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THE PROMOTION OF PRESCRIPTION MEDICINES BY PHARMACEUTICAL SALES REPRESENTATIVES AND ITS EFFECTS ON HEALTH PROFESSIONALS IN THE KUMASI METROPOLIS.

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DECLARATION

I hereby declare that, this project report is the result of my own work, except for the literature whose sources have been explicitly stated and that, this thesis has neither in whole nor in party been prescribed by another degree elsewhere.

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ABSTRACT

Contrary to over-the-counter (OTC) drugs that can be obtained without prescription, prescription drugs are licensed medicines that are legislation-regulated in Ghana. In other words, consumers pay for prescription drugs, but the health professionals control its access. Therefore, health professionals in Ghana are the primary targets for the promotional tactics of drug companies. There is no evidence from any part of Ghana that has established that health professionals knowingly or intentionally compromise their patients' care as a result of external influence. However, the question remains whether the current promotional tactics employed by pharmaceutical representatives in the Kumasi metropolis mobilized any influence on the patterns of prescriptions by health professionals. Or whether there have been prescriptions of medicines in the Kumasi metropolis by health professionals based on considerations that go beyond scientific knowledge and patient needs. The research looked at the extent of interactions health professionals (prescribers) engage in with Pharmaceutical representatives, the appropriateness of the sorts of gifts prescribers have received from Pharmaceutical Sales Representatives and whether those gifts have any influence on prescription of a drug to a patients. The analysis was based on a survey of health professionals conducted at three different public hospitals in the Kumasi metropolis namely; Komfo Anokye Teaching Hospital, Manhyia Polyclinic and Suntreso Government Hospital. One hundred medical professionals comprising Medical Officers, Pharmacists and Medical Assistants were involved. The research showed that Pharmaceutical Sales Representative detailing has become prevalent in hospitals in the Kumasi Metropolis with these drug Representative visiting a health professional (prescriber) at least once a week. These frequent visits are meant to build a relationship with these health professionals. However, health professionals (prescribers) in the Kumasi metropolis do not rely on the drug information provided by the drug representatives. Most prescribers feel the Representative are gaining significant influence on their social lives because of their preference when they meet them “over drinks” after or in-between work. In spite of that, health professionals in Kumasi generally still have a positive attitude towards the interactions with the pharmaceutical sales Representative. In addition, health professionals have received drug samples, medical reference books, vouchers and branded items (Pens, note pens, shirts and calendars) as gifts from the drug company’s representatives. Others have also received other financial benefits with just five

percent acknowledging receipt of cash rewards. Furthermore, the prescribers consider the gifts received as appropriate.

Finally, this research showed a strong correlation between receiving drug industry benefits and favouring specific products in hospitals in Kumasi. Health workers in Kumasi admitted that their interactions with the Representative might have had influence on their prescription but somehow did not feel obliged because of the gifts received.

DEDICATION

I wholeheartedly dedicate this research work to the Lord Almighty through whose guidance and protection I have been able to reach this far in my education.

Secondly, to my late parents Mr and Mrs Appiah-kubi. May the lord grant them eternal rest.

Lastly to my wife, siblings and all loved ones.

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"I thank you, Lord, with all my heart" (Psalm 138:1a)

In works of this nature, it is very difficult indeed, if not impossible; to recollect all the sources of ideas used or adequately acknowledge debts where they are due. Any observed failure of such acknowledgement should not be taken as intellectual dishonesty or ungratefulness. Such ideas might have been completely absorbed in my thinking, that they become unnoticed as my own.

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ACRONYMS & ABBREVIATIONS

BNS – British National Standard

GOV'T – Government

WHO - World Health Organization

CME - Continue Medical Education

CHAPTER ONE

INTRODUCTION

1.1 BACKGROUND TO STUDY

Contrary to over-the-counter (OTC) drugs that can be obtained without prescription, prescription drugs are licensed medicines that are legislation-regulated. These medicines are given to patients by a doctor for the purpose of treating specific health conditions. In other words, consumers pay for prescription drugs, but the health professionals control its access. Since direct-to-consumer advertising (DTCA) of prescription drugs is banned in most countries including Ghana, health professionals are the primary targets for the promotional tactics of drug companies (CI Report, 2007).

Ghana has become a rising destination for most branded pharmaceutical companies because the per capita spending on drugs has more than tripled within the last decade and it is again expected to double from its current $9.8 to $20.4 by the year 2014 (GHS report, 2007). Related to this endeavour, these drug companies have engaged in interactions with prescribers, patients, patient associations and health authorities across the entire country. These discussions and promotions made by the drug representatives (pharmaceutical Representative) have been made in order to build good relationships with these health professionals (prescribers) so as to increase sales. Dwyer, Hill and Martin (2000) stated that sales success is dependent on the effectiveness of a salesperson's interactions with the buyer. Several other authors have found that sales success is directly attributable to the use of specific selling techniques applied during the selling process (Peterson, Cannito, and Brown 1995; Plank and Reid 1994; Predmore and Bonnice 1994; Spiro and Perreault 1979).

The kind of marketing strategy adopted by Medical or Pharmaceutical Representative takes four main forms: gifting, detailing, drug samples, and sponsoring continuing medical education (CME). Physicians with access to these four main forms are more likely to prescribe brand name medication over equivalent OTC medications (Sufrin and Ross, 2008). However, Medical representatives serve as a source of important information in terms of the evolution of the medicine to the Prescriber.

1.2 PROBLEM STATEMENT

There is no evidence from any part of Ghana that has established that health professionals knowingly or intentionally compromise their patients' care as a result of external influence. Nevertheless, the question remains whether the current promotional tactics employed by pharmaceutical representatives in the Kumasi metropolis mobilized any influence on the patterns of prescriptions by health professionals. Or whether there have been prescriptions of medicines in the Kumasi metropolis by health professionals based on considerations that go beyond scientific knowledge and patient needs.

Regardless of the numerous codes of ethics regulating the Marketing of prescription drugs such as IFPMA code of Pharmaceutical Medical Practice, World Health Organisations code of ethics as well as the Pharmacy act 1994, there are still unethical commercial practices which influence prescribers' decisions.

This is an important gap, since the net outcome for stakeholders involved in health delivery in Ghana hinges upon these (possibly countervailing) effects. This research work will attempt to fill this gap in literature.

1.3 OBJECTIVES

The objectives of this research work are as follows:

1. To determine the extent of the interactions health professionals (prescribers) engage in with Pharmaceutical representatives in the Kumasi metropolis.
2. To find out the attitude of Health professionals (Prescribers) towards the relationship with the Pharmaceutical Representatives.
3. To determine the appropriateness of the sorts of gifts health professionals (prescribers) receive from Pharmaceutical Sales Representatives.
4. To determine whether gifts received from Pharmaceutical Representatives have any influence on prescription of a branded drug to a patient for treatment.

1.4 RESEARCH QUESTIONS

This study aims at addressing the following research questions:

I. What is the extent of the interaction between health professionals (prescribers) and pharmaceutical representatives in the Kumasi metropolis?

II. What is the attitude of Health professionals (Prescribers) towards the relationship with the pharmaceutical representatives?

III. What is the appropriateness of the sorts of gifts health professionals (prescribers) receive from pharmaceutical sales Representatives?

IV. Do gifts received from pharmaceutical Representatives have any influence on prescription of a branded drug to a patient for treatment?

1.5 SIGNIFICANCE OF THE STUDY

While relationships between the drug industry and the medical community have resulted in important benefits for patient care (Smith, 2002), there has been growing concern about the potential negative consequences of these relationships, especially in Ghana. In particular, commentators have increasingly questioned the appropriateness of some of the gifts that are given to physicians by companies in the pharmaceutical, device and medical equipment industries. Many gifts serve important and socially beneficial functions. For example, companies have long provided funds for educational programs and facilities. Some gifts, however, may have inappropriate effects and therefore serve as a cause for concern.

This study will be helpful to academics seeking to pursue further studies on the matter. This may trigger an impetus to further improve the knowledge of the medical industry in Ghana. To this end, the study will be beneficial to a number of sectors in society.

The implications of the findings are not limited to medical studies alone. The data from this study will also be beneficial to other stakeholders such as the patients and the Ghana government.

1.6 SCOPE AND LIMITATIONS

This research work would be carried out in the Kumasi metropolis, specifically in three hospitals namely; Komfo Anokye teaching hospital (KATH), Manhyia Polyclinic and Suntreso Government Hospital.

Ideally all health professionals in the Kumasi metropolis should have been covered but due to time and financial resource limitations, only those in the three selected hospitals would be considered. Again, because the researcher is a medical practitioner himself, it was difficult getting his colleagues to give honest answers to the questions in the questionnaires. This is because most respondents initially thought the findings could be made available to superiors. However, assurance of a purely academic exercise calmed nerves.

1.7 SYNOPSIS OF THE CHAPTERS

The framework of this piece of study has been structured to gain insights into the above purpose and thus includes 6 chapters namely the literature review, Methodology, Analysis and Discussion, Conclusion, limitations, managerial implications and future research. A brief outline of each of them is given below:

The first chapter formed part of the introductory elements of the research work. It offered a discussion on what the thesis intended to tackle and what medical issues it sought to resolve.

The second chapter provided related literature pertaining to evolution of marketing, pharmaceutical selling and its representatives, forms of pharmaceutical marketing etc. The discussion concentrated on how the existing literature pointed to the concepts and issue mentioned in the aims and objectives of this work.

The third chapter of the research work covered the methods and procedures that were used in this research work. The chapter covered the models used in the data collection; statistical tool as well as other concerns which the researcher encountered during the course of the study was also taken into account.

The fourth chapter presented, interpreted and analyzed the data acquired from the respondents. In this part of the study, tables and charts were used to summarize the findings made by the research process. The processed data from the quantitative research was discussed and it was related to the objectives of this research.

The last chapter concluded and made the necessary recommendations based on the findings presented in the preceding chapter.

CHAPTER TWO

INTRODUCTION

2.1 MARKETING AND ITS EVOLUTION

The question “what is marketing” could be answered as, “it is a process by which one identifies the needs and wants of the people, creates a product/service to meet the needs and wants, develops a way of taking the product/service to the market place, determines the way of communicating t she product to the market place, determines the value for the product, targets the people (segmentation), who have needs/ wants and then creating a transaction for exchanging the product for a value and thus creating a satisfaction to the buyer's needs/wants” (Smith, 2002). Evolution of marketing didn’t take place overnight, international situations and scenarios made the business people to develop this way of retaining and increasing their business (Evens, 1990).

The evolution process can be in three eras; production, sales and marketing. The production concept prevailed from the time of the industrial revolution until the early 1920's. It was early industrialization when output was limited, no competition and high demand. Companies had no interest in consumer preferences or demands (Evens, 1990). Production concept prevailed into the late 1920's (Evens, 1990). By the early 1930's however, mass production had become commonplace, competition had increased, and their demand was decreasing. The firms now began to practice the sales concept (or selling concept), which was focused on convincing customers to buy their products through advertising and personal selling. Now, the key questions were, can we

sell the product? And can we charge enough for it? The sales concept paid little attention to whether the product actually was needed; the goal simply was to beat the competition to the sale with little regard for customer satisfaction. Marketing was a function that was performed after the product was developed and produced, and many people came to associate marketing with hard selling. Even today, many people use the word "marketing" when they really mean sales (Evens, 1990). After the Second World War, the variety of products increased and hard selling no longer could be relied upon to generate sales. With increased discretionary income, customers could afford to be selective and buy only those products that precisely met their changing needs, and these needs were not immediately obvious. The key questions became; what do customers want, can we develop it while they still want it and how can we keep our customers satisfied?

In response to these discerning customers, firms began to adopt the marketing concept, which involves; focusing on customer needs before developing the product, aligning all functions of the company to focus on those needs and realizing a profit by successfully satisfying customer needs over the long-term.

2.2 PHARMACEUTICAL MARKETING

Pharmaceutical industries adopted marketing toll with some controlled practices initially. But with passage of time, pharmaceutical marketing became like fast moving consumer goods (FMCG) and all the concerns regarding patient safety and health were neglected.

The definition of pharmaceutical marketing is “activities focused on making physicians as well as the general public aware of new and existing pharmaceutical brands, pharmaceutical marketing can include giveaway samples, detailed product literature, disease management programs, and support

material for patients, internet initiatives, and events/meetings for physicians" (Olszewska, 2006). Pharmaceutical marketing can also be defined as a management process that serves to identify and meet patients' needs in a profitable way (Pharmaceutical Marketing, 2006). Pharmaceutical business mainly adopts sales and promotion, the branches of marketing (Doran et al., 2006).

World Health Organization (WHO) defines promotion as "all informational and persuasive activities by manufacturers and distributors, the effect of which is to induce prescription, supply, purchase and/or use of medicinal drugs" (Olszewska, 2006).

International Federation of Pharmaceutical Manufacturers Association (IFPMA) defines promotion as "any activity undertaken, organized or sponsored by a member company (pharmaceutical company member of IFPMA) which is directed at healthcare professionals to promote the prescription, recommendation, supply, administration or consumption of its pharmaceutical product(s) through all media, including the internet" (IFPMA code of practice, 2006).

2.3 Techniques And Tools For Pharmaceutical Marketing And Promotion

For ease of understanding, it can be divided in two sections:

1. Traditional pharmaceutical marketing and promotion: techniques and tools
2. Pharmaceutical marketing in 21st century: latest techniques and tools in global village.

2.3.1 Traditional Pharmaceutical Marketing and Promotion: Techniques and Tools

I. Advertisement

Advertisement of drugs is done mainly by.

Directed to consumers Advertisement (DTCA) • Advertisement in mass media (legally allowed only in two countries USA and New Zealand), Directed to prescribers Advertisement,Through advertisement in professional publications, books, journals, conferences, electronic media and cyber space and Continuous Medical Education (CME).

These days, this tool of pharmaceutical promotion is very popular. It is a process by which pharmaceutical companies use educational events for their marketing purpose by investing in physicians or opinion leaders who are paid as speakers at education events, lectures, excursions i.e. national excursions for participation in conference/seminars and symposia, foreign excursions for participation in conference/seminars and symposia. The industry gets double benefits from CME programs. At one end, they oblige their customers (prescribers) and as return, get increased prescription. On the other end they promote their image as a responsible organization of the society to use corporate social responsibility (CSR) concept.

II. Sponsorships

Companies also try to make direct payments to the doctors by various indirect ways i.e. for clinical trials (entering patients in clinical trials against payment), national and international conferences and symposia sponsorships, free medical camps, and opinion leaders (to deliver lectures) for health care professionals (Masood et al., 2007).

III. **Personal Selling**

Personal selling is the most important way of drug promotion. It adopts detailing in combination with many other tools. Detailing is the most commonly used technique world-wide and by definition, it is “the personal sampling and other promotional work among doctors, dentists, and

other professional persons done for pharmaceutical concerns; in order to secure goodwill and possible distribution or prescription of the product". Sales representatives are the focal resource for applying most of the techniques of pharmaceutical marketing. This means that the relationship between prescribers and medical representatives is supported by various gifts and materials (McNeill et al., 2009). The adopted tools of promotion for this technique are drug information brochures, literatures, drug samples, giveaways, personalized gifts, sweepstakes in conferences and workshops and many other tools (McNeill et al., 2009: Masood et al., 2007).

2.3.1 Pharmaceutical Marketing in 21st Century: Latest Techniques and Tools in Global Village

Pharmaceutical marketing have also adopted modern techniques according to developments in technology. Few of them are adopted independently and some are being used in combination or to support traditional techniques.

I. Internet Based Drug Promotion: Using Corporate Blogs, Social Network Webs and Many Other Online Methods

Pharmaceutical industries are focusing on the advantages of the internet and the development of new media forms to promote their products. Electronic detailing, interactive websites, email prompts and viral marketing campaigns using social networking sites such as YouTube, MySpace and Facebook are amongst the tools being used (Sweet, 2009).

II. Electronic Detailing

With the development in technology, many existing methods and practices have been either replaced or modified in combination with technologically developed methods. Electronic detailing (e-detailing) is one of the methods of drug promotion introduced a few years back as a technologically developed tool. In the pharmaceutical industry, it has been introduced as a new communication channel for the promotion of drugs among the physicians. E-detailing digital technologies like internet, video conferencing, and interactive voice response are adopted to interact with physicians (Alkhateeb and Doucette, 2008).

III. Direct to Consumer Advertisement of Prescription Drugs.

The pharmaceutical industry is one of the most advertising-intensive industries. Promotional expenditures often amount to 20–30 percent of sales, sometimes well exceeding expenditures on research and development (R&D) (Brekke and Kuhn, 2006).

Direct-to-consumer advertising of prescription drugs (DTCA) is legal in 2 industrialized countries, the United States and New Zealand. No new legislation was introduced to allow this form of advertising; both countries' laws were silent with respect to the target audience for prescription drug advertising. However, since the early 1990s when the US pharmaceutical industry spent less than $100 million per year advertising prescription drugs to the public, DTCA has grown enormously, with spending reaching $3.2 billion in 2003 and the proportion of advertising revenues devoted to DTCA growing from 9% in 1996 to 13% in 2003 (Mintzes et al., 2005)

Under the Federal Food, Drug, and Cosmetic Act, the Food and Drug Administration is responsible for ensuring that the labelling and advertising of prescription drugs is truthful and not misleading.

Section 502 (n) of the act (21 U.S.C. 352 (n)) prohibits the advertising of drugs that is false or misleading or that fails to provide required information about product's risks. Although in the beginning, advertising of prescription drugs was primarily addressed to health professionals, over the period of time, consumers have become the primary target audience. After the change in the target audience of advertisement, direct-to-consumer advertising (DTCA) has become the favourite channel of the pharmaceutical companies for marketing their products. Spending on DTCA for prescription drugs reached $3.27 billion in 2003, almost 5 times the $695 million level seen in 1996, and over 25 times the $130 million level seen in 1993. Part of this growth resulted from the Food and Drug Administration's August 1997 Draft Guidance for Broadcast Advertising of Prescription Medicines, which effectively opened the door for pharmaceutical companies to advertise prescription drug products on television and radio (Schommer, 2005).

2.4 Regulations and Codes of Conduct to Control Pharmaceutical Promotion

The issue in pharmaceutical marketing is not only the misuse or abuse of the drug promotional techniques. The absence and weak enforcement of the regulations and self-regulatory codes could also be responsible for uncontrolled drug marketing.

