ECRONICON OPEN ACCESS

EC NURSING AND HEALTHCARE
Research Article

Perceptions of Pharmacists on the Practice of Medication Dispensing at the Primary Health Care Level

Juliana Teotônio Mota Sousa[1,3]*, Edna Regina Silva Pereira[2,3] and Nathalie de Lourdes Souza Dewulf[3]

[1]*Pharmaceutical Assistance Department, Municipal Health Secretary of Goiânia, Goiás, Brazil*

[2]*Department of Internal Medicine, School of Medicine, Federal University of Goiás, Brazil*

[3]*Research Laboratory of Education and Health Services, School of Pharmacy, Federal University of Goiás, Brazil*

***Corresponding Author:** Juliana Teotônio Mota Sousa, Municipal Health Department, Municipal Health Secretary of Goiânia, Brazil.

Received: November 10, 2020; **Published:** February 28, 2021

Abstract

Dispensing is the process, performed exclusively by the pharmacist, during which medication is provided to the patient, along with counseling on how to use that medication. Within primary health care settings, this service can identify, prevent, and resolve problems related to medications, consequently improving the health of the population. Nevertheless, this task has been incipient in Brazil, possibly interfering with the rational use of medicines and the success of pharmacological treatment. The objective of this study was to analyze pharmacists' perception of medications dispensing within a Primary Health Care setting. A descriptive exploratory study was conducted using a qualitative approach. Semi-structured interviews were carried out with seven pharmacists working in Primary Health Care. The interviews were conducted using scripted questions and were audio-recorded. The sample was defined by data saturation and the data was analyzed using content analysis. This study was approved by the Research Ethics Committee of the Federal University of Goiás. Seven interviews were conducted, with three thematic categories being identified: medication management, medication dispensing, and pharmaceutical education. Medication management was found to be the activity that generated greatest concern among the pharmacists. Medication dispensing was considered inconsistent, with the participants reporting difficulties that negatively affect this service, particularly the physical structure of the pharmacy, and issues involving pharmacy assistants and the multi-professional teamwork. These pharmacists also mentioned that the undergraduate pharmacy program is deficient insofar as medication dispensing is concerned. Most interviewees reported a need for continuing education, with emphasis on master's degree courses. These results highlight the lack of proximity between the pharmacist and the patient, with the pharmacist's routine activities being focused predominantly on medication management. Also, it is important to review the structure and processes established in primary health care to improve the pharmacy structure, the relationship between the pharmacist and the assistants, as well as the multi-professional teamwork. The pharmacists interviewed were interested in acquiring medication dispensing skills through continuing education. Therefore, developing continuing education in medication dispensing for pharmacists working in primary health care and encouraging them to take advantage of such programs could improve their performance and the health of patients..

Keywords: *Primary Health Care; Medication Dispensing; Pharmaceutical Education; Continuing Education*

Abbreviations

MD: Medication Dispensing; NMP: National Medication Policy; PHC: Primary Health Care; RUM: Rational Use of Medicines; WHO: World Health Organization; UK: United Kingdom

Introduction

When performing medication dispensing (MD), the pharmacist must meet patients' needs by providing them with the medication and counseling them on how to use that medication appropriately. Information should be given on the duration of treatment, dose, and dosage, as well as on interactions with other medications, interactions with food and possible side effects, among other issues related to the use of medications. In addition, patients should be instructed on how to store the medication at home [1]. This process is defined through a National Medication Policy (NMP) in Brazil and the World Health Organization (WHO) [1,2]. For the WHO, in addition to delivering the medication, the pharmacist must provide the necessary conditions for the patients to use the medication in the best possible way [3]. The objective of these acts is to promote the Rational Use of Medicines (RUM) [1]. The WHO has defined that RUM occurs when patients receive medications appropriate to their clinical needs, in doses that meet their individual requirements, for an adequate period of time and at the lowest cost to them and their community [2].

