

## Physicians' Perception at College of Medicine/ University of Mosul Regarding Relationship with Drug Industries

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### ABSTRACT

**Context:** Physicians experience a conflict of interest related to appropriate interaction to the current industries' practices of gifts provision as a marketing strategy.

**Aim of the study:** The study aims to explore physicians' insight about dealing with drug promotion activities of pharmaceutical industries.

**Subjects and methods:** A cross- sectional study design was conducted in the College of Medicine /University of Mosul during the academic year 2018-2019. Medical faculty staffs in the College of Medicine/ University of Mosul in the clinical departments including department of: (Medicine, Surgery, Pediatrics and Obstetrics and Gynecology). In addition to academic physicians in non-clinical departments who have private clinic who agreed to participate were involved. A modified standardized questionnaire form was used.

**Results:** From 71 participant physicians 61 (85.92%) had no previous teaching regarding ethical principles of interaction with drug representatives. Forty percent of the participants had personal friendship with a medical representative; meanwhile 63.38% had previous dealing with pharmaceutical companies. Only 16.9% of participants trust the information that delivered from drug companies. More than one fifth of participants supposed that gift provision from drug companies will influence drug prescription manners. Physicians considered drug sample appropriate gift to be accepted followed by conference registration fees, textbooks and travel to conference.

**Conclusion and recommendations:** Considerable proportion of academic Physicians at College of Medicine /University of Mosul had interaction with pharmaceutical company representatives. Academic physicians' responses attempted to minimize gifts provision on their professional behavior. However, pharmaceutical promotional activities should be monitored and controlled through physicians' self- regulation and legislations.

**Keywords:** Academic physicians, Pharmaceutical marketing, Professional behavioral, Drug representatives

### إدراك الأطباء في كلية طب الموصل فيما يخص العلاقة مع شركات الأدوية

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### الخلاصة

**المقدمة:** يواجه الأطباء تضارباً في المصالح يتعلق بالإستجابة لممارسات شركات الصناعات الدوائية الحالية المتمثلة في تقديم الهدايا كاستراتيجية تسويقية.

**الهدف من الدراسة:** تهدف الدراسة إلى استكشاف وجهة نظر الأطباء حول التعامل مع أنشطة الشركات الدوائية في الترويج لمنتجاتها.

**المشاركون وطرق العمل:** تم إجراء تصميم دراسة مقطعية في كلية الطب / جامعة الموصل خلال العام الدراسي 2018-2019. بمشاركة أعضاء هيئة التدريس الطبية من الأقسام السريرية في كلية الطب/ جامعة الموصل والتي تتضمن فرع الطب الباطني

وفرع الجراحة وفرع الأطفال وفرع النسائية والتوليد، وكذلك الأطباء الأكاديميين في الفروع الأساسية ممن لديهم عيادات خاصة الذين أبدوا موافقتهم للمشاركة. تم جمع البيانات باستخدام نموذج إستبيان ذاتي معدل.

**النتائج:** غالبية الأطباء المشاركين (85.92%) لم يتلقوا أي تعليم سابق فيما يتعلق بالمبادئ الأخلاقية للتعامل مع مروجي الأدوية. وكان 40.85% من المشاركين لديهم صداقة شخصية مع مروج طبي للأدوية؛ في الوقت نفسه، كان 63.38% قد تعاملوا سابقاً مع شركات الأدوية. 16.9% فقط من المشاركين يثقون في المعلومات التي تقدمها شركات الأدوية. إفتراض أكثر من خمس المشاركين (22.54%) أن تقديم الهدايا من شركات الأدوية سيؤثر على طرق وصف الأدوية. إعتبر الأطباء أن عينات الادوية مناسبة لتقبل كهدايا لتكون متبوعة برسوم تسجيل لمؤتمر ما والكتب العلمية ودفع تكاليف السفر إلى مؤتمر.

**الاستنتاجات والتوصيات:** هناك نسبة لا بأس بها من الأطباء الأكاديميين في كلية الطب جامعة الموصل لديهم تعامل مع مندوبي الشركات الدوائية. حاول الأطباء الأكاديميين في إجاباتهم التقليل من تأثير توفير الهدايا في سلوكهم المهني. وعليه يجب مراقبة الأنشطة الترويجية الصيدلانية وتنظيمها من خلال وسائل الضبط الذاتي للأطباء والرقابة القانونية.

**الكلمات المفتاحية:** الاطباء الاكاديميين، التسويق الدوائي، السلوك المهني، مندوبي الادوية.

## INTRODUCTION

It is well known that the primary duty of physicians is to manage their patients in a way that to achieve their best interest, avoid any harm, respecting their autonomy within a justifiable manner<sup>1-4</sup>. Indeed, pharmaceutical industry contribute for improving patient care via developing new medications, medical devices and products that support practicing modern medicine, conduct studies and executing clinical trials<sup>5</sup>.