Malaysia has a comprehensive (Malaysian Laws on Poison and Sales of Drugs) law to control pharmaceutical promotion and a well-defined self-regulatory code developed by the Pharmaceutical Association of Malaysia (PhAMA) which is an extension of IFPMA (International Federation of Pharmaceutical Manufacturers Association) Code. However, the effectiveness of the Pharmaceutical Association of Malaysia's (PhAMA) code of conducts for prescription (ethical) products in controlling pharmaceutical promotion is questionable as no research has been done to

examine if it is implemented in practice (Othman, 2006). Many developing countries have no appropriate law to control the pharmaceutical promotion. In Pakistan, the drug act of 1976 governs the Pharma industry, but there is no appropriate control on promotion. In the chapter 4 of Drugs (Licensing, Registering And Advertising) Rules, Drug Act 1976 rule number 31 to 35 addresses the "advertisement" not promotion and this, is even not enough to control advertisement (DCOMoH, 2009).

Chapter III of Drug act "prohibitions" rule number 24 and 25, addressing prohibition of advertisement of drugs direct to consumers and control on sampling is very ambiguous. It states that "no person shall distribute or cause to be distributed any drug as a sample except in accordance with such conditions as may be prescribed" (DCOMoH, 2009) and no details of "may be prescribed" are available. Schedule "G" is added by an SRO (Solicitor's Remuneration Order) 1362(1)/96, dated 28-11-1996, specifically to control pharmaceutical promotion (DCOMoH, 2009) but it is in the same ambiguous statement form and actually is only an addition of few more papers in the Drug Act. These legal provisions are much ambiguous and can easily be violated.

2.5 Abuse of Marketing Techniques in Pharmaceuticals.

The pharmaceutical industry has contributed more to the well-being of humanity than any other. Arguably among other achievements, it has helped to remove tuberculosis, gastroenteritis, and diphtheria from among the 10 leading causes of death in the western world and also achieved a mile stone by playing basic roles in the removal of small pox, plague and polio, which were the main causes of death and disability especially in the developing countries a few decades back. Despite

these achievements, the avoidable suffering caused by the pharmaceutical industry, particularly to the poor of the world, seems at times beyond comprehension (Braithwaite, 1986).

Alliances between the medical profession and the pharmaceutical industry have become increasingly widespread in recent years. While there are clearly benefits for doctors and their patients derived from the medical profession working with the industry, concerns have been raised that commercial imperative of industry may conflict with physicians' independence and professional integrity (Doran et al., 2006) it is a fact that marketing and promotional activities may influence the physicians' decision regarding prescribing medication. Little information is available about means of the promotion of pharmaceuticals all over the world especially in the developing countries where there is no documentation of the promotional practices, means and tools influencing doctors prescribing behaviours. Even globally we can find few studies that addressed the issue but in a very narrow and specific area of the scene.

2.6 Promotional Spending

Gifts given by the pharmaceutical industry to physicians are common and controversial (Gibbons et al., 1996). Their expenditure on marketing is increasing day by day.
In the USA, the pharmaceutical industry spends nearly twice as much on marketing as on R&D (Applbaum, 2008). In 1998, the pharmaceutical industry spent US$12724 million in United States only on promoting its products. In 1998, the expenditure was dominated by free drug samples provided to physicians (equivalent retail cost of US$ 6602 million) and office promotion (US$ 3537 million), followed by (DTCA) Direct to consumers advertisement (US$ 1337 million) hospital

promotion (US$ 705 million) and advertising in medical journals (US$ 540 million) (Jun et al., 2003). It has been estimated that on the average, more than US$8000 is spent per physician annually (Gibbons et al., 1996) and this budget is increasing every year. According to IMS (International Medical Statistics) and CAM, spending for the promotion of prescription drugs in US during the year of 2004 was more than 57.5 Billion out of which 15.9 (27.7%) was spent on free samples, 20.4 (35.5%) on detailing 4 (7%) on Direct to Consumers Advertisement (DTCA), 2 (3.5%) on meetings, 0.3 (0.5%) on e-promotion, mailing etc., 0.5(0.9%) on journal advertisement and 14.4 (25%) were the unmonitored promotional expenditures (estimate) (Gagnon and Lexchin, 2008).

IMS have not included the spending on phase IV "seeding" trials, trials which are specifically designed for the promotion, the prescription of new drugs and have no interest in generation of scientific data. In 2004, 13.2% (US$4.9 billion) of R&D expenditures by American pharmaceutical firms was spent on phase IV trials (Gagnon and Lexchin, 2008).

Out of these marketing budgets, focus of the companies show an increasing trend in the budget allocation for detailing mode and direct to consumer advertisement. In 1996, budget spent on detailing mode of promotion was 3 billion which reached 4.8 billion in 2000 (only in 5 years). Similarly, spending on direct to consumer advertisement was 0.8 billion which in the 5 years reached 2.5 billion USD in United States (Millenson, 2005).

The Pharmaceutical industry has been the most profitable industry in the country for a decade. According to an analysis of 2001 data, it was five times as profitable as the average Fortune 500

companies. The industry deserves great credit for supplying miracle drugs, but no responsible industry would engage in the price gouging and advertising abuses that taint its reputation today.

2.7 The Game of Patent and Branding

Since the early 1990s, the drugs mostly approved by FDA were “me too” and were as high as 92% of the approvals (Applbaum, 2008). This sharp growth has produced many concerns regarding marketing tactics because when we compare this growth with the launching of new molecules, we will find no considerable addition in number of new molecules so easily. Hence it can be concluded that this growth is based upon generic drugs. The same drug is registered with different brand names; for example, diclofenac sodium is registered in Pakistan with more than 170 brand names for different companies (Neeshat, 2006). This type of growth is increasing with no ending of competition in the market. Companies want to sell their products by any possible means either ethical or non-ethical.

The Food and Drug Administration (FDA) approved Neurontin in doses of 1800 mg per day as adjunctive therapy for partial complex seizures, in 1993 which was patented in 1977. This drug became a surprise blockbuster for Parke–Davis, a division of Warner–Lambert, which was purchased by Pfizer in 2000. U.S. sales shot up to nearly $3 billion in 2004 which was $98million only in 1995. Later, Neurontin faced generic competition and lost most U.S. sales (Landefeld, 2009).

2.8 The role of the commercial sector as a source of drug information

2.8.1 Accuracy of promotional drug information

Zeigler et al (Zeigler M et al, 1995) quantified the inaccuracies in pharmaceutical representatives presentations by analysing 106 statements made during 13 presentations. 11% of the statements were inaccurate in favour of the promoted drug. Of the 15 statements about competitors' drugs, none were favourable. 49% of accurate statements about the promoted drugs were favourable, 31% were neutral and 15% were unfavourable. A questionnaire was distributed to a sample of 27 residents who had attended the presentations. Only 26% of residents recalled having heard a representative make an inaccurate claim.

Avorn et al (Avorn et al, 1982) examined the contribution of scientific and commercial sources on drug use by comparison of physician's beliefs on two very similar drugs, one prescription and one available over the counter. Both drugs have high levels of commercial advertising and poor scientific evidence to help eliminate self-reporting bias. Those physicians who believed that the drugs were effective stated that their information was most likely to come from scientific sources. Physicians who believed the prescribed drug to be effective were also more likely to find the over the counter drug more effective. 68% of physicians believed commercial sources had little effect on their prescribing habits and 54% believed pharmaceutical representatives were minimally important in choosing prescriptions (Avorn et al, 1982). In comparison 62% believed scientific evidence was very important in influencing their prescribing choice. However, 88% believed that training and clinical experience was the most important factor in their prescribing habits.

The inaccuracy and selective bias of promotional drug information have been demonstrated (Zeigler et al, 1995 and Avorn et al, 1982). Given this situation, it is pertinent to investigate the extent to which prescribers rely upon biased commercial information sources in their clinical practice.

2.8.2 Value of promotional drug information

McGettigan et al (McGettigan P, 2001) investigated the importance of different information sources on doctors' prescribing. 200 GPs selected randomly from a national register and all prescribing hospital doctors (n=230) working in three teaching hospitals were asked to rate the relative importance of a range of information sources for prescribing "new" and "old" drugs. Amongst GPs, academic references, such as the Drugs and Therapeutics Bulletin and medical journals, were the most frequently cited sources. Pharmaceutical representatives were important for 62% of GPs for "new" drugs and 26% for "old" drugs. Amongst hospital doctors, the BNF was most valuable for "old" drugs and senior colleagues for "new" drugs. Pharmaceutical representatives were important for 47% of hospital doctors for "new" drugs and 18% for "old" drugs. Both GPs and hospital doctors more frequently cited academic references and colleagues as important sources of prescribing information than commercial sources. However, the paper revealed that in practice, pharmaceutical representatives are more heavily utilised than doctors realise. GPs are more likely than hospital doctors to underestimate the relative influence of pharmaceutical representatives, which may reflect lower reliance on advice from colleagues due to different social networks in the working environment. This difference between theory and practice may indicate that doctors are unaware of the extent to which commercial information sources influence their prescription decisions.

A 1974 survey of USA doctors undertaken by the FDA (Moser R, 1974) revealed that 64% of all doctors and 80% of general practitioners and paediatricians used materials provided by pharmaceutical representatives as a source of drug information. Additionally, package inserts and

journal advertisements were commonly used. Personal contact with representatives was used as an information source by 61%. Doctors also valued information from other personal contacts including consultants, clinical meetings and courses, as well as journals and periodical newsletters. Although preferences for information sources may have changed since this survey, the large sample size of almost 15, 000 physicians makes it a valuable source.

There is some evidence that there is a difference in the source of drug information between different ages of doctors. McCue et al (McCue J et al, 1986) found that commercial sources of drug information were thought to be less accurate than non-commercial sources, but were still more frequently used. Doctors who had been practising for longer than 15 years were more likely to use pharmaceutical representatives as a source of drug information. Similarly, Murray-Lyon's survey of 131 GPs in Scotland (Murray-Lyon N, 1977) found that those who qualified between 1950-1959 ranked pharmaceutical representatives first as their preferred source of drug information and medical journals second. The reverse was true for those who had qualified after 1960. It seems possible that these differences may be due to cultural attitudes and habits instilled during medical training.

Strickland-Hodge and Jeqson (Strickland-Hodge, B. and Jeqson, M, 1980) found that longer-qualified GPs cited industrial sources of information as being useful significantly more often than those who had qualified more recently. This may be due to differential preference for two publications: MIMS, an industry-derived reference, was cited more often by longer-qualified doctors; whilst the DTB was significantly rated more useful by more recently qualified doctors, who would have received the publication without subscription since 1976.

In the above studies the relationship between drug promotion and prescriber knowledge is self-reported. Studies measuring self-reported reliance on commercial information sources provide evidence about doctors' perceptions of where their knowledge of drugs comes from, and may not be an accurate indication of the actual influence of the pharmaceutical industry on doctors' knowledge. A review by Williams et al (Williams R et al, 1991) concluded that the relative importance of commercial sources of drug information for physicians had declined in the USA over the latter half of the twentieth century. However, it has been suggested that this is more likely to reflect the decreasing social acceptability of reliance on commercial source and hence, a decline in self-report, rather than a real trend in utilisation of such sources (Norris P et al, 2005). The following study measures self-reported knowledge and attitudes following a known exposure to drug promotion. This approach establishes a concrete relationship between exposure to drug promotion and the uptake of knowledge, though the measurement of knowledge is still limited by the self-report method. Spingarn et al (1996) used a retrospective cohort study design to evaluate the effect that a pharmaceutical grand round presentation had on the knowledge and attitudes of attendees. 75 house officers, of whom 22 had attended the presentation on Lyme disease, were followed up three months later with a questionnaire. They were asked to identify a suitable drug therapy for four different hypothetical presentations of Lyme disease. Attendees were more likely to name a more expensive, parenteral therapy for the advanced cases of Lyme disease in which it is indicated. However, they were also significantly more likely to inappropriately name this therapy for milder cases, when a cheaper oral antibiotic is indicated. Attendees were also more likely to name the cephalosporin manufactured by the speaker's pharmaceutical company than non-attendees. These findings were in spite of the fact that the presentation had been factually accurate and the speaker

had referred to the cephalosporin by its generic name for the majority of the presentation. Furthermore, although the speaker had been introduced as an executive of the pharmaceutical company, most house officers denied being aware of this affiliation during follow-up. Spingarn et al (1996) observed that even if not biased, education so supported may still be preselected, speculating that the inappropriate prescribing knowledge may have arisen from the disproportionate time spent by the speaker in discussing those infrequent, advanced cases of Lyme Disease that would require the cephalosporin.

It is an accepted and a well documented fact that pharmaceutical companies are the biggest source of drug information for the prescribers. In Canada, 66% of doctors are dependent on medical representatives for drug information. Other sources include detail aids 41%, non-reviewed journals 44%, company sponsored symposia 45%, association meetings 51%, product monographs 51%, journal ads 53%, and CME 59% and peer reviewed journals 82% (SWAB, 2004).

If the pharmaceutical industry provides healthcare professionals such as doctors with exact and accurate information regarding medicine, it will be really a very big contribution for the healthcare system and for the society at large because doctors are very much dependent on the pharmaceutical companies for drug information especially in developing countries (Masood, 2007). Using the fact of being the main source of drug information, companies are not hesitant even to deceive the health care providers and regulatory authorities (Meier, 2007; Tanne, 2009). Many studies have proved provision of drug information with the intentional manipulation and misinterpretation.

In 1997, for example, a study comparing the effects of brand-name and generic formulations of levothyroxine led to an uproar over the discovery that the manufacturer of the brand-name product suppressed publication of the result that the two formulations were equivalent. Recently, lawsuits alleging damages from illegal marketing of another old drug; gabapentin (Neurontin), have yielded remarkable discoveries about the structure and function of pharmaceutical marketing (Landefeld et al., 2009).

This is the picture of a developed country, where peer-reviewed journals are the biggest source of information for doctors regarding drugs. This is followed by medical representatives which is the second biggest source for them (SWAB, 2004), but in developing countries, the situation is different. There is poor or no mechanism of monitoring drug promotion; medical representatives are the main source of information (Rohra et al., 2006) even we can say the only source of drug information for (Islam and Farah, 2008) the doctors regarding drugs and to transfer the drug information (Rohra et al., 2006), brochures are the main tool. More than seventy-seven percent of the doctors rely on the medical representatives for drug information (Rohra et al., 2006), in developing countries. A study conducted in 6 cities of NWFP and Punjab (Pakistan) finds that 87% of the doctors think that they can face problems without industry representatives out of which 92%(of the 87%) think that they will be unable to get knowledge of new drugs. Considering this fact, the industry is increasing their sales force day by day. According to IMS health, the sales force of top 30 US based pharmaceutical companies was 52400 in 1998 which increased to more than 100000 only in 7 years (2005).

The accuracy and usefulness of the industry providing information/advertisement has been a subject of debate for a long time which generates the need to audit the mostly used information transfer

means i.e. medicine literature, wall mountings etc.

In a recent study conducted in Pakistan, 18% claims made by pharmaceutical companies were adjudged to be misleading or unjustifiable out of which 32%(of 18%) were classified as "exaggerated", 21% ambiguous, 26% false and 21% as controversial (percentage of the misleading or unjustifiable) (Rohra, 2007).

It is not only in developing countries, if we observe that the pharmaceutical industry is heavily involved in aggressive drug promotion. Due to this aggressiveness, many cases of unfair ways of drug promotion have been identified in developed countries. For example, three current and former executives of the company that produce the narcotic painkiller OxyContin pleaded guilty in federal court of ABINGDON, to criminal charges that they misled regulators, doctors and patients about the drug's risk of addiction and its potential to be abused (Meier, 2007).

To resolve criminal and civil charges related to the drug's "misbranding," the parent of Purdue Pharma, the company that markets OxyContin, agreed to pay some $600 million, one of the largest amounts ever paid by a drug company in such a case (30) in fines and other payments. Likewise, Bayer healthcare pharmaceutical agreed to spend $20m (£14m; €15.6m) for correction of its misleading direct to consumer advertisement of birth control pills (Tanne, 2009).

2.8.3 Bribes.

Any researcher, who investigated the comparative evidence on bribery in international trade has concluded that pharmaceutical is one of the most corrupt among the industries. Dr. John

Braithwaite in his article “The corrupt industry” says that his own research has found evidences of substantial bribery by 19 of the 20 largest American pharmaceutical companies. There is evidence of bribe being paid to every type of governmental official who could conceivably affect the interest of pharmaceutical companies: bribes to cabinet members to get drugs approved for marketing, bribes to social security bureaucrats who fix prices for subsidized drugs; to health inspectors who check pharmaceutical manufacturing plants; to customs officials, hospital administrators, tax assessors, political parties and others (Braithwaite, 1986). Specialists are becoming little more than paid 'shill' for pharmaceutical companies'. Usually the slides they use for their lectures are provided by the host pharmaceutical company. Topics for these lectures are just repetitions. Their research figures are manipulated to turn a two percent improvement into a fifty percent improvement. Graphs are doctored by altering the scales to show substantial improvements where none exist (Gupta, 2009).

If the drug company didn't expect the gift to influence the doctor's decision, why would it give the gift? According to a 1992 article published in The New England Journal of Medicine written by Douglas Waud, M.D., the term gift should read bribe: A gift implies that no strings are attached (Veracity, 2006).

It is now beyond dispute that retiring Rep. Nick Smith, R-Mich, was offered a $100,000 bribe to vote for the Medicare pharmaceutical bill (Noah, 2003).

Companies offer everything from free golf games to week-ends in resort hotels, from free tickets for theatre festivals to dinner cruises. The evening invitations to the most expensive local

restaurants arrive once or twice a week, let alone the free lunches which are mine for the asking. The most a guest has to do is to sit through a half hour presentation of a company's product (Gupta, 2006).

2.8.4 Abuse of Sponsorships

Companies also try to make direct payments to the doctors by using various indirect ways i.e. enter patients in clinical trials against payment, national and international conferences and symposia sponsorships, free medical camps, and foreign trips. Sponsorships also involve "promotional research", use of opinion leaders by way of calling them to present company provided presentations among the health care professionals (Masood and Anwar, 2007).