The pharmacist is responsible for counseling not only on the pharmaceutical treatment itself, but also on possible lifestyle changes, on the development of the patient's self-care, and on the risks of self-medication [4]. This may improve patient compliance with pharmacotherapy, contributing to the prevention, treatment, or control of diseases [5]. In addition, this relationship between the pharmacist and the patient serves to minimize medication-related problems such as side effects, to avoid food interactions, and to prevent potentially harmful medication interactions [6].

In primary health care (PHC) settings, the pharmacist should be part of a multi-professional teamwork, ensuring that patients are provided with integrated healthcare. Within health services, MD is generally the last opportunity at which to provide the patient with information on health care and on how to manage their pharmacological treatment. Here, the pharmacist is the health professional in the best position to promote access to quality medications that will ensure the desired therapeutic outcomes [7,8].

In Brazil, only pharmacists are permitted to MD. This service is part of pharmaceutical clinical activities and provides direct care to patients [8]. However, this activity is considered incipient, since the practices performed by pharmacists do not meet the needs of society or comply with current public policies [9].

There are many known obstacles to the proper performance of MD. Administrative activities reduce the time pharmacists have available for providing counseling to the patient and overstretch the professional. In addition, according to the literature, pharmacists' knowledge on MD is limited, a situation that could compromise the success of pharmacotherapy [10]. Therefore, educational interventions are required to improve pharmacists' knowledge, with technical and interpersonal skills that support appropriate counseling to patients [11,12].

Little is available in terms of pharmaceutical counseling, negatively affecting patients' knowledge of their pharmacological treatment [4]. Merely handing over medications without providing appropriate counseling may place patients at risk, with a detrimental effect on quality of life and generating additional costs to the healthcare system [13].

Considering this situation, pharmacists constantly need to re-evaluate their work practices. The focus of their activities needs to be on the patient and on guaranteeing effective healthcare [14].

The contributions that MD can offer patients within a PHC setting are significant; however, there are gaps in this service that prevent this task from being performed adequately. Therefore, further understanding is required on what is causing the pharmacist to dispense in

an inappropriate fashion. First is to understand, from the point of view of these professionals, how routine MD is performed, the limitations that negatively affect good MD practices and the factors required to improve the service.

Objective of the Study

The objective of this study was to analyze pharmacists' perception of MD within a PHC setting.

Methods

This descriptive exploratory study was conducted using a qualitative approach [15]. Semi-structured interviews were carried out with seven pharmacists working with MD in PHC units managed by the municipal health department in a capital in Midwestern Brazil. This capital has a population of 1,536,097 inhabitants, being the tenth largest Brazilian city [16].

The investigator responsible for the data collection is a pharmacist working with MD within the municipal PHC network; however, the unit where the investigator works and the entire group of pharmacists working at this unit were excluded from the study to avoid bias arising from possible personal relationships established.

The municipal health department network is divided into seven health regions. All regions were invited to participate in the study; data collection was initiated in the region where authorization was first obtained, with the procedure then continuing successively as authorization was gained from other regions.

Pharmacists actively working in their profession who fulfilled the inclusion criteria were invited to participate. The inclusion criteria consisted of: working with MD, working in health units with multi-professional teamwork and working in PHC. Pharmacists who were on vacation or leave were excluded from the study.

All the pharmacists who were invited to participate in the study agreed to take part, with the order of the interviews being determined by the dates selected by the participants. All the pharmacists opted to be interviewed in their workplace, with preference always being given to private settings within that workplace.

All research participants read and signed the an informed consent form in which there was information about the research objectives, guarantee of confidentiality and security of the data provided. This study was approved by the Research Ethics Committee of the Federal University of Goiás, Brazil, according opinion present on the internet platform https: plataformabrasil.saude.gov.br, under number 1,144,128, CAAE46709415,0,0000,5083.

At the time of data collection, 142 pharmacists were working for the municipal health department. Of these, 45 met the inclusion criteria. A face-to-face interview was held for 7 participants, based on the criterion of thematic saturation. Which it is verified during the interviews that the information provided no longer adds new subjects.

