

MEDICINE STUDENTS' PERCEPTION OF CONFLICTS OF INTEREST BETWEEN DOCTORS AND THE PHARMACEUTICAL INDUSTRY

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Abstract: Introduction: Conflicts of interest can arise in different areas of everyday life and one of them is in the profession. Knowing how to separate personnel from professionals in the medical field is essential for the patient to benefit from the best possible treatment. Under this bias, medical schools are not always prepared to deal with such a situation. **Goal:** the present study aims to show the perception of medical students about the relationship between doctors' conflicts of interest and the pharmaceutical industry and how it can interfere with patients. **Methods:** exploratory, cross-sectional, descriptive study with a quantitative approach with a sample of 230 medical students from a Federal University in the Northeast. **Results:** in relation to the total number of respondents, about 52.8% of the students declared they were aware of the pharmaceutical industry's dissemination strategies and 19% believe that the main strategy is through advertisements, but 90.6% declared that they did not feel secure in the information disclosed in these advertisements. Regarding receiving free drug samples, 93% of students consider it ethical and more than half (63%) consider it normal to receive gifts, in addition to the fact that 54% have already witnessed teachers accepting benefits. **Conclusion:** Based on the findings of this study, transparency in the relationship between doctors and pharmaceutical industries is necessary, as well as ongoing ethical debates in educational events and in medical schools, as students are faced with such conflicts from an early age.

Keywords: Conflict of interest, medicine, pharmaceutical industry.

INTRODUCTION

Current medicine portrays a scenario of great change, from the curriculum to ethical issues and the doctor-pharmaceutical industry relationship, which have been increasingly

discussed at the university level, given the conflicts of interest (BECHOUX et al., 2021).

Conflict of interest is a situation in which the initial objective is not prioritized, due to other personal, financial or any other interests that deviate from the primary. Thus, this line of thinking applies in the medical field, when the physician's conscious choices and judgments regarding the product or drug are influenced by external issues, usually of economic and private bias (PASCHKE, 2018). In this sense, whenever situations arise that demand decisions and choices such as prescribing drugs, therapies and treatments from a supplier to the patient, the line between the personal interest of the person in charge of making the decision, in this case the doctors, and thinking about the good of patients, according to ethical precepts, is extremely tenuous (CHIMONAS et al., 2021).

The interaction of pharmaceutical companies with students starts from the academic environment, since they see the possible profit that that future doctor can bring through drug prescriptions (MINTZES et al., 2018). This way, the pharmaceutical industry uses numerous artifices to conquer and involve students within the universities of medicine, discussions and lectures about the tools used by companies are in order to form a critical sense in students and minimize the future damages of conflict of interest (WEISSKIRCHER et al., 2017).

Thus, the present study aims to show the perception of medical students about the relationship of doctors' conflicts of interest with the pharmaceutical industry and how it can interfere with patients.

MATERIALS AND METHODS

This article is an excerpt from a broader research on medical students' knowledge about medical ethics and ethical conflict

resolution carried out with students. This study was approved by the UFS Research Ethics Committee under CAAE registration (83153718.0.0000.5546), and part of it was published in *Revista Bioética* (GRAÇAS et al., 2019).

Exploratory, cross-sectional, descriptive, quantitative study. Data were collected using an instrument created by the authors and divided into three sections: sociodemographic data of the participants, questions about medical ethics and ethical dilemmas in clinical cases in the exercise of the profession. The collection instrument was applied to 230 students from a medical school at a public university in the Northeast of Brazil.

Statistical analysis described data in simple frequencies and percentages, and associations between variables were evaluated using Pearson's chi-square test. A significance level of 5% and the R Core Team 2018 software were adopted.

For the purpose of this clipping, the results only deal with the knowledge of medical students about conflicts of interest between doctors and the pharmaceutical industry.

RESULTS

The epidemiological profile of these students shows that they are predominantly men (60.3%), aged between 20 and 25 years old (78%), and 14% reported having medical parents. Among the students in this study, 35.7% did not take the courses Medical Ethics and Communication Skills and Legal Medicine, Deontology and Medical Expertise, in which ethical aspects are addressed in favor of the preparation of these professionals.

