

Beliefs and Practices of Physicians in Lebanon about Promotional Gifts and Interactions with Pharmaceutical Companies

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Abstract

Background: Pharmaceutical companies invest greatly in promotional gifts to influence physicians' prescription of medications, yet there is limited published information evaluating its impact on health care.

Aim: This study aims to assess the beliefs and practices of Lebanese physicians about promotional gifts from and interactions with pharmaceutical company representatives.

Methods: This cross-sectional study was conducted in between December 2019 and January 2020 through an email-based questionnaire sent to 5936 physicians of different specialties enrolled in the Lebanese Order of Physicians. The assessment used a validated tool.

Results: Among the 268 respondents, 188 (70.4%) reported that Lebanese physicians accept gifts from pharmaceutical company representatives. Most were exposed to these representatives more than once a week (31.7%). Among physicians who admitted accepting gifts, medication samples (n=251, 94.0%) and stationery items (n=222, 83.1%) were the most common. Overall, 225 (84.9%) respondents believed that Lebanese physicians' prescribing habits are influenced by pharmaceutical company gifts. Only 74 (40.0%) of those who accept pharmaceutical gifts believed that it is unethical, and around half do not know if the Lebanese Code of Medical Ethics allows them to accept such gifts.

Conclusion: Even though Lebanese physicians were aware of the effect pharmaceutical company gifts could have on their practical behaviour, many physicians accept these exchanges as part of normal practice. The study widens the base of evidence that allows policy-makers to take informed decisions to enhance the ethical guidance governing these interactions.

Keywords: clinical practice, Lebanon, physicians, pharmaceutical companies, promotional gifts, medical ethics, pharmaceutical representatives.

Background

A great deal of money is spent by pharmaceutical companies for promotional purposes; it has been estimated that the global worth of promotional activities is around US\$ 300 billion a year (1). This is almost twice the amount of money spent by these companies on research and development, as often asserted by relevant professional societies (2).

A pharmaceutical company representative (PCR) is defined as an employee of a pharmaceutical company who would visit practicing doctors on a regular basis to advertise a certain product (3). Frequent and regular PCR visits are the most important and influential tool used by pharmaceutical companies (4,5). During these visits, the representative provides details about the product (6) and often presents gifts to make the product more appealing to the physician (3).

In several studies, most doctors were shown to accept gifts from pharmaceutical companies (7); the blind spot concept in conflicts of interest has been associated with such behaviour (8). Substantial evidence reveals the presence of influence – including changes to physicians’ prescribing behaviours – when dealing with promotional gifts, even those of negligible value (9).

Lebanon’s health care landscape comprises both public and private healthcare providers. The National Social Security Fund (NSSF), established in 1963, caters to 80% of hospital expenses and encompasses costly medical interventions, offering a notable benefit to a considerable proportion of the populace (approximately 42.7%).

While Lebanon’s health care system was once renowned regionally, the aftermath of the 1975 civil war led to a decline and a shift of control towards the private sector and non-governmental organizations (NGOs)(10). Since then, nearly half (48%) of total public health spending is attributed to hospitalization within the private sector (11); and 80% of the hospitals in Lebanon are private (12). This sector has been shown to over-medicalize, focusing more on the younger, healthier population and their immediate demand responses, such as procedures and prescriptions, than on primary preventative measures and continuity of care for chronic diseases (13). Of drug expenditures within private practice, 79% is out-of-pocket payment by the patient (12).

In Lebanon, the rate of prescription inaccuracies is up to 40%; of these inaccuracies, 9% is seen as unnecessary prescription as a consequence of promotional activities (5). Due to the change in prescribing behaviours, the ethical issue was of concern to both promoting companies and physicians, as well as the regulatory authorities (5).

The impact of these interactions on physicians is well established, although precise knowledge of the extent to which Lebanese physicians interact with and accept promotional gifts from pharmaceutical companies is lacking, as is an understanding of their beliefs in this regard. We hypothesize that the majority of Lebanese physicians have interactions with pharmaceutical companies that would affect their practice and prescription patterns.

This study aims to assess the beliefs and practices of Lebanese physicians regarding promotional activities and interactions with pharmaceutical companies.