2.8.5 Abuse of Internet Sources of Marketing

Such campaigns target both health professionals and the general public. The internet is helping to globalize and to change the nature of pharmaceutical marketing, and thus raises some new challenges for regulators (Sweet, 2009). There are no restrictions for consumers to access the web based drug information or through the advertisement mails they get in their e-mail box from some unknown people offering to deliver at their doors. Now, the question arises about who will monitor them and how it can be controlled after the start of internet based pharmaceutical marketing? Country regulation has become just a piece of paper because direct to consumers advertisement of prescription drugs is legally allowed in USA and New Zealand but by internet who will stop the companies from directing their advertisements towards consumers and who will stop consumers from accessing such advertisements and getting involved in self-medication of prescription drugs.

2.9 Impact of marketing on prescribing behaviour and behavioural changes towards offers

A number of authors have commented on the paucity or lack of objective data on impact of pharmaceutical marketing techniques on physician prescribing practices (38). The industry grew very rapidly during the last 2 decades. Simple example for observing this growth rate in a developing country is the trend in number of drugs registrated in Pakistan. The number of total registered branded drugs in Pakistan was less than 20,000 in early 1990s but it was more than 35,000 in 2004 (Sheikh AL, 2006). Ministry of health has registered more than 30000 branded drugs during the last 30 years (Hameed, 2006).

Here, a question arises, "Are the pharmaceutical promotional activities really able to influence the behaviours of the physicians?" (Orlowski and Wateska, 2007). Many studies concluded that pharmaceutical marketing is not only influential to the doctors' attitude but also their prescribing behaviours. Pharmaceutical companies give gifts to doctors as part of promoting and marketing their products. Although many doctors deny the potential for gifts to influence their judgment, it has been found out that medical practitioners' attitudes to the pharmaceutical industry, their knowledge about pharmaceutical products, and prescribing behaviour are influenced by industry promotion and gift-giving (McNeill et al., 2009).

As far as attitude is concerned, it has been changed. For example they (prescribers) ask for or readily accept the offer for free travel and hotel accommodation, give green cards against donations for building funds and refuse to see the medical representatives if donation is not given. Groups of doctors have formed companies and prescribe their products. They have an increasing liaison with chemists to prescribe a product which provides more discounts. They ask for money per

prescription particularly for prescribing more tonics and vitamins. They also request for renovation of clinics and hospitals (Jawaid and Jafary, 2004).

Other studies also support the truth that pharmaceutical promotion has clear impact on the doctors prescribing behaviour. A case is presented for understanding the impact of drug promotional activities on the sale of a drug (intravenous antibiotic used for hospitalized patients) having 125 units' consumption per month over the period of last 22 months. The consumption of the drug peaked to 476 units (maximum) per month after the pharmaceutical company invited specialists of that hospital with one guest each for an "all-expense paid" trip to a luxurious place (Orlowski and Wateska, 2007).

2.10 Impact on Healthcare Spending

Spending on prescription drugs by different countries is increasing continuously by a significant margin every year and one of the identified and most prominent causes of this increase is the continuing switch to new drugs (Moynihan, 2004) which is an outcome of increasing promotional influence. Healthcare expenditures in USA reached $1.6 trillion during the year 2002, which is 15 percent of that year's gross domestic product (GDP). Share of the pharmaceutical expenditures over the past decade, reached 10 percent of overall healthcare spending which is highest during last forty years. Another indicator for increase in pharmaceutical expenses is increasing sales of prescription medicines in USA which reached at $228.8 billion in 2003 (Alkhateeb and Doucette, 2008).

CHAPTER THREE

RESEARCH METHODOLOGY

3.1 INTRODUCTION

This chapter deals with the research and the methods that were used during the research work. It describes the method used in collecting data, the population of the study, the sample size and sampling techniques. The instruments used and the data collection procedures and administration were also described. It also considered the statistical tool that was used to analyze the data.

3.2 CHOICE OF RESEARCH METHODS

The two broad and distinct approaches to social research are the Quantitative and Qualitative methods of enquiry. The purpose of this study is to find the effect of promotion of prescription drugs on health professionals in the Kumasi metropolis. To get a reliable result, it will be of great importance to collect a larger amount of data; therefore, a quantitative research method fits this study.

3.3 RESEARCH DESIGN

For the purposes of this study, survey (field) was deemed appropriate as a research design for this research as against experimental design, correlational design or meta-analysis because of the following four reasons as found by Sekaran (2003):

1. Survey studies have participants in their natural settings, hence maximise realism.
2. Survey research involved data collection from a group, generalising the results of the study to predict the attitude of the population of interest.

3. The survey questionnaire may be structured to elicit information from the population of interest in a systematic and unbiased manner.
4. Survey allows the researcher to make statistical analysis of the data and generalise it to a larger population, hence a perfect choice for this research.

3.4 RESEARCH INSTRUMENT

Data for this research was collected through a questionnaire, which consisted of questions, some of which were open ended and some closed as well as likart scale. The first part of the questionnaire collected demographic data of the respondents before the main questions followed.

Before the questionnaires were finally dispatched, it was pre-tested on five health professionals at KATH hospital. The pre-testing was done in order to ensure that the best questionnaires were administered to the respondents. The sample of the questionnaires could be seen in appendix one.

3.5 SAMPLING TECHNIQUE

The sampling technique adopted for the study was stratified random sampling and quota sampling. Stratified random sampling is probability sampling procedure that ensures that the sample represents certain characteristics or parameters of the population chosen by the researcher. In the selected hospitals in the Kumasi metropolis, only health professionals who prescribe medicines to patients were selected as respondents. Respondents were chosen from the three prominent public hospitals in the metropolis (stratum) using simple random sampling. However, each of the three hospitals was given quotas based on their percentage with regards to the population involved in the stratum.

3.6 DATA COLLECTION

The research was carried out at the Komfo Anokye Teaching Hospital (KATH), Manhyia Polyclinic and Suntreso Government Hospital which had a total population of five hundred and fifty (550) professionals (Doctors, Pharmacist and Medical Assistance) who prescribe drugs. The same questionnaire was administered to all of them.

Seventy-five questionnaires (75) (see Appendix one) were issued to prescribers at KATH. These prescribers were primarily composed of Doctors and Pharmacists since no medical assistant works at KATH. The number of questionnaires issued at KATH was highest because of the higher number of health professionals who work there. On the other hand, twenty-five (25) questionnaires were issued at Manhyia Polyclinic while ten (10) were administered at Suntreso Hospital.

Seventy-two (72) questionnaires from KATH were returned, among that number, one answered questionnaire was not usable due to its incompleteness and missing answers. The remaining seventy-one (71) answered questionnaires were included in the final data analysis. For the Manhyia Polyclinic, all the twenty-five (25) questionnaires were returned answered. However, only twenty-one (21) were usable. Eight (8) issued questionnaires were returned from Suntreso and properly answered. Two were not returned.

3.7 RESPONSE RATE

Total number of questionnaires issued to employee respondents: 110

Gross total response: 105

Usable (Net) response: 100

Response rate of respondents of hospitals in the Kumasi Metropolis

HOSPITAL	NO. QUESTIONNIRES ISSUED	NOT RETURNED	SPOILT	USABLE RESPONSE
KATH	75	3	1	71
MANHYIA	25	-	4	21
SUNTRESO	10	2	-	8

Table 3.1

Response Rate (%) for questionnaire A = (100 / 110) * 100

= 90%

3.8 RESPONSES TO QUESTIONS

Respondents were encouraged to answer the questions as clearly as possible; they were given enough time to answer the questions. Some filled in the questionnaire on the spot, others took it away and left behind their phone numbers from which follow ups were made.

3.9 METHOD OF ANALYSIS

Data analysis tool SPSS 17 for windows was used to analyse the data obtained. Frequency tables, tabulations and cross tabulations were done and the results are presented in chapter four and Appendix two.

3.10 DIFFICULTIES AND PROBLEMS ENCOUNTERED

Data collection was rather difficult because of the busy schedules of the health professionals. Again, because the researcher is a health professional himself, some respondents initially declined to take part because they were afraid that their honest responses might be made known to

management. The researcher therefore had to convince them that their responses were solely for an academic purpose.

CHAPTER FOUR

SURVEY RESULTS, ANALYSIS AND DISCUSIONS

4.1 INTRODUCTION

This chapter presents the empirical data findings. It also provides the reader with the discussions and analysis of findings.

4.2 DESCRIPTIVE PRESENTATION OF SURVEY QUESTIONS

This field survey was conducted in March, 2011. The survey utilized a questionnaire designed to collect data regarding the promotion of prescription-only drugs by pharmaceutical sales representatives and its effects on health professionals in the Kumasi metropolis.

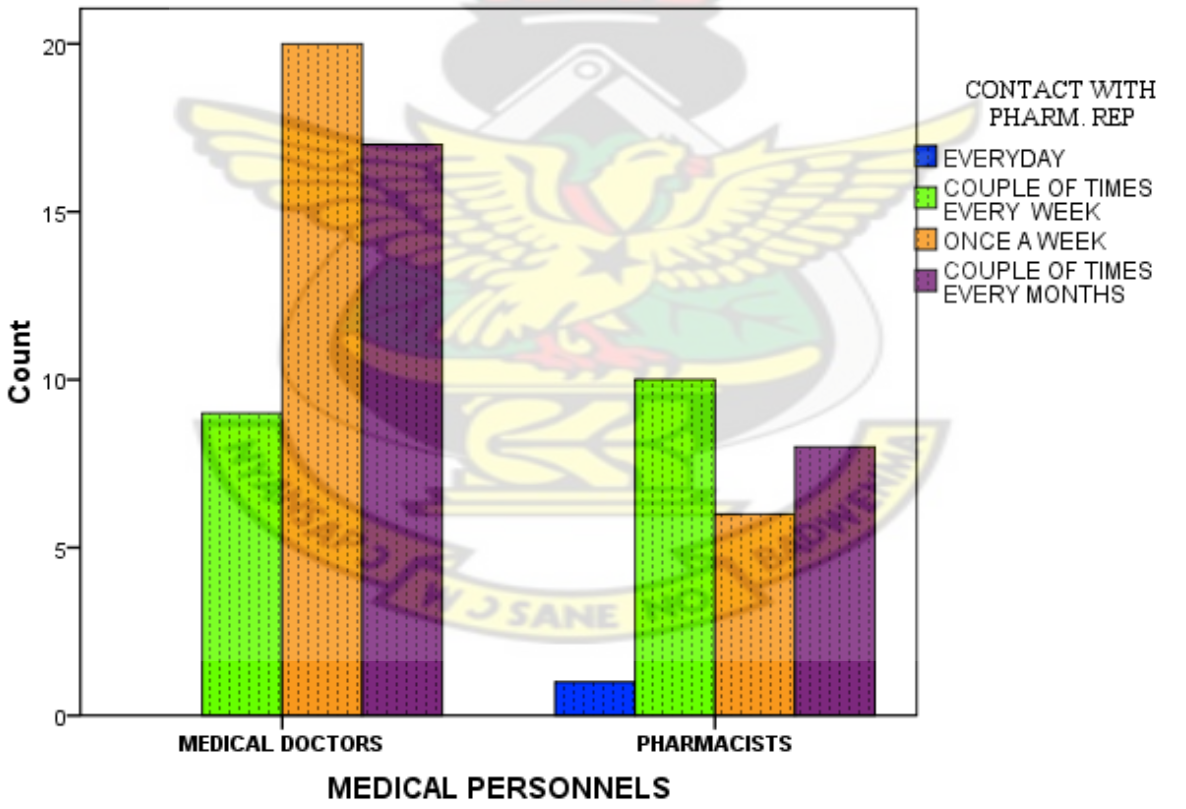
A hundred and ten (110) questionnaires were issued to one hundred and ten respondents through stratified random selection at the premises of three public hospitals in the Kumasi Metropolis, namely: Komfo Anokye Teaching Hospital (KATH), Manhyia Polyclinic and Suntreso Government Hospital. One hundred respondents were returned with no errors. This constituted a response rate of 90%. All the questions on the questionnaires were designed specifically to respond to the objectives of the study.

4.3 OBJECTIVE ONE

To determine the extent of the relationship prescribers engage in with medical representatives.

Figure 4.1

A bar Chart showing Medical Personnels at Komfo Anokye Teaching Hospital (KATH) and how often they come into contact with Pharmaceutical Representatives.



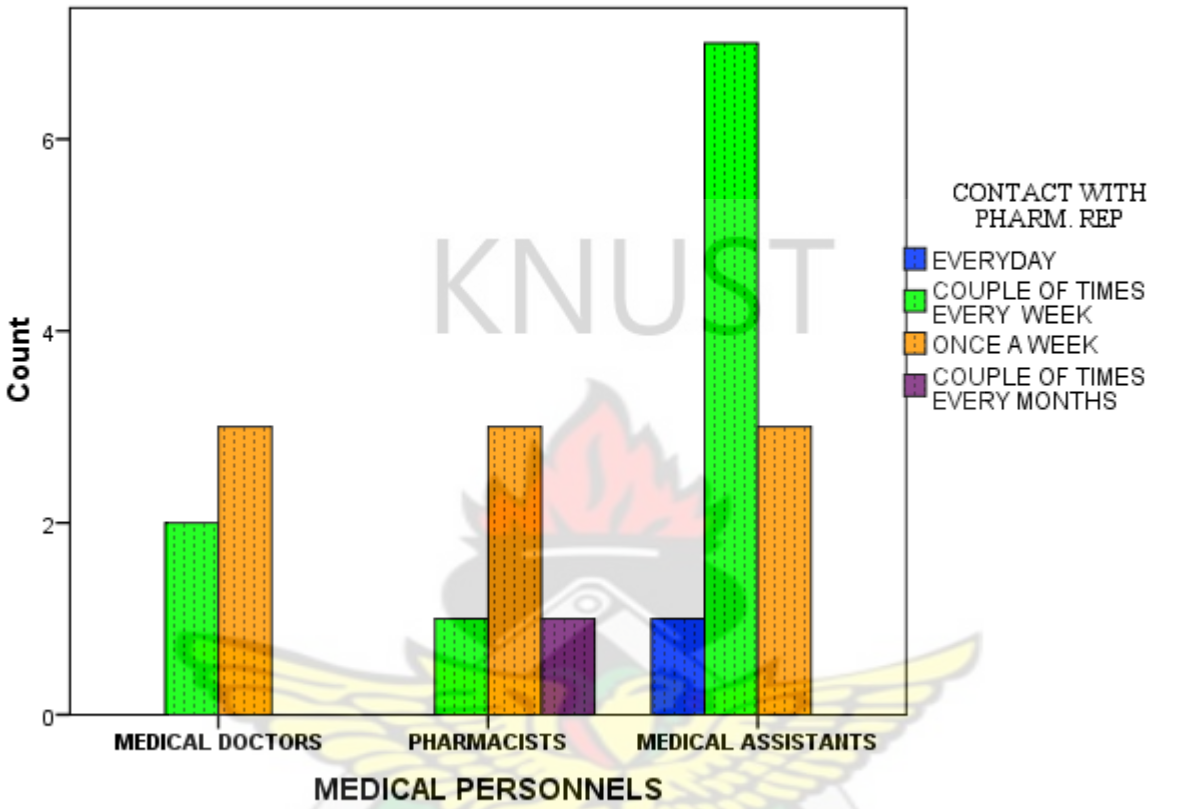
Source: Field work 2011

Figure 4.1 shows medical personnel at Komfo Anokye Teaching Hospital (KATH) and how often

they come into contact with pharmaceutical sales representatives. The figure above shows that most Medical Doctors at KATH had come into contact with the Representatives once a week and couple of times every month. However, fewer doctors had met the pharmaceutical Representatives a couple of times every week but none every day. On the other hand, most pharmacists do come into contact with the Representatives a couple of times in the week and month while fewer said they meet them once a week and every day. It is significant to note that there were no medical assistants among the respondents at KATH. This is because the hospital does not employ the services of medical assistants.

Figure 4.2

A bar Chart showing Medical Personnels at Manhyia Polyclinic and how often they come into contact with Pharmaceutical Representatives.



Source: Field work, 2011

Figure 4.2 shows medical personnel at Manhyia Polyclinic and how often they come into contact with pharmaceutical sales Representatives. The figure above shows that most Medical Doctors at Manhyia come into contact with the Representatives once a week. However, fewer doctors had met the pharmaceutical Representatives a couple of times every week but none every day. Most pharmacists at Manhyia Polyclinic also do come into contact with the Representatives once a week while few pharmacist said they meet the Representatives a couple of times in a week and month. Again, majority of the medical assistance at the Manhyia Polyclinic said that they come into contact with the pharmaceutical Representatives a couple of times in the week, while others said once a week. However, a smaller number of the medical assistants said that they meet them every day.

