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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

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

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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 Anísio 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

	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(%)]			
1 st year	-	04 (9.5%)	04 (9.5%)
2 nd year	-	04 (9.5%)	04 (9.5%)
3 rd year	-	08 (19.0%)	08 (19.0%)
4 th year	-	12 (28.6%)	12 (28.6%)
5 th 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	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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References

1. Hepler CD, Strand LM. Opportunities and responsibilities in pharmaceutical care. *Am J Hosp Pharm*. 1990;47(3):533-543.
2. Dewulf NL, dos Santos V, Leira Pereira LR, Troncon LE. The invisible pharmacist. *Am J Pharm Educ*. 2009;73(4):74.
3. Lyra Junior DP. Impacto de um programa de atenção farmacêutica no cuidado de um grupo de idosos atendidos na Unidade Básica Distrital de Saúde Dr. Ítalo Baruffi, Ribeirão Preto (SP). [Thesis]. Ribeirão Preto: Universidade de São Paulo; 2005.
4. World Health Organization. WHO. "The role of the pharmacist in the health care system: preparing the future pharmacist: curricular development: report of a third WHO Consultative Group on the Role of the Pharmacist, Vancouver, Canada, 1997. Available at: <http://www.who.int/medicinedocs/en/d/Js2214e/> (accessed Aug 7, 2017).
5. European Parliament and the Council. Directive 2005/36/EC of the European Parliament and of the Council of 7 September 2005 on the recognition of professional qualifications 17/01/2014 (consolidated version). 2005/36/EC. *J Eur Union*. 2005;2005.
6. Accreditation Council for Pharmacy Education. Accreditation Standards and Key Elements for the Professional Program in Pharmacy Leading to the Doctor of Pharmacy Degree; 2016. Available at: <https://www.acpe-accredit.org/pdf/Standards2016FINAL.pdf> (accessed Oct 16, 2018).
7. International Pharmaceutical Federation. Nanjing Statements. Statements on Pharmacy and Pharmaceutical Sciences Education. The Hague: FIP; 2017.
8. Berger BA. Communication Skills for Pharmacists: Building Relationships, Improving Patient Care. 3rd ed. Washington, DC: Jobson; 2009.
9. Makowski CT, Jennings DL, Nemerovski CW, Szandzik EG, Kalus JS. The impact of pharmacist-directed patient education and anticoagulant care coordination on patient satisfaction. *Ann Pharmacother*. 2013;47(6):805-810. doi: [10.1345/aph.1R686](https://doi.org/10.1345/aph.1R686)
10. Wallman A, Vaudan C, Sporrang SK. Communications training in pharmacy education, 1995-2010. *Am J Pharm Educ*. 2013;77(2):36. doi: [10.5688/ajpe77236](https://doi.org/10.5688/ajpe77236)
11. Marriott JL, Nation RL, Roller L, Costelloe M, Galbraith K, Stewart P, Charman WN. Pharmacy education in the context of Australian practice. *Am J Pharm Educ*. 2008;72(6):131.
12. Brock D, Abu-Rish E, Chiu CR, Hammer D, Wilson S, Vorvick L, Blondon K, Schaad D, Liner D, Zierler B. Interprofessional education in team communication: working together to improve patient safety. *BMJ Qual Saf*. 2013;22(5):414-23. doi: [10.1136/bmjqs-2012-000952](https://doi.org/10.1136/bmjqs-2012-000952)
13. Hanya M, Kanno Y, Akasaki J, Abe K, Fujisaki K, Kamei H. Effects of communication skill training (CST) based on SPIKES for insurance-covered pharmacy pharmacists to interact with simulated cancer patients. *J Pharm Health Care Sci*. 2017;3:11. doi: [10.1186/s40780-017-0080-0](https://doi.org/10.1186/s40780-017-0080-0)
14. Luetsch K, Burrows J. From transitions to transformation - A study of pharmacists developing patient-centered communication skills. *Res Social Adm Pharm*. 2018;14(7):686-694. doi: [10.1016/j.sapharm.2017.08.003](https://doi.org/10.1016/j.sapharm.2017.08.003)
15. Internacional Pharmaceutical Federation/ World Health Organization. Joint FIP/WHO guidelines on good pharmacy practice: standards for quality of pharmacy services. Hyderabad: FIP/WHO; 2011.
