

Professional practice of pharmacists in private community pharmacies of Minas Gerais, Brazil

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Considering the wide accessibility of population to private community pharmacies, Pharmaceutical Services must be provided comprehensively in such establishments. This research aims to understand how pharmaceutical practice is developed by pharmacists in private community pharmacies of Minas Gerais, Brazil. Qualitative descriptive research was performed. Data were collected through online questionnaires (n= 113) and interviews (n= 12) with pharmacists working in such institutions and they were analyzed according to Bardin's Content Analysis, with the contribution of software IRAMUTEQ. Two main categories of analysis were formed: "Professional training of pharmacists and the working conditions in private community pharmacies" and "Pharmaceutical Services in private community pharmacies of Minas Gerais". Pharmacists understood the population's healthcare as the main purpose of their professional practice. However, the routine focused on the technical management of medicines and the lack of private rooms hindered the provision of qualified assistance. Furthermore, commercial strategies were identified as motivators for ethical dilemmas and conflicts among the work team. It is suggested that the growth of the pharmaceutical retail market in Minas Gerais should be accompanied by favorable conditions for the production of care, so that pharmaceutical practice in these institutions can be developed in an ethical and responsible way.

Keywords: Pharmacy. Pharmacists. Professional practice. Qualitative research.

INTRODUCTION

Pharmaceutical Services (PS) are divided into technical and clinical management of medicines. The first one is operationalized from a multiprofessional perspective through the technical-managerial actions of research, production, selection, programming, acquisition, storage, distribution, prescription and dispensing. The second one is carried out exclusively by pharmacists and it is supported by the philosophy of Pharmaceutical Care,

so it aims to promote the health of individuals through the safe management of pharmacotherapy (Hepler, Strand, 1990; Correr, Otuki, Soler, 2011).

Private community pharmacies are the most numerous healthcare institutions in Brazil and are therefore considered accessible and strategic locations for PS' development (Melo *et al.*, 2021). These institutions are under the technical responsibility of pharmacists, and their operation is subjected to Federal, State, and Municipal laws, as well as sanitary norms, such as the Good Pharmacy Practice (Brasil, 2009; 2014).

The main reasons that motivate the public to visit these places are the need to purchase prescription or non-prescription medicines. Patients also seek treatment and health advice at these institutions, especially in regions where there is lack of access to public health

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services (Melo *et al.*, 2021; Paiva, Brandão, 2014; Coulibaly *et al.*, 2017). In this sense, it is important to ensure that PS are efficiently exercised in private community pharmacies.

However, there are obstacles that prevent the complete development of PS in these institutions. Examples of barriers that hinder pharmaceutical performance in private community pharmacies are: inadequate infrastructure to provide proper pharmaceutical care, accumulation of technical-managerial functions by pharmacists, stimulation of unsafe medicine consumption and low technical qualification of the staff, which is generally composed of pharmacy assistants, managers and owners who have no training in the health area (Tomassi, Ribeiro, 2012; Hipólito Júnior *et al.*, 2017; Paiva, Brandão, 2014; Oliveira *et al.*, 2017; Mota *et al.*, 2020).

This research is part of a Master's Degree dissertation and was outlined in order to understand how pharmaceutical practice is developed by pharmacists working in private community pharmacies in the state of Minas Gerais, Brazil. This scenario was chosen because it was found only one recent reference about pharmacists' work routine in such institutions at the state when searching in databases (Mota *et al.*, 2020). In addition, the information that Minas Gerais ranks third in the Brazilian ranking of private community pharmacies was taken into account (Sincofarma Minas Gerais, 2021).

MATERIAL AND METHODS

Study design and ethical approval

This is a qualitative and descriptive study. In the databases searched for this study, the authors did not find any recent qualitative studies investigating private community pharmacy's practice in Brazil. From the study design, it was possible to describe the phenomenon of interest from the perspective of pharmacists and to present how these subjects interact with the analyzed scenario (Minayo, 2014; Gil, 2021). This research was approved by the UFJF's Research Ethics Committee on August, 2021 (CAAE: 50970021.9.0000.5147). The COREQ checklist was used as a guideline.

Study setting

Located in the southeastern region of Brazil, Minas Gerais is the second most populous state in the country, with 20.7 million inhabitants. The state has 853 municipalities, of which 820 are classified as small-sized, 29 are medium-sized and 4 are large-sized (IBGE, 2010; 2021). In 2020, there were 8,951 private community pharmacies in Minas Gerais, which represented 11.0% of these establishments in Brazil (CFF, 2021; CRF-MG, 2021). In December 2021, there were 28,153 pharmacists of the state registered with the Regional Pharmacy Council of Minas Gerais (CRF-MG), of which 10,061 worked in private community pharmacies.

Study participants

Pharmacists working in private community pharmacies in small, medium and large cities in Minas Gerais participated in the study. In the first phase, 113 pharmacists responded completed an online sociodemographic questionnaire.

The eligibility criteria to be interviewed – the second stage of the research – were as it follows: pharmacists who had answered the questionnaire completely; who were working in private community pharmacies and were not owners nor business partners of these institutions; they should have had at least six months of experience in the current job position and had to be graduated in 2009 or later. After that, 38 professionals were eligible and were then invited to participate in the interviews. 12 pharmacists agreed to do so.

Data collection

To invite pharmacists to participate in the study, CRF-MG and the Pharmacists Association of Minas Gerais (AMF) publicized the research by sending electronic invitation letters to pharmacists working in private community pharmacies in Minas Gerais. The invitation letter was also spread on social networks and chat applications and it was personally delivered by Imbelloni LSM to pharmacists of the community

pharmacies to which she had access. Data were collected from September 2021 to July 2022.

The invitation letter provided a link to a sociodemographic questionnaire created in Google Forms application. The pharmacists interested in participating in the research electronically signed the Informed Consent Form (ICF).

After signing the ICF, the participants had access to a questionnaire containing the following items: name; gender; age; whether the participant was a pharmacist in private community pharmacies in Minas Gerais; how long the pharmacist had been working in the current job; job position held; type of community pharmacy (chain or independent); staff members; graduation year; city in Minas Gerais where the pharmacist worked.

In order to facilitate the recruitment of pharmacists according to the eligibility criteria outlined for interviewees, the questionnaire's structure was designed to redirect the participants to an acknowledgement page in case they selected options that excluded them from the aforementioned criteria. For those who met all the requirements, the last page of the questionnaire included an invitation to take part in the interviews. Those interested were asked to provide their email or cell phone number so that the researchers could schedule the interview. For those who did not feel comfortable with being interviewed, the option "I prefer not to participate" was provided.