Figure 4.3

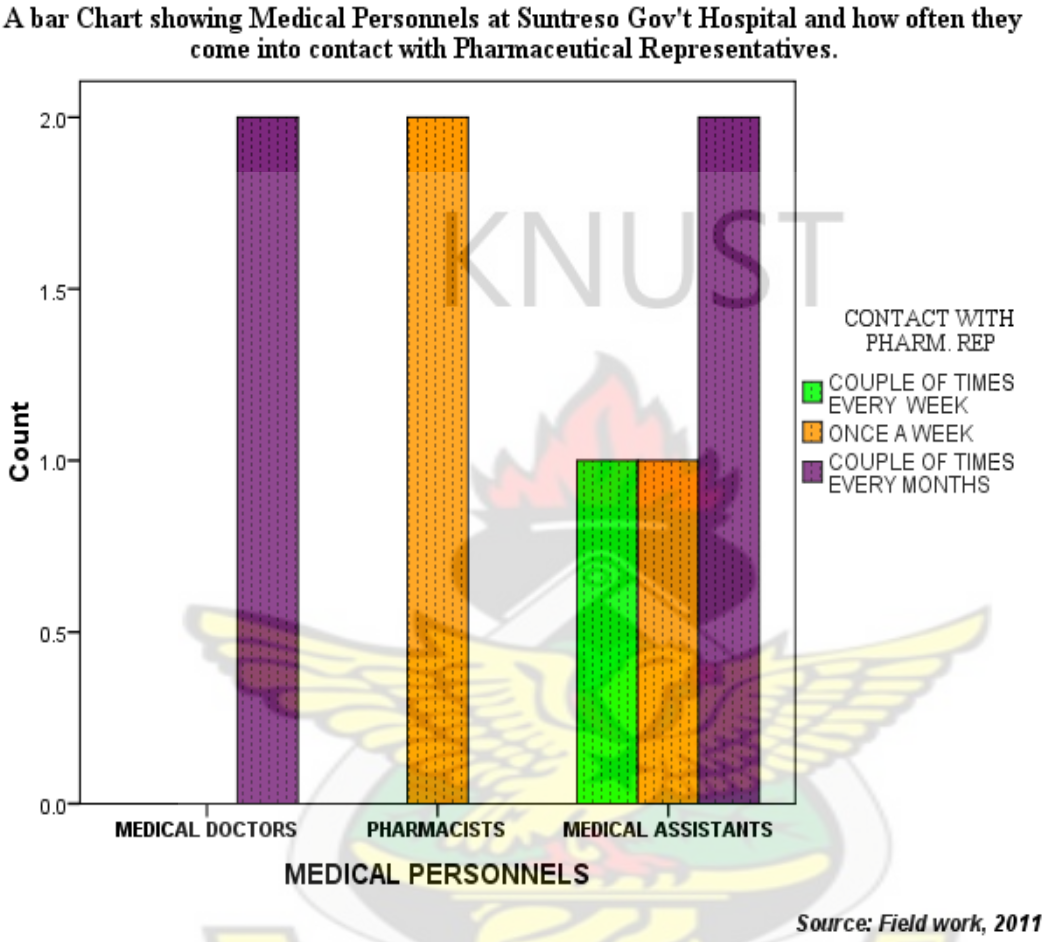


Figure 4.3 shows medical personnel at Suntreso Government hospital and how often they come into contact with pharmaceutical sales Representatives. The figure above shows that, two Medical Doctors (100%) at Suntreso had come into contact with the Representatives a couple of times in a month. However, the two pharmacists (100%) at the Suntreso Hospital had met the pharmaceutical Representatives once a week but none every day. Two Medical Assistants (50%) at Suntreso also

said they come into contact with the pharmaceutical Representatives a couple of times in the month, while each one (25%) said once a week and every day.

Figure 4.4

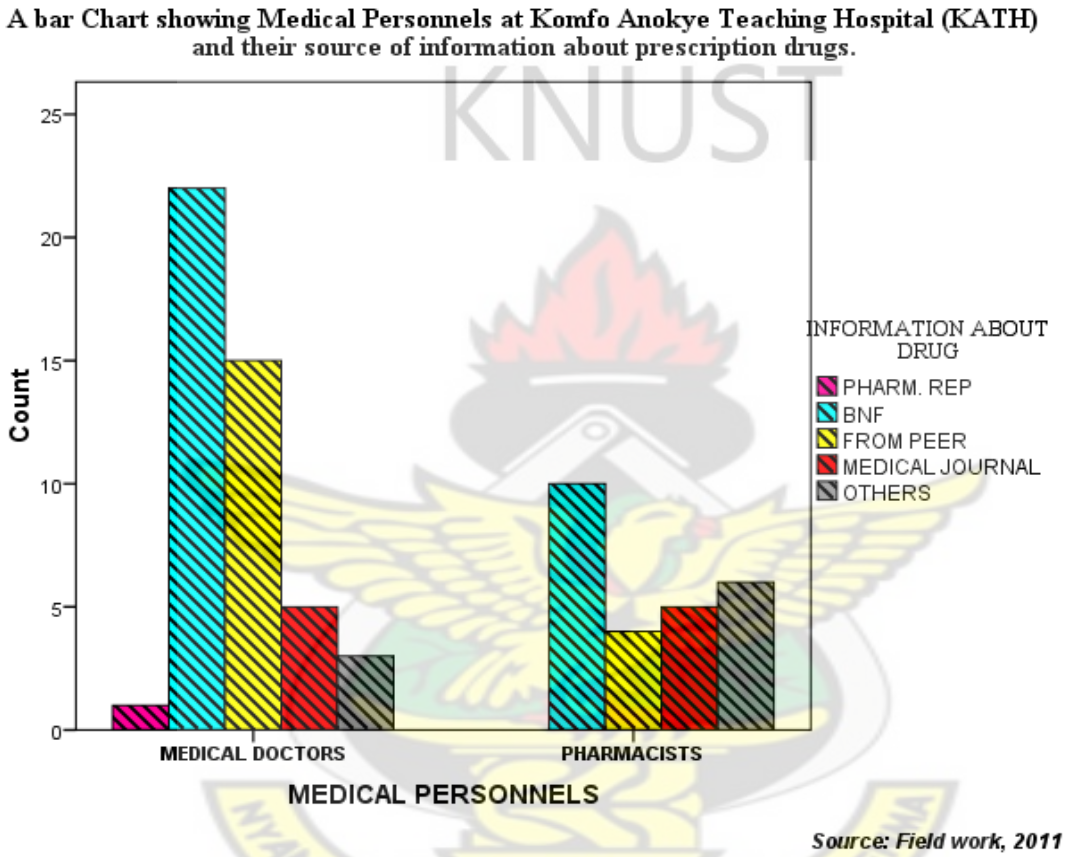


Figure 4.4 shows medical personnel at Komfo Anokye Teaching Hospital (KATH) and their sources of information about prescription drugs. The figure above shows that twenty-five (47%) of Medical Doctors at KATH mostly use the British National Formulae (BNF) to access information about prescription drugs. Fifteen Doctors representing 28.3% do ask their peers and while five Medical Doctors (9%) use medical journals while three (5.6%) use others. However, just one

(1.9%) doctor at KATH uses the Pharmaceutical Representatives to access information about prescription drugs. The same can also be said about Pharmacists at the KATH. Ten Pharmacists' access information about drugs from BNF with a few using peers, medical journals and others. No Pharmacist however, gets information about drugs from Pharmaceutical Representatives.

Figure 4.5

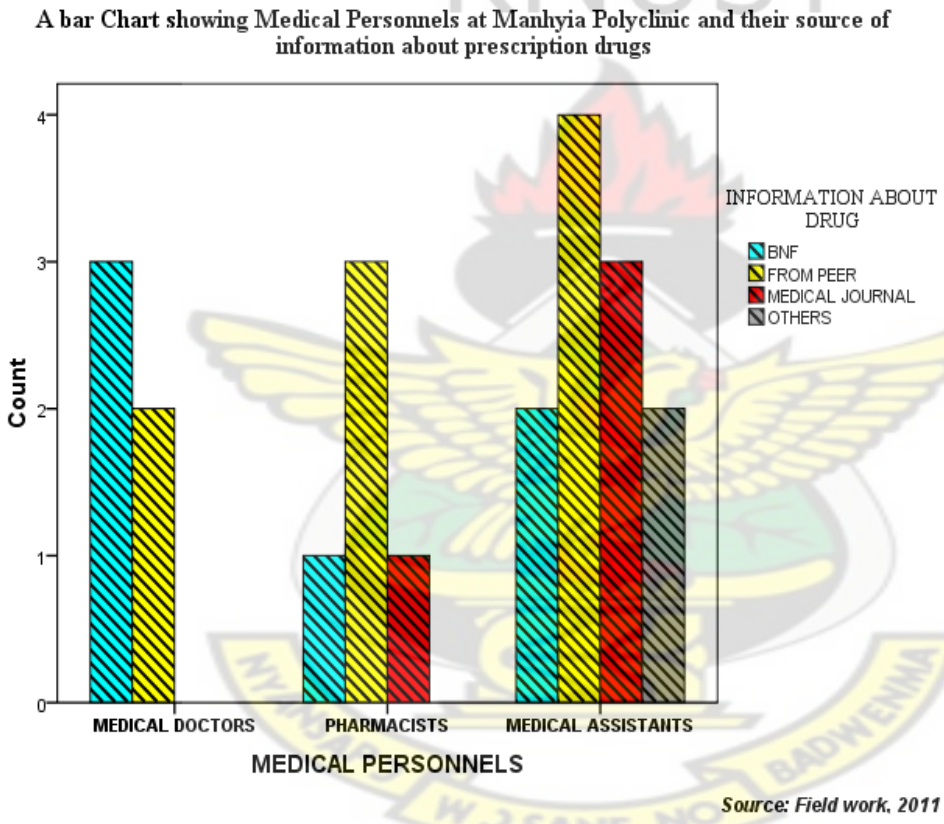


Figure 4.5 shows medical personnel at Manhyia Polyclinic and their source of information about prescription drugs. The figure above shows that out of the five Medical Doctors at Manhyia Polyclinic who answered the questionnaire, three (60%) said that they get their information about drugs from BNF, while two (40%) said from peers. However, majority of the five Pharmacists at the Polyclinic said their source of information about prescription drugs is from their peers.

Majority of the Medical Assistants at the Polyclinic said their source of information is from their peers and the medical journal. Fewer Medical Assistants get their information about drugs from other sources and the BNF.

Figure 4.6

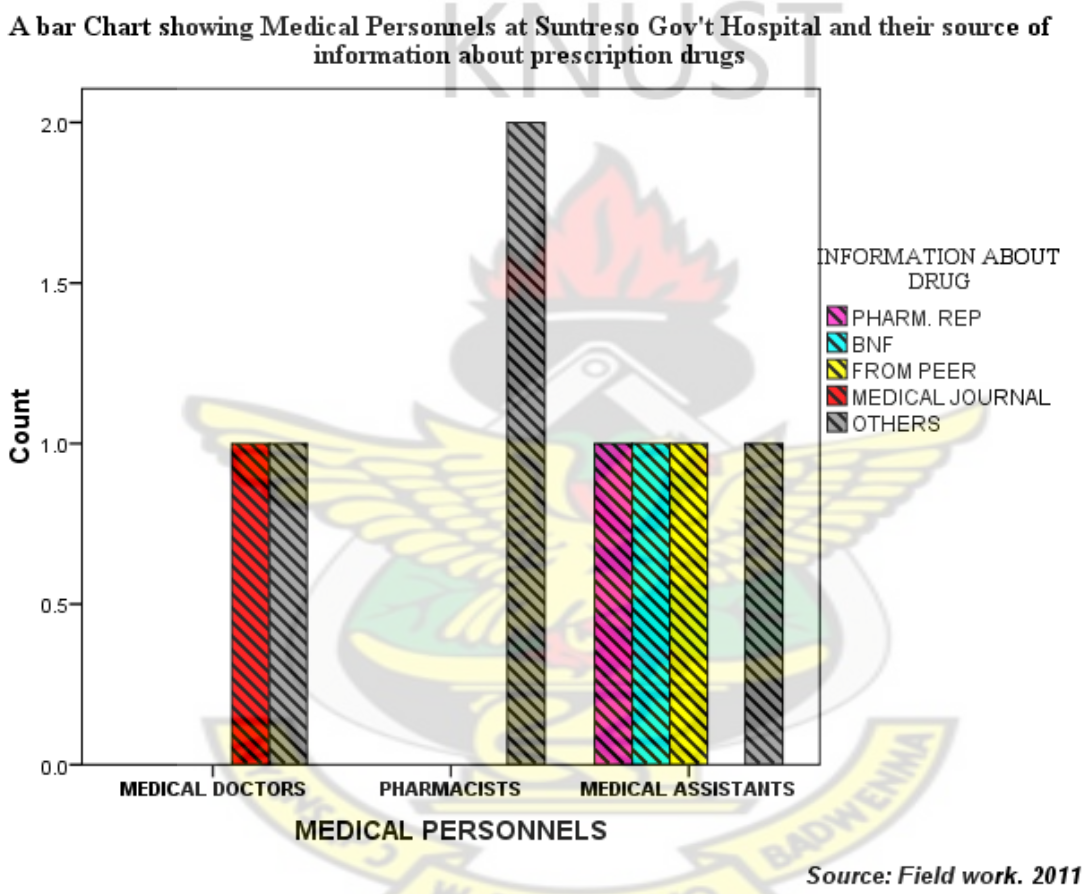


Figure 4.6 shows medical personnel at Suntreso Government hospital and their sources of information about prescription drugs. The figure above shows that out of the two Medical Doctors who answered the questionnaire at the government hospital, one gets his drug information from the medical journal while the other gets his from other sources. However, all the two Pharmacists at the

hospital said their source of information about prescription drugs is from other sources. All the four Medical Assistants get their information about drugs from each of the sources listed except the medical journals

Figure 4.7

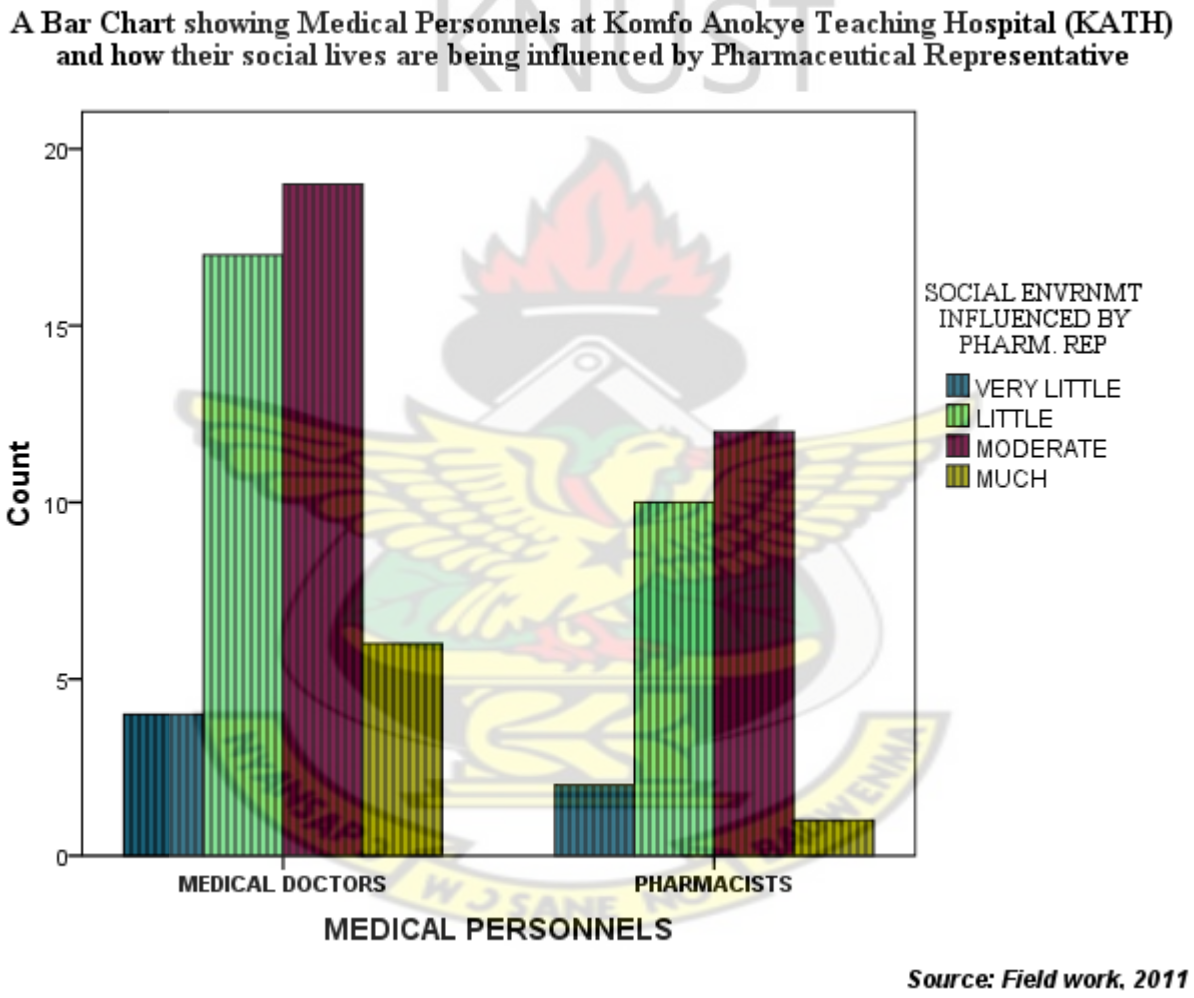


Figure 4.7 shows medical personnel at Komfo Anokye Teaching Hospital (KATH) and whether their social lives are influenced by the Pharmaceutical Representatives. The figure above shows that

twenty-one (39.6%) Medical Doctors at KATH feel that Pharmaceutical Representatives have had very little or little influence on their social lives, while a majority of 60.4% indicated the Representatives have moderate influence on their social lives. An overwhelming majority of pharmacist think that the level of influence of Representatives is moderate while one (7.7%) thought that the influence on their social lives was significant.

