

Pharmacists' knowledge of sanitary legislation and professional regulations

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Keywords

Pharmacists. Legislation, pharmacy. Pharmaceutical services. Knowledge, attitudes, practice. Legislation, health. Education, pharmacy.

Abstract

Objective

To characterize the profile of pharmacists employed as technical supervisors in drugstores and evaluate their knowledge regarding certain aspects of the legislation controlling drugstores and the profession in general.

Methods

Based on 175 drugstores in the city of Ribeirão Preto, southeastern Brazil, 100 pharmacists/technical supervisors were randomly selected. Data collection was done by means of in-person interviews, and was guided by a questionnaire evaluating knowledge and attitudes. Data were processed and analyzed using Epi Info and Stata software. Associations were sought between dependent and independent variables using Pearson's chi-squared and Fisher's exact tests.

Results

Most pharmacists were women (64%), aged 22-29 years (47%), graduated approximately three years prior to data collection, trained to work in the pharmaceutical industry (36%) or in clinical analysis (29%). Pharmacist's knowledge of sanitary legislation was considered as insufficient for 28% of subjects, regular for 50%, and good for 22%. Low levels of knowledge were observed regarding the legal requirement for the presence of a pharmacist during the entire drugstore opening hours, pharmacists' attributions, sale of antibiotics, and penicillin administration. It was found that most professionals have difficulties handling the concepts of 'generic' and 'similar' drugs. Low level of knowledge was not associated with any of the independent variables, indicating that this is a generalized phenomenon, i.e., one present among pharmacists of all age groups and both sexes, irrespective of the time since graduation, institution attended, and modality of graduation, among others.

Conclusions

We conclude that training in the field of drug pharmaceutical care, during undergraduate studies and, especially, during traineeship in pharmacies and drugstores is deficient. It is necessary to divulge information concerning sanitary legislation so that pharmacists may fully exert their profession, without risk of legal threats or hazard to the population.

INTRODUCTION

Until the mid Nineteenth Century, pharmacists were single-handedly responsible for the process of drug manufacture. With the industrialization of medica-

ments, serums, and vaccines, Pharmacy began including, in addition to the compounding of products, the sale of pharmaceutical specialties as well.² Pharmacy is slowly changing its major characteristics, a fact which directly affects the profile of the pharmacist.

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From the category's perspective, the most attractive professional field – not only for financial reasons but also due to the possibility of applying technical knowledge – is now the pharmaceutical industry.¹³

The estrangement of the pharmacist from his original place of work (the drugstore), associated with the technological and functional transformations characterized, according to Santos,¹³ a process of 'dis-professionalization', understood as the loss of one's specific qualities, especially in terms of the monopoly of knowledge, public trust, and perspectives of professional autonomy.

Current Brazilian sanitary legislation, established in 1973, prescribes that all pharmacies and drugstores may work only under the technical supervision of a pharmacist, at all times. In practice, it is well known that the majority of these places work without the presence of a pharmacist most of the time, usually without any legal consequences.^{1,4,14} The withdrawal of the pharmacist from the drugstore has given room for laypeople and commerce workers lacking in technical knowledge to fill the gap created behind the counter, hence stimulating the irrational consumption of drugs and creating hazard for population health. According to Perini,¹² a consequence of the technological evolution was the transformation of the pharmacist's role, which formerly placed these professionals in close contact with physicians and their clients, into an empty activity which transcends into the field of commercial relationships. The pharmacist's former 'health house' was transformed into a 'business establishment', an emporium.

Pharmaceutical care

The World Health Organization¹¹ defines pharmaceutical care as: *"The set of attitudes, behaviors, ethical values, knowledge, and responsibilities of the pharmacist during the act of dispensing drugs, aimed at contributing towards the obtainment of the desired therapeutic results and the improvement of the patient's quality of life."*

The First National Congress of Pharmaceutical Care and Medication Policies, which took place in 1988, proposed a model for pharmaceutical care based on principles set by the Brazilian *Sistema Único de Saúde* (Unified Healthcare System). The model was defined as a set of multidisciplinary procedures – necessary for the promotion and recovery of health – encompassing drug research, development, and production activities and the planning and management of drug commercialization, prescription, dispensation, and use, with special emphasis to sanitary, social, and economic consequences.⁴