However, with the great development of technology and complexity of medicine including pharmaceutical industry the medical care has been shifted to a commercial job resulting in a great competition in pharmaceutical industry<sup>6,7</sup>. Drug promotional strategies of pharmaceutical companies were directed toward physicians via gifts provision, funding of educational and social events<sup>8</sup>. Such strategies raised ethical worries linked to patients' rights since they are the primary consumers of pharmaceutical products<sup>7</sup>.

For instance, in a study conducted in US done in 2007<sup>9</sup> exposed that relationship with pharmaceutical industry was reported by most participants' physicians (94%) mostly in the form of receiving food in the workplace (83%) or receiving drug samples (78%). In another Indian study that examined medical interns' attitude toward interaction with promotional activities of drug companies in 2017<sup>10</sup>. That study disclosed that one third (32.2%) of them favored drug prescription from gifts providing companies over those without and majority (77.8%) of the respondents thought that it is appropriate to accept gifts from drug representatives if offered. Likewise, according to a

systematic review that identified studies conducted in low and middle-income countries revealed that the main benefits of physicians' interaction with pharmaceutical representatives were receiving information and rewards<sup>11</sup>.

Unfortunately, gifts provision can emerge a conflict of interest which may badly affect patients' trust and clinical care<sup>12</sup>. Therefore, physicians have to comprehend and manage their relationships with industry appropriately in order to safeguard their clinical and professional objectivity and avoid being in a conflict of interest<sup>13,14</sup>.

The present study aims to explore physicians' insight regarding promotional activities of pharmaceutical industries. The general aim was conducted through 1<sup>st</sup> identifying physicians' previous teaching regarding medical ethics and their relation-ship with drug representatives. 2<sup>nd</sup> exploring faculty staffs' attitude to drug representatives' promotional activities and 3<sup>rd</sup> detecting their opinions to the appropriateness of accepting different types of pharmaceutical gifts.

## SUBJECTS AND METHODS

A cross sectional study design was conducted in the College of Medicine/ University of Mosul. After obtaining the official permission, the medical faculty staffs' opinions regarding relationship with pharmaceutical companies were obtained via a modified standardized self-administered questionnaire form<sup>15</sup>. Data were collected during a period of two months from 1<sup>st</sup> of Sep. 2018 to the 1<sup>st</sup> of Nov 2018. The forms were circulated to all faculty staff in the clinical departments including

department of: (Medicine, Surgery, Pediatrics and Obstetrics and Gynecology). In addition to academic physicians in non-clinical departments who have private clinic. The participants were informed that participation is optional. The returned forms were 71 out of 177 (number of academic physicians of the College of Medicine / University of Mosul) forming response rates of 40.1%.

The information that collected by the form was included general information of the participants that included their gender, age, years of professional experience, previous teaching regarding medical ethics and their relationship with drug representatives. In addition, the faculty staffs' attitude to drug representatives' promotional activities was obtained, and their opinions to the appropriateness of accepting different types of pharmaceutical gifts were included. The collected data arranged in suitable tables and managed statistically by the software Minitab version 14. Simple descriptive statistical tools in the form of mean, standard deviation, numbers, percent and Z-test for one proportion were used for the presentation and analysis of the study results. P-value equal or less than 0.05 considered significant.

## RESULTS

Out of 177 forms disseminated, 71 forms were returned forming response rate of 40.1%. **Table 1** shows that mean age of the study sample was 46.42 (SD 7.31), male forming 52.11%. Significantly, more than three fourth of the study sample (77.46%) was having more than 10 years of professional experience. It was noticed that the majority of physicians (83.1%) have no previous MEs teaching, as well as 85.92% had no previous teaching regarding ethical principles of interaction with drug representatives (P=0.000). A proportion of 40.85% of the participants had personal friendship with a medical representative; meanwhile 63.38% had previous dealing with pharmaceutical companies.

**Table 2** reveals that 71.83% of the participants physicians considered seminars that funded by drug companies are often unfair in approval of their products. While 56.34% of participants agreed on the beneficially of learning about new drugs from drug companies. On the other hand only 16.9% of participants trusted the information that delivered

from drug companies, and 63.38% were neutrally trust. More than one fifth (22.54%) of participants supposed that gift provision from drug companies will influence drug prescription manners.

According to the physicians opinion; drug sample considered appropriate gift to be accepted by 63.38% of the participants, followed by conference registration fees (50.7%), textbooks (43.66%), and travel to conference (40.85%). While almost all participant refuse money as a promotional gifts as shown in **Table 3**.