Methodology

Study design and setting

This cross-sectional study was conducted using an online-based questionnaire through Lime Survey, sent by email to physicians who are enrolled in the Lebanese Order of Physicians (LOP); to be able to

practice, Lebanese physicians must be enrolled in LOP. Ethical approval for the study was obtained from the institutional Review Board of Beirut Arab University.

Sample size

Since we had no available data on the proportion of physicians accepting promotional gifts, we assumed an expected proportion of 50% of physicians. For a power of 80%, margin of error of 5% and a confidence interval of 0.95, the estimated sample size was set at 385 using $n = Z\alpha/2 * p * (1-p) / MOE^2$.

Recruitment and participants

An online questionnaire was sent to 5936 physicians in Lebanon whose names and emails were provided by LOP. Lime Survey was used to establish, send and collect surveys. An initial invitation email was sent to study participants between December 2019 and January 2020. The consent form was attached, and participants consented electronically to participate in the study. Reminder emails were sent every two weeks, with a total of three emails. The physicians participating in the survey remained anonymous.

Questionnaire

The questionnaire was divided into four parts: demographics; physicians' practices with regard to interactions with pharmaceutical companies; validated tool to assess beliefs; and physicians' knowledge of relevant LOP laws. The questionnaire was piloted on 10 physicians and a few modifications were made to ensure validity.

Validated tool

S. Madhavan developed a validated assessment tool to measure the gift relationship between pharmaceutical companies and physicians (14). The tool studied the extent of gift giving and receiving (14), which was validated based on the extent of giving (15). The tool consists of 22 close-ended statements distributed into 7 belief constructs (7-likert scale) (14). Physicians were asked to specify their level of agreement or disagreement using a 0-6 scale, where 0=strongly disagree and 6=strongly agree (14).

Statistical analysis

The analysis used SPSS 26.0. Descriptive data was reported as mean \pm standard deviation for continuous data, and as numbers and percentages for categorical data. $P < 0.05$ was considered significant. Different statistical tests were used wherever appropriate, such as a Chi-square test for categorical variables, T-test for continuous variables, and Kendall Tau for ordinal variables.

Results

Participant demographics

Most respondents were male (65.7%) and the mean age was 45 years. The majority of physicians were from Beirut (59.3%), Mount Lebanon (33.2%) and North Lebanon (22.8%). Most were attending physicians (94.8%) with more than 10 years of experience (56.7%).

Years of experience is not significantly correlated with the acceptance of pharmaceutical gifts ($P = 0.219$). Internal medicine and its subspecialties (32.5%), family medicine/general practice (14.9%) and general surgery (13.4%) were among the most common fields practiced (see Table 1 for participant demographics).

Physicians most commonly practiced in private hospitals (64.2%), university hospitals (50.7%) and private clinics (45.5%). There is significant association between working in a private hospital and seeing a PCR more frequently ($P < 0.001$).

Interaction with pharmaceutical companies

Only 6.3% of physicians had no interaction with PCRs (see Table 2). Of those who interact with PCRs, 28% reported once-weekly interactions and 31.7% reported interacting even more frequently, although not daily. The figure drops to 14.2% for daily interactions.

Promotional gifts

Among responding physicians, 69.3% think that most of their colleagues accept gifts from PCRs, which is concordant with further results, which showed that most (70.4%) respondents admit accepting gifts from PCRs. Interestingly, there seems to be self-awareness of prescribing habits, as 84.9% of physicians believe that receiving gifts affects their own prescription habits.

Of those who work in a private clinic, 76.9% reported that they have ever received a promotional gift, as compared to 65.1% of those who do not work in a private clinic ($P=0.043$). Figure 1 shows the promotional gifts most commonly received by physicians: medication samples (94%); stationery items (83.1%); books and journal subscriptions (80.9%); research funding (79.4%); and sponsored travel to conferences (73.3%).

Results show that 89.5% of physicians who interact with PCRs on a daily basis accept promotional gifts. This percentage drops progressively and significantly to 23.5% for those who do not interact with PCRs. When we analysed the association between accepting pharmaceutical gifts and the frequency of interaction with PCRs, that relationship was directly proportional and statistically significant ($P<0.001$).

Half of the physicians surveyed believe there should be a cut-point value for a promotional gift to be considered acceptable; the majority suggesting under US\$ 100. There is a significant difference ($P=0.032$) between those who accept promotional gifts and those who do not with regard to the cut-point value. Those who usually accept promotional gifts mostly believe in setting a cut-point value (53.5%), while the others do not (61%).