16. Seybert AL. Patient Simulation in Pharmacy Education. *Am J Pharm Educ*. 2011;75(9):187. doi: [10.5688/ajpe759187](https://doi.org/10.5688/ajpe759187)

17. Medina MS, Plaza CM, Stowe CD, Robinson ET, De Lander G, Beck DE, Melchert RB, Supernaw RB, Roche VF, Gleason BL, Strong MN, Bain A, Meyer GE, Dong BJ, Rochon J, Johnston P. Center for the Advancement of Pharmacy Education 2013 Educational Outcomes. *Am J Pharm Educ.* 2013;77(8):162. doi: [10.5688/ajpe778162](https://doi.org/10.5688/ajpe778162)
18. Dolinsky D. Pharmaceutical Psychology. *Am J Pharm Educ.* 1979;43(3):261-266.
19. Svarstad BL. Pharmaceutical Sociology: Issues in Research, Education and Service. *Am J Pharm Educ.* 1979;43(3):252-257.
20. Millis JS, Biles J, Chalmers R. Pharmacists for the future: the report of the Study Commission on Pharmacy. Ann Arbor, MI: Health Adm Press. 1975.
21. Beardsley RS. Communication skills development in colleges of pharmacy. *Am J Pharm Educ.* 2001;65:307-314.
22. Hanya M, Yonei H, Kurono S, Kamei H. Development of reflective thinking in pharmacy students to improve their communication with patients through a process of role-playing, video reviews, and transcript creation. *Curr Pharm Teach Learn.* 2014;6(1):122-129. doi: [10.1016/j.cptl.2013.09.009](https://doi.org/10.1016/j.cptl.2013.09.009)
23. Chereson RS, Bilger R, Mohr S, Wuller C. Design of a pharmaceutical care laboratory: a survey of practitioners. *Am J Pharm Educ.* 2005;69(1):3. doi: [10.5688/aj690103](https://doi.org/10.5688/aj690103)
24. Tsingos C, Bosnic-Anticevich S, Smith L. Reflective practice and its implications for pharmacy education. *Am J Pharm Educ.* 2014;78(1):18. doi: [10.5688/ajpe78118](https://doi.org/10.5688/ajpe78118)
25. Taglieri CA, Crosby SJ, Ferullo JW. Implementation of a Communication Skills Laboratory. *Curr Pharm Teach Learn.* 2014;6(6):773-781.
26. Hess R, Hagemeyer NE, Blackwelder R, Rose D, Ansari N, Branham T. Teaching communication skills to medical and pharmacy students through a blended learning course. *Am J Pharm Educ.* 2016;80(4):64. doi: [10.5688/ajpe80464](https://doi.org/10.5688/ajpe80464)
27. Nunes-da-Cunha I, Arguello B, Martinez FM, Fernandez-Limos F. A Comparison of Patient-Centered Care in Pharmacy Curricula in the United States and Europe. *Am J Pharm Educ.* 2016;80(5):83. doi: [10.5688/ajpe80583](https://doi.org/10.5688/ajpe80583)
28. Soares L, Boff PR, Valgas C, Leite S. Educação farmacêutica e identidade profissional. In: Cordeiro BC, Leite SSN. 2 ed. Itajaí: Univali, 2008.
29. Brasil. Conselho Nacional de Educação. Resolução nº 2, de 19 de fevereiro de 2002. Diretrizes Curriculares Nacionais do curso de Graduação em Farmácia. Diário Oficial da União 04 mar 2002; Seção 1.
