Original Research

Communication skills in Brazilian pharmaceutical education: a documentary analysis

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Abstract

Objective: To characterize the inclusion of the teaching of communication skills in the curriculum of Pharmacy Schools of Federal Institutions of Higher Education.

Methods: An exploratory study of documental analysis of curriculum of Pharmacy Schools was carried out. A convenience sample was selected from undergraduate pharmacy courses of Federal Institutions of Higher Education (IFES). The variables collected were related to the identification of the course, its nature (elective or mandatory), workload, semester, and program content.

Results: Among the 49 undergraduate pharmacy courses of IFES, 35 (71.4%) had their curriculum available online. The teaching of communication in health was identified in 26 (74.3%) curriculum. In this study, three courses (7.2%) specifically aimed at teaching communication skills, while 39 (92.9%) had content related to this subject. Most courses (22; 52.4%) belonged to the field of Social, Behavioral, and Administrative Sciences. As for the course period, there was a concentration in the third (19%) and fourth (28.6%) years. The main content present in the curriculum was related to the principles and techniques of health communication (42.8%).

Conclusions: Data obtained enabled the identification of gaps in the curricula of undergraduate courses in pharmacy concerning the inclusion of the teaching of communication skills. These results can be used to reflect the current models adopted in Brazil for the teaching of this skills, especially after the recent publication of the new curricular guidelines for undergraduate pharmacy courses.

Keywords

Health Communication; Social Skills; Education, Pharmacy; Curriculum; Students, Pharmacy; Pharmacists; Brazil

INTRODUCTION

In the last decades, a "silent revolution" has provoked changes in the professional practice of pharmacists through the resignification of their work process, with a focus on patient care.[1-3] In order to guide this transition, the World Health Organization has published a document entitled "Preparing the Pharmacist of the Future: Curriculum Development," suggesting that the pharmacist should develop seven general competencies to carry out his or her activities, including communication.[4] In addition, The International Pharmaceutical Federation (FIP) in Nanjing Statements on Pharmacy and Pharmaceutical Science Education, the American Accreditation Council for Pharmacy Education and the European Union, recommends that Pharmacy students should gain skills in interpersonal communication.[5-7]

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According to Berger, communication can be conceptualized as the process of transmitting verbal (written or oral) or nonverbal information.[8] In many countries, the use of effective communication in the training of pharmacists leads to improvement in clinical outcomes and patient satisfaction, as well as promotion of interprofessional relationships.[9-14] This improvement requires the restructuring of educational processes, going beyond technical knowledge, and contemplating clinical communication, i.e. with the patient, family, and health team.[2,15-16]

In the United States of America (USA), since the 1970s, it has been recommended to include knowledge related to the social and behavioral sciences in the pharmacist training process.[17-20] In 2001, about 75% of the USA universities introduced the teaching of communication skills in their courses.[21] Furthermore, studies highlight investments in research, curricular changes, the use of new teaching techniques, and the creation of laboratories for teaching communication in the USA.[10,22-26] In Europe, however, less curricular emphasis in the social and behavioral sciences may result in deficiencies in pharmacists' clinical training, inhibiting effective communication between pharmacists and patients.[26]

In Brazil, until the beginning of the 2000s, the Pharmacy curriculum was focused on the basic and natural sciences.[27,28] The first guidelines to facilitate training for patient care and the addition of content that included the field of human and social sciences were published at 2002. This curriculum contemplates a minimum workload of 4,000 hours and five years of training. The general training allows the egress to work in the areas of drugs and

medicines, clinical and toxicological analyzes and control, and food production and analysis.[29] Although the Brazilian curricular guidelines emphasize that undergraduate courses in pharmacy should teach content from the human and social sciences, the literature emphasizes that the quality of the communication of Brazilian pharmacists is still ineffective and is often considered "invisible" to patients.[2,29-33]

The teaching of communication skills in Brazil was highlighted by the publication of recent professional legislation with emphasis on patient care, such as Resolutions nº 585 e nº 586 of the Federal Council of Pharmacy, which regulated the clinical attributions of the pharmacist and pharmaceutical prescription. This situation has also triggered the publication of new curricular guidelines, with emphasis on the healthcare, which should correspond to 50% of the hours of training of the pharmacist.[34]

Although Brazilian literature on this subject is scarce, studies recommend changes in the training of pharmacists with the addition of new courses, contents and teaching methodologies related to health communication.[35-39] However, there are no studies published that confirm the implementation of these contents in Brazilian undergraduate curricula in pharmacy. Under this perspective, the objective of this study was to identify and characterize the inclusion of the teaching of communication skills in the curriculum of Pharmacy Schools of Brazilian Federal Institutions of Higher Education.

