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Conflict of Interest: The Attitude of Iranian Physicians Involved in Breast Cancer Management

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ABSTRACT

Background: Evidence on physicians' attitude toward conflict of interest is scant on a global scale and almost non-existent in a regional/national scale. This investigation is a pioneer to evaluate this issue in the Middle East and Iran.

Methods: We invited physicians of different (sub)specialties/educational levels who were engaged in breast cancer management to take an online 13-question survey regarding their attitude toward different statements on conflict of interest. The responses were then collected and analyzed.

Results: The questionnaire was returned by 91 out of 157 recipients (response rate = 57.9%). Based on the answers, advertisement by pharmaceutical sales representatives in academia was considered inappropriate (63.8%) and influential on clinical practice (80.2%). It was the belief of 59.4% of participants that local practice norms defined whether or not to accept travel grants. According to these norms, they might have accepted paid travels (53.9%), but not financial offers (72.2%). It was acceptable to deliver (74.8%) or attend (68.9%) a speech when a financial/scientific relationship with industrial companies existed and 93.4% believed that the disclosure and transparency rules should be respected in such situations. Physician-industry financial contracts were generally unfavorable (60.5%), especially when it came to prescribing a drug among other equally effective choices (71.1%). The majority of respondents (92.3%) stated that they would choose the best approach for the patients regardless of possible prejudgments on conflict of interest.

Conclusions: The observed variation in physicians' standpoints highlights the necessity for more comprehensive training and implementation of rigorous protocols regarding conflict of interest.

Introduction

Preservation of trust between physicians and patients is the cornerstone of many healthcare policies, as the efficacy of clinical interventions depends on it.

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Conflict of interest (COI), as a major source of potential threat to achieving this goal, has become the concern of healthcare policymakers in recent decades. By definition, COI is a conflict between a professional responsibility and financial or professional interest.¹ Although not every financial relationship or professional interest constitutes a COI, there is always a possibility. Since inappropriate policies can easily turn this potential threat into an actual ethical problem, many academic medical centers have established new



strategies to reduce the risk of COI.²⁻⁴

Although personal advantage can be discussed in different aspects, in majority of cases the most concerning COI is the financial one.^{5, 6} Evidence suggests that financial connections between pharmaceutical industry and oncology have grown over time.⁷ Despite being common, this relationship can eventually increase the influence of industry on oncology research and practice. In the United States, this issue has become even more concerning as a result of a shift in prominent clinical trials from being government-funded in the past to industry-funded in recent years.⁷

In the literature, little evidence exists regarding the physicians' awareness of and attitude towards COI on a global scale, and the evidence is almost

non-existent in a regional or national scale. Hence, this study was conducted to present an overview of the current state of Iranian physicians' mindset on this issue.

Methods

A self-administered online questionnaire was designed in two parts. The first part (Table 1) included questions on age, gender, highest level of education, training in the medical ethics, and oncology practice background. The second part contained 13 questions to assess the attitude of physicians towards COI. Respondents were asked to answer each question by selecting one of the five options: strongly agree, agree, undecided/neutral, disagree, and strongly disagree.

Table1. Questionnaire

First Part: Demographic information

1. Age (years):
2. Gender: Male Female
3. Level of Education:
Resident Board-certified specialist Fellowship student Fellowship graduate
4. Specialty: / Fellowship sub-specialty:
5. Professional experience in oncology (years):
6. Average number of patients you visit in a week:
7. Have you ever attended workshops/courses on “medical ethics and professionalism”: Yes No
8. Have you ever attended workshops/courses on “Conflict of Interest”: Yes No

