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Influence of Medical Representatives on Prescribing Practices in Tripoli

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ABSTRACT

Background and objectives. Medical representatives (MRs) have an impact in the medical community in terms of their promotion of medical products. The pattern of choosing to prescribe drugs by doctors may be affected according to the extent to which the representative is convinced the doctor which eventually influence physicians' prescribing decisions and choice of drugs. The current study aimed to assess the influence of medical representatives on prescribing practice of physicians in health facilities in Tripoli, Libya. **Methods**. A cross-sectional study was conducted over a period from Jan to April 2021, targeting different physicians in a number of public hospitals and private clinics in Tripoli. Data were collected using a pre-validated questionnaire and were analyzed using descriptive statistics. **Results**. Out of 135 distributed questionnaires, 122 were filled completely giving a response rate of 90.3%. About 36.3% of the respondents were males and 67.2% of them were within the age group of 30–40. The majority of physicians reported that the most common category of drug information was from the internet 78.7%, followed by medical representatives 60.6%, and medical journals 32.8%. The most effective reminder was a product sample (52.5%), leaflet (47.5%), a frequent visit (29.5%), a gift with a corporate logo (27.3%), medical representatives' acceptance of trustworthiness (16.4%), brochures (14.8%), and other approaches (23%). Furthermore, about 73.8 % of physicians were prescribing medications for their patients based on drug company. **Conclusion**. The outcomes of this study gave insight into prospective target areas for Libyan drug policymakers and regulatory agencies, and to develop a comprehensive guideline for MR interaction with health care professionals, as well as enforcement measures.

Keywords: *Medical Representative; Drug; Physician; Prescribing.*

INTRODUCTION

It is well recognized in the literature that pharmaceutical companies usually employ a wide range of advertising strategies to boost drug sales [1]. Medical representatives (MRs) are crucial employees engaged to promote their product in this setting [2]. Medical promotion is defined by the World Health Organization (WHO) as "any information and persuasive actions by makers and distributors with the goal of inducing the prescription, supply, purchase, and/or use of medicinal pharmaceuticals" [3].

Pharmaceutical advertising has a major impact on influencing doctors to write prescriptions and increasing drug sales [4]. It also plays a vital role in rational drug usage, drug pricing control techniques, important

drug accessibility, and drug distribution fairness. As a result, it becomes a health concern to the community [5].
It is recognized that diverse promotional approaches used by MRs in describing their product and the value of information supplied in developing nations is less in compare to developed countries [6]. Even though there are WHO guidelines in promotion of pharmaceutical, most MRs do not successfully provide the required information for doctors during their advertising activities [7]. Previous data among 1,000 doctors from selected institutes in Tripoli, Benghazi and Sebha reported that 40% of respondents stated that contraindications, precautions, interactions and adverse effects of products promoted by MRs were rarely described during promotional visits, and 65% of respondents stated that an alternative drug to the promoted product was never or rarely mentioned by the representatives [8]. Similarly, another study reported that 75.2% of physician stated that MRs regularly used the word "safe" and only 19.7%, 20.4% and 23.6% of MRs elucidated information concerning drug interaction, adverse drug events and price of the drugs respectively [9].

There is limited data published in Libya about the information given by MRs to their physicians. This study was therefore undertaken to assess the influence of MRs on physicians' prescribing practice in Tripoli, Libya.

METHODS

Study design and setting

The facility-based cross-sectional study was performed during the period from Jan to April 2021, covering 120 doctors operating in public and private health facilities (sample size was calculated based on confidence level of 95% and confidence interval of 8). All participants were interviewed using a structured pre-validated questionnaire, and their response were recorded and further analyzed. Participants were stated that there would be no risks in this research, and that all information collected would be kept private and anonymous. Only the researchers would have access to the information. An informed consent form, explaining the research methodology, attached to each questionnaire was read and signed by the doctors who participated in the survey. The study was approved by the research committee of the department of Pharmaceutical Sciences, University of Tripoli Alahlia, Janzur, Libya.

Study Instrument

A structured, self-administered questionnaire was created to assess the influence of MRs on physicians' prescribing practice. The questionnaire consisted of two parts. The primary portion contained questions related to the socio-demographic characteristics of the participants such as; age, gender, experience, qualification, length of desiccation. The second part compromise questions concerned to the drug promoting and prescribing practice. The questionnaire was validated on five physicians and amendments were considered and further applied.