Of all respondents, 7.9% said that professors of other disciplines never mentioned issues related to medical ethics, while 1.3% said that professors always emphasized the importance of ethical precepts for good professional performance.

All respondents said they were aware of visits by pharmaceutical industry representatives to doctors' offices and 82% said they were normal. Among the totality, more than half (52.8%) of the students declared having knowledge of the pharmaceutical industry's dissemination strategies (Table 1).

Main strategy	Students
Advertising	19%
Sponsorships	20%
Pay for trips	4,8%
Research	9%
Unfamiliarity	47,2%

Table 1 - Students' opinion on the strategies of the pharmaceutical industry (Aracaju, 2019).

Source: Prepared by the authors

As for the respondents' opinion about whether the representatives' information is safe or not, 90.6% said they did not feel safe in it and only 9.3% said they trust this information.

Concerning the relationship between the pharmaceutical industries and doctors, 73.3% of the students do not think the existence of this helping relationship is normal or ethical, only 26.6% think this relationship is healthy and necessary.

From the students' perspective, in relation to receiving gifts and gifts of different prices from pharmaceutical companies in an academic environment, 54% said they had witnessed professors accepting these offers, and among students, 63% considered it normal to receive gifts. Compared to the value of gifts, 78% of students declare that they would not change their behavior in the face of expensive gifts, and 80% do not consider cheap gifts as a possibility to change their behavior.

Table 2 refers to the perception of students

at the Federal University of Sergipe in association with the free sample delivered by pharmaceutical companies in the state of Sergipe.

Get free sample	Students
People consider it ethical	93%
People accept to judge the product	16%
People would use free sample in a partial treatment	70%
People believe that samples influence the patient in the future purchase	20%

Table 2 – Student's perception of the distribution of free drug samples (Aracaju, 2019).

Source: Prepared by the authors

In addition, most students (77%) understand the need for actions by the Medical Council, regarding conflicts of interest between physicians and the pharmaceutical industry, which may be normative (14%) or educational (27%).

DISCUSSION

About 36% of respondents in our sample believe that the interaction of the pharmaceutical industry with medical students and doctors is intended to update these subjects about new products on the market. It so happens that the sponsorship of these industries in the education of future health professionals is questionable, since students begin to have an interaction with the pharmaceutical industry, which aims, in their future, to have them as a doctor of their reference and loyal (MINTZES et al., 2018; MISSELBROOK, 2016).

One of the mechanisms of the companies is the pharmaceutical representatives, company employees, with the function of visiting

doctors and propagating the products, in person, they take countless pamphlets of medicines, data from research funded by the industry, and countless gifts for doctors, with objective of inducing medical prescriptions for drugs (WORKNEH et al., 2016; LUNDH et al., 2017). In this sense, in our study, we evidenced this, as 37.3% of respondents claim to have knowledge of the pharmaceutical industry's control over prescriptions through confidential data recorded in pharmacies. This data is sold to laboratories by auditing companies and propagandists, therefore, industries know which professionals most prescribe their laboratory's products and those of the competition (PEREIRA, 2017).

Although the industry denies that it acquires this data to pressure doctors, it is a practice known and practiced worldwide. The Federal Council of Medicine (CFM) criticized and condemned these methods for violating the Brazilian Penal Code itself and constituting a very serious offense of active corruption. This way, there is a Bill in the Chamber since 2015, which typifies the breach of confidentiality of prescriptions as a sanitary infraction and establishes sanctions (PEREIRA, 2017).

The doctor-pharmaceutical industry relationship can be compared to a kind of philanthropy, in the view that it can bring benefits in social issues, given that some doctors, when receiving free samples, can help in the treatment of a patient with no financial condition (LATTEN et al, 2018). When looking at this in our survey, 62.6% of respondents agree with giving free samples to patients and out of that percentage, 21.2% claim to reduce treatment costs for patients.