METHODS

An exploratory study of documental analysis of Brazilian undergraduate pharmacy curriculum was carried out between March and June 2017. There were more than 500 Schools of Pharmacy (publics and privates) in Brazil, however this study included only Schools of Pharmacy from Federal Institutions of Higher Education (FIHE). According to the Brazilian Ministry of Education, FIHE have to available the curriculum on their own electronic page. This curriculum incorporates academic content, workload and years of training of specifics courses.[40]

List of Pharmacy Schools of FIHE were identified in January 2017, through the website http://emec.mec.gov.br/, of the National Institute of Educational Studies and Research Anisio Teixeira (INEP). Schools of Pharmacy of FIHE that provided complete curriculum on the website were included in this study. Data extraction was performed by two researchers independently and data consistency was verified by a third researcher. The collected variables were course denomination, nature (elective or mandatory), workload, semester, and academic content.[21,41-42]

The courses identified in the curriculum were initially classified into two categories: i) specific course for the teaching of communication skills; ii) course with contents related to the teaching of communication skills. Then, the courses were categorized by the researchers in three main areas, according Nunes-da-Cunha *et al.*: a) Social, Behavioral, and Administrative Sciences; b) Clinical Sciences; and c) Basic/Other Sciences.[27]

Finally, the contents related to the teaching of communication skills were analyzed and grouped according to similarity. Before this step, the researchers discussed about the terminology used to ensure consistency. The results obtained from the collection and categorization were represented by descriptive statistics with the presentation in absolute and relative frequency.

RESULTS

Among the 49 courses of the Federal Institutions of Higher Education, 35 (71.4%) had their curricular matrices available online. The teaching of health communication was identified in 26 (74.3%) curricular matrices. Ten (25.7%) curricular matrices did not present content related to this theme. There were 42 courses, among which three (7.2%) were specifically aimed at teaching communication skills and 39 (92.9%) had content related to this subject. The disciplines' profile is described in Table 1.

When grouping the disciplines according to the areas of knowledge, it was observed that most (22; 52.4%) belonged

Table 1. Courses' profile identified in curriculum of Pharmacy courses of Brazilian Federal Institutions of Higher Education, 2017.

	Courses specifically aimed at teaching communication skills	Courses with content to teaching communication skills	Total N (%)
Nature [n(%)]			
Mandatory	-	31 (73.8%)	31 (73.8)
Elective	03 (7.2%)	08 (19.0%)	11 (26.2)
Semester [n(%)]			
1st year	-	04 (9.5%)	04 (9.5%)
2nd year	-	04 (9.5%)	04 (9.5%)
3rd year	-	08 (19.0%)	08 (19.0%)
4th year	-	12 (28.6%)	12 (28.6%)
5th year	-	02 (4.8%)	02 (4.8%)
Undefined	03 (7.2%)	09 (21.4)	12 (28.6%)
Workload [n(%)]			
< 30 hours	-	01 (2.4%)	01 (2.4%)
30-59 hours	01 (2.4%)	24 (57.1%)	25 (59.5%)
≥ 60 hours	02 (4.8%)	13 (31.0%)	15 (35.8%)
Not described	-	01 (2.4%)	01 (2.4%)
Category			
Social, Behavioral and Administrative Sciences Administrativas	03 (7.1%)	19 (45.2%)	22 (52.4%)
Clinical Sciences	-	20 (47.6%)	20 (47.6%)

Table 2. Contents related to the teaching of communication skills identified in the curriculum of Pharmacy courses of Brazilian Federal Institutions of Higher Education, 2017.

Category	Description	N (%)
Principles and techniques of communication	It comprises the teaching of conceptual aspects, principles and communication techniques, as well as syllabus that use generic terms to refer to health communication.	18 (42.8%)
Communication with patients and their families	It comprises specific aspects of communication between pharmacists and patients or their relatives	16 (38.1%)
Interprofessional communication	It comprises specific aspects of communication between Pharmacists and other health professionals	12 (28.6%)
General Principles of Human Relationships	It comprises general aspects of the interpersonal relation and interferences of the psychosocial factors in the human relations	5 (11.9%)

to the field of Social, Behavioral and Administrative Sciences, while 20 (47.6%) belonged to the Clinical Sciences. None of these belonged to the field of Basic Sciences. (Table 1).

From the analysis of the content present in the syllabus, four categories emerged: i) Principles and techniques of communication (18, 42,8%); ii) Communication with patients and their families (16, 38,1%); iii) Interprofessional communication (12, 28,6%); and iv) General Principles of Human Relationships (5, 11,9%) (Table 2).

