

THE RELIABILITY AND ACCURACY OF MEDICAL AND PHARMACEUTICAL INFORMATION THAT WERE GIVEN BY DRUG COMPANIES THROUGH MEDICAL REPRESENTATIVES TO IRAQI PHYSICIANS

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ABSTRACT

Objective: Evaluating the quality of promotional information that given by medical representatives (MRs) to physicians in Iraq.

Methods: A survey in questionnaire format for 22 specialist physician was done in Baghdad governorate during March – October 2013. The questionnaire involve questions about the age, gender, occupation of the physician besides 4 different questions regarding reliability, accuracy, and benefit from promotional information to the Iraqi physician.

Results: Medical representatives provide physicians with good information about drug indication and weak information about drug contraindications and side effects. On the other hand, academic physicians have a significantly more negative opinion than physicians who work in hospitals regarding the reliability of promotional information. Furthermore only hospital physicians found that MRs Information are useful for them. There is a non significant difference among physicians who directly trust the information from drug companies and MRs from those who don't trust unless check the data by themselves using suitable reference books or journals.

Conclusion: MRs provide Iraqi physicians with biased information, yet non academic physicians found that information is beneficial for their clinical practice.

Keywords: Promotional information, Medical representatives, Iraqi physicians.

INTRODUCTION

Drug Promotion can be defined according to world health organization (WHO) as all informational and persuasive activities by manufacturers and distributors, the effect of which is to induce the prescription, supply, purchase and/or use of medicinal drugs [1]. There are many tactics that were adopted by pharmaceutical companies for drug promotion including physician targeted promotion, direct to consumer advertisement, and data manipulation in clinical trials [2]. However physician targeted promotion is the most common tactic in this regard [3, 4], since physicians have the largest power to shift prescribing from one company to another [5]. Medical sale representatives (MRs) is one of the most important techniques for physician targeted promotion, to provide physicians with a sufficient and reliable information about their drugs [6], however there is a debate about the accuracy and reliability of information that was given from drug companies through MRs to physicians [7,8].

The aim of this study is to evaluate the quality of promotional information that given by MRs to physicians in Iraq.

Methods

A survey for specialist physicians was done during March – October 2013 in different areas of Baghdad governorate. A questionnaire format was given to 35 physicians however only 22 agreed to participate in this study and fill in the questionnaire completely. The questionnaire involve questioning about the age, gender, occupation (as shown in table 1), besides 4 different questions regarding reliability of information from MR, the information that the MRs focus on while comparing their products with the products of competing companies, trust in promotional information from MRs and drug companies, and final question regarding the benefit of promotional information to the physician and patient health. Statistical analysis was done using chi square test for all of the obtained values not only for the whole number of participated physicians but also for each group of physicians (academic and hospital working), in addition to statistical comparison for each

value between the 2 groups of physicians, values less than 0.05 considered significant.

The questions of the questionnaire

1. Do Medical sale representatives provide physicians with reliable and accurate information about drug regarding; drug indication, side effect, contraindication and dosing and route of administration (please rate your answer using one of the following 4 grades: V. good, Good, Moderate or Weak)
2. During the comparison of the promoted drug with other drugs, medical representatives focus on several aspects like the cost, effectiveness, side effects and dosing and package of the product. Please rate each aspect using one of the following 3 grades: high focus, moderate focus and low focus)
3. Is there any benefit from medical representative information about drugs? (Please answer by No, or Yes and if yes is it high, moderate or low?)
4. Do you trust medical representative claims and information about their promoted drugs? Please choose one of the following answers (after oral discussion with them, after I read drug brochures, or unless I found similar data in textbooks or medical journals)