In 2012, the pharmaceutical industry to influence physicians spent \$89.5 billion on the physician-representative relationship. This can be understood as an investment in the doctor to profit from prescriptions, and even

though it is a high value, the financial return is even greater (FICKWEILER; FICKWEILER; URBACH, 2017). In our study, 66.6% of respondents believe that there is an influence of the pharmaceutical industry, through its dissemination mechanisms, on medical prescriptions and, therefore, on profit. And 36% do not feel secure in propagandist information due to uncertain scientific evaluation.

It is also known that research sponsorships by the pharmaceutical industry are very attractive to researchers, as they are less bureaucratic. From this perspective, it was observed in our research that 52% of students recognize the strategies of the pharmaceutical industry, and 9% of these believe that research is the main one. However, pharmaceutical companies, with their commercial vision, often decide which data can be shared or disclosed, manipulating the results in their favor (BENEA et al., 2020).

The pharmaceutical company makes payments to doctors in a variety of ways, including cash, gifts, travel, books, research funding, and even stock. Many of the payments are also directed to specialties that may be more profitable, which have a greater number of prescriptions (INOUE et al., 2019). However, even so, there is a resistance on the part of doctors to recognize the influence of this relationship at the time of choices in prescriptions, even the reality showing that no matter the value of the gift, the doctor will nurture a feeling of gratitude towards that specific company (PIMENTEL et al., 2014; ALTISENT; DELGADO-MARROQUIN; ASTIER-PEÑA, 2019; LUNDH et al., 2017).

This reality could be found in our data, in which approximately 63% of the interviewed students think it is normal to receive gifts from the pharmaceutical industry, 26.6% of them think this relationship is necessary and 5% consider the cost of travel as the main strategy

of these companies, considered, therefore, legitimate. However, the International Federation of Pharmaceutical Manufacturers and Association (IFPMA) has prohibited gifts, unless they aid in the profession, such as pens and notepads, and if they are without the names of the drugs (HAJJAR et al., 2017).

In addition to this embargo, some countries have created laws on this, such as the Sunshine Law enacted in the United States, which requires companies to transparently pay payments made to doctors (SHARMAN et al., 2018), and the Bribery Law, with the same content. in the UK (HAJJAR et al., 2017). In Brazil, the Ministry of Health is evaluating the possibility of issuing a Provisional Measure with the same content, forcing the industry to declare the benefits offered to doctors by name, giving more transparency to the relationship between laboratories and doctors and, which prohibits incentives for prescriptions of drugs (DUARTE, 2022).

In addition, conflicts of interest are also present in scientific, health or professional representation institutions (ALTISENT; DELGADO-MARROQUÍN; ASTIER-PEÑA, 2019). Current medical ethics are clear about impediments, however, there is still a conflict between the professional and the financial. In this sense, 77% of the students who participated in our survey understand that the Federal Council of Medicine needs to take action on conflicts of interest and clarify the illegality in some cases that doctors seem to conveniently ignore.

Sometimes academics don't even notice the indoctrination, an example of this is that the industry seduces them with gifts, generating their involvement with academics. In this strategy, many students feel grateful for the attitudes of pharmaceutical companies in offering stationery and books, and many believe that advertising leaflets on medicines add value to their knowledge, which is not

always true (SAITO et al., 2018; KEENER et al., 2019).

It is important to emphasize that companies can only offer free samples to professionals prescribing drugs, namely, doctors and dentists, and the samples must only be distributed in offices, clinics and hospitals. In our study, 66.6% of the students claim to receive gifts of different natures, including free samples (which is strictly prohibited, because if they are not yet doctors, they cannot prescribe), in addition to food, shirts, cups, among others, in environments academics or in medical congresses (RIBEIRO; JURUENA, 2013).