Figure 4.8`

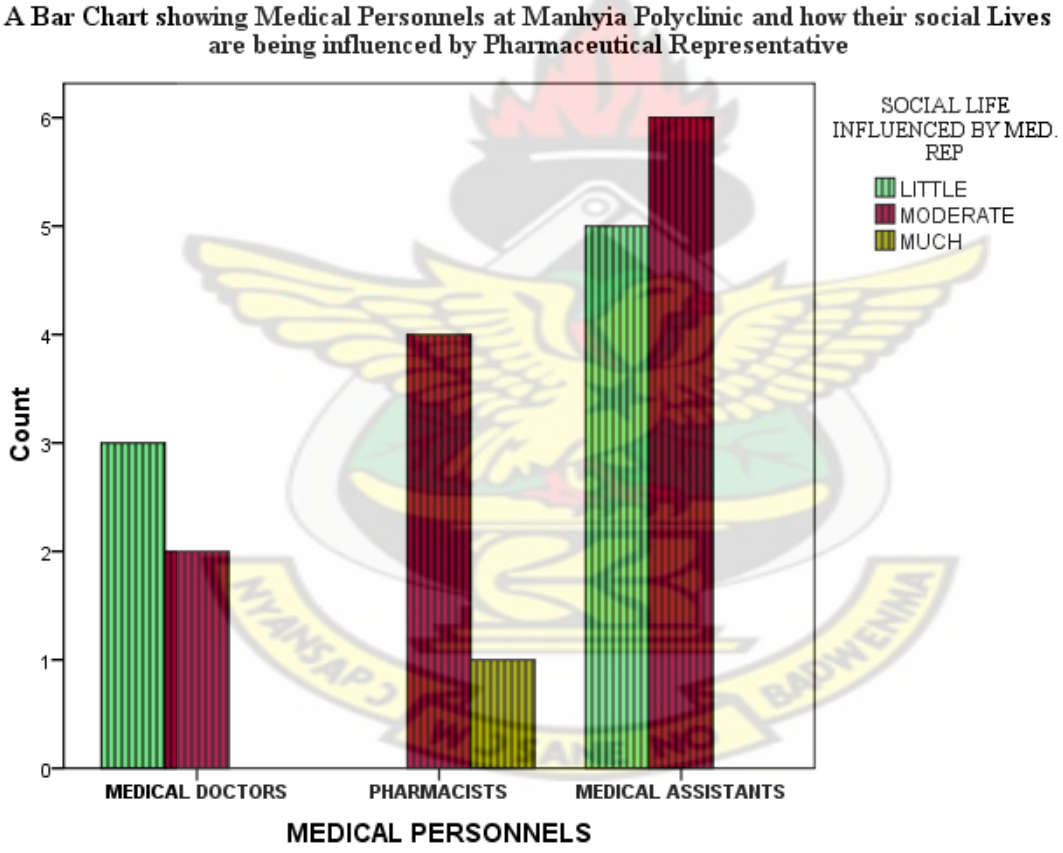
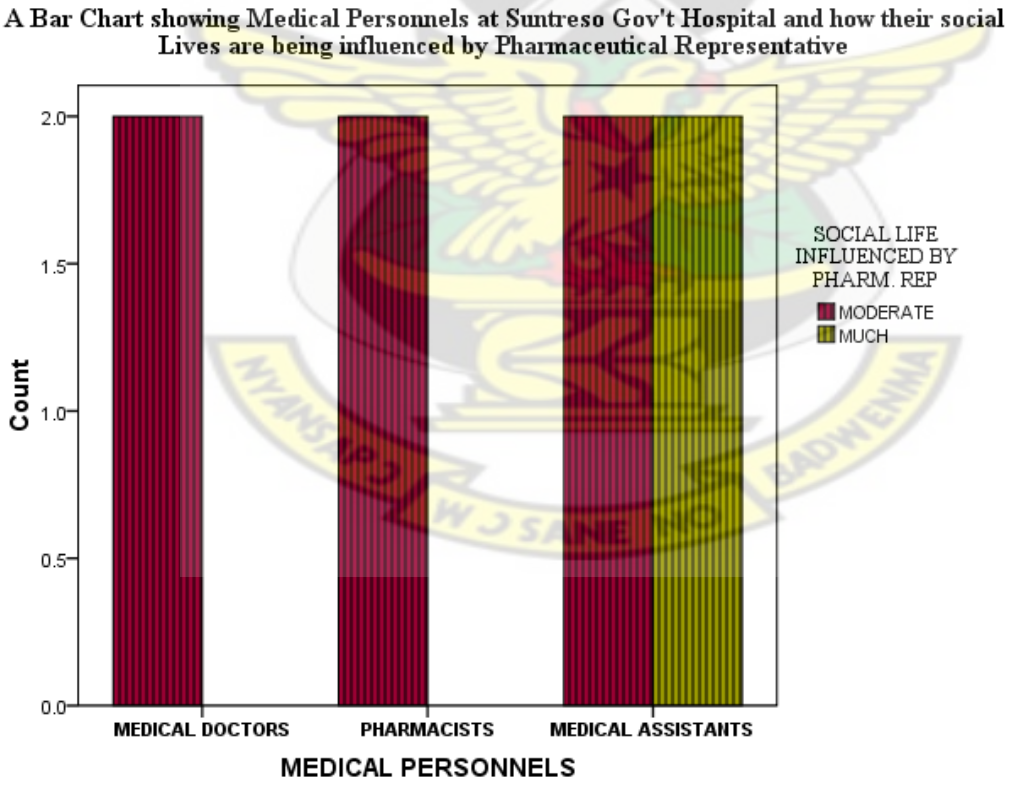


Figure 4.8 shows medical personnel at Manhyia Polyclinic and whether their social lives are

influenced by the Pharmaceutical Representatives. The figure above shows that out of the five Medical Doctors respondents at Manhyia Polyclinic, three (60%) said that the Pharmaceutical Representatives have little influence on their social lives while the other two (40%) Doctors said their lives are moderately influenced. The five Pharmacists at the Polyclinic said that there is moderate or much influence on their social lives by the medical Representatives. On the other hand, while six (54.5%) Medical Assistants at the Polyclinic said that there is moderate influence on their social lives, the other five (45.5%) Medical Assistants said that they feel little influence from the Pharmaceutical Representatives on the social lives.

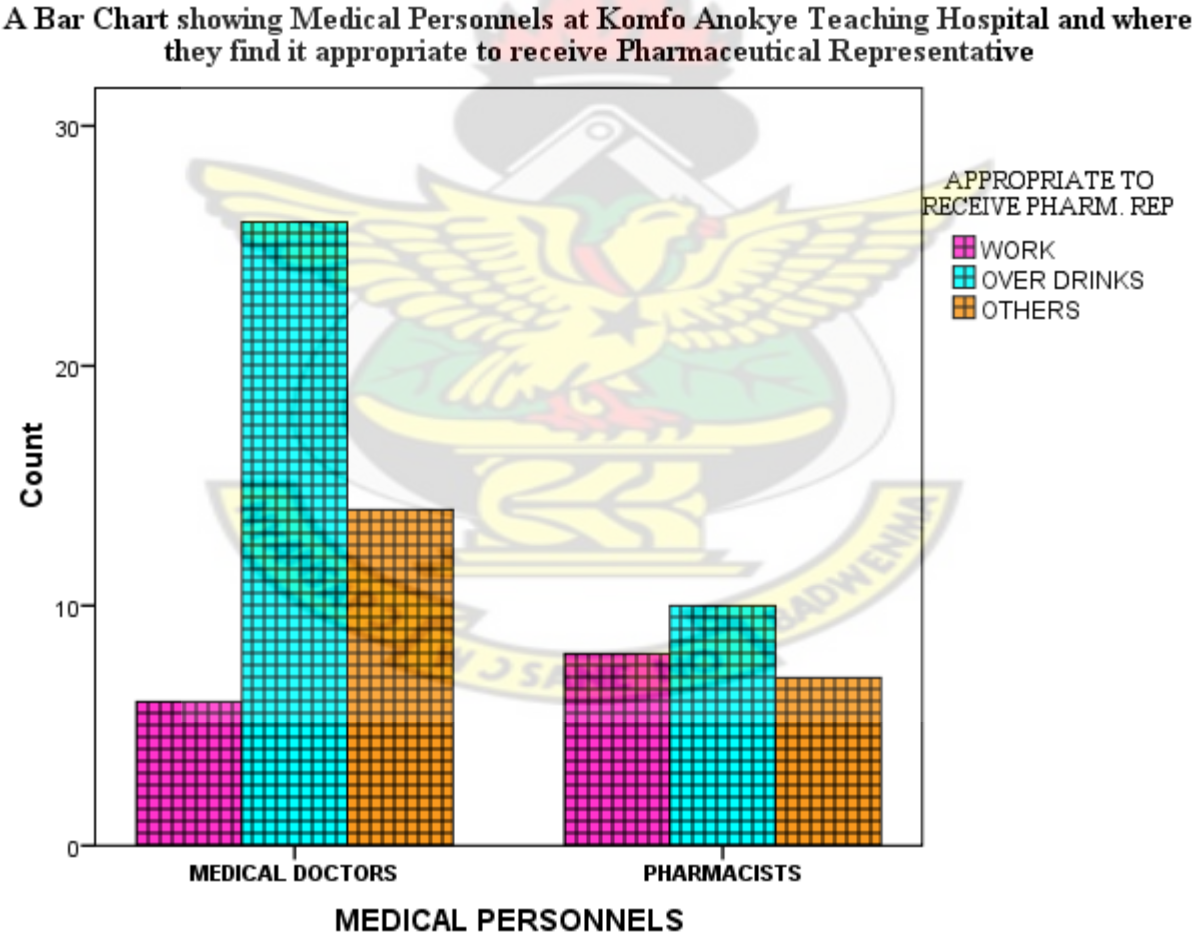
Figure 4.9



Source: Field work, 2011

Figure 4.9 shows medical personnel at Suntreso Government Hospital and whether their social lives are influenced by the Pharmaceutical Representatives. The figure above shows that all the two Medical Doctors and the two Pharmacists at the hospital feel moderate influence on their social lives. On the other hand, while two (50%) Medical Assistants at the hospital said that there was a moderate influence on the social lives, the other two (50%) Medical Assistants said that they feel much influence from the Pharmaceutical Representatives on their social lives.

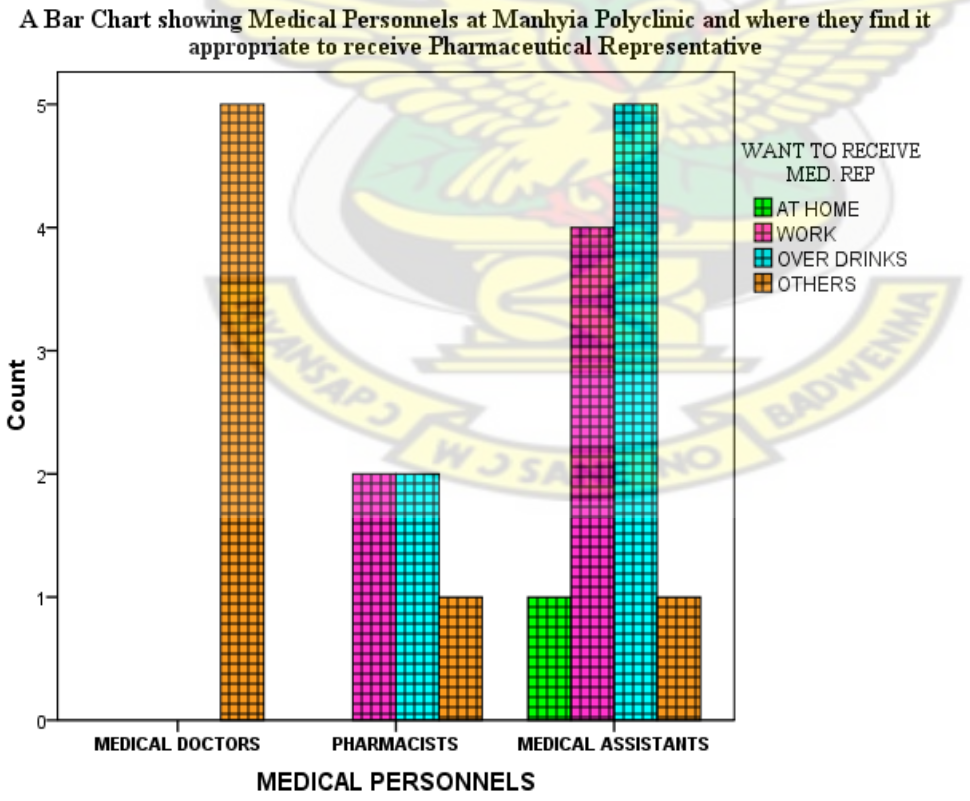
Figure 4.10



Source: Field work, 2011

Figure 4.10 shows medical personnel at Komfo Anokye Teaching Hospital (KATH) and where they found it appropriate to receive Pharmaceutical Representatives. The figure above shows that, twenty-six (49%) Medical Doctors at KATH wanted to receive Pharmaceutical Representatives over drinks. Fourteen (26.4%) Doctors said at other places not necessarily over drink or at work or at home. Five (9.4%) Doctors responded that they wanted to receive them at the work place. With similar reflections on the Pharmacist at KATH, ten Pharmacist (40%) said they prefer meeting Representatives over drinks, whiles seven (28%) and eight (32%) Pharmacists at KATH said they would want to receive Representatives at work and other places respectively. However, none of the medics wanted to receive the Representatives in their home.

Figure 4.11



Source: Field work, 2011

Figure 4.11 shows medical personnel at Manhyia Polyclinic and where they found it appropriate to receive Pharmaceutical Representatives. The figure above shows that the five Medical Doctors at Manhyia Polyclinic wanted to receive Pharmaceutical Representatives at other place other than the choices available. Two (40%) of the Pharmacists responded that they wanted to receive Representatives over drinks while the other two (40%) responded that they wanted to receive Representatives at work. Just one (20%) pharmacist said that he wanted to receive Representatives at other places. Majority (45.6%) of the Medical Assistants at the Polyclinic said that they preferred receiving Representatives over drinks while fewer (36.4%) responded at work, while 9% responded other places and another 9% responded at home.

Figure 4.12

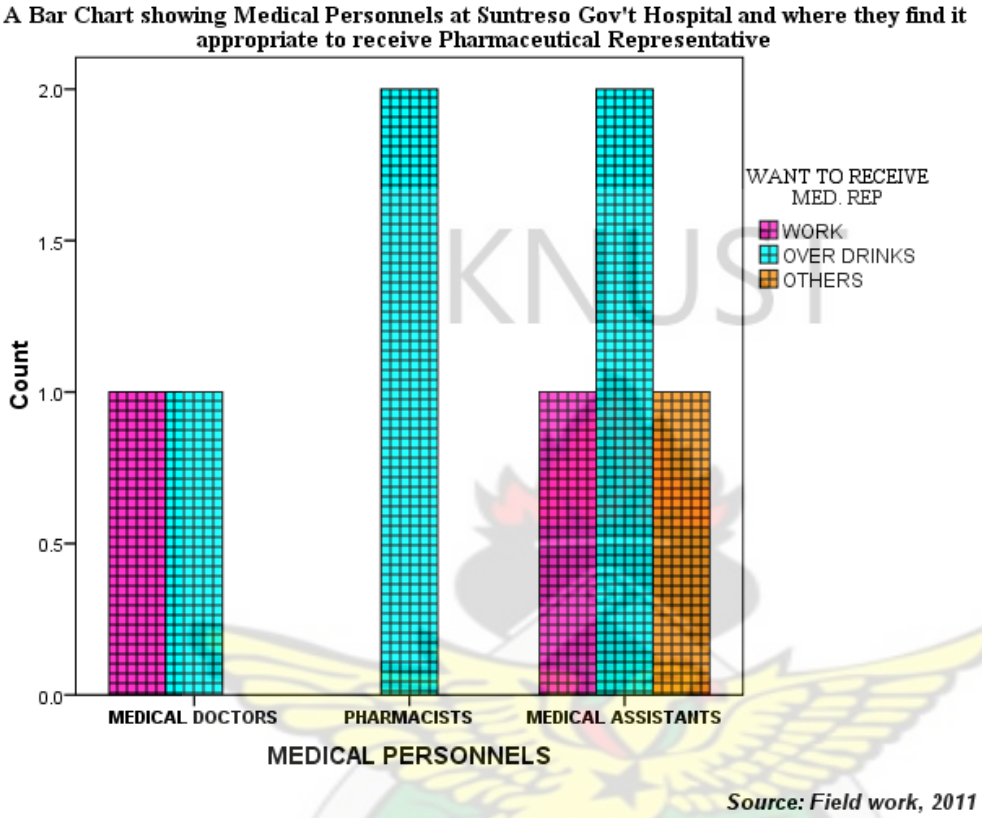


Figure 4.12 shows medical personnel at Suntreso Government Hospital and where they found it appropriate to receive Pharmaceutical Representatives. The figure above shows that each of the two Doctors at the hospital preferred receiving Representatives over drinks and at work respectively. All the Pharmacists at the hospital preferred meeting Representatives over drinks. Majority of 50% of the Medical Assistants at the hospital said that they preferred receiving Representatives over drinks whiles 25% responded at work and at other places.

4.3.1 Analysis of the extent of the relationship prescribers engage with in with medical representatives.

According to their career profile, pharmaceutical sales representatives spend most of their business time on the road, talking with pharmacists, hospital personnel, physicians, patients and advocacy groups thus increasing the visibility of their company's products and the volume of their sales (Roughed, et al., 1998). One-to-one visits from sales representatives have proven to be the most effective way of promoting drugs to doctors. This is because they can identify the behaviour change stage and the main motivators and decision-making styles of the person they are selling to and adapt their approach accordingly.

Pharmaceutical Sales Representative detailing has become prevalent in the Kumasi Metropolis according to the findings above. This was demonstrated in the fact that most of the respondents in the bigger hospitals like KATH said they have had interactions with the Representatives at least once a week, while Medical Personnel at the smaller hospitals like Manhyia Polyclinic and Suntreso Hospital said that Representatives had visited them a couple of times in the month. At least sixty-eight percent (68%) of the Medical personnel said they were visited by Pharmaceutical Representatives at least once a week, while thirty percent (30%) said at least couple of times visit from Representatives in the month (as seen in figures 4.1- 4.3). From the findings above it is certain that the frequent visits drug representatives make to doctors and other health workers has its intended effect: building relationships with doctors and ultimately changing how they prescribe. The purpose of those frequent visits is to provide comprehensive information on new and forthcoming products, updates on existing products, miscellaneous information such as product discontinuation, future developments marketing strategies etc.

The main influencing techniques used by drug sales representatives try to focus on doctors' tendencies to trust experts, trust their peers and trust likable (friendly and/or attractive) people, to be

consistent with their commitments and to act on reciprocal obligations when given gifts (Roughed, et al., 1998) Visits from sales representatives are often coordinated with other methods such as providing gifts, free samples or running advertising campaigns.

Again, prescribing hospital Medical professionals (Doctors, Pharmacist and medical Assistants) working in the three hospitals (KATH, Manhyia Polyclinic and Suntreso) were asked to choose in order of importance a range of information sources for prescribing "new" and "old" drugs. Amongst them, BNF was the most frequently cited sources by over thirty-nine percent (39%) of the respondents. Pharmaceutical representative information about a drug was the least cited source representing just two percent (2%). Twenty-nine percent (29%) get the new or old drug information from their peers while additional fifteen percent (15%) apiece said their sources of information about medical drugs are from the medical journals and other sources as seen at figures 4.4 – 4.6. Inaccuracy and selective bias of promotional drug information have been the source of distrust of drug information provided by the medical representatives. Thus, most professionals are unwilling to rely on pharmaceutical representative's information about a drug's efficacy or otherwise (Zeigler et al, 1995 and Avorn et al, 1982).

Obtaining access to a prescriber in a hospital in the Kumasi metropolis is more difficult for pharmaceutical representatives. In the findings above, only twenty-two percent (22%) of the health professionals in the metropolis said they would prefer a sales call to be at the work place. Forty-eight percent (48%) said they would prefer a sales call over drinks, with one percent (1%) meeting pharmaceutical sale representatives at home. This is seen in the figures 4.10 – 4.12. This could be due to the fact that most of the Doctors and other professionals want to ensure minimal disruption in hospital service. Again, the frustrating process medical representatives always have to go through

especially in Kumasi is that they have to make an appointment in advance. Yet still, professionals are not able to honour appointments because of patient's numbers.