Second Part: Survey on Physicians' Attitude

- Q1. I consider it inappropriate if pharmaceutical sales representatives attend an academic environment.
- Q2. The presence and advertisement of pharmaceutical sales representatives subconsciously affects the clinical and therapeutic decisions.
- Q3. It is acceptable if I travel abroad for which a pharmaceutical company will pay the costs (not accompanied by my family).
- Q4. Local practice norms determine whether or not to accept any gifts or travel grants.
- Q5. In case of any financial relationship with healthcare industries, I will adhere to the disclosure and transparency rules in national meetings/seminars should I give presentations on pertinent issues.
- Q6. In my opinion, neither scientific cooperation nor financial relationships with medical centers interfere with giving lectures in relevant seminars.
- Q7. Knowing that a lecturer has received grants from a corporation on the associated topic, I cannot attend as an audience.
- Q8. Financial contracts with medical centers (e.g. laboratory or imaging centers) is acceptable if no further cost is imposed on the patients.
- Q9. Financial contracts with medical centers are justifiable if the gain is devoted to development of medical services or charity purposes.
- Q10. In case two drugs are similar and equally effective, selecting the one for which there is a contract between a physician and a company is not right.
- Q11. According to my country's practice norms, it is not unethical to accept offers from pharmaceutical / medical instrument corporations.
- Q12. Suggesting options of referral laboratory / imaging centers to patients, while respecting their choices, is suspicious and damages the patient-physician trust.
- Q13. I consider what is best for my patient and prejudgements and doubtful situations, with regard to possible conflict of interest, do not influence my approach.



The questionnaire was developed by the authors using a discussion method over several meetings. It was then finalized through consultation with a panel of ethics experts.

We asked 157 physicians engaged in the field of breast cancer to participate in this survey via an email containing a link to the pre-designed online questionnaire. All participants were also sent a cover letter requesting them to complete the questionnaire. The answers were collected anonymously, without linking it to the participant's email address or any other personally identifiable information.

Data analysis was performed with SPSS software (version 19.0; IBM Corp., Armonk, NY). All frequencies are expressed as percentage.

Results

Ninety-one out of 157 physicians participated in the survey (response rate: 53.5%), of whom 36.3% were surgeons, 28.6% were oncologists, and 35.1% were of other specialties, including radiotherapy, radiology, and pathology. The participants were 60.4% male and 39.6% female with the mean age of 44 years (SD: 8.76, Range: 26–68 y). Of the total participants, 31.9% were board-certified MDs, 57.1% were fellowship students/graduates, and 11% were residents. All respondents were physicians working in the field of breast cancer, with a mean experience of 9.99 years (SD: 9.01, Range: 1–40 y). At least one course of medical ethics training was attended by 51.6% of participants, of whom 29.8% (15.4% of total participants) had also received training in COI. Table 2 shows a summary of demographic information.

Table 2. Demographic characteristics of participants

Variables (N=91)	N (%)	Mean (±SD)
Age± SD		44 (±8.769)
Gender		
Male	55 (60.4%)	
Female	36 (39.6%)	
Specialty		
Surgeon	33 (36.3%)	
Oncologist	26 (28.6%)	
Radiotherapist	13 (14.2%)	
Radiologist	6 (6.6%)	
Pathologist	4 (4.4%)	
Other	7 (7.7%)	
Missing	2 (2.2%)	
Education*		
Resident	10 (11.0%)	
Board certified	29 (31.9%)	
Fellowship student	15 (16.5%)	
Fellowship graduate	37 (40.6%)	
Ethics training		
Yes	47 (51.6%)	
No	44 (48.4%)	
COI training		
Yes	14 (15.4%)	
No	77 (84.6%)	
Average breast cancer patients (N)		16.82 (±26.52)
Oncology experience (Y)		9.99 (±9.01)

The majority of respondents believed that the presence of pharmaceutical sales representatives in academia is not appropriate (Q1, 63.8% “agree” or “strongly agree”) and may unintentionally influence the practice of physicians (Q2, 80.2% “agree” or “strongly agree”).