RESULTS

This study (Table 2) showed that medical representatives provide physicians with a good information about drug indication and a weak information about drug contraindications and side effects. On the other hand, academic physicians have a significantly more negative opinion than physicians who work in hospitals regarding the information of MRs on drug contraindication. While the data in table 3 showed that MRs while comparing their product with other products provide a significantly high focus on the effectiveness of their product; Meanwhile MRs provide a moderate to weak focus on other aspects like side effect, dosing and package of their product. Furthermore, there is a significant difference between the opinion of hospital and academic physicians regarding the focus of MR on cost

difference of their promoted products. Furthermore this study as shown in table (4) showed that only hospital physicians found that MRs information are useful for them. Meanwhile there is a large number of physicians who agreed in that drug promotion is beneficial to the patient, yet it didn't achieve a statistically significant value. Furthermore there is a significant difference between the

number of patients and physicians who didn't get a benefit by drug promotion. This study also showed in table 5 that there is a non significant difference among physicians who directly trust the information from drug companies and MRs from those who don't trust unless check the data by themselves using suitable reference books or journals.

Table 1: General demographic data

Parameter	Value
Age (years)	45.59± 8.89
Gender M/F	17/5
Occupation (Academic/ hospital)	7/15

Table 2: Reliability and accuracy of medical representatives' information about promoted drugs

Parameter	Participated physician Occupation	Rating Value				P value
		V. Good N (%)	Good N (%)	Moderate N (%)	Weak N (%)	
Drug indication	Hospital	2 (13%)	7 (47%)	4 (27%)	2 (13%)	0.215
	Academic	2 (29%)	4 (57%)	1 (14%)	0 (0%)	0.171
	Total (Both)	4 (18%)	11 (50%)	5 (23%)	2 (9%)	0.042*
Drug side effects	Hospital	----	3 (20%)	6 (40%)	6 (40%)	0.085
	Academic	----	0 (0%)	4 (57%)	3 (43%)	0.063
	Total (both)	0 (0%)	3 (14%)	10 (45%)	9 (41%)	0.0057*
Drug contraindication	Hospital	----	3 (20%)	3 (20%)	9 (60%)*	0.009*
	Academic	----	0 (0%)	1 (14%)	6 (86%)*	0.002*
	Total (both)	0 (0%)	3 (14%)	4 (18%)	15 (68%)	0.00003*
Drug dosing and route of administration	Hospital	4 (27%)	5 (33%)	5 (33%)	1 (7%)	0.462
	Academic	2 (29%)	4 (57%)	1 (14%)	0 (0%)	0.171
	Total (Both)	6 (27%)	9 (41%)	6 (27%)	1 (5%)	0.164

Table 3: Reliability and accuracy of medical representatives' information when comparing their promoted drugs with drugs of other competing companies

Parameter	Participated physician Occupation	Rating Value			P value
		High	Moderate	Low	
Cost	Hospital	9 (60%)*	4(27%)	2 (13%)	0.074
	Academic	1 (14%)*	3 (43%)	3 (43%)	0.564
	Total (Both)	10 (45%)	7 (32%)	5 (23%)	0.421
Effectiveness	Hospital	10 (67%)	5 (33%)	0 (0%)	0.006
	Academic	5 (71%)	2 (29%)	0 (0%)	0.066
	Total (both)	15 (68%)	7 (32%)	0 (0%)	0.00046
Side effect	Hospital	2 (13%)	7 (47%)	6 (40%)	0.246
	Academic	1 (14%)	3 (43%)	3 (43%)	0.564
	Total (both)	3 (14%)	10 (45%)	9 (41%)	0.141
Usage and Package	Hospital	3 (20%)	9 (60%)	3 (20%)	0.0907
	Academic	3 (43%)	3 (43%)	1 (14%)	0.564
	Total (Both)	6 (27%)	12 (55%)	4 (18%)	0.094

Table 4: Benefit from drug promotion information to the physician

Parameter	Occupation of participated physician	Yes there is a benefit			No any benefit	P value
		High	Moderate	Low		
Benefit to the physician	Academic	1 (14%)	3 (43%)	1(14%)	2 (29%)*	0.665
	Hospital	1 (7%)	9 (60%)	5 (33%)	0 (0%)*	0.0036*
	Total (Both)	2 (9%)	12 (55%)	6 (27%)	2 (9%)	0.0067*
Benefit to the patient		20 (91%)			2 (9%)*	0.00012
		13 (59%)			9 (41%)*	0.393

