary use (ITA, 2016). The pharmaceutical market represents one of the most dynamic and controversial markets. Its specific features are rooted in the specific nature of its products and in the complex interests of the main constituents of market demand (Vasiljev and Pantelic (2010)). Similar to other industries, the main objective of pharmaceutical marketing is to increase the profit ability of the organization by accommodating the needs and wants of consumers. The pharmaceutical market is growing from time to time. It is estimated that the world wide prescription drug market had under ling growth (Hall.et al (2018)). The role of medicines in healthcare systems globally is becoming more important as innovative treatments become available to address unmet clinical needs at the same time that economic development and the imperative of universal health coverage become drivers of expanded access. (IMS, 2017)

Emerging conditions with the potential to spur innovations for access to medicines Seeing Africa as a single cluster for investment purposes obscures the country-specific contexts where the opportunities are ripe for advancements in the pharmaceutical sector due to changes and reforms in the institutional underpinnings.(Ahen & Salo-Ahen, 2018).

There is a growth of investment by pharmaceutical companies in Ethiopia. Pharmaceutical manufacturing identified as priority sector in the second Growth and Transformation Plan. In 2015, the Ethiopian pharmaceutical market was estimated to be valued at $450M. It is expected to grow at a CAGR of 15% to reach an estimated value of USD 0.9 billion by 2020. (EIC, 2018)

According to Norris et al., (2005) and Limbu & 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 and pharmacists 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 physicians and pharmacists in understanding specific patient therapeutic options. The marketing activities towards physicians and pharmacists comprise: Face to calls, where PSRs communicate pharmaceutical and marketing information to physicians (detailing) Limbu & Key (2010), Provision of drugs at no cost (sampling) Zaki, (2014), Provision of different kinds of gifts, to physician and pharmacists.

2.1.3. OVERALL ATTITUDE LEVEL TOWARDS PHARMACEUTICAL PROMOTION

Pharmaceutical companies typically direct their promotional effort to physicians and pharmacists to alter their prescribing and dispensing pattern (Manchanda & Honka, (2013), Zaki (2014) and Kamal et al. (2015). As Aliye and Bülent (*2014***)**, the promotional activity of the pharmaceutical industry affects the behavior of the pharmacist and thus have different attitude towards the promotional effort. Norris et al., (2005), stated in the related literature review of conclusions, physicians' attitudes to promotion vary, and do not necessarily match their behaviours. Their opinions differ on the value of sales representatives, on whether they should be banned during medical training and on whether physicians 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. Most believe that drug representatives or gifts do not influence them personally, but do influence many colleagues.

Limu & Mark (2010) & Zaki, 2014) identified that, the promotional efforts towards practicing physician and pharmacist include: PSRs communicate pharmaceutical and marketing information to physicians (detailing)), Provision of drugs at no cost (sampling), Provision of different kinds of gifts, and etc.

2.1.4. ATTITUDE TOWARDS PSRS

Drug firms have to keep their relations with physicians and pharmacists good so as to increase their market share. This is the fundamental reason for employing pharmaceutical sales representatives in the marketing of drugs (KHAN *et al*, 2016 and Tengilimoglu.et al. 2017).

Researches showed that physicians has positive attitude towards pharmaceutical sales representatives. The main reasons stated for allowing medical representatives' visits are the social contacts and mutual benefits they will gain from these representatives. They also emphasized that the meeting with representatives provides educational and scientific benefits. (Al-Areefi et al. ,2013, KHAN *et al*, 2016 and Fickweiler F.et al., 2017). Although both pharmacists and physicians mostly felt that drug company sponsored talks were biased in favor of the company's product, they did not appear to restrict contact with PSRs or to feel that they would be improperly affected in their professional practice (Zaki, 2014).

Studies done in Egypt shows pharmacists working in privately owned pharmacies appear to have a pragmatic attitude towards pharmaceutical promotion. This is interpreted as giving lower relevance to medicine samples or personal experience and probably more weight to professional recommendation, textbooks or academic journals. It seems that physicians have negative (at one extreme) to neutral (at the other) attitudes toward pharmaceutical sales representatives (Manchanda & Honka, 2013). Pharmacists appeared more aware of pharmaceutical promotion's impact on medicine prescribing, but felt helpless to interfere with doctor's prescription habits influenced by pharmaceutical marketing (Kamal.et al., 2015).

2.1.5. ATTITUDE TOWARDS PROMOTIONAL GIFTS

Gifts from the PSR can be as innocuous as pens, note pads, medication samples, and fast food, or as substantial as travel, cash honoraria, and research support. Egregious, and recent noteworthy, examples include trips to lap-dancing clubs and cash awards for active prescribers of target drugs, (Day, 2006). Physicians they welcome representatives to visit them and consider receiving free samples, gifts and various kinds of support as a normal practice (Al-Areefietal., 2013).
According to Norris et al., (2005) review of literature; the studies suggest that there is a range of views about gifts but a tendency for gifts that were smaller or more relevant to helping patients to be regarded as more acceptable. On a review of literatures Fickweiler.et al., (2017), conference registration fees, informational luncheons, sponsorship of departmental journal clubs, anatomical models and free drug samples were considered as appropriate gifts. The majority of physicians or pharmacists participating in the study that Fickweiler.et al., (2017) had reviewed, have received gifts from pharmaceutical companies. The drug samples and printed educational materials are the most widely accepted gifts in a study of Zaki, (2014). According to Demeke et

al. (2016) study on physicians in northern Ethiopia, Mekelle majority of the respondents reported that they accepted gifts from PSRs.

2.1.6. ATTITUDE TOWARDS DETAILING

Pharmaceutical companies have traditionally engaged in extensive personal selling to physicians, known as drug detailing. Detailing refers to the activity of 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. (Limu & Mark, 2010). The classic role of detailing is to provide (medical) information to a physician. This information ranges from awareness-building to detailed technical information (Manchanda & Honka, 2013). 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 Francer et al., (2014). Regarding the drug detailing and information, physicians' largely expected that the PSRs should have good knowledge about their drug products as well as they must also exhibit good communication skills (KHAN *et al.,* 2016). According to Norris et al., (2005) review of literature about health professionals think about the quality of the information provided by sales representatives, some of the psychiatry trainees agreed that sales representatives provide useful and accurate information on new drugs and many of family medicine residents felt that the literature provided by sales representatives was useful. According to study by Kamal.et al., (2015) detailing is important to the doctors. The respondents state their feeling about detailing as "Detailing is important. To be able to prescribe a medicine it is important that the PSRs visit me once or twice to remind me of the medicine." in the in-depth interview, one pharmacist characterized detailing as: "The PSRs describe the medicine and its mechanism of action and they quite often compare it with their competitors. I do not think this is a good thing as they promote their medicine and make the competitor look bad. If there is a patient at the pharmacy at that time, they could be influenced by this." In a study of Zaki (2014) conclusion, it was obvious that significantly more pharmacist participants perceived drug companies as a useful way to gain knowledge about drugs than physicians.

In some studies the information provided by PSRs was not complete. A study in Libya by mustefa and Stefan (2012), most of respondents indicated that contraindications, precautions,

interactions and adverse effects of products promoted by PSRs were never or rarely mentioned during promotional visits, and majority of respondents indicated that an alternative drug to the promoted product was never or rarely mentioned by the representatives.

2.1.7. ATTITUDE TOWARDS SAMPLE DRUGS

According to DACA of Ethiopia (2008) Guideline for the Regulation of Promotion and Advertisement of Drugs, drug samples can be used for promotional purpose only after the drug is registered and market authorized by the authority. Samples may be provided to health personnel and labels of drug samples intended for, promotional purposes must state in Amharic and/or English that they are free samples not intended for sales. It is prohibited to sell free medical samples. The information on the label of free medical samples should be consistent with the information approved by the Authority. Distribution of samples (both for prescription only and OTC) at medical, pharmaceutical congresses, symposia and exhibitions is prohibited. Postal sampling is prohibited.

Researches show that physicians and pharmacists has positive attitude towards the sample drug given as a gift. Most of the physicians who accepted drug samples had a positive attitude towards the pharmaceutical representatives. In the review by Fickweiler .et al., (2017), to explore interactions between physicians and the pharmaceutical industry including sales representatives and their impact on physicians' attitude and prescribing habits; Most of the physicians who accepted drug samples had a positive attitude towards the pharmaceutical representatives and accepting samples lead to higher branded drug prescription rather than generic prescribing. According to Al-Areefi et al. (2013), Physicians they welcome representatives to visit them and consider receiving free samples. As Norris et al., (2005) reviewed; free samples affected their prescribing. A study from Saudi show pharmacists exposed to drug sample less than doctors. Free drug samples were the gifts most commonly received by physicians whereas pharmacists reported that the most frequent gifts they received from pharmaceutical companies were non-educational gifts however, in appropriate ness of gifts, pharmacists' shows that the drug sample was the most suitable donation (Zaki, 2014). According to Demeke et al, (2016) study on physicians in northern Ethiopia, Mekelle; most of physician respondents reported that they accepted gifts from PSRs and of which, frequently accepted gifts drug sample is one.

2.2. EMPIRICAL REVIEWS

2.2.1. ATTITUDE TOWARDS PSRS

A qualitative study from Egypt shows physicians had a positive attitude towards PSRs. They described as “It is a business relationship”; “It is a cautious relationship based on mutual benefit. They offer some benefits e.g. by inviting you to attend conferences, symposia on medicines. Sometimes they give out gifts or free medical samples. So there is a benefit for the physician”; or “Detailing is important. To be able to prescribe a medicine it is important that the rep visits me once or twice to remind me of the medicine.” However, Pharmacists had various attitudes towards pharmaceutical promotion. One pharmacist characterized pharmaceutical promotion as follows: “The PSRs describe the medicine and its mechanism of action and they quite often compare it with their competitors. I do not think this is a good thing as they promote their medicine and make the competitor look bad. If there is a patient at the pharmacy at that time, they could be influenced by this” (Kamal.et al., 2015).