The data collection instrument chosen for the second phase of the research was the semi-structured interview, supported by a pre-designed script (Minayo, 2014; Gil, 2021) that included six questions aimed at answering the study objective. The script is available at the Supplementary Information Section. Both sociodemographic questionnaire and interview scripts were pre-tested with pharmacists who met the eligibility criteria in order to identify gaps in the content of the questions, as well as the relevance of the questions to the study objective, and to estimate the average length of participation (Gil, 2021).

Twelve pharmacists agreed to be interviewed by Imbelloni LSM, between September 2021 and July 2022. The interviews were conducted remotely due to biosecurity measures imposed by the COVID-19

pandemic and they lasted an average of 60 minutes. The interviewees had the choice of using online meeting tools or chat applications and they could also choose whether or not to turn on their cameras. The twelve respondents preferred to participate in the interviews via chat applications with their cameras turned off.

At the beginning of each interview, the interviewer described the study objectives and its scientific contributions, emphasizing that participants could stop the activity at any time if they wished. It was made clear to the interviewees that audio would be recorded for later transcription and analysis. Then, the researcher introduced herself to the pharmacists, providing relevant information about her academic credentials and her previous personal experience working in private community pharmacies. This was done to create a comfortable environment for data collection and to bring the researcher closer to the interviewees' universe.

It is recognized that the researcher's influence on the responses of the participants is inherent to the interview method of data collection (Anderson, 2010). To prevent potential bias arising from such an assumption, the interviewer avoided expressing her own opinions on the topics discussed during the interviews, leaving the participants free to express their opinions. The interviewer limited her interventions to when it was observed that the pharmacist mentioned information that could contribute to a deeper understanding of the phenomenon under study. She also intervened when the respondent deviated from the topic addressed by the questions. As a qualitative study, the number of participants was limited by the saturation criteria.

Saturation criteria

The saturation criteria were determined by checking indexes provided by the IRAMUTEQ 0.7 alpha 2 software – *Interface de R pour les Analyses Multidimensionnelles de Textes et de Questionnaires* – and also verifying the compliance of the corpus to the precepts proposed by Laurence Bardin (2015).

Interviews were transcribed no later than one week after they were conducted. Transcriptions were done by Imbelloni LSM. This helped to assimilate the collected data,

as transcribing the material was considered a first reading of the content, which was done repeatedly as more interviews were added to the corpus. This process revealed that the first 8 interviews had more similar than divergent notes.

IRAMUTEQ software allows to qualify the representativeness of the material through the Text Segment Retention Index. The corpus is considered to be representative if the index is greater than or equal to 75.0% (Camargo, Justo, 2016). The data saturation can be identified with the help of Hapax Coefficient, which indicates the percentage of words, among the corpus, whose frequency is equal to 1. It is suggested that the lower the value found, the greater the homogeneity of the corpus and that there is a minimum central point of similarity in the content. Considering that repetitiveness is a guiding principle for data saturation, Hapax Coefficient's values less than or equal to 5.0% can indicate that the criterion is met (Camargo, Justo, 2016; Martins *et al.*, 2020).

Both Text Segment Retention Index and Hapax Coefficient from the corpus of 8 interviews were considered unsatisfactory (Table I). Then, 4 more interviews were conducted, transcribed and read.

TABLE I – Identifying data saturation through IRAMUTEQ indexes

| Number of interviews | Text Segment Retention Index (%) | Hapax Coefficient (%) |
|----------------------|----------------------------------|-----------------------|
| 8 | 67,24 | 5,13 |
| 12 | 89,25 | 3,89 |
| Reference value | $\geq 75,00$ | $5 \leq \% > 0$ |

Source: The authors, with data extracted from IRAMUTEQ 0.7 alpha 2 (2023).

The transcriptions of the 12 interviews were inserted into the software and both indicators under analysis were considered satisfactory (Table I). Given these results, a reading of the material was done to indicate if the corpus' content met the research objectives, as recommended by Bardin (2015). Once the Text Segment Retention Index, the Hapax Coefficient and the pertinence of the content

of the corpus were deemed to be adequate, data collection was completed.

Data analysis

The technique used for data analysis was Bardin's Content Analysis. It was carried out with the help of IRAMUTEQ 0.7 alpha 2 software, which is a free electronic tool for computerized text processing developed with the support of the R software and based on Python language (Bardin, 2015; Camargo, Justo, 2016).

It is argued that this tool provides a greater methodological rigor to qualitative research, since it presents answers anchored in statistical procedures and offers multiple alternatives for processing textual data (Camargo, Justo, 2016). As a textual analysis software, IRAMUTEQ is compatible with the phases of content analysis proposed by Bardin (2015): 1) pre-analysis, 2) material exploration – coding and categorization, and 3) treatment of results and interpretation. Each one of them is described below.

Pre-analysis consists of organizing the corpus of interviews. In order to protect the identity of the pharmacists, all documents identifying them were coded with the capital letter 'F' (representing the word *farmacêutico* – pharmacist, in Portuguese), followed by the Arabic number referring to the order in which they were interviewed (1, 2, 3...) and the lower-case letters 'p' (representing the word *pequeno* – small, in Portuguese), 'm' (medium) or 'g' (representing the word *grande* – large, in Portuguese), related to the population size of the city in which they worked, according to the Brazilian Institute of Geography and Statistics classification (IBGE, 2010; 2021).

After transcribing the interviews' audio recording, the texts were edited and configured to follow the standards required by IRAMUTEQ in order to avoid errors when processing the material's data (Camargo, Justo, 2016). After preparing the corpus, the authors read the material several times so they could identify and discuss the themes that emerged in the interviews. This activity also helped them to formulate hypotheses and indicate possible directions for textual analysis (Bardin, 2015). Procedures for identifying the saturation criteria were also carried out during this phase.

After completing the pre-analysis, the corpus was coded and categorized by Imbelloni LSM and Farah BF with the help of IRAMUTEQ. Corpus' codification consisted in dividing it into Registration Units, which are words that translate the main topics discussed in the transcribed interviews, and Context Units, which are text segments from the corpus that give more meaning to the Registration Units (Bardin, 2015).

For this purpose, the Descending Hierarchical Classification was operationalized in IRAMUTEQ (Figure 1). This function classifies the codes into exclusive classes, constructing a dendrogram that shows the degree of relationship established between the categories. The corresponding Registration Units for each class are shown in the graph and the software allows the researcher to check which are the Context Units for each category (Camargo, Justo, 2016).