Table 5: Physician trust in drug promotion information

Parameter	Trusted		Not Trusted		P value
	After oral discussion with MR	After reading drug company brochures	After checking in reference book or medical journal		
Hospital	5 (33%)	4 (27%)	6 (40%)		0.818
Academic	1 (14%)	3 (43%)	3 (43%)		0.564
Total	6 (27%)	7 (32%)	9(41%)		0.727

DISCUSSION

Some previous Qualitative studies found that pharmaceutical promotion is a useful and convenient source of information for physicians [9–11], so MRs are welcomed by physicians to get some educational and scientific benefit from their information about drugs [12].

This study (Table 2) showed that medical representatives provide physicians with good information about drug indication but a weak information about drug contraindication and side effects, similarly other studies found that promotional information by drug companies and MRs is incomplete [13], usually biased [14] and even misleading [15,16]. Additionally many other studies in Arabic countries found that MRs provide physicians with partial information about their products [17, 18].

In addition to that the result of this study (Table 3) showed that MRs highly focusing on the positive aspects of their promoted drug like its effectiveness when comparing it with other drugs of the competing companies, in one similar study, 80% of physicians believe in that MR overestimate the effectiveness of their promoted products to influence physicians to prescribe their products [19]. On the other hand, this study (Table 2) showed that academic physicians have a significantly more negative opinion than physicians who work in hospitals regarding the information from MRs. Similarly In Abate et al.'s study academic medicine physicians used drug industry sources for their drug information questions less than private practice physicians did [20]. Furthermore, there is a significant difference between the opinion of hospital and academic physicians (Table 3) regarding the focus of MR on cost difference of their promoted products, this finding can be explained in only one way at which academic physicians interested in factual information rather than trading information, since it is well known that the environment in which community physicians interact with industry may be quite different from the environment of academic physicians [21].

This study (Table 4) also showed that Iraqi physicians and most specifically those who work in hospitals found that MRs and drug companies information are useful for them, Since most physicians in Iraq working in both public and private sector, this may lessen their available time for continuous medical education and keep their medical information up to dated. While in contrast with hospital occupied physicians academic physicians didn't find any benefit form promotional information, may be because of the higher educational level and continuous medical education for academic physicians [21, 22]. Additionally the result of this study (Table 4) showed that there is a larger number (59%) of physicians who agreed in that drug promotion is beneficial to the patient, yet it didn't achieve a statistically significant value. But most importantly there is a significant difference between the number of patients and physicians who didn't get a benefit by drug promotion, this fact can be explained in that biased promotional information may not be beneficial and even harmful to the patient, besides that other causes like gift acceptance may be one of the benefit to the physician that lead to conflict of interest that may negatively influence prescribing behaviors of the physician [23-25] and thus may lessen patient welfare and benefit [26].

This study (Table 5) also showed that more than 59% of the participated physicians trust promotional information, yet, there is a non significant difference among physicians who directly trust the information from drug companies and MRs from those who don't trust unless check the data by themselves using suitable reference books or journals, this finding in contrast to the finding in USA at which the majority of physicians said that they relied mainly on academic source of information rather than the promotional source [27]. This finding may be a negative point on Iraqi physicians, which despite their beliefs about the bias in promotional information, still directly trust this information; additionally ineffective promotional information may be harmful if it wastes prescribers' time or if the money spent on promotion increases the cost of medicines [28]. So in the absence of evidence of net improvement in prescribing from exposure to promotional information, we recommend that Iraqi physicians should depend on clinical guidelines rather than commercial information to ensure safety and benefit to all Iraqi patients.

Although this study has some limitations, most importantly are the small sample size for the questionnaire and the area at which the study was done involving one governorate; However, this study is the 1st study in Iraq evaluating the quality of promotional information, additionally unlike other studies that include trainees [29] and general practitioner physicians [30], this study is one of the few surveillance studies in the world that based in its questionnaire on specialist physicians only.

In conclusion, MRs provide Iraqi physicians with biased information, yet non academic physicians found that information is beneficial for their clinical practice.

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