**Table (1):** The percentage distribution of the study population according to their characteristics, (n=71).

Age (n=71)	Mean	SD	P-value*
	46.42	7.31	
Sex (n=71)	No.	%	
Male	37	52.11	
Female	34	47.89	
Years of professional experience	No.	%	
(1-5)	3	4.23	
(5-10)	13	18.31	
10 and above	55	77.46	
Proportion of physicians how had previous MEs education.	No.	%	
Yes	12	16.9	0.000
No	59	83.1	
Proportion of physicians how had previous teaching regarding ethical principles of interaction with drug representatives of drug companies	No.	%	
Yes	10	14.08	0.000
No	61	85.92	
Proportion of physicians how had personal friendship with a medical representative.	No.	%	
Yes	29	40.85	0.154
No	42	59.15	
History of interaction by Pharmaceutical company representatives.	No.	%	
Yes	45	63.38	0.032
No	26	36.62	

\* using Z-test for one proportion.

**Table (2):** Physicians' perception regarding promotional activities of pharmaceutical companies, (n=71).

Statements	Physicians' responses		
	Agree No. (%)	No opinion No. (%)	Disagree No. (%)
1- Drug representatives deliver trustful information about their companies' product.	12 (16.9)	45 (63.38)	14 (19.72)
2-Drug representatives provide important information to the medical staff.	38 (53.52)	26 (36.62)	7 (9.86)
3- Gifts from drug companies can be accepted because they have minimal effect on staff.	17 (24.64)	16 (23.19)	36 (52.17)
4- Most of drug companies' informative activities are helpful and educational.	10 (14.08)	46 (64.79)	15 (21.13)
5- It is beneficial to learn about new drugs from drug companies.	40 (56.34)	27 (38.03)	4 (5.63)
6-Drug companies supported meetings are often unfair in approval of their products.	51 (71.83)	20 (28.17)	0 (0.0)
7-Drug companies' gifts given to the doctors will raise costs of medicines.	28 (39.44)	13 (18.31)	25 (35.21)
8- There is a chance of increase prescribing drug from certain companies that offer gifts.	16 (22.54)	13 (18.31)	42 (59.15)
9- Most drug promotional and adverting activities in general are unethical.	18 (25.35)	32 (45.07)	21 (29.58)

**Table (3):** Physicians' perception regarding the appropriateness of various promotional gifts of pharmaceutical companies, (n=71).

Type of gift	Physicians' responses		
	Appropriate No. (%)	Inappropriate No. (%)	Neutral No. (%)
1- Restaurant invitation	6 (8.45)	46 (64.79)	19 (26.76)
2- Drug sample	45 (63.38)	13 (18.31)	13 (18.31)
3 -Social journey	5 (7.04)	52 (73.24)	14 (19.72)
4 -Cash money (< 20\$)	0 (0.0)	70 (98.59)	1 (1.14)
5- Cash money (20-49 \$)	0 (0.0)	70 (98.59)	1(1.14)
6- Cash money (≥50 \$)	1 (1.14)	69 (97.18)	1 (1.14)
7- International Holiday	3 (4.23)	53 (74.65)	15 (21.13)
8- Notebook	20 (28.17)	33 (46.48)	18 (25.35)
9-Conference registration fees	36 (50.7)	20 (28.17)	15 (21.13)
10- Travel to conference	29 (40.85)	33 (46.48)	9 (12.68)
11- Stethoscope	4 (5.63)	49 (69.01)	18 (25.35)
12- Textbook	31 (43.66)	22 (30.99)	18 (25.35)

## DISCUSSION

The current study is confined to academic physicians only who may have different perception and attitude than physicians who work in the health sectors which could related to the nature and field of work. However, academic physicians' perception was given an extra importance because they are role model and have direct influence on their students in medical colleges.

In the current study there is high proportion of physicians from the faculty staff of College of Medicine\ University of Mosul with no previous formal medical ethics (MEs) education or previous learning on the principles of interaction with drug representatives of pharmaceutical companies. This may be due to late establishment of MEs teaching in the College of Medicine\ University of Mosul at 2002 which is inadequate and still in the form of theoretical lectures with lack of postgraduate ethics education<sup>16</sup>. However, this result is convenient with a Saudi study conducted in 2014 in which only (23%) of the participant physicians have history of

education about the ethics of drug promotion as they reported<sup>15</sup>.

In regard to personal relationship and history of interaction with drug representative's numerous studies confirm such interaction. In a study in Germany on 2014 it was found that 84% of the physicians saw Pharmaceutical sales representatives at least once a week<sup>17</sup>. While an Indian study with a similar aim conducted in 2016; 37% of the responded doctors had interacted with medical representatives once a week whereas 25.9% of them disclosed that they interact with medical representatives twice a month<sup>18</sup>. Likewise, in a Nigerian study in 2017 depicted that all the participants doctors had visited by pharmaceutical sale representatives in the previous year and (88.6%) of them visited 12 times or more in the last year<sup>19</sup>. In a systematic study done in 2017; Fickweiler, *et al* found that interaction with pharmaceutical sale representatives is common among attending physicians and residents<sup>20</sup>. The relatively less proportion of interaction with pharmaceutical sale representatives (63.38%) as reported by participants' physicians in the current study may be because the participant was from the faculty staff of medical college.