Across sectional study done in Pakistan to asses Perceptions and Attitudes of Prescribers Regarding PSRs Promotion, when the prescribers were asked about their expectations from a PSRs they expected good communication skills of drug detailing (12%) and evidence base behind the drug being promoted (4.8%) while the majority believed (83.2%) that both the qualities should be exhibited by medical sales representatives. When they were asked about their demands from PSRs, they were initially skeptical about the response and only (36%) demanded gifs, incentives as inducements while the majority (52.7%) demanded continued medical education CME as inducements making up a majority (88.7%) who demanded inducements. The rest (11.3%) did not demand anything and prescribed drug solely on knowledge. (KHAN *et al* (2016)).

A study done in Yemeni by in-depth interview show most physicians accepted PSRs’ visits regardless of their company origin or whether they planned to prescribe the representatives’ products. Physicians rarely avoid or refuse visits from PSRs. Only one of the 32 physicians in the study has never received visits from PSRs (Al-Areefi et al. (2013,).

In the review different literatures by Norris et al., (2005), most (71%) psychiatry trainees surveyed disagreed that PSRs should be banned from making presentations in their training

programme. In another literature from the review, most directors of internal medicine residency programme (67%) felt that the benefits of PSRs outweighed the negative effects. Forty-two per cent felt that curtailing sales representative interactions with residents would jeopardize company sponsorship of other departmental activities. However on one study in the review, of the internal medicine faculty and residents surveyed, 52% of faculty and 66% of residents agreed that presentations by sales representatives should be banned at their institutions.

2.2.2. ATTITUDE TOWARDS PROMOTIONAL GIFTS

Across sectional study done in turkey on pharmacy students shows that the students' have positive attitude towards the different promotional gift. However, the degree of preference was varying depending on the types of gift. 61.7% of the student agree the acceptability of participating in the social activities such as dinners arranged by the company, 66.2% agreed that it is appropriate to accept the gifts for educational purpose distributed by companies, 62.2% of the students thought that it is appropriate to accept drug samples given by the companies and 63.2%of the students agreed that it is appropriate to accept books, journals and other educational materials distributed by the companies Aliye and Bülent (*2014*). In a systematic review by Austad, Avorn and Kesselheim (2011) on medical students' exposure to and attitude about the pharmaceutical industry, a substantial proportion of students (13%–69%) were reported as believing that gifts from industry influence prescribing.

According to the study by KHAN *et al* (2016), on Perceptions and Attitudes of PSRs and Prescribers Regarding Pharmaceutical Sales Promotion and Prescribing Practices in Pakistan; when the prescribers were asked about their demands from PSRs, they were initially skeptical about the response and only (36%) demanded gifs, incentives as inducements while the majority (52.7%) demanded continued medical education CME as inducements making up a majority (88.7%) who demanded inducements. The rest (11.3%) did not demand anything and prescribed drug solely on knowledge. In the review of literatures by Norris et al., (2005) most (55%) of the family medicine residents said that they would attend a private dinner with a sales representative paid for by a company. Thirty-six per cent felt that gifts from sales representatives to doctors resulted in higher drug costs for patients. The doctors felt that smaller gifts were more appropriate than more valuable ones. Of the Canadian doctors surveyed 85% agreed that sales

representatives should be able to offer free samples, but 74% felt they should not be able to offer all-expenses-paid trips to meetings organized by companies. More than half of the residents in another survey reported accepting gifts such as textbooks because they needed financial assistance with their education. Seventy-eight per cent of programme directors and 92% of students believed it was appropriate to accept textbooks from drug sales representatives. Twenty-five per cent of resident doctors in Virginia in one survey study said they would not want patients to know that they had received gifts and awards from drug companies and would try to hide this.

A Saudi study by Zaki, (2014) on pharmacists and physicians perception and exposure to drug promotion found that, the promotional gifts most appropriate in the opinion of the majority of physicians were conference registration fees and free drug samples (67% and 66%, respectively; $p < 0.01$). Whereas for pharmacists, the drug sample was the most suitable donation (79%) followed by text book (67%) and notepad (63%) ($p < 0.05$). Interestingly, expensive gifts were considered to be the least appropriate by the participants of both groups (18% physicians and 21% pharmacy staff). Generally, there was a similar pattern in perception of both groups about the appropriateness of gifts but with different proportions in each group.

Other study on medical student confirmed the majority of all students felt it was inappropriate to accept a vacation package, a gift greater than $50, an expenses-paid social outing, covered travel costs to a conference, or small, non-educational gifts. Free meals, textbooks, medication samples, grants for student-initiated events, and sponsored research were viewed with greater acceptance, as <50% of respondents felt these gifts were inappropriate (Cody, et al., 2010). Other study from Pakistan identified 81% of medical students' favored pharmaceutical sponsorship of student-body events/seminars at medical colleges. And more than one-third of the students were comfortable receiving gifts from drug companies (Siddiqui. et al., 2014).

2.2.3. ATTITUDE TOWARDS DETAILING

In in-depth interview of Al-Areefi et al. (2013,) one physician said that "in the current situation, when representatives visit me, first, he explains the medicine because I do not have enough information about it. Shows the latest studies that have been conducted. He may show me information that I do not know at all." in another qualitative study done in Egypt, one pharmacist

describes the detailing of PSRs as "The PSRs describes the medicine and its mechanism of action and they quite often compare it with their competitors. I do not think this is a good thing as they promote their medicine and make the competitor look bad. If there is a patient at the pharmacy at that time, they could be influenced by this." Another pharmacist added: "In Egypt, promotion is about financial promotion, not ethical promotion. So it is about how much profit you make, not whether this is an effective medicine. Is the medicine being promoted the best in the market? I doubt it." In this study one physician also said "I think it is a bit misleading, the information they give. They are trying to sell a product, so they overrate it. The information is not wrong but they only talk about the positive things." Another physician said: "I don't think they write any wrong information, they only show the benefits in big font and colors, but the drawbacks are not listed" Kamal.et al., (2015).

A study in Saudi showed that significantly more pharmacist participants perceived drug companies as a useful way to gain knowledge about drugs than physicians (75% vs. 65%; $p < 0.01$) (Zaki, 2014). In the integrated review of the effects and Role of direct-to-Physician marketing in the pharmaceutical Industry by Manchanda & Honka, (2013), In general, physicians perceive detailers to be useful sources of information. A Survey of Canadian physicians, Forty-six percent of the respondents considered detailing the most informative and/or acceptable form of drug promotion. Among the general practitioners, 56% ranked it first while only 37% of the specialists did so. Only 13% considered detailing as the least informative and/or acceptable form of drug promotion. Twenty-four percent of the physicians (18% specialists, 31% general practitioners) stated that detailing and other spoken forms of manufacturers' advertisements were their preferred choice of information on new drugs.

In the assessment of Libyan doctors' opinion about drug information quality provided by PSRs, Approximately, 40% of respondents indicated that contraindications, precautions, interactions and adverse effects of products promoted by PSRs were never or rarely mentioned during promotional visits, and 65% of respondents indicated that an alternative drug to the promoted product was never or rarely mentioned by the representatives. More than 50% of respondents (n=310, 51%) reported that PSRs were not always able to answer all questions about their products (mustefa and Stefan (2012)).

A study in Ethiopia by Demeke et.al (2016) on influence of PSRs on prescribing practices in Mekelle, Northern Ethiopia revealed that 48.2% of the physicians believed that their prescribing behaviors were influenced by visits of PSRs although two third (65%) of the physicians were not satisfied in the current way of drug promotion. More than 84.3% of information provided by medical representatives to physicians is about the brand name of a product followed by approved drug indication, 30.1%. On the contrary, the physician received scarce information on drug contraindications, interaction and precautions from PSRs with 4.8%, 4.8% and 6% respectively.

2.2.4. ATTITUDE TOWARDS SAMPLE DRUGS

Different studies show that physicians and pharmacist had positive attitude towards the sample drug as promotional gift. A Saudi study by Zaki, (2014) on pharmacists and physicians perception and exposure to drug promotion found that, the promotional gifts most appropriate in the opinion of the majority of physicians were conference registration fees and free drug samples (67% and 66%, respectively; $p < 0.01$). Whereas for pharmacists, the drug sample was the most suitable donation (79%) followed by text book (67%) and notepad (63%) ($p < 0.05$). Likewise according to the study by KHAN *et al* (2016), on perceptions and attitudes of PSRs and prescribers regarding PSRs Promotion and prescribing practices in Pakistan, when the PSRs asked; Out of all of the unethical demands of prescribers from the PSRs (63.8%) considering it as a whole (63.8%=100%), it was reported by the PSRs that almost all prescribers demanded the samples of the medicines being promoted. A systematic review by Norris et al., (2005) in review of Canadian doctor surveyed; Of the Canadian doctors surveyed 85% agreed that sales representatives should be able to offer free samples.

A study in Ethiopia by Demeke et.al (2016) on influence of PSRs on prescribing practices in Mekelle, Northern Ethiopia revealed that 50.6% of physician respondents reported that they accepted gifts from PSRs and of which, frequently accepted gifts drug sample (30.7%) is one. In Kamal.et al., (2015) study Physicians commonly accepted free samples of medicines as beneficial for patients, since they distributed them among the poor or charity institutions. One physician asserted: "For an antibiotic, if you give the patient one box and ask him to buy another box to complete the course of treatment, you are guaranteed that the patient will buy the box for sure from this company. And you save the patient some money, so it is a great thing."

CHAPTER THREE

RESEARCH METHODOLOGY

This chapter discusses the research methodology used for conducting this research. The research approach, research design, population and sample of the study, the type of data to collect and instrument to use, methods of data analysis are specified. Finally, ethical issues related to the study are explained and justified.