Resolution 328 of 22 May 1999, approved by the National Sanitary Surveillance Agency (Anvisa) establishes the responsibilities and attributions of pharmacists and drugstore proprietors, 'pharmacist' being defined as *"the person responsible for supervision and dispensation, which must possess the necessary scientific skills and formal training for the activity"*, and that the proprietor *"must predict and provide the resources necessary for running the establishment."*

Since drugs have lately become predominantly market-oriented products, it has become increasingly difficult for pharmacists to assert themselves through their technical knowledge, further estranging these professionals from their original function: promoting the rational use of medication. As with several other healthcare professionals, pharmacists are inserted into a labor market whose homogeneous rationale is profit at any expense. Labor relationships often impose upon pharmacists the choice between maintaining their positions and violating both sanitary legislation and the profession's code of ethics. As a qualified professional performing an activity under state regulation, pharmacists are answerable not only for their own technical acts, but also for the decisions of other parties imposed upon them in the fields in which they work. Pharmacists are thus subject to ethical, civil, and criminal implication. In addition, Pharmacists are subject also to sanitary legislation and its regulations and, as a consequence of their acts, may suffer severe penalties if professional inability, negligence, and/or omission are proven.

Based on the concepts above, and considering the difficulties faced by pharmacists when attempting to assert their technical knowledge given the commercial scenario into which the medication issue is inserted, the present study is aimed at evaluating the knowledge and attitudes of pharmacists employed as technical supervisors in drugstores concerning their duties, and the legislation of drugstore operation and of the pharmaceutical profession in general.¹⁴ In the present article, only issues related to pharmacists' knowledge of legislation are addressed.

METHODS

Our sample comprised one hundred pharmacists employed as technical supervisors in drugstores – not including drugstores with drug compounding services or those whose technical supervisors were pharmacy officers – in Ribeirão Preto, southeastern Brazil.

Dependent variable 'knowledge' included: 1) knowledge of the legal requirement that drugstores have a pharmacist available during all opening hours; 2)

knowledge of the pharmacist's duties – some of which are cited in Resolution 328/99-ANVISA – which include: a) evaluating medical prescriptions; b) ensuring adequate conditions for product conservation and dispensing; c) keeping controlled medication records up to date; d) providing initial and continued staff training; and e) providing safe and clear instructions to clients; 3) knowledge of prescription-free medication; 4) knowledge of generic or equivalent drugs (based on Statute 9787/99); 5) performance of services permitted in the drugstore, such as administering injectable penicillin, and those not permitted, such as collecting biological materials, fractioning medication, and selling compounded medication.

Independent variables are those that may be associated with greater or lesser knowledge of current sanitary legislation and its attribution. These include worker's characteristics – sex, age, time since graduation, institution attended, modality of graduation, time working in drugstores, daily work hours, receiving sales commissions, having another job, earning the category's minimum wage, drugstore ownership, and working in franchise or network drugstore.

Data collection was performed by means of a questionnaire comprising 68 open or true/false closed questions. The questionnaire also included statements with which subjects were to agree or disagree, aimed at evaluating subjects' attitudes with respect to a given regulation.

Subjects were randomly selected based on the sampling of the 175 drugstores distributed throughout 42 neighborhoods in the city of Ribeirão Preto. The sample was probabilistic and was stratified proportionally to its geographical distribution in order to be representative of all pharmacists, from those working in small drugstores in the furthest neighborhoods to those working in large establishments in the central area. Sample selection included only workers registered in the Regional Council of Pharmacy of the State of São Paulo (CRF-SP) as of May 2001. When a selected drugstore employed more than one pharmacist, a single pharmacist was randomly selected. In case of refusal, another drugstore from the same neighborhood was drawn. Interviews were carried out one-on-one by six previously trained (6) interviewers, between 28 May and 28 August 2001, at a place determined by the subject and at a time adequate for both parties. Interviews lasted in average 30 minutes. The study was approved by the Research Ethics Committee of the *Hospital das Clínicas – Faculdade de Medicina de Ribeirão Preto – USP*. All subjects participated in the study by their own will and signed an informed consent form, as determined

Table 1 - Summary of the drugstore sample, Ribeirão Preto, 2001.

"Occurrence"	N	%
Pharmacists interviewed	100	69.5
Refusals	18	12.5
Pharmacists not found	13	9
Drugstores without pharmacist	13	9
Total drugstores drawn	144	100

by Ministry of Health resolution 196/96. Subject's identities were preserved, and data were kept anonymous. Data were entered using Epi Info 6.0 software, and analyzed/processed using both Epi Info and Stata 6.0 software. Statistical associations were sought between dependent and independent variables using Pearson's Chi Squared test and Fisher's Exact Test. Association was established at $p=0.05$.