An interview script based on the following theoretical references was used: the concept of MD as defined by the WHO, the National Drug Policy, the National Pharmaceutical Assistance Policy and the National Curricular Guidelines for undergraduate pharmacy courses. A pilot study was first conducted to adapt the script to the research setting.

All the interviews were audio-recorded and a field diary was compiled with non-verbal messages. The interviews lasted between 30 and 55 minutes and took place between October and December 2015. The data were transcribed and then the empirical material resulting from the interviews was subjected to thematic content analysis, as recommended by Bardin. Such analysis consists of pre-analysis, exploration of the material and treatment of the results, which in turn generates inferences and interpretations, which are detailed below [17].

The interviews were first subjected to an initial superficial reading to allow impressions, hypotheses, recommendations, and information to be extracted. The crude data were coded in thematic units, numbered, and then cut and re-grouped into units with similar contexts. Thematic units related to aspects of medication dispensing in primary health care gathered in the seven interviews were grouped into three thematic categories and six subcategories [17].

The categorization process was performed by two independent investigators individually coded and analyzed the data. The data obtained from each individual investigator were compared for the purposes of validating the analysis. Any divergences encountered were checked and discussed until a consensus was reached, with any remaining discrepancies being discussed with a third investigator for clarification [18].

The results obtained were synthesized and selected. Next, the data were used to make inferences and interpretations.

Results and Discussion

The characteristics of the study sample are described in table 1. Following data analysis, three thematic categories and six sub-categories emerged, as shown in figure 1.

Interviewee	Sex	Age (years)	Time in profession	Year of graduation	Type of university	Postgraduate Specialist Course	Postgraduate Master's degree
1	M	30	09 years	2006	Public	Yes	No
2	F	39	10 years	2005	Private	Yes	No
3	F	34	10 years	2005	Public	Yes	Yes
4	F	48	23 years	1992	Public	Yes	No
5	F	46	17 years	1998	Private	Yes	No
6	F	52	31 years	1984	Public	Yes	No
7	F	25	05 years	2010	Private	Yes	No

Table 1: *Characteristics of the pharmacists interviewed on their experiences medication dispensing in primary health care. M = Male; F = Female.*

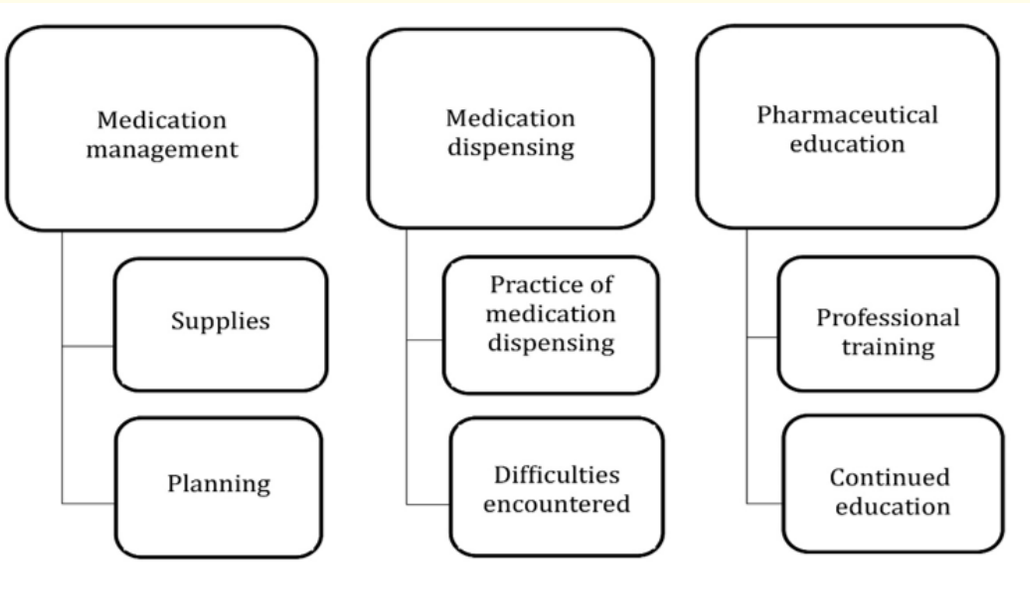

Figure 1: *Thematic categories and sub-categories that emerged from the data collected from interviews with pharmacists on their experiences medication dispensing in primary health care.*

Medication management

When asked about their work routine, medication management emerged as the principal activity performed by this group, with particular emphasis on activities related to the planning and controlling of medication supplies.