2.3. RESEARCH APPROACH

Research can be classified in to two based on its approach. These are qualitative research and quantitative research. Quantitative research is the systematic and scientific investigation of quantitative properties and phenomena and relationships. Quantitative researchers favor methods such as surveys and experiments. Therefore the researcher chose quantitative research approach to describe the attitude of post graduate medical and pharmacy students towards promotional effort by the pharmaceutical company quantitatively.

2.4. RESEARCH DESIGN

Based on the purpose of the research, a research design can be divided into four. These are descriptive, correlation, explanatory and exploratory. Descriptive research attempts to describe systematically a situation, problem, phenomenon, service or programme, or provides information about , say, living condition of a community, or describes attitudes towards an issue. The researcher used a cross-sectional study design in order to get quantitative description of post graduate medical and pharmacy students' " attitude towards pharmaceutical companies' promotional effort." The study used both post graduate pharmacy and Postgraduate medical students' at" TASH" in Addis Ababa, capital city of Ethiopia as unit of observation. This data was collected from February19- march19, 2019 GC. TASH was selected because it incorporates post graduate students in both fields from other area of the country from different universities because of its higher specialty center in addition to students from Addis Ababa University. This is important for the diversity of the study population coming from different areas of the country. The survey method is employed to collect the primary data from the students.

2.5. POPULATION, SAMPLE SIZE AND SAMPLING TECHNIQUE

In Ethiopia promotional effort is targeted towards physician or trainee physician in hospital setting. Currently they also target pharmacists. The target populations of the study were all postgraduate pharmacy 2018/2019 year student and all residents 2018/2019 year at TASH. This population includes students from year one to be graduated student in both pharmacy and medical. Residents from the radiology department are not included as because of the fact that they were not as such prescriber of medicines for the patient. according to college of health science 2018/2019 GC registrar data; there were pediatrics residents, general surgery residents, internal medicine residents, emergency medicine residents, gynecology and obstetrics residents, oncology residents, orthopedic surgery residents and neurosurgery residents with total of 713 post graduate medical students were registered and on education and work. Regarding post graduate pharmacy students, the registrar data of 2018/2019 GC recorded as social pharmacy, analytical and medicinal chemistry, pharmacology and clinical pharmacy, pharmacognosy and pharmaceutics and industrial pharmacy postgraduate students in a total of 326 were registered and on education at the time of data collection.

The target population of this study is finite but too large to conduct censes. There for, sampling is required. In this research levels of confidence for the survey is 95% and the confidence interval is set at 5%. Since the population proportions are not known are set to 0.5 each. The area under normal curve corresponding to the desired confidence leve1 in this case 95% is set to 1.96 which can be found in statistical tables. In order to get proportion number of students from each filed, sampling and sample size determination was performed separately for the pharmacy and medical students. There for the total sample size is the sum of the sample of pharmacy students and sample of medical students.

By using finite population sample size calculation formula suggested by Daniel (1999), the number of pharmacists and physicians were determined.

$n=N*x/(x+N-1)$

Where: n= sample size

N=population size

X=z$\alpha/2^2 * p(1-p)/MOE^2$

$Z\frac{\alpha}{2} = the\ critical\ level\ of\ the\ norma\ desterbution(1.96)$

P= the sample proportion (0.5) and MOE= margin of error (0.05)

By using the above formula, from 326 postgraduate pharmacy students; 177 students and from 713 post graduate medical students; 250 students; with a total of 427 students as sample size is calculated. To do sapling the students in each field were all listed in alphabetical order and every 2^{ndth} student is intercepted systematically (163) for pharmacy students and every 3^{rdth} student is intercepted systematically (238) for medical students to give probability of being chosen in the sample for the students thus, 401 questioners were administered. Form the previous similar studies done by Zaki, (2014); the sample size was 400 with the response rate of 63% done at multiple sites. The researcher here took 401 as sample size by expecting greater response rate.

2.6. INSTRUMENTS OF DATA COLLECTION

A structured survey questionnaires were used those adopted from previous research works Eyosias (2015) with cronbach's alpha 0.777.The instrument was having five parts that contain a total of 40 items. Part one present question about demographic characteristics of the respondents and years of professional experience 4 items. Part two present questions about attitude towards PSRs in order to know physicians and pharmacists attitudes and behaviors towards the PSR 10 items in 5 point Likert scale style (5 Absolutely agree to 1 Absolutely disagree, also there is reverse rating) . Part three present items measuring the attitude toward the appropriateness of gifts, appropriate types of gifts and types of gifts once accepted in which 16 items in 5 point Likert scale style (5 Absolutely agree to 1 Absolutely disagree, also there is reverse rating) for appropriate ness of gifts and yes/no for types of gifts once accepted in addition to the appropriate / inappropriate option. Part four presents questions about detailing 6 items in 5 point Likert scale style (5 very good/very high to 1 very poor/very low, also there is reverse rating). Part five presents questions about sample drugs 4 items in 5 point Likert scale style (5 Absolutely agree to 1 Absolutely disagree, also there is reverse rating). The questionnaires adopted without language translation but the final tool was checked with 35 students' pilot test and minor correction was

performed (correcting age group, inserting full text for abbreviations which was not known by students.)

2.7. VALIDITY AND RELIABILITY

Validity: - is defined as the extent to which a measurement represents characteristics that exists in the phenomenon under investigation. The scales that are used for this study are valid scales adopted from previous researches.

Reliability: - is the extent to which a measurement reproduces consistent results if the process of measurement were to be repeated. In order to check the internal consistency of the instrument, a pilot study was conducted on 35 respondents and reliability test was done using Cronbach's Alpha. Based on the pilot survey the result for cronbach's alpha was found 0.719 values.

2.8. SOURCES OF DATA AND COLLECTION PROCEDURE

The study depends on the primary data collected through self-administered questionnaires survey. Questionnaires are applied usually for descriptive, which identify and describe the attitude towards certain issue. Self-administered survey questionnaires were distributed to all representative sample postgraduate pharmacy and medical students who have attachment in TASH on the month of February19- march19, 2019 GC. This was done before and after morning meeting for medical students and after class for pharmacy students after getting the consent from both department heads and the students. After administration of the questioners, the data collector (researcher) takes the phone number of the respondents to follow up the return of the questioners. Voluntary friends who work in TASH help in the collection process of the questioners.

2.9. METHOD OF DATA ANALYSIS

Regarding the analysis of the data, before each data is entered to the Statistical Package for the Social Sciences (SPSS) version 23, it was coded then data from the survey have been entered. The study utilizes descriptive statistical analysis. Descriptive statistics was used mainly to organize and summarize the demographic data of the respondent as well as their overall attitude

towards the promotional effort by pharmaceutical companies mainly PSRs, promotional gifts, detailing and sample drug. The mean and percentage of the respondents were used as quantitative description of the attitude of the respondents.

2.10. ETHICAL CONSIDERATIONS

Ethical clearance was obtained through an official letter written from St. Mary's University was taken to and then official letters of cooperation were provided to all department heads to get permission. Written consent was also secured from each study participant on voluntary basis prior to data collection. In the structured questionnaire, there were no questions that required personal information and the data from the returned questionnaire were assessed confidentially. The data were not made available to third party without permission from study participants.

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CHAPTER FOUR

RESULTS, ANALYSIS AND DISCUSSION

4.1. RESULTS AND ANALYSIS

The study focused on both postgraduate medical and pharmacy students. A total of 342 students completed the questionnaires which is 85% response rate.

4.1.1. DEMOGRAPHIC CHARACTERISTICS

For the analysis, the students were categorized with four demographic variables; gender, age, department and work experience. About 58.8% of the respondents were males and 41.2% were female (See table 1). Hence, most of the respondents are males.

Table 1 Gender of Respondents

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Male	201	58.8	58.8	58.8
	Female	141	41.2	41.2	100.0
	Total	342	100.0	100.0	

Source: 2018/19 survey da

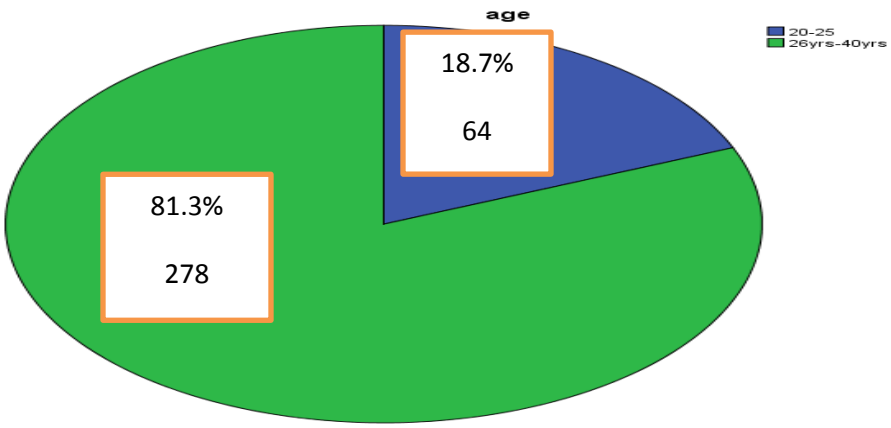

Figure 1 : ages of respondents

Source: 2018/19 survey data

The total of the respondents categorized into three age groups, 18.7% were 20-25yrs, 81.3% were 26-40yrs, and none of the respondents were found under 20years age and above 40 years (see fig2.)

The medical students take larger portion (58.2%) than the pharmacy students (41.8%). (See fig3.)