More than half of the respondents (53.9%) considered it acceptable for pharmaceutical companies to pay for the costs of their travel or other personal expenses, if their family members were not included (Q3). Decision on the acceptance of travel grants or other gifts was assumed to be dependent on the local practice norms by 59.4% of the respondents (Q4).

A large number of participants (93.4%) valued the disclosure and transparency rules in national presentations, while four (4.4%) stated that they would not abide by it (Q5), and two (2.2%) were neutral/undecided. The majority (74.8%) believed that financial or scientific relations with industrial companies had no conflicts with giving speech in medical seminars (Q6). Also, participating as an audience member when the speaker has such relations was acceptable (Q7, 68.9%).

Financial contracts between physicians and medical institutions or companies to administer specific products were not generally acceptable (38.5% “strongly disagree”, 22% “disagree”, 3.3% “undecided/neutral”), even without imposing any extra costs on patients (Q8). However, it became more justifiable (38.5% “strongly agree”, 17.6% “agree”) when the resultant profit was to be spent on developing medical services or for charity purposes (Q9). Also, it was commonly (71.1%) stated that a financial contract between a physician and a pharmaceutical company to prescribe a drug developed by that company would be unethical if other equally effective drugs were available (Q10).

Accepting financial offers from companies did not enjoy a good reputation among participants (Q11, 72.2% “disagree” or “strongly disagree”). The participants did not believe that giving extra information to patients to help them choose from available choices could damage their trust due to suspicion on probable existing interests when referring them to other medical centers (Q12, 60% “disagree” or “strongly disagree”). Also, a solid majority (92.3%) stated that they would consider the best approach for their patients, without being affected by prejudgments and doubts on possible COI (Q13).

Discussion

We performed this investigation to assess Iranian clinicians' awareness of and attitude toward COI. To the best of our knowledge, the few previous studies were primarily focused on authors' disclosure of conflict of interest in medical articles,⁸ and our study is among the first in Iran to document the attitude to COI in medical practice.



We found that physicians are generally against the presence of pharmaceutical sales representatives in academic environments and believe that this may unintentionally affect their practice. This common perception was in accordance with the recent systematic review by Fickweiler *et al.*⁹ In a comprehensive search of literature from 1992 to 2016, in PubMed, EMBASE, Cochrane Library, and Google Scholar, they found that pharmaceutical industry and sales representatives influence “physicians’ attitudes and their prescribing behavior.”⁹ Another study on 379 Polish physicians by Makowska showed that 35% of participants would usually meet with pharmaceutical sales representatives in their offices during working hours, despite its illegality in Poland.¹⁰ Also, 72.3% of them trusted the information provided by the representatives, which could influence their knowledge and practice.¹⁰

In a survey of 1386 clinicians in Germany (response rate = 11.5%), Lieb and Scheurich demonstrated that acceptance of gifts, participation in sponsored continuing medical education, and the perception of receiving adequate information from sales representatives were associated with biased prescription.¹¹ In a different study, Chressanthis, a former employee of global sales and marketing consulting firm “ZS Associates”, and his colleagues analyzed clinical decisions of up to 72,114 physicians using AccessMonitor™ database created by ZS Associates.¹² In contrast to others, they highlighted the importance of having access to pharmaceutical representatives and reported that limiting this access may reduce proper reactions to negative information on a drug as well as positive information on an innovative product.¹² Overall, the optimal level of restriction for pharmaceutical sales representatives still remains controversial, especially considering the fact that most representatives may not meet the standards of medical knowledge.¹³ Also, there is an undeniable body of evidence describing the adverse effects of pharmaceutical representatives on medical prescription.^{9-11,14-18}