Clinical encounters

In terms of clinical visits, 105 respondents (39.2%) saw 0–10 patients per day. This value slightly increased and peaked with the increase of patients, where 107 (39.9%) saw 11–20 patients per day. As the number of patients per day increased, the number of physicians fitting these categories decreased: only 38 (14.2%) saw 21–30 patients per day, and 18 (6.7%) saw 31–40 patients per day.

Regarding prescriptions, 135 physicians (50.4%) wrote 0–10 prescriptions per day. As the number of prescriptions written per day increased, the percentage of doctors writing them decreased to 16 (6%) for those who write 31–40 prescriptions per day (see Table 3). Among the respondents, 226 (86.9%) gave medication samples to their patients, with the majority (94.3%) doing so to help those who cannot afford a medication rather than to build rapport with patients (5.7%).

Overall, there is a significant increase in the number of prescriptions associated with the increase of PCR contact. None of the physicians interacting with a PCR less than a once a month wrote more than 21 prescriptions per day; this number increased in a statistically significant fashion ($P=0.007$) to 31.6% for those who see a PCR on a daily basis.

Beliefs about promotional activities

Most physicians moderately agree ($\bar{x}=4.65\pm 0.45$) that companies give them gifts to influence their prescribing (see Table 4). However, physicians slightly disagree ($\bar{x}=2.43\pm 0.20$) that they themselves are influenced by pharmaceutical companies upon receiving a gift. Physicians slightly agree ($\bar{x}=3.36\pm 0.37$) that the gifts they receive are a form of professional recognition.

Most doctors moderately agree ($\bar{x}=4.04\pm 0.60$) that receiving gifts is inappropriate, and moderately agree ($\bar{x}=4.31\pm 0.44$) that making their relationship with pharmaceutical companies public is an obligation.

Regarding sponsored continuing medical education (CME) programmes, physicians moderately agree ($\bar{x}=4.65\pm 0.56$) that sponsored CME events are a promotional gimmick by pharmaceutical companies.

Of those who accept pharmaceutical gifts, 40% believe that receiving gifts is unethical, versus 66.7% of those who do not accept such gifts. This difference is significant. Similarly, only around 42% of those who accept pharmaceutical gifts believe that a physician's behaviour is liable to change because of such behaviour, and that gifts are given to doctors as a means to influence, in contrast to 72.0% of those who do not accept gifts.

While 83 physicians (31.4%) believed that the Lebanese Code of Medical Ethics allows them to accept pharmaceutical gifts, 49 (18.6%) did not, and 132 (50%) did not know its stance on this issue. Among physicians who are unaware of whether the Lebanese Code of Medical Ethics allows accepting promotional gifts, around 70% reported that they have ever accepted a promotional gift.

Those who believed the code allows acceptance of some or all promotional gifts were more likely to accept promotional gifts. On the other hand, the percentage of physicians who believed that the Lebanese code does not allow acceptance of promotional gifts was significantly lower (around 50%) than those who reported ever accepting a promotional gift ($P=0.006$).

Discussion

The study targeted Lebanese physicians to assess their beliefs and practices regarding encounters with pharmaceutical companies and their promotional agenda. In many areas of the world, most doctors are visited by PCR's at least once weekly (3). This could be considered problematic, as repeated PCR visits seem to have an increased influence on prescribing patterns (16).

The rate of gift acceptance from PCR's was high among Lebanese physicians (70.4%), comparable to other countries, such as the United States (94%) (8) and Saudi Arabia (80.1%) (1). Several studies show that most of the offers presented to physicians by pharmaceutical companies are accepted (1).

In terms of promotional purposes, pharmaceutical companies seem to be targeting physicians practicing in the private sector and at universities. However, our findings reveal that only those physicians who work within private hospitals had significantly more frequent visits from PCR's, and their tendency to accept promotional gifts was significantly higher compared to their colleagues in the public sector. This preference could be due to the high level of physician autonomy in private practice (17).

Changes in prescription behaviour, under the influence of pharmaceutical companies, often causes the physician to overlook cheaper alternatives as they feel obliged to submit to the promotional party's benefits (5). Our study shows that physicians moderately agree that they receive gifts as an attempt to influence prescription-related decisions, and most respondents (84.9%) believe that Lebanese doctors are indeed influenced by receiving pharmaceutical gifts. This was also observed in multiple other studies (4).