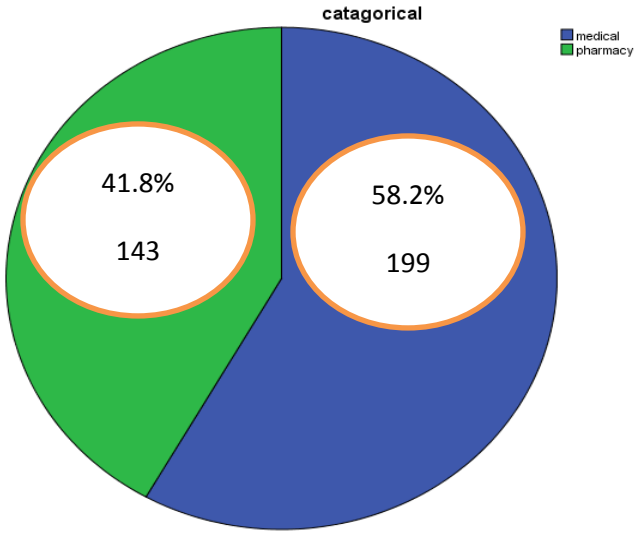

Figure 2: departments of respondents

Source: 2018/19 survey data.

From the total respondents, 91.2% have work experience of 1-5 years, 8.5% have 6-10 years and 0.3% of the have more than 10 years. (See fig.4)

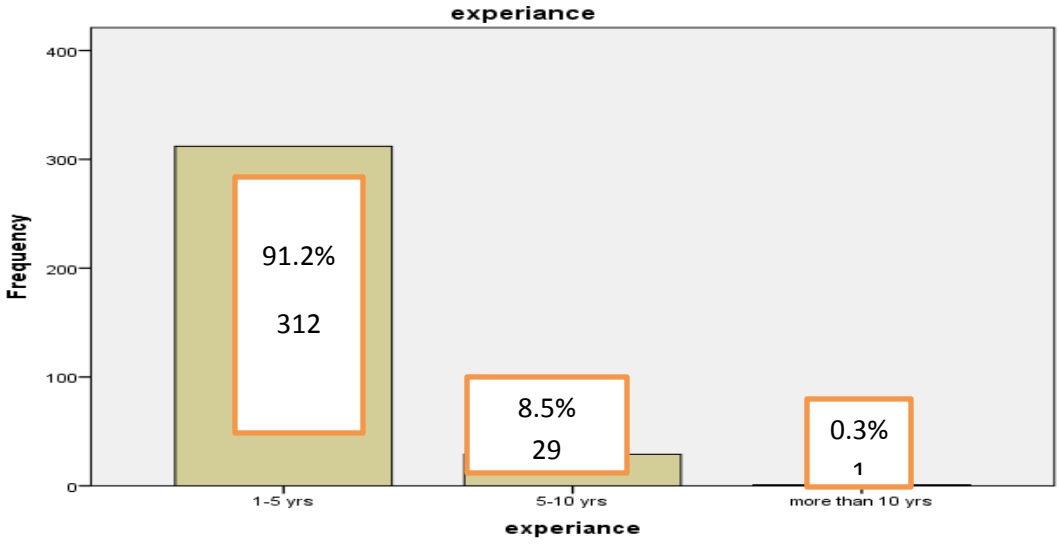

Figure 3 : experiences of respondents

4.1.2. ITEMS TO MEASURE ATTITUDE TOWARDS PSRS

The respondents' responses to items to measure Attitude towards PSRs were reported as percentages of those surveyed who absolutely agreed, agreed, neutral, disagreed, and absolutely disagreed on table 2 and mean of each of the items in table 3. The quantitative analysis of the results was taken by summation of the percentages strongly agreed and agreed as appositive agreement and summation of the strongly disagreed and disagreed percentages as negative agreement.

For the statement 'PSRs provide accurate and useful information about drugs' 66.7% of the respondents positively agree with the statement and 19.6% neutral and the remaining 13.7% negatively agree with the statement (table 2). Majority of the respondents positively agree with the statements: PSRs use marketing techniques in their interactions with physicians/ pharmacists (84.5%), the students surveyed believed that PSRs, they met, were competent professionally and in their communication skill (79.8%), an educator that works in their institution should participate as an observer in all presentations made by PSRs (62%), the respondents would keep their relationship with PSRs on the same level, even without the promotional activities, including social gatherings for dinner (49.7%), PSRs took over an important educational role in their institution (43.5%). For other statements the majority of the students negatively agree with statements. For statements: "Presentations made by PSRs should be forbidden in their institution", 78.7% of the students agree negatively, and "interactions with PSRs don't influence their prescribing/ dispensing practice" (46.2%), and "PSR Promotional activities don't influence their prescribing practice' 53.5% of the respondents agree negatively. The highest mean score was given to the statement that the students believed that PSRs, they met, were competent professionally and in their communication skill (4.0994) and the least mean score was given to the statement Interactions with PSRs do not influence prescribing and dispensing pattern (2.0146) with standard deviation of 0.72779 and 0.70799 respectively (table 3). Majority of the students were neutral to weather PSRs took over an important educational role in their institution or not. The overall mean score of the student's attitude towards the PSRs is analyzed by transforming each of the variables about PSRs to one cumulative variable through summation of all the variables and rating to the number of variables to get harmonized mean value.

Table 2 Percentage responded of each item to measure attitude towards PSRs by agreement Scale

Item	Absolutely agree	Agree	Neutral	Disagree	Absolutely disagree	Means
PSRs provides accurate and use full information about drugs.	f=58 17%	f=170 49.7%	f=67 19.6%	f=31 9 %	f=16 4.7%	3.6520
Interactions with PSRs do not influence prescribing and dispensing pattern	f=0 0%	f=14 4.1%	f=46 13.5%	f=213 62.3%	f=69 20.2%	2.0146
PSRs took over an important educational role in my institution	f=14 4.1%	f=135 39.5%	f=140 40.9%	f=52 15.2%	f=1 0.3%	3.3187
PSRs use marketing techniques in their interactions with physicians and pharmacists	f=82 24%	f=207 60.5%	f=39 11.4%	f=14 4.1%	N=0 0%	4.0434
I believe that PSRs , I met , were competent professionally and in their communication skill	f=106 31%	f=167 48.8%	f=66 19.3%	f=3 0.9%	f=0 0%	4.0994
Presentations made by PSRs should be forbidden in my institution	f=0 0%	f=14 4.1%	f=59 17.3%	f=199 58.2%	f=70 20.5%	2.0497
I would keep my relationship with PSRs in the same level, even without the promotional activities, including social gathering for dinner.	f=25 7.3%	f=145 42.4%	f=129 37.7%	f=33 9.6%	f=10 2.9%	3.4152
An educator works in my institution should participate as an observer in all presentations made by PSRs	f=52 15.2%	f=160 46.8%	f=66 19.3%	f=64 18.7%	f=0 0%	3.5848
Interaction with PSRs do not influence my prescribing/ dispensing pattern	f=14 4.1%	f=106 31%	f=64 18.7%	f=118 34.5%	f=40 11.7%	2.8129
PSRs activities do not influence my prescribing / dispensing practice	f=29 8.5%	f=80 23.4%	f=50 14.6%	f=170 49.7%	f=13 3.8%	2.8304

Source: 2018/19 survey data

When comparing to the means of the respondents based on department for each statement of attitude measurement towards PSRs as shown in table 4, the students have different mean score for each statement.

Table 3 Means of the respondents' response to items to measure attitude

Items	N	Minimum	Maximum	Mean	Std. Deviation
Interaction with PSRs don`t influence prescribing/ dispensing pattern	342	1.00	4.00	2.0146	.70799
Presentation by PSRs should be forbidden in my institution	342	1.00	4.00	2.0497	.73488
Interaction with PSRs don`t influence my prescribing/ dispensing pattern	342	1.00	5.00	2.8129	1.12036
PSRs activities don`t influence my prescribing/ dispensing practice	342	1.00	5.00	2.8304	1.09406
PSRs took over an important educational role in my institution	342	1.00	5.00	3.3187	.78896
Keep my relationship with PSRs in the same level without the promotional activities	342	1.00	5.00	3.4152	.87158
An educator should participate as an observer in all presentation by PSRs	342	2.00	5.00	3.5848	.96118
PSRs provide accurate and useful information about drugs	342	1.00	5.00	3.6520	1.01541
PSRs use marketing technique in their interaction with physicians and pharmacists	342	2.00	5.00	4.0439	.71912
PSRs I met were competent professionally and communication skill	342	2.00	5.00	4.0994	.72779
Valid N (list wise)	342				

Source: 2018/19 survey data

Highest mean score (4.2727) of pharmacy students gave to the statement “PSRs use marketing technique in their interaction with physicians and pharmacists” with standard deviation of 0.63002 and the highest mean sore(4.1206) of medical students gave to the statement “PSRs they met were competent professionally and communication skill” with standard deviation of 0.69306. The least mean score (1.8042) of pharmacy students gave to the statement “Interaction with PSRs don`t influence prescribing/ dispensing pattern” with standard deviation of

0.59645.on the other hand medical students least mean score (2.1106) gave to the statement "Presentation by PSRs should be forbidden in my institution" with standard deviation of 0.77710 (table 4).

When comparing to the overall attitude mean score towards PSRs based on the department of the students, they have different attitude score as shown in table 5 below. The mean score of pharmacy students were slightly greater than that of medical students (3.2503 and 3.1308) with standard deviation of 0.21126 and 0.38908 respectively.

Table 4 means of Students' attitudes toward each item of PSRs based on department.