Supplies

The control of medication supplies was described as the exclusive responsibility of the pharmacist. Monitoring the expiry date of medications and the availability of emergency medications is a constant preoccupation, particularly insofar as psychotropic and antimicrobial medications are concerned.

Interviewee #1: "The first thing I do is check the supplies of emergency medications. I do the things that only I, as the pharmacist, can do, like checking the stock of emergency medications, controlling the psychotropic drugs (…)".

Interviewee #2: "I check the expiry date of the emergency medications".

A study conducted with pharmacists working in community pharmacies showed that in most cases, the professional's knowledge on the safe disposal of expired medications or of products with quality deviation was good [10]. This finding suggests that pharmacists are aware of current regulatory legislation, minimizing risks to the health of the population.

Planning

Conducting monthly stock control and preparing weekly lists of extraordinary medication requests are routine duties. The activities associated with emergency medications are time-consuming and demand dedication from the pharmacist.

Interviewee #1: "(…) because this really holds us up, you know. The stock control, the amounts, the requests, right?"

Interviewee #5: "And there are also the extraordinary requests that we look at. Also, it is part of my job here to do the monthly stock control (…)".

In addition, it is difficult to obtain medication in the public sector, a situation that distances pharmacists from patients and hampers MD.

Interviewee #5: "And also, it's… the day-to-day things, asking for medications that are out of stock. I think that the biggest problem is the lack of supplies. Then the nurse comes and says: "We don't have it, but I need it! Patient so-and-so is here, I need it!" You know, it's not easy!".

Interviewee #7: "I think that actually being able to supply the medication already contributes enormously to providing the patient with pharmaceutical care. Because I can even provide them with counseling, but what happens if I don't have the medication? And if the patient doesn't have money to buy it, is that patient going to go without treatment?".

In Brazil, pharmacists are very involved with bureaucratic and managerial issues. Conversely, in other countries, like United States, today the pharmacist focuses more on the direct care of patients and delegates administrative functions to his/her assistants [9,10]. In England, pharmaceutical care services are seen as having great potential to contribute to people's health, however the high workload of the pharmacist in MD and low skill level of pharmacy technicians in this area, are obstacles to the pharmacist who is attempting to perform patient-focused care [19].

Normally, there is only one pharmacist in the pharmacy for all these activities. Pharmacists must be attentive to needs to improve the services they provide to patients; therefore, they need to be able to count on a trained and administratively competent support team to enable them to spend more time on pharmaceutical care [14].

Medication dispensing

When asked about the MD duties that they performed as part of their daily routine, the answers received were reflexive and loaded with dissatisfaction.

Practice of medication dispensing

This group of pharmacists admitted that they did not MD in accordance with the NMP and WHO recommendations. They recognized that in most cases, in their daily work routine, the medication is simply delivered to the patient, with no counseling at all being given on the RUM.

Interviewee #6: "I am not going to tell you that I dispense medications as medication dispensing really should be done (…) I know that this way of medication dispensing is not correct because we don't provide any counseling (…) on this issue of medication interaction, you know".

Regarding MD, the pharmacist needs to understand the patients' needs, supply quality medication, and provide guidance on the RUM [20].

When opportunities to provide counseling occur, it was emphasized that the principal information they provide refers to instructions on dosage, interactions with food, and side effects.

Interviewee #1: "So, we check the medication - when it is the actual patient - explain the question of timing, the amount, if there is any question of food…before or after eating (…)".

Nevertheless, this service is poorly organized and poorly systematized to meet social demands. When information is provided, it is considered basic and is provided at random to only some of the patients.