In the current study it was found that 71.83% of the participants considered seminars that were funded by drug companies are often biased in favor of their products, more than half (56.34%) of participants indicated that learning about new drugs from drug companies is helpful. Meanwhile, small proportions of participants (16.9%) were trust the information from medical representatives about their companies' products. One fifth (22.54 %) considered gifts provision from pharmaceutical sale representatives could influence their drug prescription manners. In comparison to the Nigerian study in which two thirds of participants had positive attitude to drug promotion and (47.6%) of them stated that drug promotion by pharmaceutical sale representatives would influence their prescription practices<sup>19</sup>. While in the Saudi study on 2014; Alosaimi FD *et al*, showed that (52.1%) of the physicians denied that accepting pharmaceuticals' gifts could affect their own decisions, and 41.2% of the participants considered the promotional information from pharmaceutical sales representatives are inaccurate. More than one third (37.9%) of the

participants deliberated that drug information from pharmaceutical sales representatives will not influence their decisions<sup>21</sup>. On the other hand Fickweiler, *et al* in their systematic study in 2017; showed that large proportion of physicians assumed that information provided by pharmaceutical sale representatives, pharmaceutical funded conferences and continuous medical education (CME) events are helpful and educational. Also, they denoted that physicians do not consider that pharmaceutical sale representatives interactions influence their prescribing behavior in most of the studies, while other studies found that there was some extent of influence<sup>20</sup>. Whereas, in a national survey of physicians conducted in 2011 in US showed that only 18% of the sample considered that information provided from pharmaceutical companies could influence the prescription decision, and only 17% of the participants considered promotional activities of pharmaceutical sale representatives apart from continuity medical education (CME) influence the Prescription decision<sup>22</sup>. The relative differences in the physicians' attitude in the current study and other studies may be due to differences in the characteristics of the participant regarding their years of experienced, qualifications and field of work. Actually academic physicians attempted to balance their interaction with pharmaceutical representative by minimizing the effect of promotional activities on their professional behavior. Mikhael *et al*, found that there is a significant difference in opinion regarding the reliability of promotional information between academic physicians who had have more negative opinion compared with physicians who work in hospitals. In that study medical representatives' information was considered useful by only hospital physicians<sup>23</sup>. In the same context, Brett *et al* revealed that faculty staff rated ethical concern for all study inquiries related to physicians interaction with pharmaceutical representatives and significantly for expensive and non-educational gifts<sup>24</sup>. In contrast, De Ferrari *et al*; found in their study in Peru (2014) that physicians who involved in teaching had more frequent interaction with pharmaceutical representatives than attending physicians and residents doctors. Furthermore, in that study faculty staff considered promotional gifts

are ethically acceptable by 81.5% vs. attending physicians and residents by 58.3 %;(p=0.03).<sup>25</sup>

Almost all the academic physicians who participated in the present study refused cash money as a promotional gift. On the other hand, they considered drug appropriate gift to be accepted followed by conference registration fees, textbooks and travel to conference. Similarly, in Zaki study the most appropriate promotional gifts were conference registration fees and free drug samples (67% and 66%, respectively)<sup>15</sup>. Also, Richards in his national survey in US showed that 74% of physicians stated they accept drug samples from representatives. Most of them who accept samples use them to help patients<sup>22</sup>. While, Lieb and Scheurich found in their study that 69% of the participants' physicians accepted drug samples, 39% accepted notebook and 37% took part in funded continuing medical education<sup>17</sup>. In contrast, Morgan et al, found in their study that drug sample considered as a proper gift and is accepted by most respondents (92%), an informational lunch by (77%), while an anatomical model by (75%) and a well-paid consultant ship (53%) from pharmaceutical representatives<sup>26</sup>. Actually, although large proportion of physicians denied that gifts provision could influence their prescriptions behavior<sup>27</sup>. Yet, significant evidence revealed that gifts even of slight amount would influence behavior<sup>28, 29</sup>.

## CONCLUSION AND RECOMMENDATIONS

Promotional activities of pharmaceutical companies including gifts provision are globally common. Academic physicians' responses attempted to minimize gifts provision on their professional judgment. Physicians' interactions with pharmaceutical companies should be professional and directed to improve patient care. Legislations and monitoring should be activated to regulate drug promotional activities and appropriate physicians' behavior through self-regulation to support patients' welfare and safety.

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