Data analysis

Data was completed and descriptive analyzed using IBM SPSS Statistics for Windows, Version 22.0. Armonk, NY: IBM Corp. All data was presented as counts and percentages.

RESULTS

Out of 135 questionnaires distributed to respondents, 122 were filled completely with response rate of 90.3%. About 36.3% of the respondents were males and 68% of them were within the age group of 30–40. Approximately, 86.9% of respondents were general physician compared to 13.1% consultant, and 19.7% of the respondents were within 11–20 years of service experience. The majority of the physicians (75.4%) were working at governmental hospital, whereas 32.2% were at private clinics (**Table 1**).

Table 2 denotes the distribution of the sub-specialties of the respondents, and reveled that the majority of them were from the department of internal medicine, followed by cardiology and pediatrics (25.4%, 16.4, and 14.7%, respectively).
Regarding the main source of new drug information, the majority of physicians reported that the most common category of drug information was from the internet (78.7%), followed by medical representatives (61.7%), medical journals (32.8%), symposiums\seminars (19.7%), medical advertisements (18%), and pharmaceutical sales (14.7%).

Table 4 exhibits the most effective reminder strategies, which refer to what makes a physician think of a specific brand while prescribing. According to physician experience, the most effective reminder was a product sample (52.5%), followed by a leaflet (47.5%), a frequent visit (29.5%), a gift with a corporate logo (27.3%), medical representatives' acceptance of trustworthiness (16.4%), brochures (14.8%), and other approaches (23%).

In **Table 5**, the current findings demonstrates that physicians choose medications for patients based on the following criteria: 73.8 % is based on the drug company, 55.7 % is based on a patient's financial situation, 52.5 % is based on product price, 34.4 % is based on physician's colleagues, 26.2 % is based on hospital policy, 14.8 % is based on media advertising, and 13.1 % is based on a medical representative's frequent visit.

Table 1. Socio-demographic characteristics of respondents

Character	Category	Numbers	Percentage
Gender	Male	44	36.3%
	Female	78	63.6%
Age Category	Below 30	30	24.6%
	30-40	83	68%
	Above 40	9	7.4%
Experience (Y)	1-10	94	77.1%
	11-20	24	19.7%
	21-30	2	1.6%
	More than 30	2	1.6%
Qualification	GP	106	86.9%
	Consult	16	13.1%
Work Place	Government	92	75.4%
	Private	30	24.6%

Table 2. Sub-specialties of respondents (N=122)

Sub-specialty of respondents	Frequency	Percentage
Internal medicine	31	25.4%
Cardiology	20	16.4%
Pediatric	18	14.7%
Gynecology	12	9.8%
ENT	6	5%
Gastroenterologist	2	1.6%
Others	33	27.1%

Table 3. Main source of new drug information

Category	Frequency	Percentage
Internet	96	78.7%
Representatives	74	60.6%
Medical Journals	40	32.8%
Symposiums\ Seminars	24	19.7%
Media Advertisements	22	18%
Pharmaceutical Sales	18	14.7%

Table 4. Most effective reminder methods

Category	Frequency	Percentage
Drug samples	64	52.5%
Leaflets	58	47.5%
Frequent visit	36	29.5%
Gift with a company logo	34	27.9%
Medical representative's acceptance trustworthiness	20	16.4%
Brochures	18	14.8%
Others	28	23%

Table 5. Factors that affect physicians' drug selection decisions

Category	Frequency	Percentage
Company that produces the drug	90	73.8%
A patient's financial	68	55.7%
Product price	64	52.5%
Physician's colleagues	42	34.4%
Hospital policy	32	26.2%
Advertising in the media	18	14.8%
Frequent visits from medical rep	16	13.1%

DISCUSSION

For reasonable drug use, it is vital to provide complete and balanced drug information. Doctors can get the information they need from both scientific and commercial sources to make informed prescribing decisions. However, it is critical that the data produced by MRs is accurate, thorough, and balanced [8]. This cross-sectional study looked at the impact of physician contacts with MRs on prescription behavior in 122 physicians working in private and public health facilities. Almost all physicians' prescribing decisions were impacted by medication marketing, according to the research. The distribution of drug samples and frequent visits by pharmaceutical representatives, as well as the presentation of a gift with a business logo and reciprocal benefits between physicians and pharmaceutical companies, could all be contributing factors to this relatively high proportion.