Most doctors surveyed believe that accepting such gifts should be discouraged, as it may be unethical to accept gifts that could alter behaviours and lead to inappropriate prescriptions. In the literature,

however, many either think of these influencing attempts as benign or consider that their behaviour is immune to change (18). This belief is more prevalent among those who tend to receive gifts more frequently (9); in our study, the majority of those who receive gifts didn't necessarily agree with the potential of influencing.

When asked about gift influencing as a personal issue, Lebanese physicians slightly disagreed; they do not think they are personally influenced, even if they believe their peers might be. The concept of conflict of interest is clearly overlooked by most physicians.

One of the main ethics principles is beneficence, which dictates that physicians must strive for the net benefit of their patients. In the context of prescribing medications, it means that the choice of the medication should be based solely on the best interest of the patient. This may not be the case when a physician has an interest in or can benefit from prescribing a certain medication. Evidence shows that growing interactions between physicians and pharmaceutical companies could lead to conscious or subconscious conflicts of interest manifested as lower prescribing quality, more frequent prescription overall, and higher prescribing costs and burdens on the patient (19).

As humans tend to reciprocate received gifts, in our study this could translate into a change in behaviour (9). Most Lebanese physicians surveyed believe that their prescribing could be affected by gifts; our data show that the number of prescriptions is higher in those who see PCR's often versus those who do not. This phenomenon is also apparent across other populations of physicians (8).

Medication samples were the most common (94%) type of gift received from pharmaceutical companies. Many physicians consider samples to be a more-ethical advertisement, as they are passed to the patient and would alleviate the costs of therapy (20). Not only does this action influence the prescribing doctor, who is more likely to recommend a now-familiar drug, but it also potentially affects the users of the promoted medication, as it is seen as an act of beneficence by the company (20).

The debate continues over whether free drug samples are economically beneficial for patients, as cheaper, non-promoted alternatives could be present that could reduce the total cost of medications had no external influence occurred (19).

Other promotional gifts presented during a PCR's visit include stationery items (83.1%), books and journal subscriptions (80.9%), research funding (79.4%) and sponsored travel to conferences (73.3%), all of which align with findings in the literature (8). The studies found that the main influencing gifts were stationery items and CME event attendance (8).

Pharmaceutical companies often sponsor CME activities, and physicians in our study found the information presented to them to be beneficial. Regardless, most physicians moderately agreed that CME events are a promotional gimmick that serves the publicity of the product in question. Educational activities run by pharmaceutical companies often lead to an increase in prescription rates of a certain company's drug compared to its competitors (21).

Information presented by PCR's, whether through drug detailing or conferences, could be misleading as it focuses on favourable points of interest while ignoring drawbacks like side effects (5). This is especially problematic in developing countries, where many physicians depend on PCR's to acquire information about drugs (4).

While pharmaceutical companies look at promotional rewards as a boost to their sales, physicians and society have huge ethical concerns about the acceptance of such gifts due to possible conflicts of interest (1).

The main rationale behind rejecting a gift is the belief that accepting it might imply an obligation to the promoting company (3). Our findings reveal that physicians did not feel pressured or guilty if they did not prescribe the promoted drug. Nevertheless, questions remain about negative effects on patient care, financial profiles and public trust in health care workers (6). Participating physicians said they believe their exchanges with pharmaceutical companies should be public and transparent to improve their relationship with patients.

Although both the general public and health care professionals believe that doctors could be allowed to accept certain gifts, there is no agreed threshold value for such gifts below which there would be no influence over physicians (22). Physicians in our study, particularly those who usually accept gifts, believe that such a defined value should exist; and it is known that the risk of behaviour change is proportionally related to the value of a gift (9).

Self-reporting of physician-PCR interactions, along with the reception of gifts and drug samples, is decreasing; whether this reflects a decrease in interactions or an avoidance of reporting is unclear. This decrease, when occurring in a high-income country, could be related to regulations limiting these exchanges with pharmaceutical companies (23), e.g. requiring the submission of reports detailing the promotional gifts (24). Regulating these activities protects patients and ensures a transparent social image of health care workers in the eyes of the public (21).