All Context Units classified under the categories were read to broaden the understanding about these groups. The quotes presented in the Results and Discussion section are those that the authors judged to be most relevant to the debate about the topics raised by the categories.

Because IRAMUTEQ is limited to data processing, the final phase of Bardin's Content Analysis consisted of researchers' interactivity with the corpus in order to analyze responses generated by the software. The reading of the corpus, graphs and diagrams by the authors

helped them to interpret and to infer the content. (Bardin, 2015; Camargo, Justo, 2016). These interpretations were discussed in the light of the published literature on community pharmacy practice. Such a process enriched data analysis as different perspectives on the corpus were shared and considered.

RESULTS AND DISCUSSION

Sociodemographic profile of pharmacists and characterization of the private community pharmacies

38 pharmacists completed the questionnaire and met all the eligibility criteria to participate in the interviews (Table II). From these, 12 pharmacists agreed to be interviewed.

Table II reveals that pharmacists were mostly female. This result confirms the general report on Brazilian pharmacists published in 2015 by the Federal Pharmacy Council, which indicated that 67.5% of the pharmacy class consisted of women (Serafim, 2015). The pharmacists' profile was made up by young recent graduate pharmacists, a result that is similar to the one presented by a study developed in private community pharmacies from the metropolitan region of Belo Horizonte, Minas Gerais (Mota *et al.*, 2020).

TABLE II – Sociodemographic data of the pharmacists who participated in the study, n = 38, Minas Gerais, Brazil, 2022

| | Variable | n | % |
|------------------------------|----------|----|------|
| Gender | Female | 34 | 84 |
| | Male | 4 | 16 |
| Age (years) | 24 - 27 | 6 | 16 |
| | 28 - 31 | 15 | 39,5 |
| | 32 - 35 | 9 | 24 |
| | > 35 | 8 | 21 |
| Time upon graduation (years) | 1 - 5 | 11 | 29 |
| | 6 - 10 | 19 | 50 |
| | 11 - 14 | 8 | 21 |

TABLE II – Sociodemographic data of the pharmacists who participated in the study, n = 38, Minas Gerais, Brazil, 2022

| | Variable | n | % |
|---|----------------------------------|----|------|
| Job position | Technical responsible pharmacist | 29 | 76 |
| | Pharmacist and manager | 6 | 16 |
| | Substitute pharmacist | 2 | 5 |
| | Assistant pharmacist | 1 | 3 |
| Time working in the current job (years) | 0,5 - 5 | 31 | 81,5 |
| | 6 - 11 | 7 | 18,5 |
| Type of private community pharmacy | Chain | 24 | 63 |
| | Independent | 14 | 37 |
| City size ^(a) | Small | 22 | 58 |
| | Medium | 8 | 21 |
| | Large | 8 | 21 |
| Community pharmacy work team ^(b) | Pharmacy attendant | 36 | 95 |
| | Cashier operator | 20 | 53 |
| | Other pharmacists | 15 | 39 |
| | Owners | 16 | 42 |
| | Managers | 8 | 21 |
| | Others ^(c) | 3 | 8 |

^(a) Small ≤ 100.000 inhabitants; medium $100.001 \geq x \leq 500.000$ inhabitants; large ≥ 500.001 inhabitants (IBGE; 2010, 2021).

^(b) The percentages are in relation to the frequency of reports in the total of 38 institutions in the survey.

^(c) Job positions cited only once by the pharmacists.

Source: The authors (2023).

Most of the pharmacists (n= 24, 63%) worked in chain private community pharmacies (Table II). These are institutions that are part of a group of facilities that operate under the same management model. In the last decade, this type of community pharmacy has grown in Brazil (Serafim, 2015; Hipólito Júnior *et al.*, 2017; Oliveira *et al.*, 2017).

Among the group, 15 professionals (39%) reported working with other pharmacists. In general, the team included pharmacy assistants, cashiers, owners, and managers. There is no law in Brazil that specifies the basic schooling required, except for the pharmacist, either to work in a private community pharmacy or to

be the owner of such establishments (Melo *et al.*, 2021). Hence, this explains why pharmacists were the only health professionals in the pharmacies work teams.

The analysis of the corpus through IRAMUTEQ

The general corpus consisted of the 12 interview transcriptions in a single file of 22 pages. IRAMUTEQ divided the corpus into 372 text segments, of which 332 (89.25%) were retained for software's analyses.

Through the Descending Hierarchical Classification (DHC), a dendrogram divided into six classes and two major categories was generated (Figure 1). Among the

options, class 2 was the one with the most classified text segments (n= 66), representing 19,9% of the corpus content. The structure of the dendrogram indicates

that class 2 is the origin of other classes. Therefore, the content it addresses will also be mentioned on the other five clusters.