Interviewee #5: "(…) the [side] effects, such as: it'll make you sleepy, you might feel some discomfort (…) or the antibiotics, the anti-inflammatories, stomach pain (…) really only the simplest, the most common side effects. Those, I talk about!".

To be able to provide information during MD, the pharmacist needs to have technical and cognitive abilities that meet patients' needs. Moreover, they also need to have communication skills [21].

The literature emphasizes that the principal difficulties encountered by pharmacists when providing counseling refer to knowledge on medication interactions, adverse events, and the mechanisms of action of medications. These difficulties were attributed to the pharmacists' academic training and principally to not having participated in activities of continued education in medication dispensing [10].

Even with these limitations, this group of pharmacists recognized the importance of providing counseling when dispending and expressed their satisfaction when able to do so.

Interviewee #2: "So, these are the basic instructions that I think that (…) the patient is often grateful that you took the time to do that (…) it's gratifying!".

WHO states that the role of the pharmacist is to develop activities aimed at caring for individuals and emphasizes a change in pharmaceutical education, so they should have skills and knowledge needed to offer care to patients, as well as effectively collaborate with

members of the health care team [22]. The pharmacists interviewed in this study were aware that the service of MD is not fully functional and were able to point out the barriers that prevent them from performing this duty to their own standards.

Difficulties encountered

Neglecting to provide counseling when dispensing medications to patients contradicts the definition of the best practices of MD. The physical settings of the pharmacies were considered inadequate, since the layout hampers communication between the pharmacist and the patient by not guaranteeing the confidentiality of the counseling provided. This situation discourages the pharmacist from providing information that could expose the patient.

Interviewee #1: "As an example, here everyone has to stand to be served, and there is a little window with a glass partition, right? So, sometimes, we end up not offering [to provide information], because of the patient's own difficulties… the patient is often elderly, with poor hearing, and sometimes very short [and the window is inadequately positioned in relation to the patient's height]. So, we need to find a way to communicate with them, (…) I don't know if it is for this reason that we limit ourselves to the basics and try to be objective so that they at least understand the minimum and we are then able to speed up the medication dispensing process [delivery]".

Some of the participants in this study talked of the need for a private, humanized setting in which to provide pharmaceutical counseling.

Interviewee #7: "I think I should have a room, a consulting room, a place where I could counsel this patient privately. Here [in the pharmacy] it's really very difficult".

Inappropriate settings have a direct detrimental effect on the quality of MD and hamper the professional's ability to identify and resolve problems related to pharmacotherapy [10]. There is a clear need for a private setting in which to give individualized service, therefore guaranteeing the confidentiality of the information provided and establishing a relationship of trust between the pharmacist and the patient [9]. In Europe, since 2006, there has been an increase in the percentage of pharmacies having a private consultation area to provide quality clinical care for pharmacy patients [19].

In addition to the structural problems, the pharmacists reported communication and leadership issues with their assistants and complained of these assistants' lack of technical skills.

Interviewee #4: "They [the assistants] think that the doctor is the only one responsible for providing information on how to use the medication, and that the patient only goes to the pharmacy to get it; so we need to change this. I think that the pharmacy assistant believes that the pharmacist's role is to procure and obtain medications, check expiry dates, go to the emergency room, talk to the doctor, talk to the nurse, meet with the management, that's what they think. [In fact] they used to be cleaners, kitchen staff or laundry workers; then they moved on to work in the pharmacy. We need to do something about these assistants. I think something should be done by both the psychologist and by us".

On the other hand, the NMP defines MD as the role of the pharmacist alone [8], is not complied with, since the pharmacy assistants serve the public without the supervision of pharmacists.