In 2016, a code of ethics was established by the Lebanese Ministry of Public Health to regulate this field. It said:

“Promotional items with modest or symbolic value can be given to the doctors if they apply the following conditions: the gift should not be more than 10% of the monthly minimum wage, is useful to the professional’s practice, is related to the promoted drug, and will add greater value for the patient care” (25).

The majority of physicians, however, claim not to have received a copy of this code (5) and our data show that half of the respondents did not know what it implies about promotional gifts. Although our study showed a correlation between awareness of the code of ethics and not accepting promotional gifts, it is clear that the mere presence of ethical guidelines is not sufficient without proper dissemination and implementation. To address this gap and decrease the influence of pharmaceutical companies on doctors’ prescribing habits, health care policymakers should develop and continuously update comprehensive ethical guidelines.

Access to independent drug information resources should be made available to physicians. They should also be educated about potential biases. Financial disclosures, restrictions on gifts and their monetary value, and prescription monitoring systems that promote generic prescribing are vital steps towards unbiased, evidence-based medical practices that prioritize patient welfare.

Limitations

While this study yields results congruent with the literature, we acknowledge certain limitations. The sampling frame obtained from LOP amounted to 5936 emails, which may not account for the entire medical cohort in Lebanon.

The survey employed as the primary data-collection tool was in an online format, thereby potentially underrepresenting those who do not use email for professional purposes.

A reporting bias may exist among participants due to inherent sensitivities about self-disclosure within their practice. Certain physicians may have been reserved in their responses, thereby potentially influencing the veracity of the data. Moreover, the study did not dig deeply into the prescription patterns

and the medications most targeted by the pharmaceutical companies. The broad nature of this topic made it difficult to address within the scope of this study.

While the findings of this study contribute valuable insight that resonates with existing literature, judicious interpretation should be exercised. Future studies could address these constraints for a more holistic understanding of the issue.

Conclusion

Even though Lebanese physicians are aware of the effect promotional activities could have on their prescribing behaviours, many perceive interactions with pharmaceutical companies as an indispensable part of normal practice. While many promotional gifts are relevant to patients and would enhance their care, a big proportion are directly and solely benefiting the physicians themselves.

Physicians need to be familiar with and abide by the Code of Medical Ethics, which dictates the type of promotional activities allowed within practice in Lebanon. It would be sensible for medical institutions and medical schools to brief healthcare professionals on common promotional modalities and the possible influence they might have on prescribing practices.

Governing bodies like the Lebanese Ministry of Public Health and the Lebanese Order of Physicians are held responsible to promote and enforce clear guidance on the ethics of prescribing. Medical practice revolves around patients' well-being, which is a priority in times where commercialism and consumerism infiltrate most professions.