30. Rocha CE, Bispo ML, Santos ACO, Mesquita AR, Brito GC, Lyra Junior, DP. Assessment of community pharmacists' counseling practices with simulated patients who have minor illness: a pilot study. *Simul Healthc.* 2015;10(4):227-238. doi: [10.1097/SIH.0000000000000100](https://doi.org/10.1097/SIH.0000000000000100)
31. Mesquita AR, de Oliveira Sá DA, Santos AP, de Almeida Neto A, Lyra DP Jr. Assessment of pharmacist's recommendation of non-prescription medicines in Brazil: a simulated patient study. *Int J Clin Pharm.* 2013;35(4):647-655. doi: [10.1007/s11096-013-9787-7](https://doi.org/10.1007/s11096-013-9787-7)
32. Obreli-Neto PR, Pereira LR, Guidoni CM, de Oliveira Baldoni A, Marusic S, de Lyra-Júnior DP, de Almeida KL, Pazete AC, do Nascimento JD, Kos M, Giroto E, Cuman RK. Use of simulated patients to evaluate combined oral contraceptive dispensing practices of community pharmacists. *PLoS One.* 2013;8(12):e79875. doi: [10.1371/journal.pone.0079875](https://doi.org/10.1371/journal.pone.0079875)
33. Santos AP, Mesquita AR, Oliveira KS, Lyra Jr DP. Assessment of community pharmacists' counselling skills on headache management by using the simulated patient approach: a pilot study. *Pharm Pract (Granada).* 2013;11(1):3-7. Doi: [10.4321/s1886-36552013000100002](https://doi.org/10.4321/s1886-36552013000100002)
34. Brasil. Conselho Nacional de Educação. Resolução nº 6, de 19 de outubro de 2017. Diretrizes Curriculares Nacionais do Curso de Graduação em Farmácia e dá outras providências. Diário Oficial da União; 2017, Seção 1.
35. Amorim ELC, Lyra Junior DP, Oliveira MAC. Aconselhamento ao paciente: uma proposta de inclusão no currículo farmacêutico. *Infarma.* 1999;10:47-49.
36. Lyra Junior DP, Rocha CE, Abriata JP, Gimenes FR, Gonzalez MM, Pelá IR. Influence of Pharmaceutical Care intervention and communication skills on the improvement of pharmacotherapeutic outcomes with elderly Brazilian outpatients. *Patient Educ Couns.* 2007;68(2):186-192. doi: [10.1016/j.pec.2007.06.004](https://doi.org/10.1016/j.pec.2007.06.004)
37. Lyra Junior DP, Sá Barreto LCL, Oliveira MAC, Oliveira ATC, Santana D. Atenção Farmacêutica: paradigma da globalização. *Infarma.* 2000;12:76-79.
38. Galato D, Modolon GA, Formentin TF, Vieira, AC. Exame clínico objetivo estruturado (ECOE): uma experiência de ensino por meio de simulação do atendimento farmacêutico. *Interface Comunicação Saúde Educação.* 2011;15(36):309-319.
39. Mesquita AR, Souza WM, Boaventura TC, Barros IM, Antonioli AR, Silva WB, Lyra Júnior DP. The effect of active learning methodologies on the teaching of pharmaceutical care in a Brazilian pharmacy faculty. *PLoS One.* 2015;10(5):e0123141. doi: [10.1371/journal.pone.0123141](https://doi.org/10.1371/journal.pone.0123141)
40. Brasil. Lei Nº 10.861, de 14 de Abril de 2004. Institui o Sistema Nacional de Avaliação da Educação Superior - SINAES e dá outras providências.; 2004:1-5.
41. Kimberlin CL. Communicating with patients: skills assessment in US colleges of pharmacy. *Am J Pharm Educ.* 2006;70(3):67.
42. Schwartzman E, Chung EP, Sakharov P, Law AV. Instruction and assessment of student communication skills in US and Canadian pharmacy curricula. *Curr Pharm Teach Learn.* 2013;5(6):508-517. doi: [10.1016/j.cptl.2013.07.001](https://doi.org/10.1016/j.cptl.2013.07.001)
43. Brazilian Federal Pharmacy Council. Resolução nº. 585, de 29 de agosto de 2013. Regulamenta as atribuições clínicas do farmacêutico e dá outras providências. Diário Oficial da União, Poder Executivo, Brasília, DF, 25 set. 2013a. Seção 1, p. 186-188.