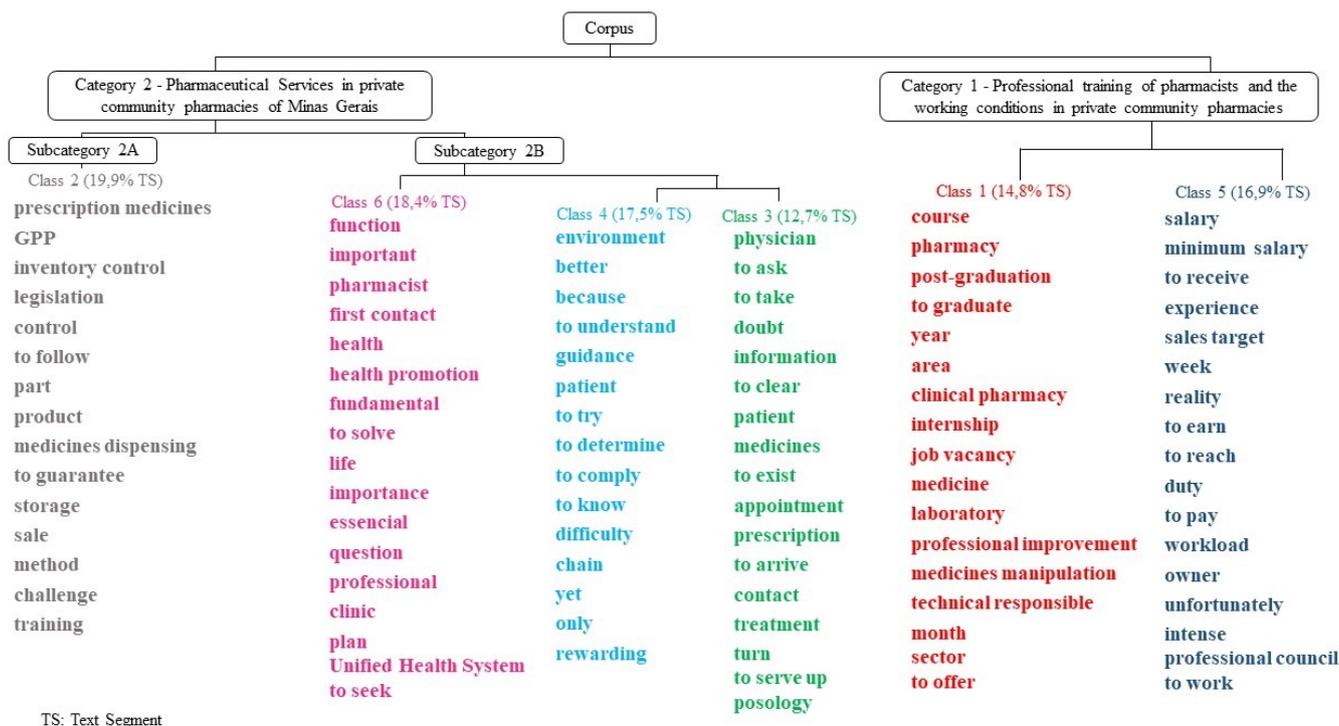


FIGURE 1 – Descending Hierarchical Classification of the *corpus*.

Source: Edited and translated by Imbelloni LSM from the original dendrogram generated in IRAMUTEQ 0.7 alpha 2 (2023). The original dendrogram is available at the Supplementary information section.

The farthest branch of the dendrogram is on the right, forming Category 1, which is composed of classes 1 and 5. The most significant Registration Units for class 1 were “course”, “pharmacy”, “post-graduation” and “to graduate”, referring to the professional education of pharmacists. An example of a Context Unit categorized in class 1 is: “*I graduated in 2011 (...). I have a postgraduate degree in Public Health (...). I started another postgraduate degree in Pharmacology, but I interrupted the course because I started the Master’s in Medicines and Pharmaceutical Services*” (F3m). For class 5, the emphasis is on the words “salary”, “minimum salary”, “to earn” and “experience”, related to the working conditions of pharmacists in private community pharmacies, as contextualized by the quote:

“We work hard, the pharmacy makes more and more money, but there is no raise in our salaries (F12p)”. In this sense, Category 1 was entitled as “Professional training of pharmacists and the working conditions in private community pharmacies”.

As for Category 2, on the left side of the dendrogram, it was divided into two subcategories. Subcategory 2A contains Class 2, whose most relevant words were “prescription medicines”, “GPP” (Good Pharmacy Practice), “inventory control” and “legislation”. This vocabulary is allusive to the pharmacists’ work routine in the healthcare settings under study and to the definitions of Good Pharmacy Practice given by the professionals, as it follows: “*GPP happens in the routine when we practice and ensure that legislation is followed (...)*”.

It corresponds to ensure the quality [of medicines, of the clinical pharmacy services], to train attendants, to perform our duties as pharmacists in the correct way, regarding prescriptions, prescription medicines (...), to take responsibility over the patient's health" (F12p).

Subcategory 2B was split into classes 6, 4 and 3. For class 6, the following words emerged: "function", "important", "pharmacist" and "first contact", referring to the strengths of the pharmacists' work in private community pharmacies, as mentioned by an interviewee: *"The role of the pharmacist in the community pharmacy is this: to be the first healthcare professional to guide the patient" (F9m).* Regarding class 4, the most significant vocabulary was "environment", "better", "because" and "understand". They are linked to the implementation of the Good Pharmacy Practice by professionals in their workplaces: *"The pharmacist is essential to achieving Good Practice in the pharmacy" (F10p).* Class 3 brings up information about how pharmacists mediate the relationship of patients with medicines, highlighting the terms "physician", "to ask", "to take" and "doubt", as the example *"Sometimes the patient comes to the pharmacy with a few doubts about medicines because they went to the physician's appointment but forgot to ask him questions. I think it's important for the pharmacist to be the intermediary between the physician and the patient (F2p)."* Considering the codes classified in the mentioned subcategories, Category 2 was called "Pharmaceutical Services in private community pharmacies of Minas Gerais".

Category 1 - Professional training of pharmacists and the working conditions in private community pharmacies

In Brazil, the undergraduate course of Pharmacy has a minimum of 4,000 hours divided into three axes: Healthcare, Technology and Innovation in Health, Health Management. Graduates of this course are awarded the title of Generalist Pharmacist, which allows them to work in multiple areas regulated for their profession, such as clinical analysis, industry, hospital pharmacy and pharmaceutical services (Brasil, 2017).

Nevertheless, it is important to emphasize that Clinical Pharmacy only became a significant part of the Brazilian

undergraduate pharmacy curriculum in 2017 (Brasil, 2017). Considering that literature suggests a profile of young pharmacists – recent graduates – working in Brazilian private community pharmacies (Oliveira *et al.*, 2017; Mota *et al.*, 2020), a scenario consistent with the one revealed by this research, it indicates that there are professionals in the market whose contact with the clinical field during their academic training may have been insufficient. The speech of F5g, who graduated in 2019, illustrates this: *"I think we leave [higher education] very unprepared. I felt a lot of difficulty when patients came in asking for indications [of medicines] (...). I am currently a postgraduate student in Clinical Pharmacy and Pharmaceutical Care and it helps me a lot" (F5g).* Therefore, it is understood that the knowledge acquired through permanent and continuing education initiatives leads to the updating of professional performance (Hipólito Júnior *et al.*, 2017).

Other pharmacists reported their participation in postgraduate courses and professional development courses. A predominant search for courses related to Pharmaceutical Services, Pharmaceutical Care and Clinical Pharmacy was noted: *"I have a postgraduate degree in Clinical Pharmacy and Pharmaceutical Care and I am currently a postgraduate student in Evidence-Based Clinical Pharmacology" (F8p); "I have a postgraduate degree in Clinical Pharmacy and Pharmaceutical Care and (...) I have attended professional development courses on vaccines, injectables and coaching, which help me to assist the public and to manage the pharmacy work team" (F9m).* The preference for such topics may be related to the regulation of the clinical attributions of Brazilian pharmacists in 2013 and the expansion of clinical pharmaceutical services offered in private community pharmacies (Brasil, 2013a; 2013b; Melo, Frade, 2016; Oliveira *et al.*, 2017).

The pharmacists' performance in private community pharmacies should be oriented towards healthcare and health promotion, in accordance with the population's needs, since it is from them that pharmaceutical care arises. For this reason, educational initiatives must encourage reflection on the relational, dialogical and responsible perspectives involved in healthcare settings.