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Competing interests

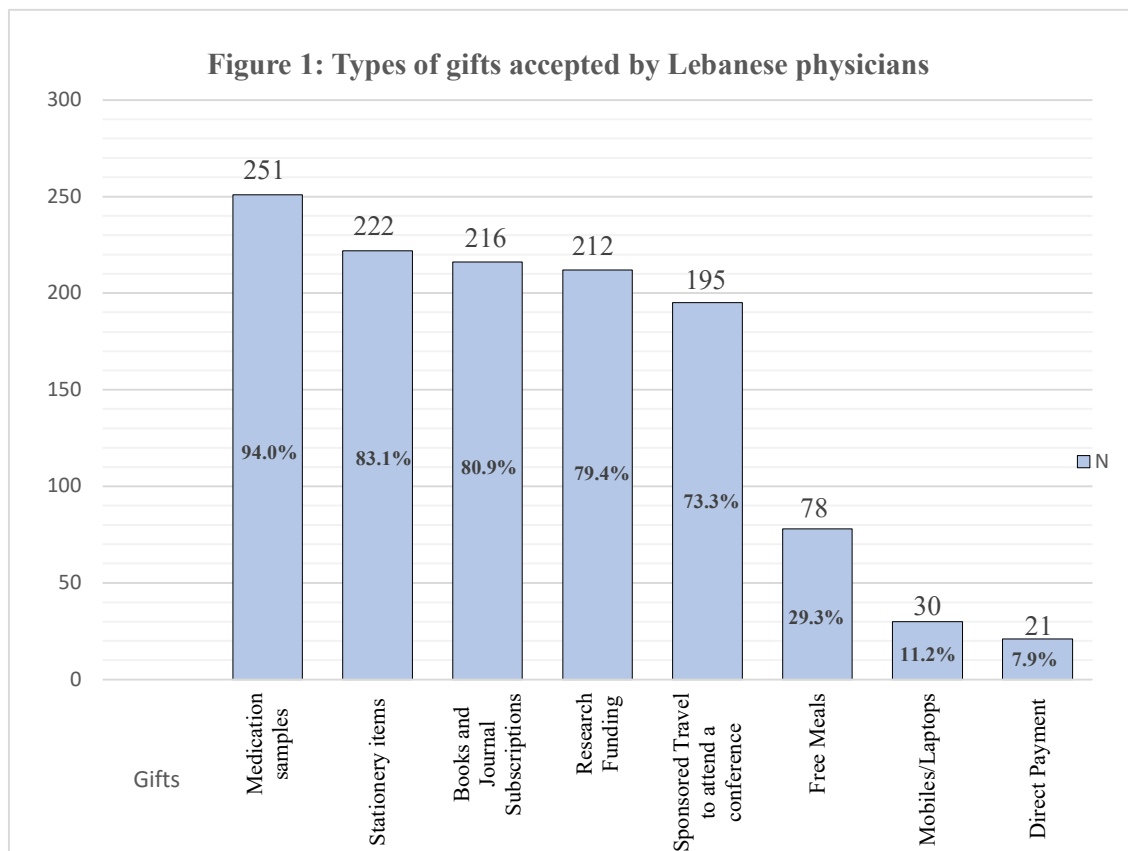
None declared.

Figures and tables

Table 1: Respondents' demographic and practice characteristics (n=268)		
General characteristics	Variable	n (%)
Gender	Male	176 (65.7)
	Female	92 (34.3)
Age	Mean (\pm SD)	45.01 \pm (11.647)
Years of experience	1–5 years	71 (26.5)
	5–10 years	45 (16.8)
	>10 years	152 (56.7)
Practice setting	Hospital-based (private hospital)	172 (64.2)
	Hospital-based (public/government)	45 (16.8)
	Academic centre (university hospital)	136 (50.7)
	Private clinics (yourself only)	122 (45.5)
	Polyclinic	43 (16.0)
	Primary health care centre	56 (20.9)
Physician's position	Attending physician	253 (94.8)
	Resident/fellow	14 (5.2)
Specialty	Anaesthesiology	15 (5.6)
	Radiology	7 (2.6)
	Obstetrics and gynaecology	23 (8.6)
	Paediatrics	17 (6.3)
	Family medicine/GP	40 (14.9)
	Internal medicine	87 (32.5)
	General surgery	36 (13.4)
	Ophthalmology	5 (1.9)
	Psychiatry	30 (11.2)
	Laboratory medicine	4 (1.5)
Governate of practice setting	Others	4 (1.5)
	Akkar	8 (3.0)
	Baalbek-Hermel	6 (2.2)
	Beirut	159 (59.3)
	Beqaa	13 (4.9)
	Mount Lebanon	89 (33.2)
	North Lebanon	61 (22.8)
	Nabatieh	8 (3.0)
South Lebanon	17 (6.3)	

Table 2: Physicians' responses on interactions with PCRs (n=268)		
Variable	Answer	n (%)
Frequency of physicians' interaction with PCRs	Daily	38 (14.2)
	More than once weekly	85 (31.7)
	Once weekly	75 (28.0)
	Once monthly	33 (12.3)
	Less than once monthly	20 (7.5)
	No interaction	17 (6.3)
Personal acceptance of gifts from PCRs	Yes	188 (70.4)
	No	79 (29.6)
Other Lebanese physicians accepting gifts from PCRs	<20%	9 (3.4)
	21–40%	15 (5.7)
	41–60%	56 (21.5)
	>80%	181 (69.3)

Lebanese physicians' prescription affected by receiving PCR gifts	Yes	225 (84.9)
	No	40 (15.1)