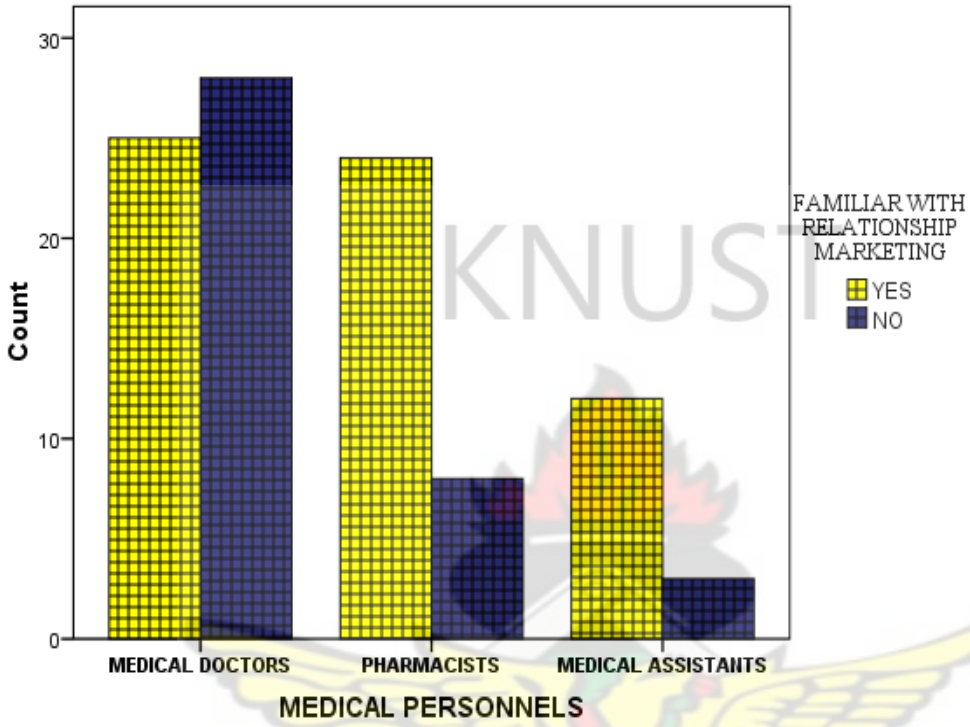
On whether the Representatives have significant impact on their social lives, fifty-nine percent (59%) of the respondents (medical professionals) said the impact is either moderate or much. Thirty-nine (39%) percent thought that the impact was insignificant that is 'very little' or 'little'. This is also seen in figures 4.8 – 4.9 above. According to Niles (2005), Drug Representatives increase drug sales by influencing physicians, and they do so with finely titrated doses of friendship. According to him, Representatives may be genuinely friendly, but they are not genuine friends. Drug Representatives are selected for their presentability and outgoing natures, and are trained to be observant, personable, and helpful. They are also trained to assess physicians' personalities, practice styles, and preferences, and to relay this information back to the company. Personal information may be more important than prescribing preferences. This is however consistent with the findings where prescribers have noticed a significant effect of the friendship with drug Representatives on their social lives.

4.4 OBJECTIVE TWO

To find out the attitude of Prescribers towards the interaction with the Pharmaceutical Representatives

Figure 4.13

A Bar chart showing Medical Personnels and whether they are familiar with Relationship Marketing



Source: Field work, 2011

Figure 4.13 shows medical personnel at all the hospitals and whether they are familiar with relationship marketing. The figure above shows that most Doctors said they were not familiar with relationship marketing. However, more Pharmacists and Medical Assistants said they were familiar with relationship marketing.

Figure 4.14

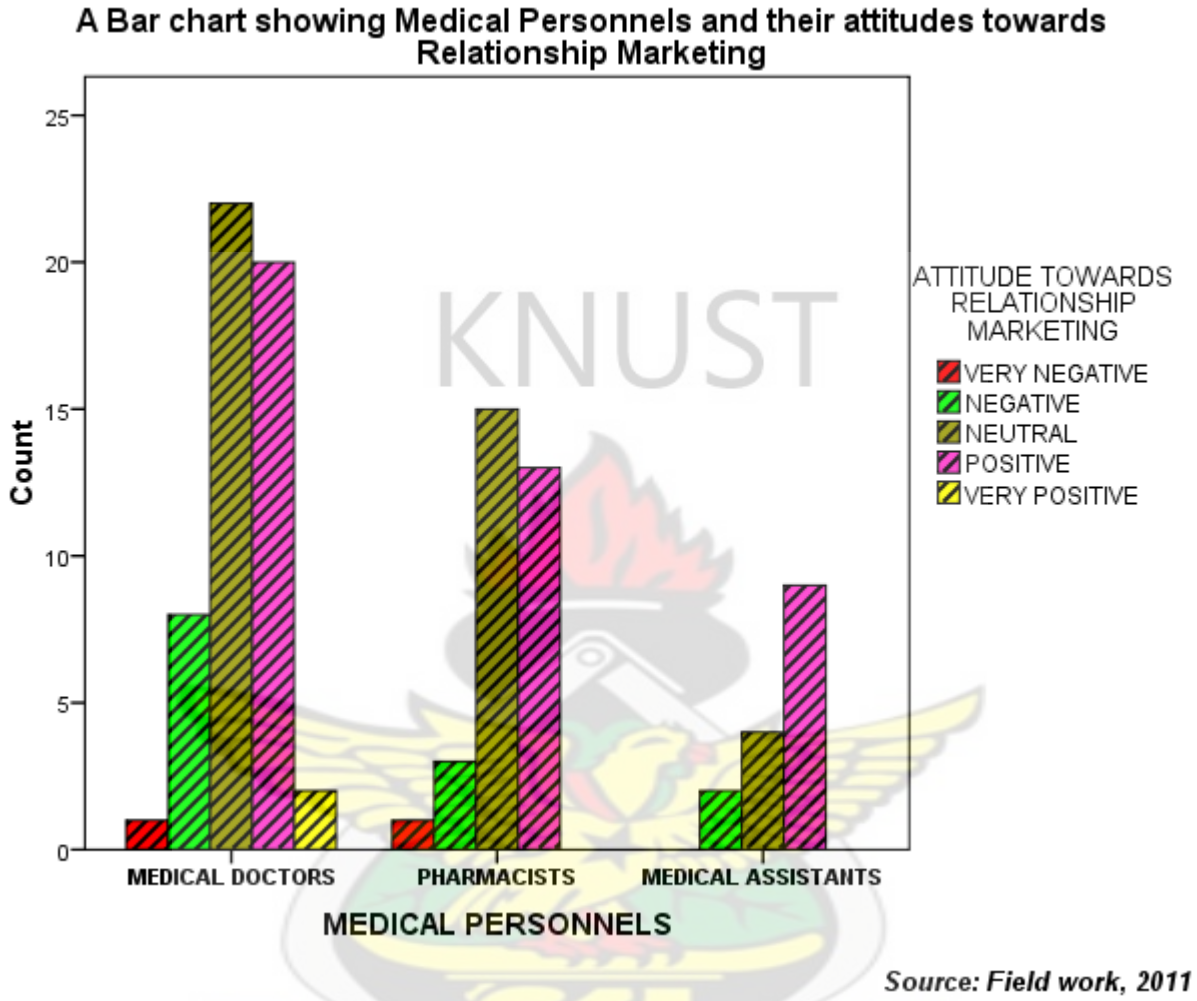
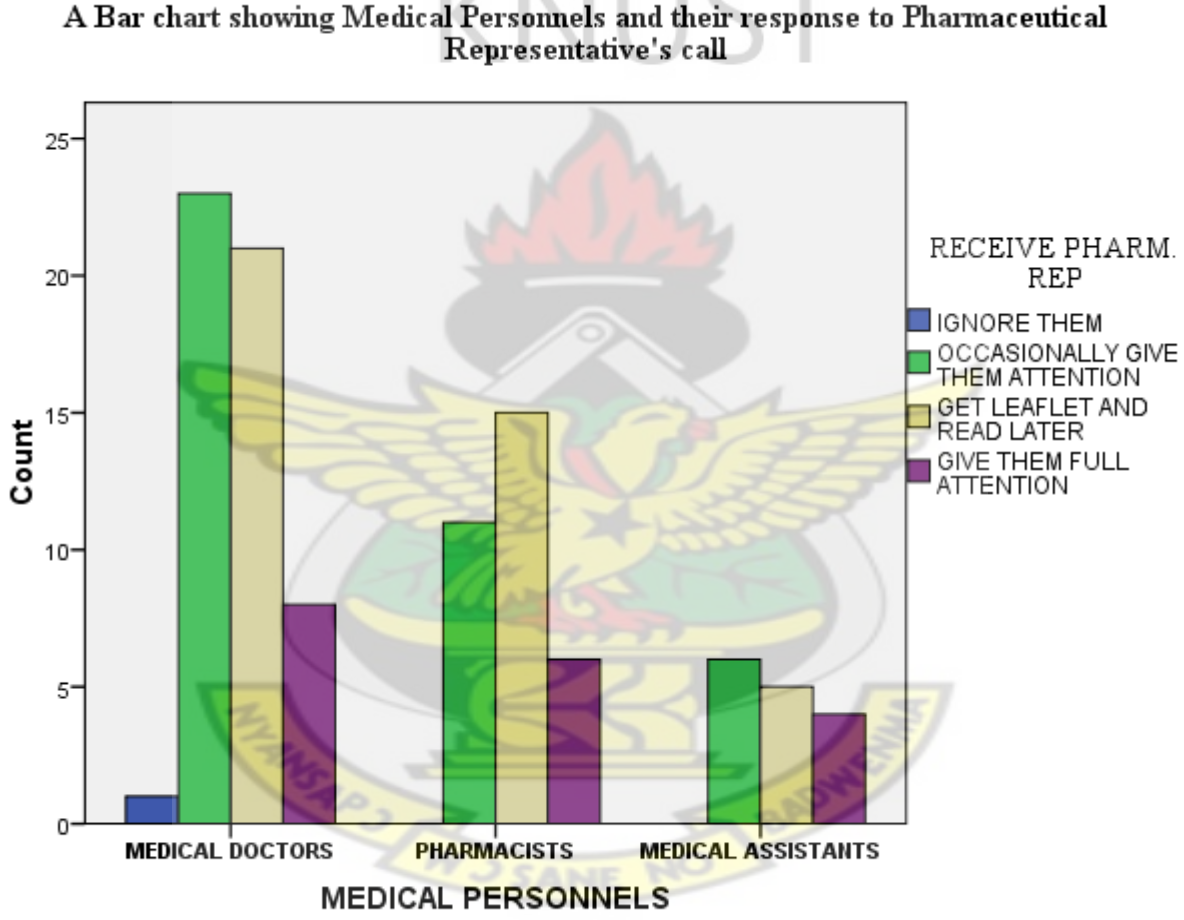


Figure 4.14 shows medical personnel at all the hospitals and their attitude towards relationship marketing. The figure above shows that most Doctors were neutral about relationship marketing with a significant number of twenty (37%) out of fifty-three responding with positive attitude towards medical Representatives. Eight Doctors (15.1%) responded with a negative attitude towards relationship marketing while two (3.8%) and a single Doctor (1.9%) responded with a very positive and a very negative attitude respectively. Similar responses were made by the Pharmacists; fifteen (46.9%) responded neutral, thirteen (40.6%) responded positive, with one (3.1%) and three

(9.4%) responding with very negative and negative respectively. However, more Medical Assistants had a positive attitude towards relationship marketing, while fewer, had neutral and a negative attitude.

Figure 4.15



Source: Field work, 2011

Figure 4.15 shows medical personnel at all the hospitals and their response to Pharmaceutical Sales

Representatives call. The figure above shows that twenty-three (43.4%) Doctors said they occasionally gave them attention. Twenty-one (39.6%) Doctors got themselves some leaflets and brochures and read them at their spare time. However, seven (13.2%) Doctors said they give them full attention when they call on them. Only one (1.9%) Doctor said he ignores them when they call on them. Most Pharmacists prefer getting leaflet and reading them later, with few occasionally giving them attention and still fewer giving them full attention when they call. This trend was also replicated amongst the Medical Assistants who also give them attention occasionally, get leaflet and brochures and read them later and give them full attention.

4.4.1 Analysis of the attitude of Prescribers towards the interaction with the Pharmaceutical Representatives

The research findings suggest that prescribers in the Kumasi Metropolis generally have a positive attitude towards the form of marketing adopted by the pharmaceutical sales Representatives. From the figures above, only fifteen percent (15%) of the respondents said that they have a negative attitude towards the Representatives. while forty-four percent (44%) said that their attitude towards the Representatives is positive with the rest remaining neutral. This was reflected when the respondents were asked what happens when the Representatives call on them. Fifty-eight percent (58%) said that they give them (Representatives) some form of attention. While forty-one percent (41%) said that they get some leaflet and brochures and read them in their free time. Only one percent (1%) said that they send them away. Many researchers elsewhere, including Korenstein et al., (2010) have found Prescribers' attitudes toward marketing-oriented activities by the pharmaceutical sale representative to be positive.

4.5 OBJECTIVE THREE

To determine the appropriateness of the sorts of gifts prescribers receive from Pharmaceutical Sales Representatives.

Figure 4.16

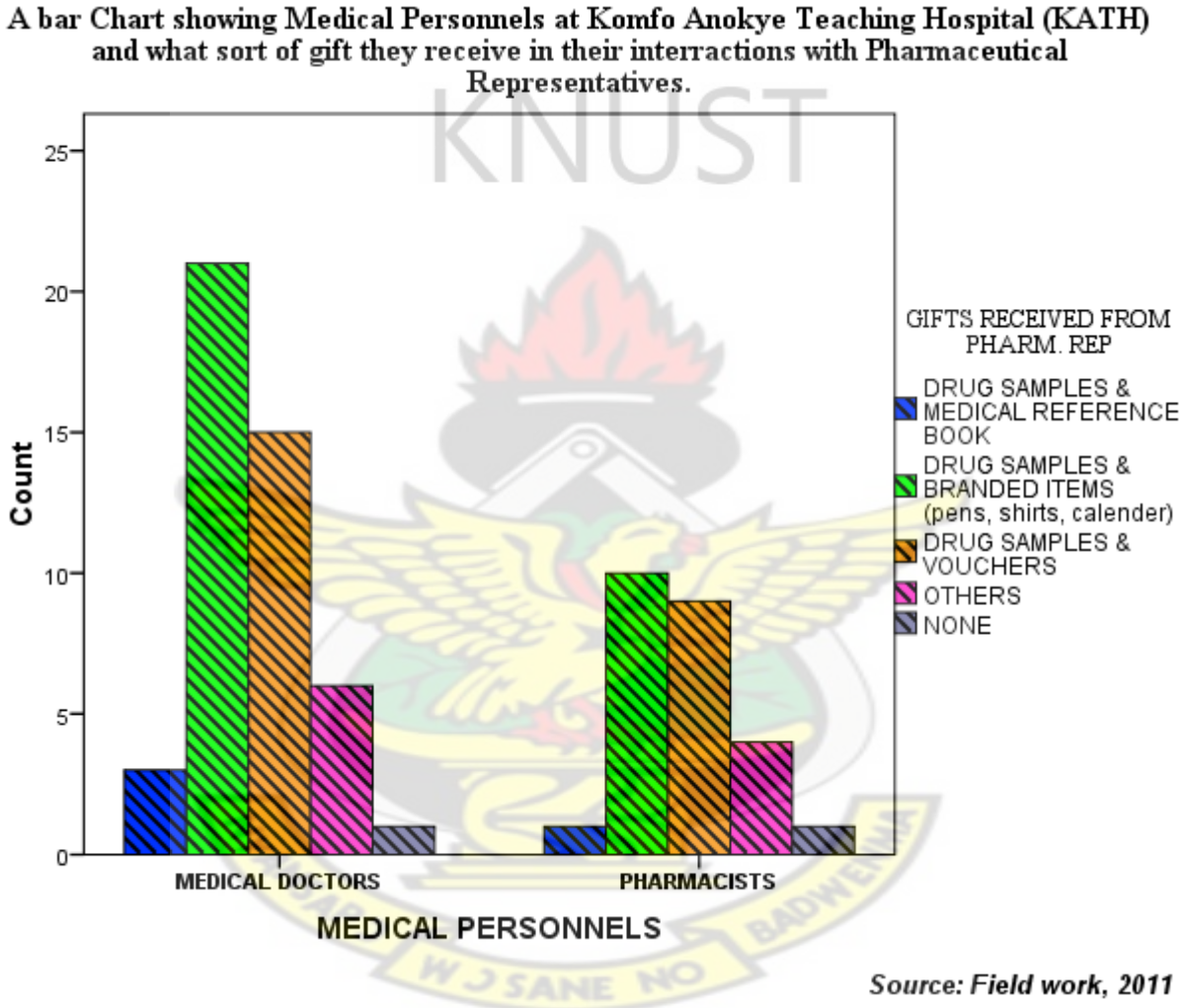


Figure 4.16 shows medical personnel at Komfo Anokye Teaching Hospital (KATH) and what sort of gifts they receive in their interactions with the Pharmaceutical Representatives. The figure above shows that twenty-one (45.5%) Medical Doctors at KATH received drug samples and branded items (Pens, Calendars, shirts, etc.). Fifteen Doctors (32.5%) received drug samples and vouchers,

six Doctors (13.3%) said they had received other gifts not included in the provided options and three (6.5%) said they had received drug samples and medical reference books. Only one Doctor (2.2%) said he had received nothing. With a similar picture among the Pharmacists at KATH, ten Pharmacist said they had received drug samples and branded items. Eight Pharmacists at KATH also said they received drug samples and vouchers. Four said they have received gifts other than options provided. One Pharmacist responded that he had received nothing from the Representatives.