Parameters	Medical Mean	Pharmacy mean	Std. deviation	
			Medical	Pharmacy
Interaction with PSRs don`t influence prescribing/ dispensing pattern	2.1658	1.8042	0.74375	0.59645
Presentation by PSRs should be forbidden in my institution	2.1106	1.9650	0.77710	0.66515
Interaction with PSRs don`t influence my prescribing/ dispensing pattern	2.5930	3.1189	1.07316	1.11639
PSRs activities don`t influence my prescribing/ dispensing practice	2.6030	3.1469	0.96305	1.18653
PSRs took over an important educational role in my institution	3.2111	3.4685	0.63002	0.50076
Keep my relationship with PSRs in the same level without the promotional activities	3.3317	3.5315	1.05436	0.50076
An educator should participate as an observer in all presentation by PSRs	3.6231	3.5315	0.88402	1.06019
PSRs provide accurate and useful information about drugs	3.6935	3.5944	0.88278	1.17628
PSRs use marketing technique in their interaction with physicians and pharmacists	3.8794	4.2727	0.73548	0.63002
PSRs I met were competent professionally and communication skill	4.1206	4.0699	0.69306	0.77505

Source: 2018/19 survey data

Table 5 over all attitudes mean score of students towards PSRs based on department

Department	Mean	N	Std. Deviation
Medical	3.1308	199	.38908
Pharmacy	3.2503	143	.21126
Total	3.1809	342	.33142

Source: 2018/19 survey data.

4.1.3. ITEM TO MEASURE ATTITUDE TOWARDS GIFTS

- *Results on item to measure Attitude towards appropriateness of accepting gifts*

The respondents' responses to items to measure Attitude towards appropriateness of accepting gifts were reported as percentages of those surveyed who absolutely agreed, agree, neutral, disagree, and absolutely disagree on table 6 and mean of each of the items in table 7. The quantitative analysis of the results was taken by summation of the percentages strongly agreed and agreed as appositive agreement and summation of the strongly disagreed and disagreed percentages as negative agreement.

For the statement 'unacceptable for physicians and pharmacists to receive gifts'70.8% of the respondents positively agree with the statement and 19.6% neutral and the remaining 9.7% negatively agree with the statement

Table 6 Percentage responded of each item to measure attitude towards appropriateness of accepting gifts by agreement Scale

Parameters	Absolutely agree	Agree	Neutral	Disagree	Absolutely disagree	Total
Unacceptable for physicians/ pharmacists to receive gift	f=78 22.8%	f=164 48%	f=67 19.6%	f=31 9.1%	f=2 0.6%	f=342 100%
I would fell confortable accepting gifts.	f=15 4.4%	f=71 20.8%	f=81 23.7%	f=102 29.8%	f=73 21.3%	f=342 100%
It is appropriate to accept expensive gifts(>$100)	f=14 4.1%	f=3 0.9%	f=28 8.2%	f=161 47.1%	f=136 39.8%	f=342 100%
It is appropriate to accept moderate gifts ($20-$100)	f=14 4.1%	f=58 17%	f=53 15.5%	f=120 35.1%	f=97 28.4%	f=342 100%
It is appropriate to accept cheap gifts(<$20)	f=11 3.2%	f=58 17%	f=69 20.2%	f=121 35.4%	f=83 24.3%	f=342 100%

Source: 2018/19 survey data.

Majority of the respondents negatively agree with the statements: "they would fell confortable accepting gifts" (51.1%). However, most of the students were neutral about this statement.

Majority of the students think that, it is not appropriate to accept expensive gifts (86.9%), it is appropriate to accept moderate gifts (63.5%) and it is appropriate to accept cheap gifts (59.7%). Even though majority of the students disagree in feeling confortable while accepting gifts, many students were neutral about the feeling.

The highest mean score given to the statement 'Unacceptable for physicians/ pharmacists to receive gift' (3.8333) with standard deviation of 0.90210 and the least mean score given to the statement 'It is appropriate to accept expensive gifts' (1.8246) with standard deviation of 0.92453 (see table 7).

Table 7 Means of students to items to measure attitude towards appropriateness of accepting gifts

Items	N	Minimum	Maximum	Mean	Std. Deviation
Unacceptable for physicians/ pharmacists to receive gift	342	1.00	5.00	3.8333	.90210
I would fell confortable accepting gifts.	342	1.00	5.00	2.5702	1.16374
It is appropriate to accept expensive gifts	342	1.00	5.00	1.8246	.92453
It is appropriate to accept moderate gifts	342	1.00	5.00	2.3333	1.17401
It is appropriate to accept cheap gifts	342	1.00	5.00	2.3947	1.12256
Valid N (list wise)	342				

Source: 2018/19 survey data

Comparing the mean score of the students for each statement by taking the department as independent variable, they had different mean scores for each item. Both pharmacy and medical students were given highest mean score to the statement "un acceptable to receive gifts" (3.6643 and 3.9548) with standard deviation of 0.90339 and 0.88361 respectively (See table 8) .

The overall attitude mean scores of the students to wards appropriateness of accepting gifts were illustrated on table 9. The mean score of pharmacy students was greater than medical students (2.7217 and 2.4975) with standard deviation of 0.55464 and 0.61327 respectively.

Table 8 means of students of each item based on department

Department		Un acceptable to receive gift	I Feel comfortable accepting gifts	Accept expensive gifts	Accept moderate gifts	Accept cheap gifts
Medical	Mean	3.9548	2.2462	2.0302	2.2362	2.0201
	N	199	199	199	199	199
	Std. Deviation	.88361	1.17837	1.09133	1.12344	.88169
Pharmacy	Mean	3.6643	3.0210	1.5385	2.4685	2.9161
	N	143	143	143	143	143
	Std. Deviation	.90339	.98201	.50027	1.23222	1.21317
Total	Mean	3.8333	2.5702	1.8246	2.3333	2.3947
	N	342	342	342	342	342
	Std. Deviation	.90210	1.16374	.92453	1.17401	1.12256

Source: 2018/19 survey data.

Table 9 Overall means of students towards appropriateness of accepting gifts based on department

Department of students	Mean	N	Std. Deviation
Medical	2.4975	199	.61327
Pharmacy	2.7217	143	.55464
Total	2.5912	342	.59896

Source: 2018/19 survey data.

- *Results on item to measure Attitude towards types of gifts/ events accepting at least once and its appropriateness***.**

The respondents' responses to items to measure types of gifts/ events accepting at least once and its appropriateness were reported as percentages of those surveyed who said yes or no and whether it is appropriate and inappropriate on table 10.

From the gifts and events the respondents accepted or involved more were Office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.) and the most appropriate gift they rate were medical pocket book.

Table 10 Percentage of students receives gifts/ participates on an event and their rating of gift/event appropriateness

Items	Did you ever received		Appropriateness of receiving	
	Yes	No	Appropriate	Not appropriate
Drug samples for patient	39.8%	60.2%	65.8%	34.2%
Medical text book	14.9%	85.1%	78.7%	21.3%
Medical pocket book	25.1%	74.9%	79.8%	20.2%
Office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.)	71.1%	28.9%	73.4%	26.6%
Paid for trip to an educational conference	17.5%	82.5%	55.6%	44.4%
Educational meeting with dinner	48.5%	51.5%	58.8%	41.2%
Educational meeting with lunch	56.4%	43.6%	69.9%	30.1%
Drug sample for individual use	27.5%	72.5%	26.9%	73.1%
Airline ticket for vacation spot	4.7%	95.3%	10.5%	89.5%
Five drugs from five different companies are identical in terms of price, efficacy and effectiveness. I would preferentially prescribe/ dispense a drug from one of the companies that provided me any gifts or incentives over those from companies that did not.	12%	88%	8.8%	91.2%
In my opinion, if five drugs from five different companies are identical in terms of price, efficacy and effectiveness. Other physician/ pharmacist would preferentially prescribe a drug from one of the companies that provided them any gifts or incentives over those from companies that did not.	36%	64%	18.1%	81.9%

Source: 2018/19 survey data

When comparing the student's exposure to different types of gifts and their attitudes towards each kinds of gift regarding their appropriateness based on their department, the numbers of pharmacy students are different from that of medical in exposure and attitude (see table 11)

Table 11 percentages of Students exposure and appropriateness to types of gifts by department.

Items	pharmacy		medical		pharmacy		Medical	
	Yes	No	yes	No	appro	In appro	Appro	In appro
Drug samples for patient	27.3%	72.7%	48.7%	51.3%	80.4%	19. 6%	55.3%	44.7%
Medical text book	26.6%	73.4%	0.1%	99.9%	100%	0%	63.3%	36.7%
Medical pocket book	33.6%	66.4%	19.1%	80.9%	100%	0%	65.3%	34.7%
Office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.)	83.2%	16.6%	62.3%	37.7%	93%	7%	59.3%	40.7%
Paid for trip to an educational conference	19.6%	80.4%	0.2%	99.8%	65.7%	34.3%	48.2%	51.8%
Educational meeting with dinner	39.2%	60.8%	55.3%	44.7%	53.1%	46.9%	62.8%	37.2%
Educational meeting with lunch	0.4%	99.6%	70.4%	29.6%	62.9%	37.1%	74.9%	25.1%
Drug sample for individual use	0.3%	99.7%	0.3%	99.7%	29.4%	70.6%	25.1%	74.9%
Airline ticket for vacation spot	0%	100%	0.1%	99.9%	0%	100%	18.1%	81.9%
Five drugs from five different companies are identical in terms of price, efficacy and effectiveness. I would preferentially prescribe/ dispense a drug from one of the companies that provided me any gifts or incentives over those from companies that did not.	0%	100%	0.2%	99.8%	0.1%	99.9%	0.1%	99.9%
In my opinion, if five drugs from five different companies are identical in terms of price, efficacy and effectiveness. Other physician/ pharmacist would preferentially prescribe/dispense a drug from one of the companies that provided them any gifts or incentives over those from companies that did not.	0.3%	99.7%	0.4%	99.6%	0%	100%	31.2%	68.8%

Source: 2018/18 survey data.

As seen in table 11, 83.2% of pharmacy students were receive office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.) as promotional gift. However, 100% of them were thought that Medical text book and Medical pocket book were the most appropriate types of gifts. Regarding the medical students 70.4% of the students were involved in educational meeting with lunch and the event educational meeting with lunch were the most appropriate gift for them (74.9%). Airline ticket for vacation spot was the most inappropriate gift for both department

students. None of the pharmacy students were influenced by gifts and only 0.2% of medicals influenced by gifts to prescribe.