Variable	Answer	n (%)
Number of patients seen per day	0–10	105 (39.2)
	11–20	107 (39.9)
	21–30	38 (14.2)
	31–40	18 (6.7)
Number of prescriptions written per day	0–10	135 (50.4)
	11–20	94 (35.1)
	21–30	23 (8.6)
	31–40	16 (6.0)
Physician gives drug samples to patients	Yes	226 (86.9)
	No	34 (13.1)
Reason for giving a drug sample to patients	To help patients who cannot afford a medication	200 (94.3)
	To build a good relationship with patients	12 (5.7)

Table 4: Physicians' beliefs about gifts given by pharmaceutical companies	
Constructs	Mean±SD
Construct 1	
Pharmaceutical companies give gifts to physicians to influence their prescribing	4.65±0.45
Construct 2	
Pharmaceutical companies give gifts to physicians as a form of professional recognition	3.36±0.37
Construct 3	
In general, most physicians are influenced in their prescribing behaviour by the gifts they receive from pharmaceutical companies	4.12±0.65
Construct 4	
I am influenced in my prescribing behaviour by the gifts I receive from pharmaceutical companies	2.43±0.20
Construct 5	
Pharmaceutical companies sponsor CME programmes as a promotional gimmick	4.65±0.56
Construct 6	
It is inappropriate to accept gifts from pharmaceutical companies	4.04±0.60
Construct 7	
The extent of the gift relationship between pharmaceutical companies and physicians should be made public	4.31±0.44

Appendix 1: Physicians' response to belief constructs, expressed as means	
Belief constructs	Mean±SD
Construct 1	
Pharmaceutical companies give gifts to physicians as a means of getting high-prescribing physicians to prescribe their drug products	5.20±2.010
Pharmaceutical companies give gifts to physicians to reward them for having prescribed the companies' drug product	4.84±1.981
Pharmaceutical companies do not give gifts to physicians who are low prescribers of the companies' drug products	4.43±1.955
Pharmaceutical companies give gifts to physicians so that the physicians accepting the gifts will feel obliged to prescribe the companies' drug products	4.16±2.092
Construct 2	
Pharmaceutical companies give gifts to physicians as a form of recognition of their professional standing among their physician peers	3.63±1.958
Receiving gifts from pharmaceutical companies is complimentary to physicians because it is a recognition of professional standing among peers	3.10±1.84
Construct 3	
Most physicians are not influenced in their drug prescribing behaviour by the gifts that they receive from pharmaceutical companies	3.66±1.866
Unknown to themselves, receiving gifts from pharmaceutical companies has an undue influence on physicians' drug prescribing behaviour	4.59±1.772
Construct 4	
I feel guilty when I do not prescribe the drug products of a pharmaceutical company whose gift of hospitality or generosity I have enjoyed	2.29±1.652
I usually try to reciprocate a pharmaceutical company's gesture of giving me a gift by prescribing the company's drug products	2.58±1.737
Construct 5	
Knowledge gained at continuing education programmes sponsored by pharmaceutical companies is useful information	5.29±1.546
Pharmaceutical companies sponsor continuing education programmes as a service to society to advance medical knowledge and improve health care	4.75±1.765
Pharmaceutical companies spend more than necessary when they sponsor continuing education programmes	3.85±1.805
Pharmaceutical companies sponsoring of continuing education programmes is a marketing gimmick (trick)	4.37±1.757
Pharmaceutical companies sponsor continuing education programmes to ingratiate (to communicate in a smarter way) themselves with physicians so that the goodwill created will result in more of the companies' drug products being prescribed	5.02±1.527
Construct 6	
Receiving gifts from pharmaceutical companies is unethical and physicians should be discouraged from doing so	4.42±2.001
Receiving gifts from pharmaceutical companies is not a professionally acceptable practice because they are meant to influence a physician's drug prescribing behaviour	4.50±1.962
Receiving gifts from pharmaceutical companies leads to excessive and sometimes inappropriate prescribing of these companies' drug products	4.54±1.863
Receiving gifts from pharmaceutical companies is harmless because it does not influence prescribing habits	3.45±1.928
Receiving gifts from pharmaceutical companies is a professional privilege that physicians have the right to enjoy	3.31±1.805
Construct 7	
Physician-patient relationship would be improved if the extent of the gift giving and receiving relationship between pharmaceutical companies and physicians were made public	4.00±2.058
Pharmaceutical companies and physicians should disclose the existence of the gift and gift receiving relationship to the public	4.63±1.987

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