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Editorial

Pharmacy and linguistics: strategies for promoting health literacy

Farmácia e linguística: estratégias para a promoção do letramento em saúde

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We frequently observe, including in the pages of the RBFHSS, that advances in professional legislation and in the curricular guidelines for Pharmacy courses in Brazil have highlighted the pharmacist's role in caring for people, families, and the community. In health education, especially since 1997, the World Health Organization has indicated that the pharmacist of the future should be a communicator and educator in its document entitled "Preparing the Future Pharmacist: Curricular Development"[1].

In Brazil, health education is considered a clinical service that "comprises different educational strategies, which integrate popular and scientific knowledge, in order to contribute to increasing knowledge, developing skills and attitudes about health problems and their treatments"[2]. And among the different educational strategies used by pharmacists, the development of educational materials such as folders, booklets and pamphlets has been common. These materials have functioned as an important complement to the guidance provided by the professional, allowing the information to be available at any time and in a convenient place for the user. However, in addition to the availability of health education materials, pharmacists need to consider the potential, greater or lesser, for the target audience to understand the information, taking into account the conditions of linguistic literacy and the different levels of reading proficiency of the majority of the country's population.

According to the Brazilian Institute of Geography and Statistics (2022), 95.4% of Brazilians aged 15 and over are considered literate, i.e. able to read and write[3]. In contrast, the Functional Literacy Indicator (2018) revealed that only 12% of the Brazilian population would be considered proficient, i.e. only a small proportion of people would be able to understand longer written texts, such as a newspaper report[4]. In this context, the use of complex language and specialized terms without any explanation is expected to be a potential barrier to understanding health information for the majority of Brazilians.

We can say that the pharmaceutical profession, from a historical perspective, has always made efforts to make information, concepts, and scientific and technical terminology accessible to both professionals and laypeople, since this is a necessity in the day-to-day work of serving people. An example of this effort is the old newspaper "Gazeta da Farmácia" (available in the collection of the National Library: https://memoria.bn.br/pdf/029548/per029548_1948_00195.pdf). This gazette, published in Rio de Janeiro, had already been warning- since 1947- in its sixth year of existence- about the importance of disseminating, explaining, and getting to know the medical-pharmaceutical vocabulary, in glossaries that the gazette published in series. In this material, which presented itself as "independent, informative and defensive of the interests of Pharmacy", we find a simplified explanation, among various terms, for an item such as ANODINIA, simply and didactically explained as " absence of pain".

Textual simplification and the promotion of Textual and Terminological Accessibility (TTA) have emerged as promising strategies to help health professionals democratize access to knowledge. TTA seeks to expand on the original Plain Language techniques established in the English-speaking world shortly after the Second World War, when the aim was to facilitate communication about health, occupational safety and law with migrant workers

and laborers with limited English proficiency. From the historical basis of Plain Language, TTA emerges as an ideal that is associated with different accessibilities, a principle and a social mechanism that can help readers "climb the ladder" of health literacy, depending on their conditions and needs. In other words, these (inter- and) multidisciplinary linguistic studies seek to transform written material, which can be complex for different people, into a simpler text, using language and syntactic structures that are more suitable for the target reader.[5,6].

The simplification of texts in the field of Pharmacy in Brazil, however, is not a trivial task, and there are always those who criticize this process of facilitation because of what they often refer to as "leveling down", "vulgarizing" or "giving the fish instead of teaching how to fish". But amid studies on Education, Reading and Linguistics, this is a process that can act as a catalyst, a subsidy for individuals, starting from an accessible starting point, to seek and achieve higher levels of literacy[7].

One example was the development of the MedSimples Tool, in 2019, by linguists and computer scientists from the Federal University of Rio Grande do Sul (UFRGS), as a pioneering online system for Brazilian Portuguese, which aims to help anyone dealing with the facilitation of medical texts (https://www.ufrgs.br/textecc/acessibilidade/page/cartilha/). The tool aims to promote accessibility and inclusion by working in a similar way to an automatic translator. The user selects an excerpt or all the text and inserts it into the designated area. They then select the medical topic corresponding to the text and define the recipient's profile (with categories based on characteristics such as level of education, for example). A suggested simplified version of the text will be displayed in a block at the bottom of the page, where terms specific to the medical field will be highlighted in green, with explanations in brackets. Portuguese words considered complex will be identified and replaced by synonyms, highlighted in blue. The user then examines the suggestions made by the tool and can use them or not when finalizing the text. MedSimples is currently being expanded and remodeled, with work underway on its new Oncology module and the production of simplified definitions for several terms[8].

The MedSimples tool, working on specific data hubs for different medical topics, is made up of four different databases: CorPop[1], a collection of words/texts that mirror simple written popular Portuguese; a system that identifies the class of each word in the text to be simplified; an electronic dictionary of synonyms and antonyms to point out alternatives for difficult words; and fin+ally, the database with glossaries specific to the health area in focus, with their definitions simplified by type of reader. MedSimples does not directly and automatically simplify the text, but instead points out a series of improvements to be made, the suitability of which the user will assess according to their objectives.

In relation to fully automatic systems for simplifying texts, it's worth noting that most of them have been produced and organized to work only with materials in English. In general, they are not specially dedicated to the area or themes of Health. Many are generic, such as those trained to simplify scientific articles, article summaries or longer newspaper news texts. Nowadays, these automatic systems have been working with the so-called LLM, Large Language Models, with promising techniques also for producing new systems in Portuguese[9]. The state-of-the-art on the

subject of automatic and semi-automatic simplification systems dealing with Portuguese can be found in Leal and Aluísio (2024)[10].