4.1.4. ITEMS TO MEASURE ATTITUDE TOWARDS DETAILING

- *Results on item to measure Attitude towards reliability and accuracy detailing*

The respondents' responses to items to measure Attitude towards reliability and accuracy detailing were reported as percentages of those surveyed who said very good, good, moderate, poor, and very poor on table 12 and mean of each of the items in table 13.

Table 12 Percentage responded of each item to measure attitude towards reliability and accuracy detailing

Parameters	Very good	Good	Moderate	Poor	Very poor	Mean	Total
Drug indication	f=136 39.8%	f=129 37.7%	f=75 21.9%	f=2 0.6%	f=0 0%	4.1667	f=342 100%
Drug side effect	f=41 12%	f=89 26%	f=110 32%	f=74 21.6%	f=28 8.2%	3.1199	f=342 100%
Drug contra indication	f=51 14.9%	f=65 19%	f=120 35.1%	f=80 23.4%	f=26 7.6%	3.1023	f=342 100%
Drug dosing and rout of administration	f=155 45.3%	f=110 32.2%	f=65 19%	f=12 3.5%	f=0 0%	4.1930	f=342 100%

Source: 2018/19 survey data

As seen from table 12, 39.8% of the students thought that PSRs have given very good accurate and reliable information about the drug side effect and 37.7% thought the information is good about the drug indication. Only 0.6% of the students were rate the information as poor in its accuracy and reliability. Majority of the students thought that the information about drug side effect were moderate (32%) and more of the students thought the information is poor (21.6%).however most of the students were rate the information about drug side effect as good (26%). Majority of the students considered the information about drug contra indication as moderate (35.1%) and most of them rate it as poor (23.4%).

The students had higher mean score for the accuracy and reliability of information about drug indication and drug dosing and route of administration (4.1667 and 4.1930) with standard deviation of 0.78382 and 0.86520 respectively. The lower mean score is given to the information for drug contra indication (3.1023) with standard deviation of 1.14802. Comparing of the mean score of the students to overall attitude of detailing based on department as shown in table 20, the mean score of pharmacy students are slightly higher than that of medical students.

Table 13 means responded of each item to measure attitude towards reliability and accuracy detailing

	N	Minimum	Maximum	Mean	Std. Deviation
Drug indication	342	2.00	5.00	4.1667	.78382
Drug side effect	342	1.00	5.00	3.1199	1.12826
Drug contra indication	342	1.00	5.00	3.1023	1.14802
Drug dosing and rout of administration	342	2.00	5.00	4.1930	.86520
Valid N (list wise)	342				

Source: 2018/19 survey data

Table 14 means of students' attitude to detailing accuracy based on department

Department	Mean	N	Std. Deviation
Medical	3.5766	199	.67427
Pharmacy	3.7413	143	1.00501
Total	3.6455	342	.83139

Source: 2018/19 survey data

Pharmacy students had higher mean score than that of medical students (3.7413 and 3.5766) with standard deviation of 1.00501 and 0.67427 respectively.

- *Results on item to measure Attitude towards benefit of detailing*

The respondents' responses to items to measure Attitude towards benefit of detailing were reported as percentages of those surveyed who said very high, high, moderate, low, and very low on table 15 and mean of each of the items in table 16.

Although majority of the students rate the information benefit to the patient as high, most of them rate it as moderate benefit.

Table 15 Percentage of responded to measure attitude towards benefit of detailing

Parameter	Very high	High	Moderate	Low	Very low	Mean	Total
Benefit to physician/ pharmacist	f=108 31.6%	f=125 36.5%	f=98 28.7%	f=0 0%	f=11 3.2%	3.9327	f=342 100%
Benefit to patient	f=96 28.1%	f=109 31.9%	f=106 31%	f=17 5%	f=14 4.1%	3.7485	f=342 100%

Source: 2018/19 survey data

Majority of the students thought that detailing had higher benefit to themselves and the patient (36.5% and 31.9%). The mean score of student's attitude towards benefit of detailing to themselves was slightly greater than benefit to patient (3.9327 and 3.7485) with standard deviation of 0.94334 and 1.04779 respectively (table 15 &16)

Table 16 means of responded to measure attitude towards benefit of detailing

Parameter	N	Minimum	Maximum	Mean	Std. Deviation
Benefit to physician/ pharmacist	342	1.00	5.00	3.9327	.94334
Benefit to patient	342	1.00	5.00	3.7485	1.04779
Valid N (list wise)	342				

Source: 2018/19 survey data

The overall mean score of medical students were less than that of pharmacy students towards detailing befit (table 17).

Table 17 over all means of student's attitude toward detailing benefit based on department

Department	Mean	N	Std. Deviation
Medical	3.5477	199	.68090
Pharmacy	3.7762	143	1.02552
Total	3.6433	342	.84846

Source: 2018/19 survey data.

4.1.5. ITEMS TO MEASURE ATTITUDE TOWARDS DRUG SAMPLES

The respondents' responses to items to measure Attitude towards drug sample were reported as percentages of those surveyed who absolutely agreed, agree, neutral, disagree, and absolutely disagree on table 18 and mean of each of the items in table 19. As seen in table 18, majority of the students were agreed that drug sample fulfill an educational role through demonstration (55.8%). The mean score of the students were higher for the statement "drug sample fulfill an educational role through demonstration"(3.5789) and the least mean score was for the statement "drug samples are serve to check the effectiveness of the medicine" (2.8480) with a standard deviation of 1.02658 and 1.16912 respectively (table 19). Comparing the overall attitude mean score of students towards drug sample as illustrated in table 20, pharmacy students mean score were slightly lower than that of medical students (3.0769 and 3.3681) with standard deviation of.59652 and .98178 respectively.

Table 18 percentages of respondents' attitudes toward drug sample**.**

Parameters	Strongly agree	Agree	Neutral	Disagree	Strongly disagree	Means	Total
Drug sample permit quicker of therapy	f=16 4.7%	f=110 32.2%	f=175 51.2%	f=13 3.8%	f=28 8.2%	3.2135	F=324 100%
Drug sample fulfill an educational role through demonstration	f=39 11.4%	f=191 55.8%	f=69 20.2%	f=84 4.4%	f=16 8.2%	3.5789	F=324 100%
Drug sample are source of medication for patient who cannot afford them	f=58 17%	f=118 34.5%	f=66 19.3%	f=84 24.6%	f=16 4.7%	3.3450	F=324 100%
Drug samples are serve to check the effectiveness of the medicine	f=39 11.4	f=50 14.6	f=117 34.2	f=92 26.9	f=44 12.9%	2.8480	F=324 100%

Source: 2018/19 survey data

The overall attitude mean scores of students towards each promotional effort were summarized in table 21 and the mean of the students based on department were illustrated in table 22.

Table 19 means of respondent's attitude towards drug sample

Parameters	N	Minimum	Maximum	Mean	Std. Deviation
Drug sample permit quicker of therapy	342	1.00	5.00	3.2135	.91167
Drug sample fulfill an educational role through demonstration	342	1.00	5.00	3.5789	1.02658
Drug sample are source of medication for patient who cannot afford them	342	1.00	5.00	3.3450	1.15802
Drug samples are serve to check the effectiveness of the medicine	342	1.00	5.00	2.8480	1.16912
Valid N (list wise)	342				

Source: 2018/19 survey data

Table 20 over all means of students towards drug sample based on department

Department	Mean	N	Std. Deviation
Medical	3.3681	199	.98178
Pharmacy	3.0769	143	.59652
Total	3.2463	342	.85355

Source: 2018/19 survey data

Least attitude means score were given to gifts (2.5912) with standard deviation of 0.59896. The highest mean score is given to accuracy of detailing (3.6455) with standard deviation of 0.83139 (table 21).The overall attitude mean score of pharmacy students were greater than medical students (3.3133 and 3.2183) with standard deviation of 0.53848 and 0.45707 respectively. (See table 22)

Table 21 means of students' attitude towards each items of promotional effort

Items	N	Minimum	Maximum	Mean	Std. Deviation
over all attitude towards PSRs	342	2.30	3.60	3.1809	.33142
over all attitude towards accuracy of detailing	342	2.00	5.00	3.6455	.83139
over all attitude towards gifts	342	1.60	3.80	2.5912	.59896
over all attitude towards detailing benefit	342	2.00	5.00	3.6433	.84846
over all attitude towards drug sample	342	1.00	5.00	3.2463	.85355
Valid N (list wise)	342				

Source: 2018/19 survey data.

Table 22 means of overall promotional effort attitude based on department

Department	Mean	N	Std. Deviation
Medical	3.2183	199	.45707
Pharmacy	3.3133	143	.53848
Total	3.2581	342	.49432

Source: 2018/19 survey data.

4.2. DISCUSSION OF RESULTS

4.2.1. ATTITUDE TOWARDS PSRS

Majority of the respondents were positively agree with the statements stating 'PSRs provide accurate and useful information about drugs' (66.7%), 'PSRs use marketing techniques in their interactions with physicians/ pharmacists' (84.5%), they believed that PSRs, they met, were competent professionally and in their communication skill' (79.8%), an educator that works in their institution should participate as an observer in all presentations made by PSRs (62%), the students would keep their relationship with PSRs on the same level, even without the promotional activities, including social gatherings for dinner (49.7%), PSRs took over an important educational role in their institution (43.5%).On the other hand majority of the

respondents negatively agree with the statements stating ‘Presentations made by PSRs should be forbidden in their institution’ (78.7%), and interactions with PSRs don't influence their prescribing practice (46.2%), and PSR Promotional activities don't influence my prescribing practice (53.5%) which indirectly supports the favorable attitude of students toward PSRs. From the items to measure attitude about PSRs, 84.5%of the students thought that PSRs had used marketing techniques in their interaction. (table2) The statement ‘they believe PSRs they met were competent professionally and communication skill’ is given the highest mean score (4.0994) with standard deviation of 0.72779. (table3)

This is similar to the studies done by Al-Areefi et al.,(2013), KHAN *et al*, (2016) and Fickweiler F.et al., (2017) that shows physicians has positive attitude towards pharmaceutical sales representatives. The main reasons stated for allowing medical representatives’ visits are the social contacts and mutual benefits they will gain from these representatives. They also emphasized that the meeting with representatives provides educational and scientific benefits.