More than half of our respondents were willing to accept the gifts or payments from the pharmaceutical companies for the costs of travel or personal expenses. According to the American Medical Association (AMA), a gift from industry can be accepted only if it “will directly benefit patients, including patient education” and “is of minimal value.”¹⁹ Furthermore, physicians are expected to reject cash gifts from an entity when it directly benefits from their prescriptions or when the reciprocity is implied.¹⁹ In addition to general rules, there are many regional and internal policies that ban the medical personnel from accepting any gifts or payments from industry. For example, internal guidelines of Harvard Medical School prohibits

faculty members from accepting “any personal gifts, meals, or fees for professional meeting registration and/or related travel” from industrial companies.²⁰ Despite all these policies, many physicians continue to receive royalties and payments. In 2016, Iyer *et al.* analyzed the Open Payments Database, which details payments from industry to physicians and teaching hospitals.²¹ They found that from 2,697,015 recorded payments to physicians, the majority (56.1%) were royalties.²¹ Another study by Patel *et al.* in 2016 identified the financial relationship between industry and faculty surgeons within colon and rectal fellowship programs as a potential source of COI.²² They found that a total of 65 companies had made payments to surgeons, with 80.1% of the funding categorized as general payments, 16.2% as investments, and only 3.7% as research payments.²²

Although financial contracts between physicians and medical institutions or companies were not generally accepted according to our study, 36.2% of participants were still in favor of such contracts. Based on the AMA guidelines, “direct or indirect influence of financial interests on prescribing decisions” is a clear case of COI.¹⁹ Accordingly, receiving any payments from pharmaceutical/medical instruments corporations to prescribe their products and referring patients to a “pharmacy that the physician owns or operates” are not ethical.¹⁹

In the last decade, there has been a worldwide demand to reduce financial COI. In the most recent attempt, in 2013, the United States enacted a federal legislation named Physician Payments Sunshine Act (PPSA) to increase transparency regarding payments from pharmaceutical and medical device industries to physicians and teaching hospitals for travel, meals, gifts, speaking, etc.²³ This piece of legislation and the related free-access Open Payments Database drew attentions to the importance of physician-industry relations. The total value of such payments were \$8.18 billion in 2016.²⁴

In Iran and many developing countries, there is no such clear policies regarding COI; nor does there exist any thorough inspection mechanism nor penalty protocols. Even the number of studies focusing on this topic are scarce. Although complete elimination of the COI in the health-care system seems practically impossible and the effectiveness of transparency rules in the outcome of COI is in question, they are not excuses to avoid, neglect or postpone the implementation of robust preventive policies in our country. This study was an attempt to fill this knowledge gap; however, there were some limitations. The validity and reliability of our questionnaire were not evaluated, even though it was discussed and approved by an expert panel. Also, the number of participants was limited. Conducting further investigations is crucial to expose the root of the pertinent challenges and problems that physicians are facing on this matter.