In our survey, 54% of respondents showed that they saw professors accepting gifts and gifts from the pharmaceutical industry, which refers to a weakness in academic integrity. The reflection of this for the students is that they consider this relationship, often, absolutely natural, and they understand how normal the pharmaceutical industry is in the academic environment, and almost unconsciously assimilate and accept this interaction that will build loyalty to product brands for future prescriptions (SCHEFFER et al., 2017). To avoid this exposure, the American Association of Medical Students (AMSA) and Health Action International (HAI) developed a manual with recommendations to avoid conflicts of interest in the pharmaceutical industry's approach to students and physicians (WEISSKIRCHER et al., 2017; SCHEFFER et al., 2017).

The American Association of Medical Students (AMSA) has initiated annual publications of a scorecard that rates American colleges on their conflict of interest policies. In order to reduce student exposure, many universities create internal policies, such as Norway, which since 2005, prohibits the participation of the pharmaceutical industry in universities, as a sponsor of events and

research funding, which is a very healthy and protective advent (SCHEFFER et al., 2017).

In view of these results, there is a need for guidelines for medical students, since some of them do not know how to deal with this student versus pharmaceutical industry relationship. Thus, the best alternative to limit commercial interaction between industry, doctors and students is education about the real role of pharmaceutical companies. This approach at graduation and at medical events is essential for the construction of the professional's ethical conduct (PIMENTEL et al., 2014; RIBEIRO; JURUENA, 2015; SCHEFFER et al., 2017).

In addition to ethical education, universities must recognize their role in protecting students from exposure to the pharmaceutical industries, and thus achieve their purpose: to train ethical and competent professionals.

CONCLUSION

In this research, it can be concluded that most medical students perceive that the relationship between doctors and laboratories is inadequate and that it violates ethics, in addition to that, they do not feel secure in the information transmitted by such companies about the effectiveness of certain products. Most students say that professors never mentioned issues related to medical ethics during the course, showing how scarce this topic is in medical universities.

Certainly, transparency is needed in the relationship between doctors and pharmaceutical industries and there is a need for a continuous ethical debate since college, because in the job market the financial vision is something persistent and seductive in the doctor and pharmaceutical industry relationship, especially if it is instigated since when doctors were students. This way, the patient's well-being will be guaranteed through the best therapeutic approach, regardless of

economic and personal bias.