DISCUSSION

The teaching of communication skills in Brazilian Pharmacy courses is essential to improve the performance of the pharmacist in healthcare, especially after the Brazilian Federal Pharmacy Council regulated their clinical activities.[43] However data obtained enabled the identification of gaps in the curricula of undergraduate courses in pharmacy concerning the inclusion of the teaching of communication skills. In particular 25.7% of the curriculum did not mention communication teaching at any point in the training. Failures in the communication process undermine the quality of pharmaceutical guidance and have generally been associated with the curriculum structure.[44] Such gaps need to be filled, since communication skills do not necessarily improve with professional practice experience, and must be taught during the training process.[45,46]

The communication contents identified in this study were mostly inserted in non-specific and mandatory courses for the teaching of communication. The fact that the subjects are mandatory makes it possible for all students to have access to the teaching of communication, especially since it is an essential skill for all pharmacists' work fields. However, the inclusion of communication could not be characterized as a transversal component, since it was identified as an isolated topic of clinical, behavioral, administrative, and social sciences. The literature has emphasized that the teaching of communication in undergraduate courses in pharmacy in the United States and Canada has occurred both through specific courses for this purpose and by inclusion in other undergraduate courses.[21,41-42] Therefore, it is worth emphasizing that the teaching of communication should not be restricted to specific disciplines, but rather integrated into the learning objectives of other clinical and social sciences courses.

Another point to be highlighted is that communication contents have appeared more frequently since the third and fourth year, when courses related to pharmaceutical care generally begin. A study by Svensberg *et al*., when mapping the teaching of communication skills in pharmacy courses of universities in Nordic countries, also verified that the teaching was not distributed throughout training, but predominantly in the last years.[47] Kimberling found that in the United States, when the teaching of communication skills was restricted to the first two years of the course, there were no training and assessments in the subsequent years to reinforce this ability.[41] On the other hand, when the instructions were given in the third year of the course, teachers felt the need for the training to be carried out earlier to avoid a consolidation of bad communication habits.

Transversality and interdisciplinarity of the teaching of communication skills considers that the contents and learning objectives are included in at different times during the course, allowing the teaching to be carried out in an articulated way, with progression of the complexity of the activities and the competence to be developed by the student.[10,48] Moreover, the sooner the evaluation process is started, the faster the students' weaknesses will be identified, enabling universities to develop strategies to overcome them.[21,42,49] Thus, as well as to synthesize a compound it is necessary in the first years to learn to know the molecular groups, in the training of social skills it is also advantageous to have a progression to consolidate the desired behaviors.

Among the contents identified in the curriculum, it was observed that there was no uniformity among the subjects to be approached in the disciplines. In addition, generic terms were used more often to refer to the content addressed, making it difficult to classify the categories that emerged in this study. Despite the national and international recommendations for inclusion of communication in pharmacy undergraduate curricula, there are no frameworks or consensus aimed at guiding this teaching-learning process through the presentation of contents and teaching strategies and evaluation of communication skills. On the other hand, medical education literature presents several well-defined models.[50-54] In considering this problem, Bachmann *et al*. made an important contribution to the curricula of undergraduate health courses by proposing the Health Professions Core Communication Curriculum, a list of learning objectives for communication skills. In the absence of specific frameworks or guidelines to aid the teaching process of pharmaceutical-patient communication, this list, after adapting the needs of the profession, can be used as a reference in the implementation or restructuring of the

curricular contents of undergraduate courses in pharmacy.[55]

This study had strengths and limitations. In relation to the strengths, this study consists in the first characterization of the inclusion of the teaching of communication skills in Brazil. These results can be used to reflect the current models adopted for the teaching of this set of skills, especially after the recent publication of the new curricular guidelines for undergraduate pharmacy courses in Brazil, which recommend that the "health care" axis should correspond to 50% of the training time of the pharmacist.[34]

The first limitation is the possibility that the curriculum do not represent the content covered in the course, the information for which is described in more detail in the syllabus contents. In addition, teaching methods, and student outcomes have not been studied, so the true teaching potential of skills is unknown.

CONCLUSIONS

This study made possible to identify gaps in pharmacy undergraduate curricula regarding the inclusion of communication skills, which occurred in a specific way in clinical, social, behavioral, and administrative subjects with a concentration in the third and fourth years of the course. Good communication skills are essential to helping patients use medicines properly. The inclusion of communication skills teaching in Pharmacy Schools is important to improve the relationships between pharmacists and patients, family members and other health professionals. It is important to highlight the need for further studies that can evaluate the curriculum in its real and hidden dimensions, identifying the teaching and assessment strategies used as well as the hours and practical experiences that contribute to this training.

CONFLICT OF INTEREST

The authors declare that they have no conflicts of interest to disclose.

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