Interviewee #2: "I don't always dispense the medication to the patient because sometimes I am doing other things, so the assistant dispenses (…) sometimes there is no time to check whether the prescription is correct because the assistant [only] asks you when he/she is in doubt and he/she is not always trained to see an inappropriate combination of medications, right? There may be a mistake with the medication, but he/she is there and [readily] dispenses it…"

In Saudi Arabia, errors with medications can occur at different steps in MD, with most of these errors occurring when this service is provided by the pharmacy assistant [23]. In Japan, the situation is similar to that in Brazil, where the pharmacists spend much of their

time in activities of stock control and in the distribution of medications. On the other hand, in industrialized nations such as Germany, the United Kingdom (UK), France, Thailand and Malaysia, the pharmacist spends more time in healthcare, in direct contact with the patients, delegating administrative tasks to the pharmacy assistants [24]. The error rates in the UK are comparable with those in the other European Countries, and in United States. In England, most of the medication errors are minor with little potential for clinical harm, however when we analyze the occurrence of errors with potential clinical significance, we perceive that most occur in PHC. Polypharmacy is among the factors that contributes to such a situation [25] and at that point the pharmacist together with other members of the health team can work to reduce the appearance and/or severity of these errors.

The relationship between the pharmacist and the multi-professional teamwork is highly charged. Communication problems and issues involving interpersonal relationships hamper teamwork; however, the importance of teamwork is recognized.

Interviewee #2: "The patient is not given much information on the medication, right? So, I think that it is teamwork, you know? The nurses, the doctor and us [the pharmacists], [together] we would succeed in promoting the RUM".

In PHC, there is no defined standard that characterizes the practice of multi-professional teamwork, with the composition depending on the characteristics of the team and of the interests, desires, and habits of its members, in addition to legal and territorial aspects [26].

The relationship between the pharmacist and the team is fortuitous and is generally associated with the presence of management issues or questions regarding prescriptions, with findings pointing to professional isolation and the fragmentation of duties. Therefore, the experience of health professionals is not that of pharmaceutical care based on teamwork [27].

In this sense, the pharmacist needs to show in practice, to members of the health team and patients, how their professional activity can improve people's health.

The distance that exists between patients and pharmacists and the distance that exists between the pharmacy team and the pharmacist, make these professionals believe that they are not viewed as health professionals.

Interviewee #6: "I think that they [the patients] need the counseling, but since the pharmacist is not recognized as a health professional… - I believe there is no such recognition yet! They do not look for counseling here".

The pharmacist holds the patient responsible for not asking questions. On the other hand, the pharmacists referred to limitations in communication and the need to improve their MD skills.

Interviewee #5: "Look, they rarely ask. Here, our clientele mainly consists of patients who have been our clients for a long time and who come here to get their medication. They are already used to taking it".

Interviewee #7: "I have to improve my communication skills and acquire the language I need to use to make the patient understand me. I think this is the main point".

According to the international literature, pharmacists feel that their patients want to be given counseling on medications, on alternative treatments, complementary therapies and non-pharmacological treatments, including lifestyle changes [28]. In Australia, patients have indicated that healthcare professionals are their preferred source of information. To them, the pharmacist is a specialist in medications and since he/she is more accessible, they prefer to receive counseling from these professionals [29].

The pharmacist needs to be proactive in providing information. He/she needs to promote the service among the patients, allowing them to gain confidence and seek information on medications. This will result in a stronger and closer relationship with the patient [30].

Pharmaceutical education

When questioned on professional training for MD, these pharmacists believed training to be largely ineffective.

Professional training

The contributions of undergraduate training to the practice of MD were considered limited. Pharmacology and pharmacy internship were the academic subjects believed to provide the best support for MD.

Interviewee #1: "I use pharmacology a lot because it provides information on administration times, quantities and interactions that we see a lot, right? Check whether the dosage is appropriate (…) So, I think it is very relevant. It is what I frequently use, and that experience I got from my undergraduate period (…) The technical part of pharmacology, I believe was good, at least in my case, I think".

Interviewee #7: "At my school, there was no university pharmacy, and this is very serious! You have no contact with patients prior to graduating. So, I had to find work experience in the private sector (…), which was what helped me! Indeed, I would like to emphasize how important practical training was for me".