However, it was observed that being a health professional is not often compatible with the market's

expectations for the professional practice of pharmacists, as stated by the interviewees: “[the pharmacy is] really a market that only aims at profit. It’s not about health (...), you are just a salesperson who has to achieve goals, because they will improve your salary” (F1p); “In the pharmacy, a pharmacist (...) will grow as a manager (...). The pharmacy profession does not provide an opportunity to grow as a pharmacist, at least in community pharmacies” (F7g).

The quotes describe situations related to a phenomenon called the commercialization of healthcare, in which medicines are defined only by their financial value (FIP, 2013). Such a process is incompatible with the proposal of Pharmaceutical Services, since this field includes activities that allow to supervise the medicine’s quality and the follow-up of patients under pharmacotherapy to achieve the efficiency of their health treatment (Correr, Otuki, Soler, 2011; FIP, 2013; Melo, Frade, 2016).

Based on the aforementioned excerpts, it was found that, in private community pharmacies, pharmacists assume attributions in administrative and commercial management of these institutions. This reduces their availability to assist patients, leading to a dissatisfaction with such professional practice that is in conflict with healthcare. A work process that is not in line with the moral principles, interests and competencies of professionals creates an environment of disappointment. This situation can affect pharmacists’ motivation and make it difficult for them to find meaning in their work (Morin, 2001; FIP, 2013).

Other aspects stemming from the commercialization of healthcare are the challenges related to sale goals and remuneration (FIP, 2013), as mentioned by pharmacist F1p. These features were also highlighted by other interviewee: “Sometimes a customer comes to the pharmacy to buy a nail polish and you have to offer them a vitamin supplement that they probably don’t need (...). Unfortunately, most companies don’t pay the [minimum] wage. I don’t earn the minimum wage” (F12p).

Sales goals are strategies typically used in business that encourage employees to sell a certain amount of products on a weekly or monthly basis in order to increase company profits and to add commissions to the

employee’s paycheck (Gabriel *et al.*, 2019). As a result, there is an incentive for consumers to purchase medicines and related products, such as vitamin supplements, without carefully assessing their need and disregarding health risks associated with inappropriate use of these products. Hence, these tactics are contrary to the Good Pharmacy Practice principles (Brasil, 2009; 2022).

It is possible that, in reporting their discomfort in practicing the sales goals strategy, pharmacists are aware of the violations of ethical principles of beneficence and non-maleficence, which refer to valuing the welfare of others, minimizing harm to the health of individuals and respecting human dignity (Schröder-Bäck *et al.*, 2014). In this case, it should be noted that the commercialization of healthcare also implies a loss of autonomy for pharmacists (FIP, 2013). Then, these professionals tend to follow the commercial policies established by the companies, taking the risk of compromising the health of clients of private community pharmacies in order to maintain their monthly income.

In addition, when F12p reports not receiving the minimum wage recommended for this professional category, it is understood that there is a violation of the Brazilian Pharmaceutical Code of Ethics (Brasil, 2022). Nonetheless, data from the Brazilian economy and labor market show that, between 1996 and 2019, the average unemployment rate in the country was 9.4% (Borges, 2022). Thus, in this context, having a job guarantees an income that ensures the survival of individuals and their families despite being below the established level.

Even though acquiescence to such inadequate salary is understandable in the presented context, when it is naturalized, it leads to devaluation of the pharmaceutical workforce. Therefore, it is assumed that the collective effort is essential to fight this practice. In this logic, there is the protagonism of the said professional class, whose members should oppose precarious salaries, as claimed by one interviewee: “Because I was not receiving the minimum wage, I left [my job] and promised myself to go back to the labor market if I received the minimum wage. To receive less than this, I would not work in a community pharmacy again” (F11m). It is also necessary that the class entities supervise companies, punishing those that do not comply with the recommended wage.

Furthermore, the sales target strategy can affect the relationship between pharmacists and the work team: *“I was training an attendant that (...) is stimulated because of the need to achieve the sales goal, so [the attendant] wants to sell regardless of knowing what she is selling” (F1p); “Most of the time the manager is not a pharmacist, so they always aim at the sale (...), they always aim at the customer leaving pharmacy with the medicine, but we have laws to follow (...), the manager always wants to go over sanitary rules” (F11m).*

The reasons for divergence between attendants, managers and pharmacists were not explored in the interviews. Yet, literature states that the interaction between these work team members is hindered by the different purposes assigned to their positions. While pharmacists value services focused on population’s health, the others see themselves as retail professionals, whose goal is to maximize sales for the benefit of the company’s financial returns (Paiva, Brandão, 2014).

To establish cooperative and respectful relationships among employees, it is essential that pharmacists undertake efforts towards the team’s health education. As pharmacy attendants, managers and owners are part of the development of Pharmaceutical Services in these settings, they must understand that, despite the activities assigned to each one of them, there is only one objective to be reached: provision of healthcare to the community.

The debate about the team’s interpersonal relationship raised aspects concerning interaction between pharmacists and community pharmacy owners. The speeches focused on the implementation of rapid tests for the detection of coronavirus: *“The owner wanted me to wear a fabric mask [to perform the COVID test on patients], [the owner] did not see the need for me to have the disposable triple mask (...), [the owner] does not agree that I should have intervals between the scheduled tests in order to sanitize the room” (F1p); “For me to do COVID tests [on patients], I had to buy masks and safety eyeglasses with my own money (...), after insisting a lot, [the owners] provided, gloves and disposable lab coats, because we didn’t even have that in the beginning” (F12p).*

The manuals written by the Ministry of Health and the Federal Pharmacy Council recommend that facilities must provide PPE (Personal Protective Equipment), such

as N95 masks or equivalent, disposable gloves, lab coats and safety eyeglasses, for pharmacists to perform COVID testing in private community pharmacies. The protocols for environmental disinfection to be carried out before, during and after the exams are also specified (Brasil, 2020).

Occupational safety is part of Good Pharmacy Practice in private community pharmacies (Brasil, 2009). The lack of protective equipment and its replacement by similar products that do not provide the appropriate safety to professionals in addition to the noncompliance with the procedures for cleaning tools and environments affects the service quality. The situations described by the pharmacists may lead to contamination, tests with false positive or negative results and misdiagnosis (Brasil, 2020).

In view of the above, it can be said that, although the expansion of services provided in private community pharmacies is an important achievement for this professional class, it is necessary that such progress is accompanied by the inspection of health authorities and professional entities. Since pharmacists are technically responsible for the job, they also cannot be silent in the face of the denial of their rights.