References

1. Lockhart AC, Brose MS, Kim ES, Johnson DH, Peppercorn JM, Michels DL, *et al.* Physician and stakeholder perceptions of conflict of interest policies in oncology. *Journal of clinical oncology : official journal of the American Society of Clinical Oncology.* 2013;31(13): 1677-82.
2. Andresen NS, Olson TS, Krasowski MD. Medical student and medical school teaching faculty perceptions of conflict of interest. *BMC research notes.* 2017;10(1):272.
3. Hams M, Wilkinson WG. A new survey to evaluate conflict of interest policies at academic medical centers. 2017;12(3):e0172472.
4. Shnier A, Lexchin J, Mintzes B, Jutel A, Holloway K. Too few, too weak: conflict of interest policies at Canadian medical schools. *PloS one.* 2013;8(7):e68633.
5. Swift S, Rizk D, Lose G. Conflict of interest: what is it, and how do journals manage it in the publication process? *International urogynecology journal.* 2017;28(7):969-70.
6. Rothenberg ML, Johnson DH. Conflict of interest, conflicting interests, and effective collaboration between academia and industry on preclinical and clinical cancer research. *JAMA oncology.* 2017;3(12):1621-2.
7. Moy B, Jagsi R, Gaynor RB, Ratain MJ. The impact of industry on oncology research and practice. *American Society of Clinical Oncology educational book American Society of Clinical Oncology Meeting.* 2015:130-7.
8. Heidari A, Adeli SH, Mehravaran S, Asghari F. Addressing ethical considerations and authors' conflict of interest disclosure in medical journals in Iran. *Journal of bioethical inquiry.* 2012;9(4):457-62.
9. Fickweiler F, Fickweiler W, Urbach E. Interactions between physicians and the pharmaceutical industry generally and sales representatives specifically and their association with physicians' attitudes and prescribing habits: a systematic review. *BMJ open.* 2017;7(9): e016408.
10. Makowska M. Polish physicians' cooperation with the pharmaceutical industry and its potential impact on public health. *PloS one.* 2017;12(9):e0184862.
11. Lieb K, Scheurich A. Contact between doctors and the pharmaceutical industry, their perceptions, and the effects on prescribing habits. *PloS one.* 2014;9(10):e110130.
12. Chressanthi GA, Khedkar P, Jain N, Poddar P, Seiders MG. Can access limits on sales representatives to physicians affect clinical prescription decisions? A study of recent events with diabetes and lipid drugs. *Journal of clinical hypertension (Greenwich, Conn).* 2012;14(7): 435-46.
13. Lassen CL, Fragemann K, Klier T, Meyer N, Graf BM, Wiese CH. Knowledge levels of pharmaceutical sales representatives in pain therapy: a descriptive questionnaire-based study. *European journal of clinical pharmacology.* 2012;68(2):161-70.
14. Lexchin J. Interactions between physicians and the pharmaceutical industry: what does the literature say? *CMAJ : Canadian Medical Association journal = journal de l'Association medicale canadienne.* 1993;149(10):1401-7.
15. Workneh BD, Gebrehiwot MG, Bayo TA, Gidey MT, Belay YB, Tesfaye DM, *et al.* Influence of medical representatives on prescribing practices in Mekelle, northern Ethiopia. *PloS one.* 2016;11(6):e0156795.
16. Habibi R, Lexchin JM, B., Holbrook A. Unwarranted claims of drug efficacy in pharmaceutical sales visits: are drugs approved on the basis of surrogate outcomes promoted appropriately? *British journal of clinical pharmacology.* 2017;83(11):2549-56.
17. Hajjar R, Bassatne A, Cheaito MA, Naser El Dine R, Traboulsy S, Haddadin F, *et al.* Characterizing the interaction between physicians, pharmacists and pharmaceutical representatives in a middle-income country: A qualitative study. 2017;12(9): e0184662.
18. Lieb K, Brandtonies S. A survey of German physicians in private practice about contacts with pharmaceutical sales representatives. *Deutsches Arzteblatt international.* 2010; 107(22):392-8.
19. AMA Council on Ethical and Judicial Affairs. Chapter 9: Opinions on professional self-regulation. *AMA Code of Medical Ethics: American Medical Association* 2016. 560 p.
20. Harvard University Faculty of Medicine. Policy on conflicts of interest and commitment. May 2016 [Available from: <https://ari.hms.harvard.edu/book/section-i-faculty-medicine-policy-conflicts-interest-and-commitment>.]
21. Iyer S, Derman P, Sandhu HS. Orthopaedics and the Physician Payments Sunshine Act: an examination of payments to U.S. orthopaedic surgeons in the Open Payments Database. *The Journal of bone and joint surgery American volume.* 2016;98(5):e18.
22. Patel SV, Klingel M, Sonoda T. An assessment of the industry-faculty surgeon relationship within colon and rectum surgical training programs. *Journal of surgical education.* 2016;73(4):595-9.
23. Krinsky S. If the "Physician Payments Sunshine Act" is a solution, what is the problem? *The American journal of bioethics : AJOB.* 2017;17(6):29-30.
24. Open Payments Database [Available from: <https://openpaymentsdata.cms.gov/>].