The attitude means scores of pharmacy and medical students towards each items of PSRs was shown in table 4 based on departments. By thoroughly analyzing the data in the two groups, it was obvious that more pharmacy student participants give more weight perceived PSRs use marketing technique in their interaction with physicians and pharmacists (mean score of 4.2727 vs. 3.8794). On the other hand, this trend was observed in medical students in a statement Interaction with PSRs don`t influence prescribing/ dispensing pattern (2.1658 vs1.8042) which means using marketing technique during interaction influence prescribing or dispensing. Nevertheless, statements about PSRs provide accurate and useful information about drugs and PSRs they met were competent professionally and communication skill got higher agreement mean score among physicians than pharmacists (3.6935 vs 3.5944 and 4.1206 vs 4.0699 respectively). As shown in table 5 the overall mean score about PSRs, pharmacy students had slightly greater mean score than that of medical students (3.2503 vs 3.1308). This departmental based difference may be due to the educational background difference. In studies done in Saudi Arabia reveals perception difference towards pharmaceutical promotion among pharmacists and physicians. Significantly more pharmacist participants perceived drug companies as a useful way to gain knowledge about drugs than physicians (75% vs. 65%; $p < 0.01$). Likewise, this trend was observed in statements about pharmaceutical companies’ talks being educational and helpful and the information given by PSRs as being trustable. Nevertheless, statements about minimal

effects gifts have on staff got higher agreement percent among physicians than pharmacists (20% vs. 14 %;). (Zaki, N. M., 2014)

4.2.2. ATTITUDE TOWARDS PROMOTIONAL GIFTS

Most of the pharmaceutical promotional effort is takes place by providing different types of gifts to prescribers or dispensers. Gifts from the PSRs can be as innocuous as pens, note pads, medication samples, and fast food, or as substantial as travel, cash and research support. One study showed that 92% of physicians had received free drug samples, 61% had received meals, and free access to entertainment, sporting events or travel, and nearly one in seven had received financial benefits (McFadden et al., (2007). According to the review of Norris et al., (2005) The studies available suggest that there is a range of views about gifts but a tendency for gifts that were smaller or more relevant to helping patients to be regarded as more acceptable.

Most of the respondents in this study agree positively (70.8%) for the statement 'Unacceptable for physicians/ pharmacists to receive gift' and the rest 19.6% and 9.6% neutral and agree negatively respectively. Likewise majority of the respondents (51.1%) negatively agree with the statement 'they would fell confortable accepting gifts'. And the rest 23.7% and 25.2% neutral and agree positively respectively. Only 5% of the respondents positively agree the appropriateness of accepting expensive gifts and 21.1% of the respondents positively agree appropriate to accept moderate gifts and 20.2% of the respondents positively agree appropriate to accept cheap gifts (table 6). From this study 71.1% of the respondents receive Office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.) and the least received gift type is Airline ticket for vacation spot (4.7%). Medical pocket book is the most rated appropriate by the respondents (79.8%) and Airline ticket for vacation spot is the least rated appropriate (8.8%) (table10). In one study at Saudi, physicians and pharmacists have different attitude towards the appropriateness of types of gifts. The promotional gifts most appropriate in the opinion of the majority of physicians were conference registration fees and free drug samples (67% and 66%) respectively. Whereas for pharmacists, the drug sample was the most suitable donation (79%) followed by text book (67%) and notepad (63%) (Zaki, 2014) For the statement that describes the influence of gift on prescribing or dispensing Most believe that gifts do not influence them (88%) personally, but do influence many colleagues (36%). As seen in table 11, 83.2% of pharmacy students were receive office supplies (pen, notebook, tablet cutter, tablet counter, cup

etc.) as promotional gift. However, 100% of them were thought that Medical text book and Medical pocket book were the most appropriate types of gifts. Regarding the medical students 70.4% of the students were involved in educational meeting with lunch and the event educational meeting with lunch were the most appropriate gift for them (74.9%). Airline ticket for vacation spot was the most inappropriate gift for both department students.

None of the pharmacy students were influenced by gifts and only 0.2% of medicals influenced by gifts to prescribe. In most studies most doctors denied that they were influenced by gifts. The available data suggest that doctors may be more willing to say that other doctors are influenced than they are themselves. Norris et al., (2005)

4.2.3. ATTITUDE TOWARDS DETAILING

The provision of complete and balanced drug information is necessary for rational drug use. Both scientific and commercial information sources can provide doctors and pharmacists with the necessary information to make informed prescribing and dispensing decisions. It is important, however, that the information provided by PSRs is accurate, complete and balanced. Study performed in Libya by Mustafa and Stefan (2012) on physicians found that only 13% of the respondents graded PSRs' information as 'high quality'. The majority of the doctors (76%) graded the information provided during visits as 'average'. 65% of the medical practitioners surveyed reported that PSRs rarely or never mentioned safety information. A study performed in Sudan found that approximately one-third of 160 PSRs interviewed admitted they did not always mention contraindications, precautions or drug interactions, and only 4.3% mentioned the side effects of their promoted products during drug-detailing visits (Idris, Mustafa, Youssef (2012)). It is assumed that marketers will attempt to present the positive aspects and advantages of their products, but downplay any negative information. However, by not presenting this information the credibility of the information provided is diminished and may also negatively influence the perceived truthfulness of their presentations. In other words this strategy may not be effective from a marketing perspective if it leads to the source becoming untrustworthy.

In this study 39.8% of the respondents graded very good, 37.7% good, 21.9% moderate and 0.6% poor for accuracy of the information of PSRs a about drug indication. PSR's detailing about drug side effect and contra indication is graded by the majority of the respondents moderate (32% and 35.1%) respectively. However, many graded this detailing poor (21.6% and

23.45%) respectively. Majority of the respondents graded 'Drug dosing and rout of administration' detailing very well (45.3%) (Table 12).

In general the majority of the respondents believe that PSRs provide either very good or good information about drug indication, drug dosing and drug route of administration. On the other extreme many believe that PSRs provide either moderate or poor information about drug side effect and drug contra indication. A study in Ethiopia by Demeke et.al (2016) on influence of PSRs on prescribing practices in Mekelle, Northern Ethiopia revealed that two third (65%) of the physicians were not satisfied in the current way of drug promotion. More than 84.3% of information provided by medical representatives to physicians is about the brand name of a product followed by approved drug indication, 30.1%. On the contrary, the physician received scarce information on drug contraindications, interaction and precautions from PSRs with 4.8%, 4.8% and 6% respectively.

Although both physicians and pharmacists had the same trends of attitude on reliability and accuracy of detailing about drug indication, drug side effect, drug contraindication, drug dosing and drug route of administration, the mean score of pharmacists were slightly greater than that of physicians (table13). As Zaki (2014) found more pharmacist participants perceived drug companies as a useful way to gain knowledge about drugs than physicians (75% vs. 65). It is assumed that the information provided by PSRs could benefit both the professionals and the patient. In this study 31.6% of the respondents believe that the information has very high benefit to them and 36.5% think high benefit but 4.3% believe that the information has very low benefit to them. 28.1% of the respondents think the detailing has very high, 31.9% high, 31% moderate, 5% low and 4.1% very low benefit to the patient (table 15). In the integrated review of the effects and Role of direct-to-Physician marketing in the pharmaceutical Industry by Manchanda & Honka, (2013), In general, physicians perceive detailers to be useful sources of information. over all the mean score of the physicians were slightly less than the mean score of the pharmacists regarding to the benefit of detailing for both themselves and the patient.; As Zaki (2014) found more pharmacist participants perceived drug companies as a useful way to gain knowledge about drugs than physicians (75% vs. 65%).

4.2.4. ATTITUDE TOWARDS SAMPLE DRUG

Sample drug is one type of gifts commonly given to prescribers and dispensers during pharmaceutical promotion. From the researcher's experience, it is the most frequent gift given to prescribers. Researches also showed that most physicians and dispensers accept drug samples as gift. A systematic review by Fickweiler F.et al., (2017) stated that most common gifts received were drug samples. Most of the physicians who accepted drug samples had a positive attitude towards the pharmaceutical representatives.

Accepting samples lead to higher branded drug prescription rather than generic prescribing. A qualitative study done in Yemeni by Al-Areefi et al. (2013,) reported that although physicians were aware that the PSRs could influence their prescribing decision, they welcome PSRs to visit them and consider receiving free samples as a normal practice.

In this study, 39.8% of the respondents accept drug sample for the patient and 65.8% of the respondents believe that it is appropriate to accept drug sample for the patient (table11). Likewise majority of the respondents (51.5%) positively agree on the statement 'drug sample are source of medication for patient who cannot afford them (table18). On the other hand, 27.5% of the respondents accept drug sample for self-use and only 26.9% of the respondents believe it is appropriate to accept drug sample for self-use (table11). Majority of the respondents were neutral (51.1%) for the statement 'drug sample permit quicker of therapy. Similarly majority of the respondents (67.2%) were positively agree for the statement 'drug sample fulfill an educational role through demonstration and 38.9% of the respondents were negatively agree for the statement 'drug samples are serve to check the effectiveness of the medicine'(table18).

According to Zaki (2014), the promotional gifts most appropriate in the opinion of the majority of physicians were conference registration fees and free drug samples (67% and 66%, respectively).Whereas for pharmacists, the drug sample was the most suitable donation (79%). 27.3% of pharmacy students were accepting drug sample for the patient and 80.4% 0f the pharmacy students thought that drug sample for patient was appropriate gift. On the other hand 48.7% of medical students were accept drug sample for patient and 55.5% of the believed it is appropriate.