REFERENCES

- ALTISENT, R.; DELGADO-MARROQUÍN, M. T.; ASTIER-PEÑA, M. P. Conflicts of interest in the medical profession. **Rev. Aten Primário**, v. 51, n. 8, p. 506-511, jun. 2019. DOI 10.1016/j.aprim.2019.05.004.
- BECHOUX, L. *et al.* Conflict of interest policies at Belgian medical faculties: cross-sectional study indicates little oversight. **PLOS ONE**, v. 16, n. 2, 16 p., fev. 2021. DOI 10.1371/journal.pone.0245736.
- BENEA, C. *et al.* Reporting of financial conflicts of interest in meta-analyses of drug trials published in high-impact medical journals: comparison of results from 2017 to 2018 and 2009. **Syst. Rev.**, v. 9, n. 77, 2020. DOI 10.1186/s13643-020-01318-5.
- CHIMONAS, S. *et al.* Mapping conflict of interests: scoping review. **BMJ.**, v. 375, 13 p., nov. 2021. DOI 10.1136/bmj-2021-066576.
- DUARTE, M. Médicos e laboratórios farmacêuticos: entenda o que deverá mudar em breve nessa relação conflituosa. **O Globo**, Rio de Janeiro, 2022. Disponível em: <https://oglobo.globo.com/saude/medicina/noticia/2022/06/medicos-e-laboratorios-farmacuticos-entenda-o-que-devera-mudar-em-breve-nessa-relacao-conflituosa.ghtml>. Acesso em: 3 ago. 2022.
- 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.**, v. 7, n. 9, 2017. DOI 10.1136/bmjopen-2017-016408.
- GRAÇAS, V. *et al.* Conhecimento sobre ética médica e resolução de conflitos na graduação. **Rev. Bioét.**, v. 27, n. 4, p. 643-660, 2019. DOI 10.1590/1983-80422019274348.
- HAJJAR, R. *et al.* Characterizing the interaction between physicians, pharmacists and pharmaceutical representatives in a middle-income country: a qualitative study. **PLOS ONE.**, v. 12, n. 9, mar. 2017. DOI 10.1371/journal.pone.0184662
- INOUE, K. *et al.* Association between physician characteristics and payments from industry in 2015–2017: observational study. **BMJ Open.**, v. 9, 12 p., 2019. DOI 10.1136/bmjopen-2019-031010.
- KEENER, T. *et al.* Student and faculty perceptions: appropriate consequences of lapses in academic integrity in health sciences education. **BMC Med. Educ.**, v. 19, n. 209, 9 p., 2019. DOI 10.1186/s12909-019-1645-4.
- LATTEN, T. *et al.* Pharmaceutical companies and healthcare providers: going beyond the gift – an explorative review. **PLOS ONE.**, v. 13, n. 2, fev. 2018. DOI 10.1371/journal.pone.0191856.
- LUNDH, A. *et al.* Industry sponsorship and research outcome. **Cochrane Database of Systematic Reviews**, n. 2, 110 p., fev. 2017. DOI 10.1002/14651858.MR000033.pub3.
- MINTZES, B. *et al.* Does industry-sponsored education foster overdiagnosis and overtreatment of depression, osteoporosis and overactive bladder syndrome? An Australian cohort study. **BMJ Open**, v. 8, n. 2, 11 p., 2018. DOI 10.1136/bmjopen-2017-019027.
- MISSELBROOK, D. Fighting about conflict of interest: where should the balance lie? **British Journal of General Practice**, v. 66, n. 643, p. 66-67, 2016. DOI 10.3399/bjgp16X683569.
- PASCHKE, A. *et al.* Increasing transparency and accountability in national pharmaceutical systems. **Bull World Health Organ**, n. 96, v.11; p. 782-791, nov. 2018. DOI 10.2471/BLT.17.206516.
- PEREIRA, C. Como médicos são assediados pela indústria farmacêutica para prescrever medicamentos. **GZH**, Porto Alegre, 2017. Disponível em: <https://gauchazh.clicrbs.com.br/geral/amp/2017/05/como-medicos-sao-assediados-pela-industria-farmacutica-para-prescrever-medicamentos-9788194.html>. Acesso em: 10 ago. 2022.
- PIMENTEL, D. *et al.* Physicians and conflicts of interest. **International Journal of Clinical Medicine**, v. 5, n. 16, ago. 2014. DOI 10.4236/ijcm.2014.516128.

RIBEIRO, G.; JURUENA, M. F. Médicos, indústria farmacêutica e propaganda: que relação é essa? **Health & Social Change**, v. 4, n. 1, p. 3-10, 2013. Disponível em: <https://www.redalyc.org/articulo.oa?id=265325753003>. Acesso em: 24 ago. 2022.

SAITO, S. *et al.* Medical students' attitudes toward interactions with the pharmaceutical industry: a national survey in Japan. **BMC Med. Educ.**, v. 18, n. 286, 10 p., 2018. DOI 10.1186/s12909-018-1394-9.

SCHEFFER, P. *et al.* Conflict of interest policies at french medical schools: starting from the bottom. **PLOS ONE**, v. 12, n. 1, 2017. DOI 10.1371/journal.pone.0168258.

SHARMAN, M. *et al.* Association between industry payments and prescribing costly medications: an observational study using open payments and medicare part D data. **BMC Health Serv Res**, v. 18, n. 236, 8 p., 2018. DOI 10.1186/s12913-018-3043-8.

WEISSKIRCHER, J *et al.* Conflicts of interest in medicine. a systematic review of published and scientifically evaluated curricula. **GMS J Med. Educ.**, v. 34, n. 3, 20 p., 2017. DOI 10.3205/zma001114.

WORKNEH, B. D. *et al.* Influence of Medical Representatives on Prescribing Practices in Mekelle, Northern Ethiopia. **PLOS ONE**, v. 11, n. 6, 11 p., jun. 2016. DOI 10.1371/journal.pone.0156795.