The pharmacy course is a practical setting in which the students can develop the skills associated with pharmaceutical care, including MD [31]. In Brazil, pharmaceutical education is changing including education related to pharmaceutical care [32], improved by the National Curricular Guidelines for undergraduate programs in pharmacy published in 2017. This guideline emphasizes the mandatory nature of curricular internships and that they must take place in university pharmacies belonging to the educational institution for all pharmacy students, that receive mostly PHC [33].

In the European Union, a 6-month internship is required from the student pharmacist, either in a community or hospital pharmacy. In Finland, during internship, students are encouraged to think about how to transform theory into professional practice. They evaluate their learning by reflecting on their professional attributions. The discussions between students and preceptors during this period of practical training generate an interchange of information with immediate feedback [34].

It's important to highlight that best-practice MD requires more than technical knowledge. MD depends on a complex association of specific knowledge, both technical knowledge involving that acquired from academic subjects of pharmaceutical sciences, such as pharmacology, and cognitive reflective skills based not only on values and ethical attitudes, but also on personal and behavioral skills connected to the social context [12]. One important step better educated health professionals, with training focused on PHC, begins with curriculum development that explains the skills to be acquired in undergraduate courses such as: interdisciplinarity, multidisciplinary teamwork, ability to share decision-making, health education aimed at the population, and social responsibility [35].

The contributions made by postgraduate studies were considered the most relevant for MD in PHC.

Interviewee #2: "There were things that I was unable to recognize before (…) some prescription errors; in that, postgraduate training helped a lot. I think that, for me, it was extremely useful".

Interviewee #4: "After graduating, I enrolled in two different postgraduate programs: 'Pharmaceutical Care in Primary Healthcare' and 'Management of Pharmaceutical Care'. Those helped a lot! They actually brought things to a practical level. The two courses did that, because that was what they were designed to do".

Studies show that postgraduate training in PHC can improve services. Continuing education can transform practice, generating reflections and reorganizing work processes [36]. In the United States, postgraduate training affects work practices and increases satisfaction with the services provided; however, it is not known whether this satisfaction has any positive effect on improving the quality of the care

provided [37]. In Europe, the provision of pharmaceutical care by community pharmacists remains limited, however a postgraduate qualification in pharmacy positively influences the execution of pharmaceutical care, including MD [19].

On the other hand, some limitations in postgraduate programs were mentioned, since postgraduate training alone cannot promote major changes in real life, possibly due to its disconnection from the work context.

Interviewee #5: "I think that we use postgraduate training to try to improve the way in which we serve the patient, providing better service and everything… but putting individualized pharmaceutical care into practice, we don't manage that!"

In Brazil, there is a policy on continuing education in health. However, it is obvious that even if efforts are being made to structure and put this policy into effect, gaps remain. First, the recommendations defined in the policy are not fully implemented. Secondly, discussions and decisions are centered among the managers, with little participation from the health workers, the society, or the institutes of higher learning, a fact that hampers the construction and implementation of the proposals [38].

Continued education

Most pharmacists interviewed showed interest in studying for a master's degree, in seeking training to improve their work conditions and in improving the services they provide. Therefore, these pharmacists expect to be able to change this scenario and are confident that they can do so.

Interviewee #2: "[Drug] use by the elderly is very interesting and I would like to study this at master's degree level… I finished my postgraduate training less than a year ago and already feel idle, that I should be doing something, that my professional life is stagnant. I'm getting desperate; this is a personal concern of mine, it's what I want to do!"

On the other hand, the financial returns and the difficulties involved in working in the public sector were mentioned as barriers to seeking further training.

Interviewee #3: "I used to have it [an interest in further training]! Nowadays, I no longer do, because financially it is not going to change anything. Everything you try to do here within the city council network is difficult to put forward; it's hard to get ahead; it's so+++ hard… so I lost my motivation! I became completely demotivated. Nowadays, I don't think it's worth it!"

This report emphasizes the need to involve not only the professionals but also the health services, since the need for training and improving the services provided must be a common goal of both, and must be supported by the academic institutions.