CHAPTER FIVE

CONCLUSION, RECOMMENDATIONS, LIMITATION AND DIRECTION FOR FUTURE STUDIES

5.1. CONCLUSION

The benefit of promotion is indispensable both for marketer and costumer as it is 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 or dispensers and users. The majority of medical and pharmacy students participating in this study had a favorable attitude towards PSRs and thought that interaction with PSRs and PSRs activity influences their prescribing or dispensing behavior. Pharmacy students had higher mean score than the medicals (3.2503 vs 3.1301) implying that pharmacists had more favor than medicals towards PSRs.

Regarding the acceptability of gifts, gifts were considered unacceptable by the physicians and pharmacists with high percent given to expensive gifts (>$100) whereas Medical pocket book, Medical text book, Office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.), educational meeting with lunch and drug samples have the greatest percentage of supporters regarding to the appropriateness.

The Office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.) and Educational meeting with lunch were the most widely accepted gifts. 83.2% of pharmacy students were receive office supplies (pen, notebook, tablet cutter, tablet counter, cup etc.) as promotional gift. However, 100% of them were thought that Medical text book and Medical pocket book were the most appropriate types of gifts. Regarding the medical students 70.4% of the students were involved in educational meeting with lunch and the event educational meeting with lunch were the most appropriate gift for them (74.9%).

The majority of physicians and pharmacists participating in this study had agreed the detailing by PSRs could benefit both the patient and professionals, despite accurate information is not given about drug side effect and contra indications sufficiently. The majority of physicians and pharmacists had positive attitude towards drug sample and agreed that drug sample fulfill an educational role through demonstration and are source of medication for patient who cannot afford them. 27.3% of pharmacy students were accepting drug sample for the patient and 80.4%

of the pharmacy students thought that drug sample for patient was appropriate gift. On the other hand 48.7% of medical students had accepted drug sample for patient and 55.5% of them believed it is appropriate.

5.2. RECOMMENDATIONS

The recommendation is heading for the pharmaceutical promotion manager and pharmaceutical sales representatives

- ✓ Pharmaceutical promotion manager should work to change attitude of physicians and pharmacists for pharmaceutical promotion particularly towards detailing and make them have strong and positive attitude by designing standardized, scientific, reliable, accurate, and ethical promotional activities. And continually assess the attitude of the physician and pharmacists toward the each of their promotional effort. Monitor the PSRs communication to ensure that it is up to standards rather than just look at sales generated.
- ✓ PSRs should act professionally and communicate unbiased scientific information. Their drug information should by balance to all needed information of the medicine like side effect and contraindication.

5.3. LIMITATION OF THE STUDY

The limitation of the study is that; obviously it could have any limitation of sample research as it is sample research. The major limitation is it was conducted only in a single site at TASH" in Addis Ababa, capital city of Ethiopia. This make difficult to generalize the finding to the whole physicians and pharmacists across the country.

5.4. DIRECTIONS FOR FUTURE RESEARCH

Generally further studies needed on practicing physician and pharmacists both in public and private setting since this study only targets one teaching hospital. Further research should study the implementation of education about ethical promotion and appropriate interaction with PSRs in the formal curriculum of both pharmacy and medicine programs as well as in continued medical/pharmacy education, to improve their ability to act in the best interests of patients, promote the rationale use of drugs and avoid conflict of interest. One may have do future

research on Perceptions and Attitudes of both pharmaceutical Sales Representatives and Prescribers Regarding Pharmaceutical Sales Promotion and Prescribing practice to investigate the ground realities of drug promotion and prescribing practices.

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Appendix A

Consent form

Consent Form for Participation in a Research Study at **ST. MARY'S UNIVERSITY COLLEGE SCHOOL OF GRADUATE STUDIES**

Title of Study "Assessment of ATTITUDES OF POSTGRADUATE MEDICAL AND PHARMACY STUDENTS TOWARDS PROMOTIONAL EFFORT BY PHARMACEUTICAL COMPANIES IN ADDIS ABABA: A CASE OF TIKUR ANBESSA SPECIALIZED HOSPITAL."

Description of the research and your participation

You are invited to participate in a research study conducted by Animaw Sintayehu. The purpose of this research is to understand the attitude of the student to the pharmaceutical industry and recommend appropriate strategies. Your participation will involve fill the questionnaire and return 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

Animaw Sintayehu at anu29.sintu@gmail.com or cell Phone 0910623123

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: _____

Appendix B

Questioners

1. General demographic data ; Please fill in the required information and (ONLY TICK THE MOST YOU THINK IS THE RIGHT ANSWER)

1.1. Gender: Male ( ) - Female ( )

1.2. Age 20-25 ( ) 26-40 ( ) more than 40 ( )

1.3. Department: medical ( ) Pharmacy ( ).

1.4. Years of professional experience: 1-5 ( ) , 5-10 ( ), more than 10 ( )

2. Attitude towards Pharmaceutical Sales Representatives (PSRs); Please complete the following by ticking the appropriate box.

SN		Absolutely agree	Agree	Neutral	Disagree	Absolutely disagree
1.1.	Pharmaceutical sales representatives provides accurate and use full information about drugs.					
1.2.	Interactions with Pharmaceutical sales representatives do not influence prescribing and dispensing pattern					
1.3.	Pharmaceutical sales representatives took over an important educational role in my institution					
1.4.	Pharmaceutical sales representatives use marketing techniques in their interactions with physicians and pharmacists					
1.5.	I believe that Pharmaceutical sales representatives , I met , were competent professionally and in their communication skill					
1.6.	Presentations made by Pharmaceutical sales representatives should be forbidden in my institution					
1.7.	I would keep my relationship with Pharmaceutical sales					

	representatives in the same level, even without the promotional activities, including social gathering for dinner.					
1.8.	An educator that works in my institution should participate as an observer in all presentations made by Pharmaceutical sales representatives					
1.9.	Interaction with Pharmaceutical sales representatives do not influence my prescribing/ dispensing pattern					
1.10	Pharmaceutical sales representatives activities do not influence my prescribing / dispensing practice					

3. Attitudes of acceptability of gifts from pharmaceutical companies

3.1. Attitude towards appropriateness of accepting gifts

Please complete the following by ticking the appropriate box.

SN	Parameters	Absolutely agree	Agree	Neutral	Disagree	Absolutely disagree
3.1.1.	Unacceptable for physicians/ pharmacists to receive gift					
3.1.2.	I would fell confortable accepting gifts.					
3.1.3.	It is appropriate to accept expensive gifts(>$100)					
3.1.4.	It is appropriate to accept moderate gifts($20-$100)					
3.1.5.	It is appropriate to accept cheap gifts(<$20)					

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

Please complete the following by ticking the appropriate box

SN	Types of gift or event	Did you ever received	Appropriateness of receiving	
		(yes/no)	Appropriate	Not appropriate
3.2.1.	Drug samples for patient			
3.2.2.	Medical text book			
3.2.3.	Medical pocket book			
3.2.4.	Office supplies (pen, notebook, tablet cutter, tablet counter, cup 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			
3.2.8.	Drug sample for individual use			
3.2.9.	Airline ticket for vacation spot			
3.2.10.	Five drugs from five different companies are identical in terms of price, efficacy and effectiveness. I would preferentially prescribe/ dispense a drug from one of the companies that provided me any gifts or incentives over those from companies that did not.			
3.2.11.	. In my opinion, if five drugs from five different companies are identical in terms of price, efficacy and effectiveness. Other physician/ pharmacist would preferentially prescribe a drug from one of the companies that provided them any gifts or incentives over those from companies that did not.			

4. Attitudes towards Information from pharmaceutical (Detailing)

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

SN	Parameters	Very good	Good	Moderate	Poor	Very poor
4.1.1.	Drug indication					
4.1.2.	Drug side effect					
4.1.3.	Drug contra indication					
4.1.4.	Drug dosing and rout of administration					

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

Please complete the following by ticking the appropriate box

SN	Parameter	Very high	High	Moderate	Low	Very low
4.2.1.	Benefit to physician/ pharmacist					
4.2.2.	Benefit to patient					

5. Attitudes towards Drug Samples

Please complete the following by ticking the appropriate box

SN	Parameters	Strongly agree	Agree	Neutral	Disagree	Strongly disagree
5.1.	Drug sample permit quicker of therapy					
5.2.	Drug sample fulfill an educational role through demonstration					
5.3.	Drug sample are source of medication for patient who cannot afford them					
5.4.	Drug samples are serve to check the effectiveness of the medicine					

Appendix C

The result of Reliability Test

Scale: ALL VARIABLES (PSRs)

Case Processing Summary

		N	%
Cases	Valid	342	100.0
	Excluded[a]	0	.0
	Total	342	100.0

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.695	10

Reliability Statistics

Scale: ALL VARIABLES (Gift)

Case Processing Summary

		N	%
Cases	Valid	342	100.0
	Excluded[a]	0	.0
	Total	342	100.0

a. List wise deletion based on all variables in the procedure.

Cronbach's Alpha	N of Items
.710	16

Scale: ALL VARIABLES (Detailing)

Case Processing Summary

		N	%
Cases	Valid	342	100.0
	Excluded[a]	0	.0
	Total	342	100.0

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.787	6

Scale: ALL VARIABLES (Sample Drugs)

Case Processing Summary

		N	%
Cases	Valid	342	100.0
	Excluded[a]	0	.0
	Total	342	100.0

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.808	4

Scale: ALL VARIABLES

Case Processing Summary

		N	%
Cases	Valid	342	100.0
	Excluded[a]	0	.0
	Total	342	100.0

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

Reliability Statistics

Cronbach's Alpha	N of Items
.719	36