The results of this study show that MRs, beside the internet source, is one of the most frequently reported main sources of new-drug information (60.6%), and they are consistent with past similar studies. According to a study conducted in Saudi Arabia, MRs affected 41.0 % of physicians' prescribing decisions [10]. In both commercial and public health institutions, there may be a lack of on-the-job training on prescribing procedures and medical ethics, which could explain the increased degree of influence in prescribing decisions shown in our study. On the other hand, the inclusion of a greater number of general physicians than consultants may be a contributing factor in this practice. Furthermore, the current study's results were comparable to those of research conducted in Nigeria (60%) and Turkey (61.2%) [11,12]. However, the current study's findings were lower than those of a study conducted in public and private practice settings in Tripoli, Benghazi, and Sebha, which found that 94.4 % of respondents thought the MRs' visit provided them with new product knowledge [13]. This variation could be due to MRs' less frequent visits and physicians' doubts about the authenticity and sufficiency of the information provided by MRs in this study. Our findings were also found to be incompatible with studies published in German, according to which the majority of doctors believed they were generally insusceptible to efforts by the MRs to influence them and accept gifts [14].

According to the findings of this study, nearly half of all medical practitioners (52.5 %) reported receiving drug samples from MRs. Many types of marketing tools were used, but simple gifts (27.9 %) were the least common promotional gifts supplied by the MRs, contrasting the results from Libya [15], Saudi [16], Egypt [17], and Ethiopia [18], which reported that simple gifts were the most common tools used by MRS. However, it was comparable with study conducted in Yamen which reported that physicians' main reasons for allowing medical representatives' visits were the social contacts and mutual benefits they will gain from these representatives [19].

Medical representatives are an important part of a company's marketing strategy, and MRs' success in gaining physician visits is dependent on both the MR's marketing communication tactics and his or her ability to adjust his or her style to fit the personalities of the physicians[20]. The importance of interactive communication cannot be overstated, and it may be achieved simply by providing high-quality information to build credibility, developing social and interpersonal skills, and providing appropriate presents. Many of these were cited as motivating factors for physicians to accept MR visits, and each can lead to a sense of reciprocal obligation on the recipient's part [21,22].

Some physicians have a negative attitude toward MRs and their marketing activities, believing that they are attempting to influence their prescribing decisions while endangering the patient. This study reveals that some physician-MR contacts and cooperation are viewed in a commercial framework, and that this context is one of the reasons physicians gave for accepting or declining MR visits.

In this study, 73.8 % of physicians stated that medicine selection criteria were dependent on the drug's manufacturer. The increased level of competition between drug companies in their marketing activities, as well as the availability of many types of medicine in the local market, may be the reason why Libyan physicians choose drugs depending on the identity of the company. In the context of Libya, the financial aspects play a role in physicians' decision of prescription. According to a previous study, drug prices were not an extremely relevant issue in most prescription selections [23]. These findings, however, diverge from those of our study, which found that more than half of doctors (55.7%) agreed that the patient's financial status was crucial, and 52.5 % agreed that drug price was an important factor in physicians' drug selection.

The lack of generalizability of data in this study, as the served physicians were in Tripoli, is considered as one limitation. Another limitation which should be considered is that, as in case of all self-reported data, it includes the risk of social desirability bias. Our research was constrained in that it was mostly exploratory and focused on physicians' perceptions toward encounters with medical representatives and their motivations for accepting their visits. Future research should look into ethical issues such as taking financial promotion items from MRs, as well as the conflicts of interest that surround this practice from an Islamic viewpoint with physicians in a distinct study with in-depth face-to-face interviews.

CONCLUSION

Despite the fact that medical representatives have the potential to influence their prescribing decisions, physicians appreciate visits from representatives and regard getting free samples, gifts, and other forms of assistance to be standard practice. The findings revealed potential areas for educational interventions in the field of pharmaceutical marketing. Such findings will serve as the foundation for policymakers in Libya's public and commercial health sectors to design appropriate medication promotion policies and regulations.

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Conflict of interest

The authors declare that there is no conflict of interest regarding the publication of this paper.

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