RESULTS

Of the 144 drugstores selected, 13 (9%) were working without a pharmacist. Of the 131 pharmacists met, 18 (13.7%) refused to participate and 13 (10%) were not located after three attempts (Table 1).

The majority (64%) of the pharmacists working in drugstores were young women, aged between 22 and 29 years (47%), graduated from a local private university (44%) roughly three years prior to the interview, and, despite working in a drugstore, had undergone training directed basically towards the industrial (36%) or clinical analysis (29%) fields. The number of daily work hours varied between 2 and 15 hours, with a mean 7.1 hours; 28% of subjects reported working 8 hours daily and 46% reported working 6.5 hours. Only 16% reported receiving sales commissions, 22% reported having another job, and only 5% admitted to earning less than the category's minimum wage. Concerning the drugstores in which they worked, 19% were employed by the three large networks working in the municipality. Most drugstores (73%) were not owned by the pharmacist interviewed, and only 5% of pharmacies employed substitute pharmacists. Half of the drugstores had prescription-free medication exposed for self-service purchase. In average, drugstores were open 12 hours daily and most of them (64%) had at least four other staff members besides the pharmacist.

Of the 24 questions on which knowledge evaluation was based, 23 were weighted 1, and a single question (duties) was weighted 6. The maximum score obtainable was therefore 29 points. However, the score range among interviewed subjects was 8-25, mean 15.8, standard deviation 3.39. Levels of knowledge were classified as follows:

Table 2 - Distribution of antimicrobials mentioned as free for over-the-counter sale, Ribeirão Preto, 2001.

Active substance in the antimicrobial drug	Frequency	%
Amoxicillin	38	44.7
Ampicillin	8	9.4
Azythromycin	2	2.3
Cephalexin	14	16.4
Ciprofloxacin	1	1.2
Erythromycin	1	1.2
Penicillins (injectable)	2	2.3
Sulfadiazine	1	1.2
Sulfamethoxazole + trimethoprim	8	9.5
Tetracyclines	10	11.8
Total	85	100

- Good knowledge: score =19 points;
- Medium knowledge: 14-18 points;
- Insufficient knowledge: =13 points.

The level of knowledge of the legislation controlling drugstore operation and of professional regulations was considered as medium for 50% of subjects, insufficient for 28%, and good for only 22%. That is, roughly one in five subjects has a good knowledge of the sanitary legislation controlling her profession.

No association was found between level of knowledge and variables: age, sex, time since graduation, daily work hours, receiving sales commissions, earning the category's minimum wage, having another job, drugstore ownership, and working in franchise or network drugstore.

In order to evaluate knowledge of the pharmacist's duties in the drugstore, an open question and a closed question about the administration of injectable drugs were formulated. Of the subjects interviewed, 99% cited at least one duty, whereas a single subject reported that the pharmacist had no duties in the drugstore. Duties cited included: evaluation of the prescription (31%), orientation on drug usage (81%), storage of controlled medication (65%), registry keeping (55%), keeping controlled medication records in chronological order (24%), maintaining medication storage conditions (35%), and training staff members (25%). More than half of the subjects (55%) mentioned other duties not included among the above. These included controlling medication expiry dates (23%) and administering injectable drugs (15%).

In order to verify the common 'myth' among pharmacists concerning the prohibition of administering injectable drugs, the following statement was given, which subjects were to classify as true or false: "the pharmacist is prohibited by law from administering injectable drugs". Of all the subjects interviewed, 23% provided either the wrong or no answer to this ques-

tion, that is, there is still a significant share of professionals who believe they are legally prohibited from administering injectable drugs.

Forty-seven pharmacists mentioned at least one systemic antibiotic and/or chemotherapeutic as being free for over-the-counter sale. One of the subjects said there were several, but did not mention any names. Another subject mistakenly mentioned an anti-inflammatory, nimesulide, as an example. According to Brazilian drug legislation, no systemic antibiotics may be sold on a prescription-free basis. Therefore, 49% of pharmacists answered this question incorrectly.

Among antibiotics, amoxicillin was mentioned by 38 pharmacists (45%), followed by cephalexin, mentioned by 14 subjects (16%), and tetracycline, mentioned by 10 subjects (12%) (Table 2). When the question was posed as a true/false statement – "there are no systemic antibiotics for over-the-counter sale" – 23% of subjects gave the incorrect answer and three reported not knowing the answer.