Category 2 - Pharmaceutical Services in private community pharmacies of Minas Gerais

As previously shown in Figure 1, category 2 was divided into two subcategories. Subcategory 2A refers to discussions concerning pharmacists’ work routine and also the Good Pharmacy Practice in private community pharmacies in Minas Gerais. Subcategory 2B reflects on the participants’ perceptions of the strengths and challenges for the development of Pharmaceutical Services in these institutions.

Subcategory 2A - Work routine and the Good Pharmacy Practice in private community pharmacies of Minas Gerais

In order to present pharmacists’ work routine in private community pharmacies in Minas Gerais, Table III was constructed based on interview excerpts related to this topic. Activities were classified according to the proposal of Correr, Otuki and Soler (2011). From what was disclosed by the cited authors, it was understood

that PS includes technical and clinical management of medicines. The former is delimited to managerial, administrative and technical actions relevant to the

supply of these products, as well as to the operation of the institutions under study. The latter corresponds to the assistance attributions of pharmacists.

TABLE III – Activities developed in private community pharmacies by pharmacists (n=12) who participated in the interviews, Minas Gerais, Brazil, 2022

| Type of actions | Example | Interview excerpts |
|-----------------|--|---|
| Managerial | Responsibility for sanitary documentations | “When we need to renew the documentation (...) that the Health Surveillance requires, I take responsibility.” (F11m) |
| | Supervising the staff | “I supervise the service of [other] pharmacists to see if they are doing it properly.” (F7g) |
| | Training pharmacy attendants and interns | “I train the attendants on attendance, how to approach the patient, drug interactions, pharmaceutical legislation and its updates.” (F6g) |
| Administrative | Operating the institution cashier | “I keep the place organized and cleaned and I also operate the cashier.” (F9m) |
| | Organizing and cleaning | |
| | Issuance of invoices | “[At the pharmacy] I also do the issuance of invoices of the prescription medicines.” (F2p) |
| Technical | Selling medicine | “I sell medicines (...), I check prescriptions and I also do the inventory control.” (F8p) |
| | Inventory control | “I do product storage, inventory control, (...) I monitor the temperature and humidity of the pharmacy.” (F9m) |
| | Forwarding of drugs discarded by the population for incineration | “We have a medicine disposal program and I am responsible for forwarding these medicines for incineration.” (F11m) |
| | Maintenance of SNGPC ^(d) | “I do the SNGPC maintenance, I have to write down the standard procedures for every activity that is done in the pharmacy.” (F12p) |
| | Elaborating the Standard Operating Procedures | |

TABLE III – Activities developed in private community pharmacies by pharmacists (n=12) who participated in the interviews, Minas Gerais, Brazil, 2022

| Type of actions | | Example | Interview excerpts |
|--|------------|--|--|
| Clinical management | Assistance | Capillary blood glucose testing | “I perform the clinical pharmacy services of capillary glucose, blood pressure and COVID testing.” (F1p) |
| | | Systemic blood pressure measurement | |
| | | COVID testing | |
| | | Injectable application | “[I do] injectable applications, and when dispensing medicines, we give pharmaceutical advice.” (F4p) |
| | | Medicines dispensing | |
| | | Pharmaceutical advice (at the counter) | “I attend patients and I do pharmaceutical counseling [at the counter], I perform the blood pressure measurement, capillary blood glucose, earlobe piercing.” (F10p) |
| Earlobe piercing for earring placement | | | |

^(d) SNGPC: Sistema Nacional de Gerenciamento de Produtos Controlados.

Source: The Authors (2023).

The activities listed as part of the respondents' routine are in accordance with the health regulations established in Brazil by ANVISA, the Brazilian National Health Surveillance Agency, as well as with the rules for professional practice established by the Federal Pharmacy Council (Brasil, 2009; 2013a; Jubé, 2020).

The technical and clinical management of Pharmaceutical Services share the objective of promoting population's health through planned actions to ensure the safety and quality of the products and services offered in pharmacies. Therefore, one of the guiding principles of Good Pharmacy Practice is the complementarity between managerial, administrative, technical and care activities (Brasil, 2009).

From the reading of Table III, it is possible to affirm that activities corresponding to the technical management of PS cover most of the work routine of the interviewees. Other studies developed in different Brazilian states revealed similar profiles of pharmaceutical attributions (Hipólito-Júnior *et al.*, 2017; Oliveira *et al.*, 2017; Mota *et al.*, 2020). Thus, there is a decrease in the time devoted to assistance attributions, which would be directly

responsible for the therapeutic bond between pharmacists and users of private community pharmacies.

The distancing of pharmacists from the provision of care in community pharmacies is a historical process. It began with the rise of large-scale industrial production of medicines, which culminated in the removal of these professionals from functions traditionally assigned to them, such as the handmade production of medicines (Hepler, Strand, 1990).

These situations converge in the so-called transitional phase of the history of Pharmacy, a period defined by the priority given to administrative, managerial and technical functions related to the provision of medicines, instead of care actions. This milestone is also associated with the phenomenon of the commercialization of healthcare, because it was at this time that society began to conceive pharmacists as sellers of medicines produced by industry (Hepler, Strand, 1990; FIP, 2013).

The events reunited into the transitional phase seem to be still in progress in the studied scenario as shown by the lesser focus on the clinical management of medicines. This context reinforces the stigma of the pharmacist as a

medicine technician, hindering the relationship between such professionals and the community that frequents private community pharmacies.

In spite of not using observation as a data collection instrument in this research, it is possible to mention that the typical infrastructure of private community pharmacies tends to make it difficult for society to perceive the pharmacist as a healthcare provider. In general, such establishments in Brazil consist of large environments where it is easy to access over-the-counter medicines, health products and cosmetics, which are arranged on shelves outside the counters. These counters separate consumers from the prescription medicines storage area. This structure benefits the commercial interests of the community pharmacy, since it stimulates consumption and also results in quick contact with the public (Tomassi, Ribeiro, 2012; Melo *et al.*, 2021).

Besides, Table III shows that assistance actions, such as attending to the public and providing pharmaceutical advice, are usually performed by pharmacists at the counters. When performed in these spaces, clinical management is characterized by the lack of privacy and by disturbances (e.g. side conversations) that interfere in the communication between professionals and service users (Mesquita *et al.*, 2013). This context is reinforced by an insufficient accessibility to private care rooms in community pharmacies, as identified in the literature (Tomassi, Ribeiro, 2012; Mesquita *et al.*, 2013; Hipólito Júnior *et al.*, 2017; Mota *et al.*, 2020) and confirmed by the pharmacists interviewed: *“In the pharmacy where I work, we only have the dispensing of medicines, we don't have any rooms for the patients' private care”* (F9m); *“In the pharmacy where I work there is no private room for clinical pharmacy services”* (F8p).