Figure 4.17

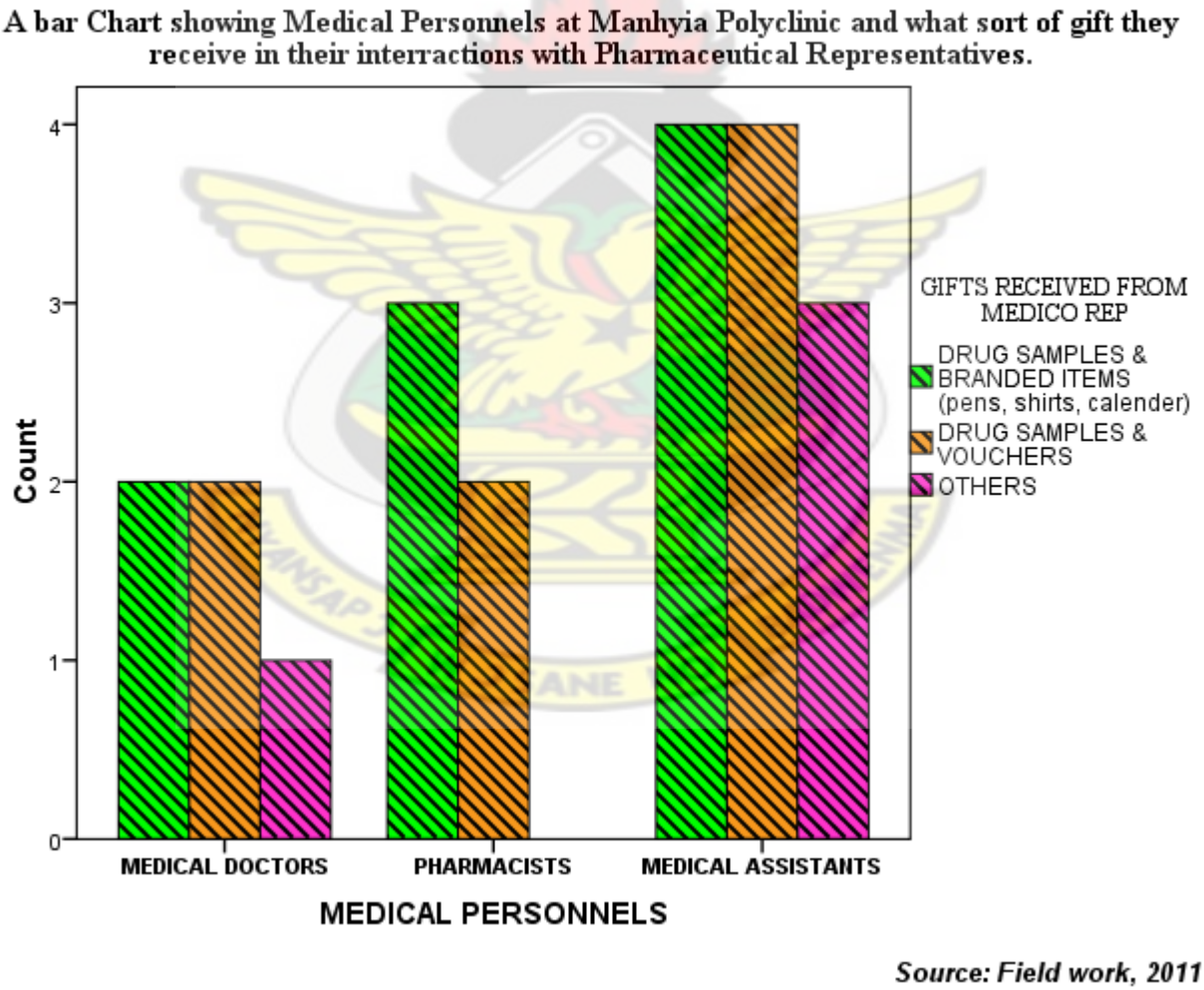
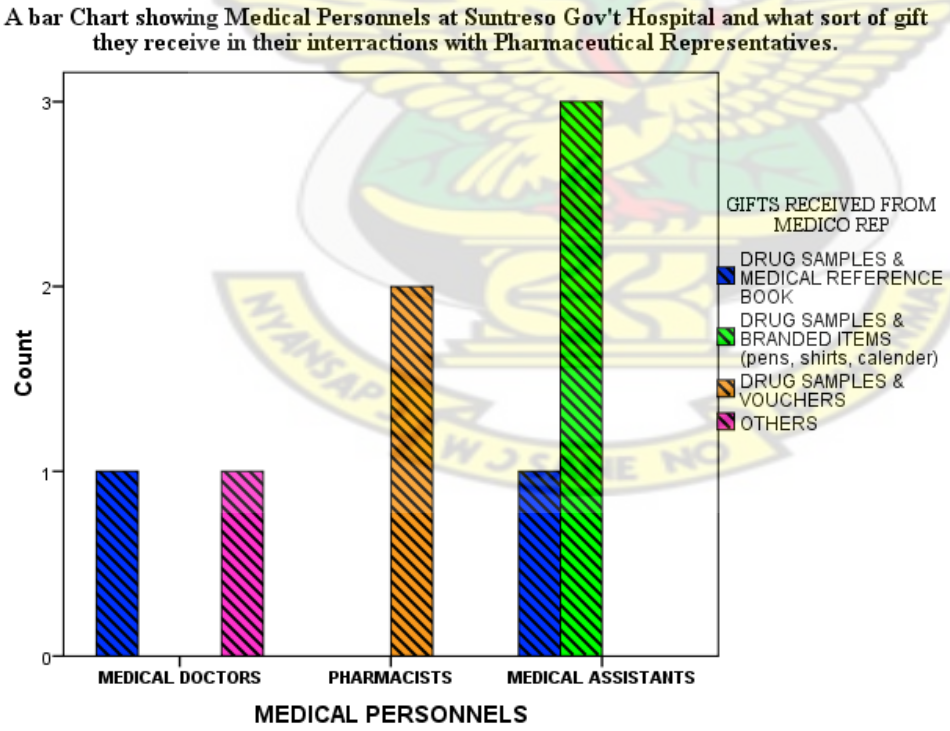


Figure 4.17 shows medical personnel at Manhyia Polyclinic and the sort of gifts they receive in

their interactions with the Pharmaceutical Representatives. The figure above shows that two Medical Doctors (40%) at Manhyia had received drug samples and branded items (Pens, Calendars, shirts, etc.) as gifts. Two Doctors (40%) also received drug samples and vouchers, with only one Doctor (20%) receiving gifts other than what was included in the provided options. With regards to the Pharmacists at Manhyia, three of them said they had received drug samples and branded items. However, two Pharmacists at Manhyia also said they had received drug samples and vouchers. Three Medical Assistants said they had received gifts other than the options provided. Four responded that they had received drug samples and branded items (Pens, Calendars, shirts, etc.) and drug samples and vouchers respectively.

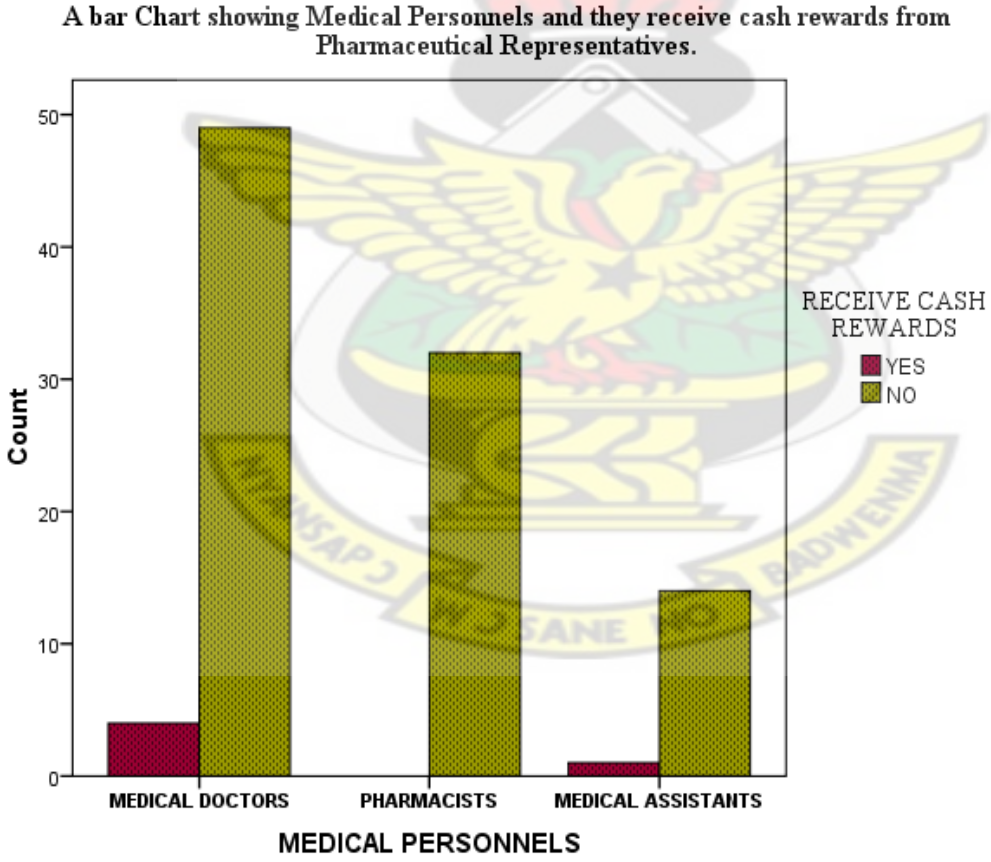
Figure 4.18



Source: Field work, 2011

Figure 4.18 shows medical personnel at Suntreso Government Hospital and the sort of gifts they receive in their interactions with the Pharmaceutical Representatives. The figure above shows that one (50%) of the two Medical Doctors at Suntreso had received drug samples and medical reference books as gifts while the other Doctor (50%) received other gifts. With regards to Pharmacists at Suntreso, all the two Pharmacists (100%) said they had received drug samples and vouchers. One of the four Medical Assistants (25%) said he had received drug samples and medical reference books, with the other three (75%) receiving drug samples and branded items (Pens, Calendars, shirts, etc.).

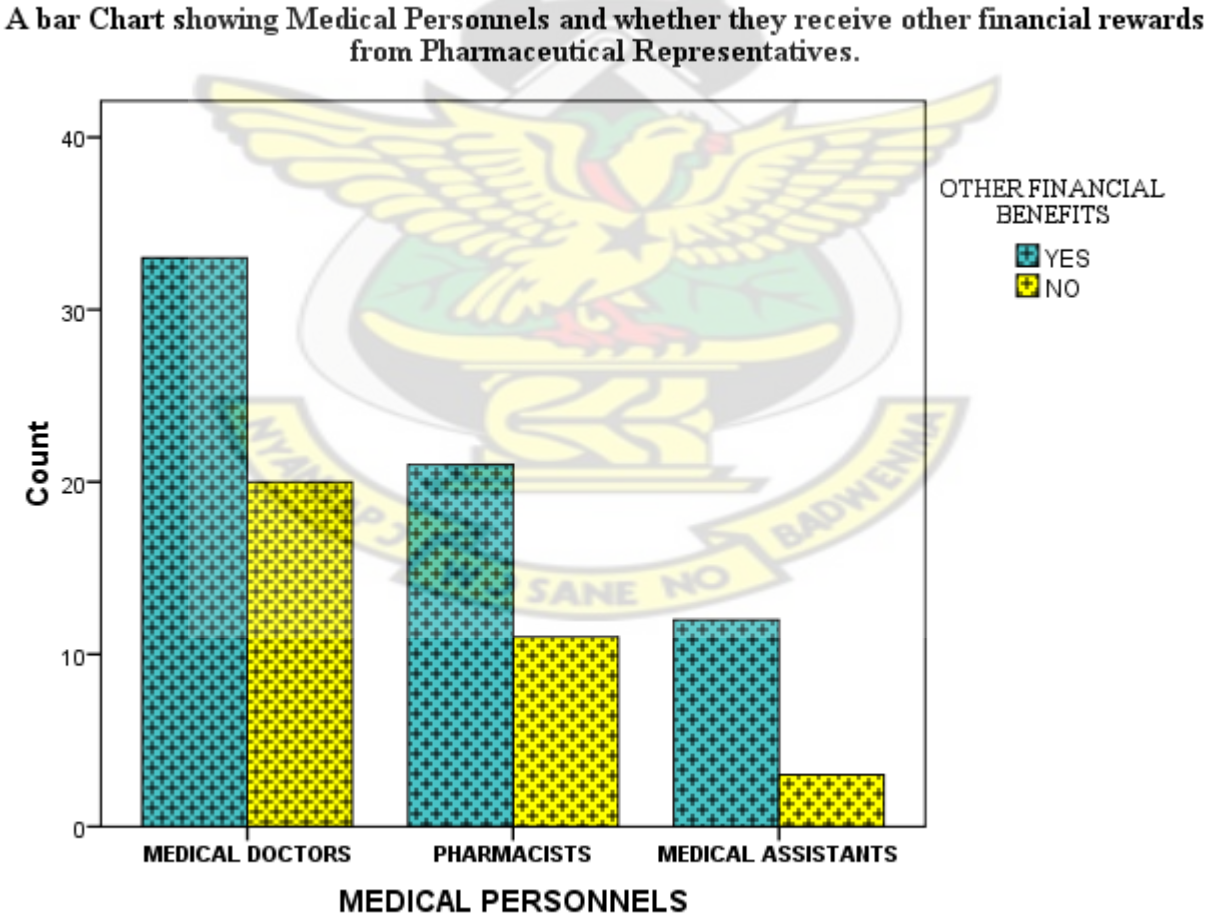
Figure 4.19



Source: Field work, 2011

Figure 4.19 shows medical personnel and whether they received cash rewards from Pharmaceutical Representatives. The figure above shows that four Medical Doctors (7.5%) responded that they had received cash rewards from Representatives. However, the majority, forty-nine (92.5%) Doctors said they had not received cash reward. All of the Pharmacists who answered the questionnaire said they had not received cash rewards. Only one (6.7%) out of fifteen Medical Assistants had responded that he had received cash rewards from the Pharmaceutical Representatives.

Figure 4.20



Source: Field work, 2011

Figure 4.20 shows medical personnel and whether they received other financial benefits from Pharmaceutical Representatives. The figure above shows that thirty-three (62.3%) Medical Doctors responded that they had received other financial benefits from Representatives, with twenty (37.7%) responding that they have not received any financial benefits. Twenty-one (65.5%) Pharmacists who answered the questionnaire said they had received other financial rewards, with eleven (34.5%) receiving no financial benefits. The same trend was also seen among the Medical Assistants.

Figure 4.21

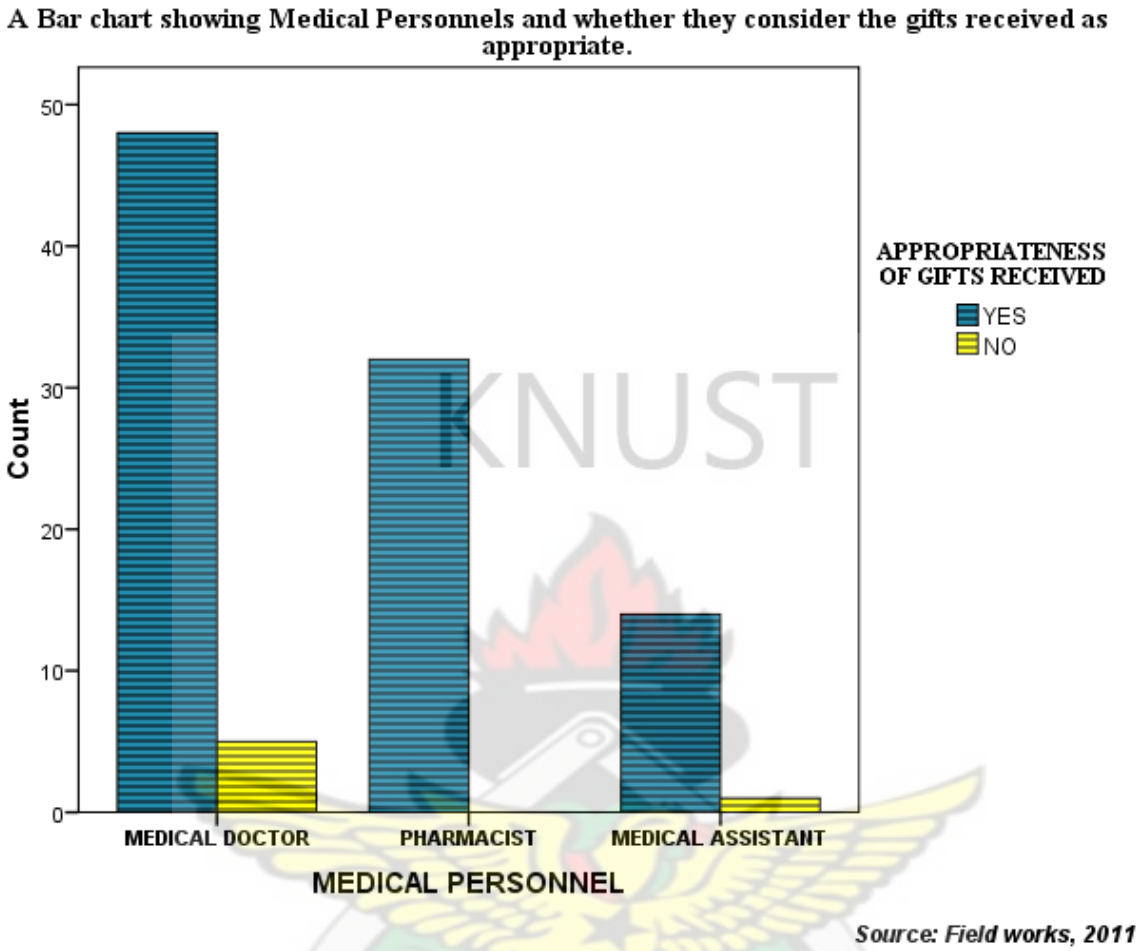


Figure 4.21 shows medical personnel and whether they consider the gifts received as appropriate. The figure above shows that forty-eight Medical Doctors (90.6%) responded that they considered the gifts they had received from the Representatives as appropriate. Five Doctors (9.4%) however, said they considered the gifts they had received as not appropriate. All the thirty-two pharmacist said that the gifts they had received were appropriate while fourteen (93.3%) out of fifteen Medical Assistants said they also considered the gifts received as appropriate.

4.5.1 Analysis of the appropriateness of the sorts of gifts prescribers receive from Pharmaceutical Sales Representatives.