The majority of pharmacists (65%) agreed about the existence of a list which defines which drugs are free form over-the-counter sale; 35% were not aware of the existence of such list. For 46% of subjects, the muscular relaxant Dorflex® (containing and association of orphenadrine, dipyrone, and caffeine) is free for over-the-counter sale, that is, 46% are not aware of the requirement of a prescription for selling this medication

Answers concerning the definition of the term 'similar drug' were considered correct if approaching the definition established by Statute 9787/99. Only 18 pharmacists were able to correctly define similar drug. Among the answers considered as wrong, 33% defined the concept based solely on similarity of composition or active ingredient. In 26% of the incorrect answers, the term 'ethical' was used as a synonym for 'reference' or 'innovative' drug. 23% of the incorrect answers contained different conceptual errors, such as "competitor of the original", "identical to the brand name", and "similar to the ethical medication".

Only 29 pharmacists were able to correctly define the term 'generic drug'. Among the answers considered as incorrect, 24% used the term 'ethical' as a synonym for 'reference' or 'innovative' drug. Many subjects also used the definition based only on similarity of composition and active ingredient, which was considered as incorrect. Incorrect answers also included different conceptual errors, such as "same drug, without marketing", "contains the same active ingredient; cheaper", and "contains the same active ingredient without associations".

When questioned about the possibility of substituting a brand name product only with a generic drug, 78% of the pharmacists interviewed considered this statement as true, which is the correct answer. When questioned about the possibility of substituting a product with a similar drug, 70% of subjects considered this statement as false, that is, 30% of subjects considered it to be possible to replace a brand name drug with a similar drug, which is against generic drug sales regulations.

Collection of biological material: 94% of subjects considered as false the statement “the drugstore is allowed to perform biological material collection services”, which is the correct answer.

Fractioning of pharmaceutical specialties: 68% subjects knew the correct definition of ‘fractioning’, and 79% knew that is the fractioning of pharmaceutical specialties is not allowed in the drugstore.

Sale of compounded drugs: 75% of subjects knew that the sale of compounded drugs is not allowed in drugstores.

Administration of injectable penicillin: 85% of subjects considered as true the statement “the administration of injectable penicillin in a drugstore is prohibited”, and 3% did not know. This means that only 12% of the pharmacists interviewed knew that such administration is allowed by law.

DISCUSSION

Ribeirão Preto cannot be characterized as an industrial municipality. There are 1,065 industrial plants in the municipality,¹² most of which are of small size. Of these, only six are pharmaceutical plants, which indicates the lack of a labor market for the pharmacists trained for work in the industrial field. These professionals seem to have ‘drifted’ towards drugstores and pharmacies. Notwithstanding, the municipality currently has four different undergraduate Pharmacy schools.

We found only 22% of pharmacists with a good level of knowledge of sanitary legislation. We found a low level of knowledge concerning the legal requirement of the presence of a pharmacist in the drugstore during opening hours, the pharmacist’s duties, antibiotic sales regulations, and the administration of injectable penicillin. Furthermore, most pharmacists interviewed had difficulty handling the concepts of ‘similar’ and ‘generic’ drugs.

This low level of knowledge was not associated

with any of the independent variables, which suggests that it is a general phenomenon, i.e., one that is observable among pharmacists regardless of age, sex, time since graduation, institution attended, modality of graduation, etc.

Answers were discrepant in terms of the legal requirement of the presence of a pharmacist in the drugstore, both when the issue was formulated as an open question and, later, as a statement. In the open question, only 16% gave the correct answer, whereas 69% stated that drugstores are required by law to provide a pharmacist for at least 50% of opening time. 41% of subjects answered correctly to the statement.

In 1997, CRF-SP established, as an internal regulation, that, in order for a drugstore to be registered it must present a statement of opening hours and of the presence of a pharmacist for at least half this period. After four years, this which was an administrative policy of a controlling agency was assimilated by pharmacists as a ‘law’. This is a mistake, for, in the juridical hierarchy, category decisions cannot overrule governmental statutes.

Over 50% of the pharmacists in our sample believed the regulation that prevents pharmacists from being technical supervisors for more than one drugstore to be a restriction imposed by CRF-SP rather than a regulation determined by sanitary legislation. Such confusion may be due to the fact that, until not long ago, in a number of Brazilian states, state Councils of Pharmacy were granting double and sometimes even triple supervising positions, which is against sanitary legislation.