Another critical aspect for improving pharmaceutical care is pharmacists' perception of how they should manage their professional practice. During the interviews, it was observed that the respondents were aware of the importance of following the guidelines dictated by Good Pharmacy Practice (Brasil, 2009): *“I understand that GPP serves to have medicines within the expiration date so that the patient is not harmed, [we should maintain] the cleanliness of the pharmacy so it will be a good place to receive the patient (...). It is to know how to serve the*

patient who goes there to get information, to solve doubts, to explain how the medicine works, how it affects the body, how the patient will take it” (F5g); *“[GPP means] following the current health legislation. The pharmacy is not just any commerce (...), it is a health institution (...), the pharmacist should be aware of everything that happens inside the pharmacy (...) so that we can bring health and quality of life to those who are there looking for healthcare”* (F9m).

Brazil's specific resolution on GPP was approved by ANVISA in 2009. The document contained mainly sanitary and technical requirements for the operation of community pharmacies and for the medicines and health products trading. There was little detail on the principles of pharmaceutical care (Brasil, 2009). In 2020, the resolution was reviewed and, influenced by the 2013 regulations under clinical pharmacy services, the document suggested that patient healthcare must be the primary purpose of the organization and operation of such facilities (Jubé, 2020).

When GPP places patient care at the forefront and is understood by pharmacists as a model to be followed for ensuring the well-being of individuals and the quality of pharmacotherapy, it contributes to the fight against the commercialization of healthcare. Moreover, these are also elements that might enhance the importance of pharmacists to the health field.

Subcategory 2B - Pharmaceutical Services in private community pharmacies of Minas Gerais: strengths and challenges

The main institutions where population has access to medicines are private community pharmacies. These places provide the encounter between patients and pharmacists. Their relationship depends, among other aspects, upon the aforementioned health professional attending patients' individual needs.

In this regard, the interviewees indicated that pharmaceutical care and interaction with the public are key features of their professional performance in community pharmacies: *“[I consider important] the assistance, the counseling... because you solve doubts, you make the person adhere to the medication, to take*

the medication properly and to have a quality treatment” (F6g); *“(…) we can have a close contact [with the patients], we can help them and give them instructions on how to use medicines, we can solve doubts”* (F11m). These positions are decisive for professionals to perceive themselves as protagonists when assisting the population. These are assumed to be favorable conditions for pharmacies to leave the transitional phase and effectively enter the patient care phase (Hepler, Strand, 1990).

Pharmacists often feel motivated when their work reflects the patients' quality of life and confidence (Serafim, 2015): *“It is very rewarding to give an indication and then the patient tells us that it has been useful (...). It is very satisfying to see our patients acknowledging our work”* (F5g). The community's sense of appreciation can lead to pharmacists' commitment to provide qualified assistance, encouraging them to develop skills and competences that will improve the provided care (Morin, 2001).

During the interviews, it was noted that participants perceived the contributions and the importance of the pharmaceutical practice in private community pharmacies, once they identified the closeness of such institutions to the territory as an aspect that enriches pharmaceutical care: *“I think the pharmacist is fundamental to health promotion because he is often the gateway to the patient's healthcare (...). There is always a pharmacist [in the pharmacy] available to give guidance, to direct that person to the best possible form of care”* (F3m); *“The pharmacist is fundamental because he is the first contact for the patients' care (...) [mainly] for poorer people, who cannot afford medical appointments (...) [the pharmacy] is the first contact”* (F12p).

The underfunding of the public component of the Brazilian health system, as well as the unequal availability of material and human resources in health, reduces the chances of providing assistance and affects the population's access to care (Albuquerque *et al.*, 2017). It is known that territorial distribution of community pharmacies is wide. In this regard, such facilities are accessible options to meet with health professionals, especially in regions of socioeconomic vulnerability or with precarious coverage of other health services (Coulibaly *et al.*, 2017; Melo *et al.*, 2021). The pharmacist

is therefore a strategic member in order to guarantee the citizens' right to have access to health assistance.

From the evidence described by the interviewees, it has been noted the importance of not only designating the mandatory presence of pharmacists in community pharmacies, but to ensure that they are available to meet the population's necessities. In this logic, facing the challenge listed in Subcategory 2A, related to the priority direction given to technical management, which culminates in less time dedicated to care actions, is a determining factor. Establishing an effective communication with patients is necessary to share knowledge concerning their health needs. Thus, the workload allocated to clinical management as well as physical and material resources are essential requirements for pharmacists to perform active listening, being sensitive to the demands presented by the community.

It is argued that the practice of pharmaceutical care is economically viable because it is capable of reducing the incidence of adverse reactions and intoxications resulting from the improper use of medicines, in addition to improving patient compliance with treatment and health education. Thus, it allows pre-existing diseases not to worsen, reducing the costs due to hospitalizations or specialized medical appointments (Melo *et al.*, 2021). During the COVID-19 pandemic, the importance of clinical pharmacy services has been proved (Al-Quteimat, Amer, 2021): *“The pharmacist can carry out COVID testing in the pharmacy, manage the patient's care and advise on isolation to prevent spreading the virus”* (F11m); *“[During the critical period of the pandemic] clients were frequently visiting the pharmacy looking for advices from pharmacists about treatments to relief a cough and to evaluate their symptoms, being properly advised to make a medical appointment when needed.”* (F12p).

The public health emergency caused by the SARS-CoV-2 virus revealed the weaknesses of the hospital-centered biomedical model. Such model assumes that the solution to health problems is linked to the provision of services in hospitals. Thus, it perpetuates the focus on medical performance (Seixas *et al.*, 2021). During the pandemic, the overburdening of hospitals and the consequent reduction in care capacity demonstrated the

need to integrate services linked to primary care in the fight against the virus (Medina *et al.*, 2020).

As a result, it was important to mobilize professionals such as pharmacists from community pharmacies to assist in the diagnosis, referral and follow-up of patients during the health emergency in question, serving as a support to the medical team. In this sense, the pharmacists of such institutions stand as collaborators in the provision of healthcare to the community, respecting the limits established by the rules governing the exercise of the profession (Brasil, 2013a; 2013b, 2022).