44. Olsson E, Ingman P, Ahmed B, Sporrang, SK. Pharmacist-patient communication in Swedish community pharmacies. *Res Social Adm Pharm.* 2014;10(1):149-155. doi: [10.1016/j.sapharm.2013.03.001](https://doi.org/10.1016/j.sapharm.2013.03.001)
45. Cantwell BM, Ramirez AJ. Doctor-patient communication: a study of junior house officers. *Med Educ.* 1997;31(1):17-21. doi: [10.1111/j.1365-2923.1997.tb00037.x](https://doi.org/10.1111/j.1365-2923.1997.tb00037.x)

46. Roter DL, Stewart M, Putnam SM, Lipkin M Jr, Stiles W, Inui TS. Communication patterns of primary care physicians. *JAMA*. 1997;277(4):350-356. doi: [10.1001/jama.1997.03540280088045](https://doi.org/10.1001/jama.1997.03540280088045)
47. Svensberg K, Björnsdóttir I, Wallman A, Sporrøng SK. Nordic Pharmacy Schools' Experience in Communication Skills Training. *Am J Pharm Educ*. 2017;81(9):6005. doi: [10.5688/aipe6005](https://doi.org/10.5688/aipe6005)
48. Van Dalen J, Kerkhofs E, van Knippenberg-Van Den Berg BW, van Den Hout HA, Scherpbier AJJ A, Van der Vleuten CPM. Longitudinal and concentrated communication skills programmes: two dutch medical schools compared. *Adv Health Sci Educ*. 2002;7(1):29-40.
49. Deveugele M, Derese A, De Maesschalck S, Willems S, Van Driel M, De Maeseneer J. Teaching communication skills to medical students, a challenge in the curriculum?. *Patient Educ Couns*. 2005;58(3):265-270. Doi: [10.1016/j.pec.2005.06.004](https://doi.org/10.1016/j.pec.2005.06.004)
50. Leonardo CG, Ruiz-Moral R, Caballero F, Cavaco A, Moore P, Dupuy LP, Pithon-Cyrino A, Cortés MT, Gorostegui M, Loureiro E, Fontcuberta JMB, Duarte LC, Kretz L, Arrighi E, Jovell A. A Latin American, Portuguese and Spanish consensus on a core communication curriculum for undergraduate medical education. *BMC Med Educ*. 2016 Mar 28;16:99. doi: [10.1186/s12909-016-0610-8](https://doi.org/10.1186/s12909-016-0610-8)
51. Kiessling C, Dieterich A, Fabry G, Holzer H, Langewitz W, Mullinghaus M, Pruskil S, Scheffer S, Schubert S. Communication and social competency in medical education in German speaking countries: the Basel consensus statement. Results of a Delphi Study. *Patient Educ Couns*. 2010;81(2):259-266. doi: [10.1016/j.pec.2010.01.017](https://doi.org/10.1016/j.pec.2010.01.017)
52. Von Fragstein M, Silverman J, Cushing A, Quilligan S, Salisbury H, Wiskin C. UK Council for Clinical Communication Skills Teaching in Undergraduate Medical Education. UK consensus statement on the content of communication curricula in undergraduate medical education. *Med Educ*. 2008;42(11):1100-1107. doi: [10.1111/j.1365-2923.2008.03137.x](https://doi.org/10.1111/j.1365-2923.2008.03137.x)
53. Makoul G. Essential elements of communication in medical encounters: the Kalamazoo consensus statement. *Acad Med*. 2001;76(4):390-393.
54. Makoul G, Schofield T. Communication teaching and assessment in medical education: an international consensus statement. *Patient Educ Couns*. 1999;37(2):191-195. Doi: [10.1016/S0738-3991\(99\)00023-3](https://doi.org/10.1016/S0738-3991(99)00023-3)
55. Bachmann C, Abramovitch H, Barbu CG, Cavaco AM, Elorza RD, Haak R, Loureiro E, Ratajska A, Silverman J, Winterburn S, Rosenbaum M. A European consensus on learning objectives for a core communication curriculum in health care professions. *Patient Educ Couns*. 2013;93(1):18-26. doi: [10.1016/j.pec.2012.10.016](https://doi.org/10.1016/j.pec.2012.10.016)