The use of TTA in the context of the pharmaceutical sciences is still in its infancy, but some initiatives have promoted the joint work of pharmacists and linguists in the production of educational materials on the use of medications in Brazil. At the Federal University of Espírito Santo, the Laboratory for Innovation in Health Care (Linc), in partnership with the UFRGS Research Group on Textual and Terminological Accessibility, has developed a glossary, with simplified language, for technical terms present in antiretroviral medication leaflets[11]. The Federal Pharmacy Council also brought in linguistics researchers, specialists in textual simplification, to help develop educational materials on the use of inhalation devices[12].

Despite the efforts of pharmacists, linguists, computer scientists, educators and others, there is still a long way to go in terms of producing educational materials in accessible language. Increasingly, the recipients and users of the products need to be involved when drawing up health information texts. An example of this can be seen in a recent initiative aimed at assisting pregnant Haitian women in health units in Rio Grande do Sul[13]. These pregnant women, even though they have little proficiency in Portuguese, were able to give their opinions on what would be more or less important to include in the bilingual educational material aimed at them. This shows that it is also possible to include the target reader in the design and preparation of these information supports. It's worth saying that we hope that this type of inclusion, as well as many others, will be new ways of working in Pharmacy communication.

Finally, this editorial would also like to acknowledge the RBFHSS referees who reviewed the articles submitted in 2023 and contributed to the improvement and quality of the journal.

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1   CorPop is available for free at https://www.ufrgs.br/textecc/porlexbras/corpop/

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References

1. World Health Organization. The role of the pharmacist in the health care system: preparing the future pharmacist: curricular development. Vancouver: WHO; 1997.

2. Conselho Federal de Farmácia. Serviços farmacêuticos diretamente destinados ao paciente, à família e à comunidade: contextualização e arcabouço conceitual. Brasília: Conselho Federal de Farmácia; 2016.

3. Instituto Brasileiro de Geografia e Estatística. Pesquisa Nacional por Amostra de Domicílios Contínua. Disponível em: [https://www.ibge.gov.br/]. Acesso em 21 de março 2024.

4. Instituto Paulo Montenegro. Indicador de alfabetismo funcional – O que é Inaf. São Paulo: Instituto Paulo Montenegro; 2018.

5. Finatto MJB, Motta E. Terminologia e Acessibilidade: novas demandas e frentes de pesquisa. Rev GTLex. 2017;316-356. Disponível em: https://seer.ufu.br/index.php/GTLex/article/view/44063. Acesso em 21 de março 2024.

6. Paraguassu L, Finatto MJB. Simplificação, acessibilidade textual e tradução em ambientes multilíngues. Rev GTLex. 2020;3:251-293. Disponível em: https://seer.ufu.br/index.php/GTLex/article/view/50190. Acesso em: 21 mar. 2024.

7. Finatto MJB, Evers A, Stefani M. Letramento científico e simplificação textual: o papel do tradutor no acesso ao conhecimento científico. Letras. 2016;26(52):135-158. Disponível em: https://periodicos.ufsm.br/letras/article/view/25328. Acesso em: 21 mar. 2024.

8. Villar GS, Finatto MJB. Acessibilidade textual e terminológica: novos glossários sobre oncologia para a ferramenta MedSimples. Mandinga-Rev Estud Ling. 2023;7(2):23-42. Disponível em: https://revistas.unilab.edu.br/index.php/mandinga/article/view/1391. Acesso em: 21 mar. 2024.

9. Anjum A, Lieberum N. Automatic Simplification of Scientific Texts using Pre-trained Language Models: A Comparative Study at CLEF Symposium 2023. 2023. Disponível em: https://ceur-ws.org/Vol-3497/paper-242.pdf. Acesso em: 21 mar. 2024.

10. Leal SE, Aluísio SM. Complexidade textual e suas tarefas relacionadas. In: Caseli HM, Nunes MGV, editores. Processamento de Linguagem Natural: Conceitos, Técnicas e Aplicações em Português. 2ª ed. São Carlos: BPLN; 2024. Disponível em: https://brasileiraspln.com/livro-pln/2a-edicao. Acesso em: 21 mar. 2024.

11. Antonucci BL, Rocha KSS, Paraguassu L, Finatto MJB, Araujo DCSSA. Definições em Linguagem Simples para termos técnicos relacionados ao uso de medicamentos antirretrovirais. In: Costa FPC, Castro AM, Leão N, organizadores. 1ª Mostra brasileira de literacia em saúde: Pistas para o SUS e as políticas públicas. Porto Alegre: Editora Rede Unida; 2024.

12. Frade JCQP, Araújo DC, Soprani J, Silva H, Paraguassu L, Nascimento M, et al. Validation of educational materials on inhalation devices: preliminary results. In: FIP Brisbane 2023: Community Pharmacy. Pharmacy Education. 2023;23:61-128. Disponível em: http://dx.doi.org/10.46542/pe.2023.236.61128. Acesso em: 21 mar. 2024.

13. Schneider MD, Monzón AJB. Proposta de um recurso linguístico-terminológico acessível para comunicação entre profissionais de saúde pré-natal e gestantes haitianas. In: Caderno de Resumos do XI Colóquio Internacional de Leitura e Cognição. Disponível em: https://www.unisc.br/site/coloquio2023/docs/Caderno%20de%20Resumos%20Coloquio%202023.pdf. Acesso em: 21 mar. 2024.

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