Costa⁵ argues that, in the field of Sanitary Surveillance, responsibility is an ubiquitous concept throughout the many ‘links’ of a chain, in which not only private entities (producers/service providers, technical supervisors, suppliers, sales representatives) are responsible for the quality of products and services offered to the population, as well as for any eventual health damage caused by them, but so it the State, through the enforcement of specific health protection laws. In the practice of Sanitary Surveillance, the concept of responsibility in the provision of healthcare service and in the production, distribution, and sale of health-related products is formalized in the person of the technical supervisor, which is a legal requirement and a condition for performing such activities.

Concerning the pharmacist’s duties, only one-third of subjects spontaneously mentioned the evaluation of medical prescriptions. The duties most cited were those related to the storage (65%) and registry (55%) of controlled drugs. Only 35% of pharmacists men-

Table 3 - Distribution of the types of infraction verified by inspection in drugstores between January 1997 and May 2001. Sanitary Surveillance, Ribeirão Preto, SP.

Description of the infraction	Frequency	%
Working without a pharmacist	66	35.3
Failing to keep special control medication records up to date	34	18.2
Selling medication subject to special control without prior SS authorization	20	10.7
Selling medication subject to special control without observing legal requirements (irregular medical prescription)	11	5.9
Failing to adequately store medication subject to special control	2	1.1
Selling medication subject to special control without in the absence of a pharmacist	6	3.2
Exposing expired medication for sale	18	9.6
Working without an SS permit	7	3.7
Selling medication not registered by the Ministry of Health	5	2.7
Expose prescription-restricted medication for self service purchase	4	2.1
Disobeying acts issued by SS	4	2.1
Storing medication intended for free distribution	2	1.1
Preventing SS operation	2	1.1
Others	6	3.2
Total	187	100

SS - Sanitary Surveillance

tioned ensuring adequate conditions for medication storage, and only 25% mentioned staff training. Controlling medication expiry dates was mentioned by 23 subjects. A great deal of discrepancy was observed when these data were compared with the list of sanitary legislation infractions verified in the lawsuits filed by the local Sanitary Surveillance (SS) agency (Table 3). Infractions related to the irregular sale of controlled medication prevail in this list (39%), whereas approximately 10% of infractions were related to the exposure/storage of expired products. In other words, the regulations most frequently infringed according to the local SS are exactly those most widely known.

The use of antibiotics without a medical prescription is a public health problem, for the irrational use of this type of drug is promoting the emergence of multiple-antimicrobial-resistant strains of bacteria. The correlation between the increase of bacterial resistance and the patterns of antibiotic consumption has attracted the attention of several medical institutions and periodicals. This issue was the subject of 45 articles published in journals from different countries between 1984 and 1990.³ In 1995, Barros¹ verified that antibiotics were among the three drug groups most 'prescribed' by drugstore clerks in Recife, northeastern Brazil. Gir,⁹ in an evaluation of the behavior of drugstore clerks in response to a customer with complaints typical of gonorrhea, found that, in roughly 70% of cases, the clerk indicated drugs, especially penicillins, to the customer.

The discrepancy observed between the two questions dealing with antibiotic sales suggests that pharmacists are aware of the inexistence of antibiotics free for over-the-counter sale. Nevertheless, the retail sale of antibiotics without medical prescription is part of the daily routine of drugstores, being incorporated by pharmacists as a normal procedure. In other words, "it's

a law but it doesn't stand". Although the free sale (without a practitioner's prescription) of antibiotics is prohibited, these drugs are sold as if it were legal. Such practice is not supervised by control organs, and establishments that indulge in it are not held liable.

This indicates a predominance of juridical instruments in sanitary control measures, which reinforces the role of Sanitary Surveillance as a bureaucratic/registry organ. Without questioning the efficacy of this system, there is a need for advancement in sanitary instruments in order to enforce such regulations. In Brazil, a country governed by the Rule of Law,⁷ in which all administrative activity is controlled by legislation, there is an abundance of regulations concerned with the consumption of health-related products, especially in relation to production. Nonetheless, when observing certain practices of medication retailers, we verify that sanitary legislation has showed little advance in the field of commercialization. As an example, Costa⁶ argues that it is not enough for the production of a given drug to be authorized, for the industry to have a technical supervisor, and for the technical requirements for production facilities and processes be fulfilled; it is also necessary to expand sanitary regulations in order to control other aspects of quality, such as efficacy, safety, and the occurrence and intensity of side effects.