Doctors, Pharmacists and Medical Assistants have received various forms of gifts from the pharmaceutical representatives when asked the sorts of gifts received, forty-three percent (43%) said they have received drug samples and branded items including pens, notepads, shirts and calendars. Thirty-four (34%) percent said they received drug samples and vouchers, fifteen percent (15%) had received other things. Two (2%) percent received nothing and a further six percent (6%) also received drug samples and medical reference books. On whether they had received cash benefits for their interactions, ninety-five percent (95%) said no, while only five percent said yes. However, when asked whether they had received other financial benefits, sixty-six percent (66%) said they had benefited from the Representatives financially. These "other" financial benefits could be accounted for by other forms of gifts which the pharmaceutical companies offer through the following:

- Pharma-supported CME (free to physicians)
- Payment for consulting relationships
- Payment for travel to meetings or scholarships to attend meetings
- Payment for participation in speakers bureaus
- Free provision of ghost-writing services
- Grants for research projects
- Payment for attendance at lectures and conferences

All the above which were not included in the choices give some form of financial rewards to the recipient. Fearing a conflict of interest, the European Federation of Pharmaceutical Industries and Association together with the WHO established guidelines to help healthcare providers decide which gifts are appropriate (Brennan et al., 2006) which is being abided by most pharmaceutical companies and is subject to territorial rectifications, for instance the Pharmacy Act of 2004. The sections 10.01 to 10.04 state that, No gift, pecuniary advantage or benefit in kind may be supplied, offered or promised to a healthcare professional as an inducement to recommend, prescribe, purchase, supply, sell or administer a medicinal product. And that Subject to Section 10.01 above, where medicinal products are being promoted to healthcare professionals, gifts, pecuniary advantages or benefits in kind may be supplied, offered or promised to such persons only if they are "inexpensive" and relevant to the practice of medicine or pharmacy. Except where they carry all the information stipulated in Section 2.01 above, gifts may bear no more than the name and logo of the company and the name of the medicinal product, or its international non-proprietary name, where this exists, or the trademark. Finally, Gifts for the personal benefit of healthcare professionals (such as tickets to entertainment events) should not be offered or provided. For ethical reasons most healthcare professionals prefer "other financial benefits" but not "cash rewards". Ninety-four percent (94%) of the health professionals surveyed considered the gifts they received from the pharmaceutical Representatives as appropriate. However, only four percent (4%) think otherwise.

4.6 OBJECTIVE FOUR

Objective five is to determine whether prescribers relationship with Pharmaceutical

A table showing whether Medical Professionals felt obliged to prescribe Pharmaceutical Representatives' drugs because of the gift offered

Representatives and gifts received have any influence on prescription of a branded drug to a patient.

A table showing whether prescribers' relationship with pharmaceutical Representatives might have had influence on prescription for a branded drug.

	Frequency	Percent	Valid Percent	Cumulative Percent
YES	57	57.0	57.0	57.0
NO	43	43.0	43.0	100.0
Total	100	100.0	100.0	

Table 4.1

Table 4.1 shows that fifty-seven percent of respondents said that the interactions they had had with Pharmaceutical Representatives might have influenced their prescription of a branded drug. However, forty-three percent of prescribers said they could not have been influenced.

	Frequency	Percent (%)	Valid Percent	Cumulative Percent
YES	50	50	50	50
NO	50	50	50	100.0
Total	100	100.0	100.0	

Table 4.2

Table 4.2 shows that only fifty percent of respondents said that they were obliged to prescribe Medical Rep's drugs because of the gifts they had received from them. The other fifty percent of respondents said they did not feel obliged to prescribe drugs in a certain way because of the gifts offered them.

4.6.1 Analyses of whether gifts received from Pharmaceutical Representatives have any influence on health workers (prescribers) prescription of a branded drug to a patient.

More than half of the respondents (health professionals) admitted that their interactions with the pharmaceutical sale Representatives might have some influence on the prescription of branded drugs. However, when asked whether the gifts they had received from Representatives obliged them to prescribe a particular branded drug, fifty percent (50%) said no. Research shows a strong correlation between receiving industry benefits and favouring specific products (Wazana, 2000). However, interestingly, health professionals claim that they are not affected by such gifts. More interesting is the fact that although most health professionals do not view themselves as subject to

bias, they do admit that conflicts of interest might influence other professionals' decisions (Dana and Lowenstein, 2003). In particular, gifts of nominal value such as pens, notepads or mugs are viewed as not affecting a physician's behaviour. In addition, certain "gifts" such as drug samples are not really viewed as gifts at all, since they are medically related and intended in essence for the patient rather than the physician. One might even suggest that drug samples serve to promote equitable access to health care, since they allow patients to try out products before committing themselves to an expensive product (Chew et al, 2000). However, such products are really intended to induce the physician to prescribe the new product, and research shows that when patients run out of a free sample, physicians are more likely to prescribe that same product rather than a less expensive one such as a generic product. (Chew et al, 2000).

CHAPTER FIVE

5.0 RESEARCH CONCLUSIONS AND RECOMMENDATIONS

5.1 INTRODUCTION

This chapter presents the conclusions of the study and recommendations made to address the main findings obtained from the analysis in the light of the objectives of the study.

The objectives of this research were to determine the extent of the interactions health professionals (prescribers) engage in with Pharmaceutical representatives. It is also to find out the attitude of Prescribers towards the relationship with the Pharmaceutical Representatives. In addition, the objective is to determine the appropriateness of the sorts of gifts prescribers receive from Pharmaceutical Sales Representatives. Finally, it is to determine whether gifts received from Pharmaceutical Representatives have any influence on prescription of a branded drug to a patient.

5.2 CONCLUSION

This research found out that Pharmaceutical Sales Representative detailing has become prevalent in hospitals in the Kumasi Metropolis with these drug Representatives visiting a health professional (prescriber) at least once a week. These frequent visits are meant to build a relationship with these health professionals. However, health professionals (prescribers) in the Kumasi metropolis do not rely on the drug information provided by the drug representatives. Most prescribers feel the Representatives are gaining significant influence on their social lives because of their preference when they meet them “over drinks” after or in-between work. In spite of that, health professionals

in Kumasi generally still have a positive attitude towards the interactions with the pharmaceutical sales Representatives.

In addition, health professionals have received drug samples, medical reference books, vouchers and branded items (Pens, note pens, shirts and calendars) as gifts from the drug company's representatives. Others have also received other financial benefits with just five percent acknowledging receipt of cash rewards. Furthermore, the prescribers consider the gifts received as appropriate.

Finally, this research showed a strong correlation between receiving drug industry benefits and favouring specific products in hospitals in Kumasi. Health workers in Kumasi admitted that their interactions with the Representatives might have had influence on their prescription but somehow did not feel obliged because of the gifts received.

5.3 RECOMMENDATIONS

The overall research findings have established that drug companies are gradually having an influence on health professionals in the Kumasi metropolis through detailing by their Representatives. This situation if not properly handled could lead to health professionals in the Kumasi metropolis prescribing unsuitable and unnecessary drugs when they are expected to only prescribe new drugs, if there is medical evidence to show they are effective.

Due to the short period of the research, only the health professionals were considered. However, the effect of the drug companies on prescriptions could have a dire consequence on patients as well as on the country as a whole. Therefore, future research work could be directed at the following;

- The effect of drug companies influence on patients in the Kumasi metropolis.
- The attitude of patients towards the gifts offered to health workers in the Kumasi metropolis by drug companies.
- The role of the Ghana Medical Association on the drug company's influence on prescribers in the Kumasi metropolis.

Policy makers on the other hand may use the findings of this research to find a way to regulate the practice of gifts to health professionals especially those who prescribe drugs. Also, this research could help the Ghana Health Service and the Ministry of Health to put in place policies on vetting of drug promotion materials at hospitals. The Ghana medical Association (GMA) and the Pharmacy Council could also use the findings of this research to implement strict adherence to existing codes of conducts of their respective professionals. It can also help to provide transparent and verifiable information on the precise nature of relationships associated with the drug industry, particularly on funding for all stakeholder groups including health professionals, pharmacists, students, clinical research organisations and patient groups. This will build public trust in the treatment they receive at the hospitals in Kumasi.

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APPENDIX ONE

QUESTIONNAIRE

Research Topic: **THE PROMOTION OF PRESCRIPTION MEDICINES BY PHARMACEUTICAL SALES REPRESENTATIVES AND ITS EFFECTS ON HEALTH PROFESSIONALS IN THE KUMASI METROPOLIS.**

This study is conducted as part of a graduate study at KNUST. It is my belief that you as my respondent would provide practical and convincing answers to the questions below to enable me present a good report on the topic above.

Thank you in advance for your contribution to this research study. Please respond to the following by either writing in the blank space provided or ticking the appropriate box.

HOSPITAL

KATH ☐ MANHYIA POLYCLINIC ☐ SUNTRESO GOV'T HOSPITAL ☐

SEX

Male ☐ Female ☐

PROFESSION

Medical Doctor ☐ Medical Assistant ☐ Pharmacist ☐

Q1. How often do you come in contact with Medical Representatives?

Every day____ Couple of times every week____ once a week____ Couple of times every month____

Q2. What is your attitude towards Medical Representative in general?

Very negative Neutral Very positive

1 2 3 4 5

Q3. In what way would you want to receive information about a medical drug? (Rank alternatives 1-5 where 5 is the most preferable on)

Medico Rep.___ BNS___ from Peer___ Medical journal____ Others___

Q4. Are you familiar with the expression relationship marketing since earlier?

Yes___ No___

Q5. Does your relationship with these Medical Reps affect your purchase decision?

Yes___ No___

Q6. How much of your social environment is influenced by these Medical Reps.

Very little Moderate Very much

1 2 3 4 5

Q7. Do you find it important to be able to approve when these Medical Reps should call?

No importance at all Moderate Very important

1 2 3 4 5

Q8. Where would you most likely want to receive Medical Reps?

At Home____ at Work____ over drinks____ Other_____

Q9. Name any form of gifts you receive from Medical Reps.

___ ___ ___ ___ ____ ____ ____ ____ ___ ___

Q10. Do you receive cash rewards as part of the relationship?

Yes___ No___

Q 11.1 If yes, how often do you use our phone to search for information?

Very seldom sometimes Very often

1 2 3 4 5

Q11.2. If no, could you say that some of your however benefit financially from these Reps?

Not possible Maybe Very possible

1 2 3 4 5

Q12. What is your expression towards relationship selling compared to traditional marketing strategies?

Less trustworthy No difference More trustworthy

1 2 3 4 5

Q13. What do you do when you receive Medical Reps?

1. Ignore them completely
2. Occasionally give them attention
3. Get leaflet and refer later .
4. Listen to them attentively.

Q14. Which Pharmaceutical Company visit you very often?

1. Pfizer
2. GSK
3. Sinofi aventis
4. Astra Zenica
5. Local Manufacturers
6. Others

APPENDIX TWO

Statistics

		HOSPITAL	SEX	OCCUPATION	CONTACT WITH M. REP	ATTITUDE TOWARDS MED. REP IN GENERAL
N	Valid	100	100	100	100	100
	Missing	0	0	0	0	0

Statistics

		INFORMATION ABOUT DRUG	FAMILIAR WITH RELATIONSHIP MARKETING	RELATIONSHIP EFFECTS ON PRESCRIPTION DECISION	SOCIAL ENVRNMT INFLUENCED BY MED. REP	APPROVE MED. REP CALL
N	Valid	100	100	100	100	100
	Missing	0	0	0	0	0

Statistics

	WANT TO RECEIVE MED. REP	GIFTS RECEIVED FROM MEDICO REP	RECEIVE CASH RECEIVE CASH REWARDS	OTHER FINANCIAL BENEFITS	APPROPRIATENESS OF GIFTs RECEIVED

N	Valid	100	100	100	100	100
	Missing	0	0	0	0	0

Statistics

		APPROPRIATENESS OF GIFTS OFFERED	RECEIVE MED. REP	PHARM. COMPANY VISIT OFTEN	RELATIONSHIP INFLUENCE PRECRIPTION	FEEL OBLIGED TO PRECSRIBE PR DRUG BECAUSE OF THE GIFT OFFERED
N	Valid	100	100	100	100	100
	Missing	0	0	0	0	0

Frequency Table

HOSPITAL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	KATH	71	71.0	71.0	71.0
	MANHYIA POLYCLINIC	21	21.0	21.0	92.0
	SUNTRESO HOSP.	8	8.0	8.0	100.0
	Total	100	100.0	100.0	

SEX

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MALE	60	60.0	60.0	60.0
	FEMALE	40	40.0	40.0	100.0
	Total	100	100.0	100.0	

OCCUPATION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MEDICAL DOCTOR	53	53.0	53.0	53.0
	PHARMACIST	32	32.0	32.0	85.0
	MEDICAL ASSISTANT	15	15.0	15.0	100.0
	Total	100	100.0	100.0	

CONTACT WITH M. REP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	EVERYDAY	2	2.0	2.0	2.0
	COUPLE OF TIMES EVERY WEEK	30	30.0	30.0	32.0
	ONCE A WEEK	38	38.0	38.0	70.0
	COUPLE OF TIMES EVERY MONTHS	30	30.0	30.0	100.0
	Total	100	100.0	100.0	

ATTITUDE TOWARDS MED. REP IN GENERAL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	VERY NEGATIVE	2	2.0	2.0	2.0
	NEGATIVE	13	13.0	13.0	15.0

	NEUTRAL	41	41.0	41.0	56.0
	POSITIVE	42	42.0	42.0	98.0
	VERY POSITIVE	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

INFORMATION ABOUT DRUG

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	MEDICAL REP	2	2.0	2.0	2.0
	BNS	39	39.0	39.0	41.0
	FROM PEER	29	29.0	29.0	70.0
	MEDICAL JOURNAL	15	15.0	15.0	85.0
	OTHERS	15	15.0	15.0	100.0
	Total	100	100.0	100.0	

FAMILIAR WITH RELATIONSHIP MARKETING

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	61	61.0	61.0	61.0
	NO	39	39.0	39.0	100.0
	Total	100	100.0	100.0	

RELATIONSHIP EFFECTS ON PRESCRIPTION DECISION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	52	52.0	52.0	52.0
	NO	48	48.0	48.0	100.0
	Total	100	100.0	100.0	

SOCIAL ENVRNMT INFLUENCED BY MED. REP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	VERY LITTLE	6	6.0	6.0	6.0

	LITTLE	35	35.0	35.0	41.0
	MODERATE	49	49.0	49.0	90.0
	MUCH	10	10.0	10.0	100.0
	Total	100	100.0	100.0	

APPROVE MED. REP CALL

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	50	50.0	50.0	50.0
	NO	50	50.0	50.0	100.0
	Total	100	100.0	100.0	

WANT TO RECEIVE MED. REP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AT HOME	1	1.0	1.0	1.0
	WORK	22	22.0	22.0	23.0
	OVER DRINKS	48	48.0	48.0	71.0
	OTHERS	29	29.0	29.0	100.0

WANT TO RECEIVE MED. REP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	AT HOME	1	1.0	1.0	1.0
	WORK	22	22.0	22.0	23.0
	OVER DRINKS	48	48.0	48.0	71.0
	OTHERS	29	29.0	29.0	100.0
	Total	100	100.0	100.0	

GIFTS RECEIVED FROM MEDICO REP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	DRUG SAMPLES & MEDICAL REFERENCE BOOK	6	6.0	6.0	6.0

	DRUG SAMPLES & BRANDED ITEMS (pens, shirts, calender)	43	43.0	43.0	49.0
	DRUG SAMPLES & VOUCHERS	34	34.0	34.0	83.0
	OTHERS	15	15.0	15.0	98.0
	NONE	2	2.0	2.0	100.0
	Total	100	100.0	100.0	

RECEIVE CASH RECEIVE CASH REWARDS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	5	5.0	5.0	5.0
	NO	95	95.0	95.0	100.0
	Total	100	100.0	100.0	

OTHER FINANCIAL BENEFITS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	66	66.0	66.0	66.0
	NO	34	34.0	34.0	100.0

OTHER FINANCIAL BENEFITS

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	66	66.0	66.0	66.0
	NO	34	34.0	34.0	100.0
	Total	100	100.0	100.0	

APPROPRIATENESS OF GIFTs RECEIVED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	94	94.0	94.0	94.0
	NO	6	6.0	6.0	100.0
	Total	100	100.0	100.0	

APPROPRIATENESS OF GIFTS OFFERED

	Frequency	Percent	Valid Percent	Cumulative Percent

Valid	YES	46	46.0	46.0	46.0
	NO	54	54.0	54.0	100.0
	Total	100	100.0	100.0	

RECEIVE MED. REP

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	IGNORE THEM	1	1.0	1.0	1.0
	OCCASIONALLY GIVE THEM ATTENTION	40	40.0	40.0	41.0
	GET LEAFLET AND READ LATER	41	41.0	41.0	82.0
	GIVE THEM FULL ATTENTION	18	18.0	18.0	100.0
	Total	100	100.0	100.0	

PHARM. COMPANY VISIT OFTEN

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	INTERNATIONAL PHARMACEUTICALS	79	79.0	79.0	79.0
	LOCAL PHARMACEUTICALS	21	21.0	21.0	100.0
	Total	100	100.0	100.0	

RELATIONSHIP INFLUENCE PRECRIPTION

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	YES	63	63.0	63.0	63.0
	NO	37	37.0	37.0	100.0
	Total	100	100.0	100.0	

FEEL OBLIGED TO PRECSRIBE PR DRUG BECAUSE OF THE GIFT OFFERED

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	yes	38	38.0	38.0	38.0
	no	62	62.0	62.0	100.0
	Total	100	100.0	100.0	

HOSPITAL * OCCUPATION Cross tabulation

Count

		OCCUPATION			
		MEDICAL DOCTOR	PHARMACIST	MEDICAL ASSISTANT	Total
HOSPITAL	KATH	46	25	0	71
	MANHYIA POLYCLINIC	5	5	11	21
	SUNTRESO HOSP.	2	2	4	8

HOSPITAL * OCCUPATION Cross tabulation

Count

		OCCUPATION			
		MEDICAL DOCTOR	PHARMACIST	MEDICAL ASSISTANT	Total
HOSPITAL	KATH	46	25	0	71
	MANHYIA POLYCLINIC	5	5	11	21
	SUNTRESO HOSP.	2	2	4	8
	Total	53	32	15	100