By recruiting pharmacists to the front line in the fight against coronavirus, the pandemic stimulated the legitimization of the professional practice in private community pharmacies. This is an opportunity to face challenges related to communication with the public, as in the following statement: *“Not everyone is willing to listen or accept your opinion, even if it is a professional one (...), either because of time, tradition or the belief that the pharmacist doesn't know anything, that only physicians know”* (F6g). The context of the production of such conceptions coincides with the validity of the hospital biomedical model, which is medical-centered, focused on diseases, cures and biology while being disconnected from the social context (Seixas *et al.*, 2021).

Similar views may be tied to the commercialization of healthcare phenomenon, where private community pharmacies are seen as trading entities with minimal connection to healthcare. Hence, referring to previous discussions, it is important that pharmacists, health authorities and class entities debate themes such as the sale goals, a topic presented in Category 1, because it is a commercial strategy that is contrary to the responsible care of individuals. In this way, it will be feasible to develop a collective understanding that private community pharmacies are places where health can be promoted.

Another point arising from the strengths of pharmaceutical performance in community pharmacies is the post-medical care: *“The pharmacist has to work in post-medical care, [the pharmacist] is the first person in contact with the client after a medical appointment, a diagnosis, and the last person before the treatment. So, this professional will be essential to carry out the treatment”* (F6g). Pharmacist follow-up after medical appointments

is a relevant issue for treatment adherence. Thus, it would be important if pharmacists could develop this activity, because clinical pharmacy services are helpful in achieving the expected results of pharmacotherapy, providing quality of life to patients and improving communication between pharmacists and physicians (Melo, Frade, 2016). Nevertheless, the opportunities for such service in private community pharmacies are hampered, among other reasons, by the lack of private rooms in such places, as described in Subcategory 2A.

This research has shown that pharmaceutical practice in private community pharmacies is significant for population's healthcare. This premise is highlighted by the pharmacists' perceptions regarding the capillarity of such establishments, a characteristic that enables the care of the population in primary needs, in referrals to other health services, and in the orientations to be given to patients after pharmacotherapy prescription.

The working conditions that emerged in the research can affect the development of clinical management of pharmaceutical care. The most frequently mentioned were: sales goals, salaries below the recommended minimum wage, conflicts with the work team, lack of private rooms for patient care, overlapping of technical management of medications to the detriment of care actions and noncompliance with aspects that make up Good Pharmacy Practice. According to the International Pharmaceutical Federation (2013), these dilemmas surround pharmacy practice worldwide, portraying pharmacists as medicine suppliers rather than health professionals.

In this sense, it was important to highlight in this study the pharmacists' perceptions about care. By understanding it as the purpose of professional practice in private community pharmacies, these professionals are willing to offer it to the community, despite the challenges. These points of view are also committed to fight against the commercialization of healthcare as they may help the consolidation of pharmacists as key professionals on the health field.

In view of the above, it is suggested that the growth of the pharmaceutical market in Minas Gerais must be linked to circumstances favorable to the production of care. Therefore, the deconstruction of private community pharmacies as exclusively retail environments is

indispensable, not only from a legal perspective. This advance must reach the collective consciousness, which includes the staff at these places, other health professionals and civil society. In this way, it is expected that the protagonism of pharmacists will be acknowledged, so that their professional practice in these health institutions can be developed in an ethical and responsible way.

Since this is a qualitative study, conducted only among pharmacists in municipalities of Minas Gerais, the generalizations are limited to these scenarios. Nevertheless, it is worth noting that the results confirmed those presented in previous researches on the same subject (Tomassi, Ribeiro, 2012; Paiva, Brandão, 2014; Hipólito Júnior *et al.*, 2017; Oliveira *et al.*, 2017; Mota *et al.*, 2020; Melo *et al.*, 2021). It enables the transferability of our study to similar settings (Anderson, 2010). Another limitation is related to the use of virtual technologies, such as conversations through instant messaging applications, which may have influenced the adherence of pharmacists to participate in the research.

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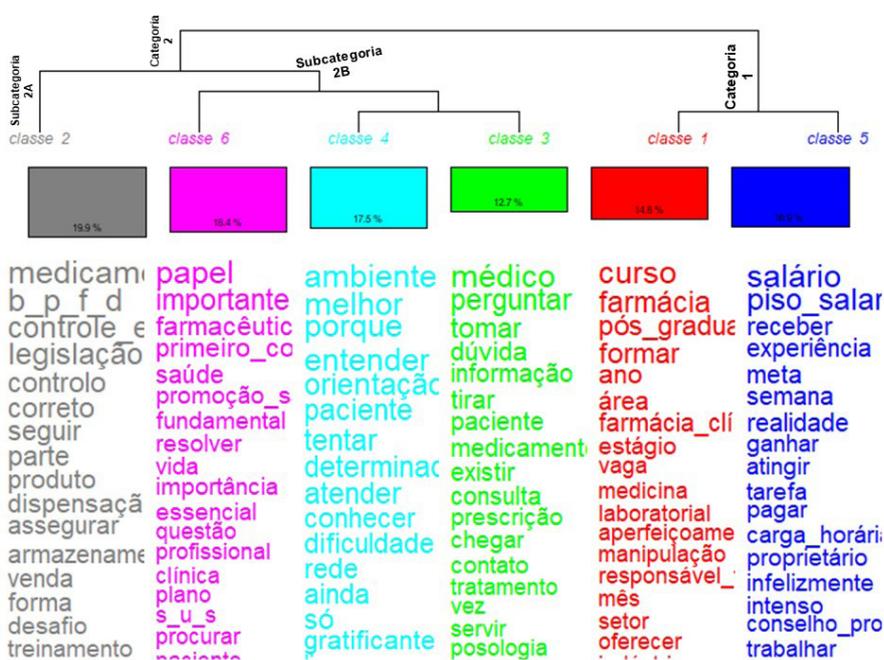
SUPPLEMENTARY INFORMATION SECTION

The script of the interviews

Introductory conversation: ask the interviewee to tell a little about their history with the pharmaceutical profession (how long they have been working in the private community pharmacy, did they work in other pharmaceutical fields, did they do any postgraduate studies...).

1. In the private community pharmacy, what activities do you perform on a daily basis?
2. What are some of the positive aspects and challenges of your daily work routine at the pharmacy?
3. What is your understanding of Good Pharmacy Practice in community pharmacy?
4. Do you face any challenges in implementing Good Pharmacy Practice in your workplace?
5. What do you think about the role of community pharmacists in population health promotion?

Original dendrogram, generated in IRAMUTEQ 0.7 alpha 2.



Source: IRAMUTEQ 0.7 alpha 2 (2023).