Most subjects showed a good level of understanding concerning the collection of biological materials, fractioning of pharmaceutical specialties, and sale of compounded drugs. We verified, however, that 85% of pharmacists believe the administration of penicillin in drugstores and pharmacies to be prohibited. The population that frequently requires injectable penicillin does not have access to this type of medication in private services. In 1995, the São Paulo State Center for Sanitary Surveillance (CVS-SP) issued a

regulation (Regulation CVS-DITEP 02/95) prohibiting São Paulo State drugstores and pharmacies from performing penicillin sensitivity tests. We thus observe a great deal of confusion amongst pharmacists, who understood that, in addition to the test, the administration of penicillin itself was prohibited, and that only healthcare facilities and hospitals were allowed to perform this service. This Regulation was revoked in May 2000 by Regulation CVS – 5/00, which was much more detailed than its predecessor, and which maintained the prohibition of penicillin sensitivity testing in drugstores. Benzathine penicillin is the main resource available for reducing the levels of morbi-mortality associated with rheumatic carditis; it is also the treatment of choice for treating streptococcal pharyngitis and the most efficacious drug in treating syphilis, in addition to being very affordable. A study⁷ carried out with 300 healthcare professionals including physicians, pharmacists, and nurses demonstrated that Regulation CVS 02/95 had a strong negative impact on the prescription and administration of benzathine penicillin outside the emergency-room/hospital environment, where the majority of professionals also believe the administration of benzathine penicillin to be prohibited in drugstores and pharmacies, showing a lack of knowledge of usage and/or sensitivity testing regulations. There is, therefore, a clear need for discussing this subject with all professionals involved, clarifying the contents of the aforementioned regulation, as well as the risks and benefits of the use of penicillin.

Concerning the definitions of generic and similar drugs, we found that the term 'ethical drug' was frequently employed as a synonym for innovative or reference drug. This is a non-technical term, incorporated into the professional jargon due to pharmaceutical industry marketing, following a market-oriented logic promoted by the large pharmaceutical laboratories who own the rights for developing these drugs.

We observed a large amount of confusion among pharmacists concerning the term 'similar drug', with only 18% of subjects being able to correctly define the term, whereas the definition of generic drug was chosen by 29% of subjects. Such confusion may be due to the recently issued legislation controlling the production and sale of generic drugs, established by Statute 9,787, of 10 February 2000.

However, we found that approximately 70% of subjects knew about the interchangeability between generic and brand name drugs, i.e., know that a prescribed drug may be replaced exclusively by the corresponding generic drug. Since the Generic Drug Stat-

ute was issued, pharmacists have been provided, by both control organs and pharmaceutical associations with divulgation and clarification material containing technical information on the subject, which have greatly contributed towards the involvement of these professionals in the generic drug issue.

The Statute allowing the sale of generic drugs has been an important instrument for nationwide medication policies. Sanitary Surveillance is a function strictly governmental in character, intended to harmonize economic and social interests for the protection of individual and collective health. Hence, it is its job to promote measures which stimulate the adoption and use of generic drugs, providing means to ensure widespread communication, information, and education concerning these drugs.

The present study was aimed at proving the hypothesis that training in the field of drug-related pharmacological care is deficient at both the undergraduate level and, especially, during traineeship in pharmacies or drugstores.

According to our results, which show that knowledge was not associated with any independent variable – thus suggesting a generalized phenomenon, i.e., one present among pharmacists of several age groups, both sexes, regardless of time since graduation, school attended, modality of graduation, etc. –, it is likely that Pharmacy schools do not provide the basic theoretical and practical knowledge that would allow future pharmacists to act in drug dispensation.

Pharmacists that work in drugstores receive training directed towards the practice of pharmaceutical care, most of them being trained for the fields of industrial production and clinical analysis.

In particular, we identified the need for training based on knowledge of drugs and sanitary legislation, so that pharmacists are able, in the future, to fully exert their profession without the threat of legal prosecution or hazard to the population. Training (and retraining in the work environment) in the field of drug dispensation, along with direct supervision and continued education should also be part of the policy proposals forwarded by pharmacist unions and associations, with the effective participation of the educational institutions.

From the perspective of Sanitary Law, sanitary education and legislation are especially important for the effectiveness of sanitary surveillance actions, healthcare professionals being the major social actors in the protection of public health and quality of life.

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