Repositioning pharmaceutical services requires restructuring undergraduate training and continuing education. The pharmacist should be aware of the sociocultural, economic, political, regulatory, and managerial context in addition to that of providing health services. To do so, institutions of higher education need to promote continuing education, with a preference for active teaching methodologies [4]. The pharmacist needs to study constantly to acquire further knowledge, not just at undergraduate level but also throughout his/her entire professional lifetime [4].

The pharmaceutical associations and professionals need to establish professional self-confidence and achieve social prestige by providing effective pharmaceutical services. The search for effective training strategies needs the support of the health services and of the academic institutions, this being an important step towards providing quality MD and improving people's quality of life [39].

Conclusion

Pharmacists working in PHC recognize that they do not provide the counseling required for MD. This gap occurs due to the lack of involvement of the pharmacist in the direct care of patients and the heavy burden of technical and managerial tasks. Also, it was observed

that it is important to review the structure and processes established in PHC to improve the conditions necessary to offer quality pharmaceutical services, such as the relationship between the pharmacist and the assistants and strengthen the multi-professional teamwork. In addition, this professional was shown to be insecure in relation to the knowledge required to comply with good MD practices. Pharmacists are interested in acquiring further knowledge that would enable them to contribute effectively to the health of the population. In this respect, this study revealed a need for continuing education and improve the undergraduate programs in pharmacy in MD in order to qualify, improve and implement decisive pharmaceutical services that would have repercussions on the quality of life of patients.

Acknowledgments

We would like to thank the pharmacists who participated in this work and all the people who helped us do this work.

Conflict of Interest

None of the authors had any conflict of interest.

Bibliography

1. Brasil. Ministério da Saúde. Portaria nº 3.916. "Aprova a Política Nacional de Medicamentos." Diário Oficial da União, Brasília. DF (1998).

2. World Health Organization. "The rational use of drugs: report of the conference of experts". *Nairobi* (1985): 25-29.

3. Organización Pan-Americana de la Salud (OPAS)/ Organización Mundial de la Salud (OMS). "El papel del farmacéutico en la atencíon a salud". Informe de la reunión de la OMS, Tokio, Japon, 31 ago. Washington: PAHO (1995).

4. Pan american organization. "Guidelines for the Development of Pharmaceutical Services in Primary Health Care". 1° ed. Washington: OPAS (2011).

5. Cazarim MDS., *et al.* "Impact Assessment of Pharmaceutical Care in the Management of Hypertension and Coronary Risk Factors after Discharge". *PLOS ONE* 11.6 (2016). e0155204.

6. Nicolas A., *et al.* "Drug-related problems in prescribed medicines in Germany at the time of dispensing". *International Journal of Clinical Pharmacy* 35.3 (2013): 476-482.

7. Laliberté MC., *et al.* "Ideal and actual involvement of community pharmacists in health promotion and prevention:a cross-sectional study in Quebec, Canada". *BMC Public Health* 12 (2012): 192.

8. Carvalho MN., *et al.* "Workforce in the pharmaceutical services of the primary health care of SUS, Brazil". *Revista de Saude Publica* 51.2 (2017): 16s.

9. Leite SN., *et al.* "Medicine dispensing service in primary health care of SUS". *Revista de Saude Publica* 51.2 (2017): 11s.

10. Reis TM., *et al.* "Knowledge and conduct of pharmacists for dispensing of drugs in community pharmacies: a cross-sectional study". *Brazilian Journal of Pharmaceutical Sciences* 51 (2015): 3.

11. Roque F. "Educational interventions to improve prescription and dispensing of antibiotics: a systematic review". *BMC Public Health* (2014).

12. Mcdowell J., *et al.* "A Simulated Learning Environment for Teaching Medicine Dispensing Skills". *American Journal of Pharmaceutical Education* 80 (2016): 1-11.

13. Alaqeel S and Abanmy NO. "Counselling practices in community pharmacies in Riyadh, Saudi Arabia: a cross-sectional study". *BMC Health Services Research* (2015): 557.

14. Gregório J., *et al.* "A scenario-planning approach to human resources for health: the case of community pharmacists in Portugal". *Human Resources for Health* (2014): 58.

15. Tong A., *et al.* "Consolidated criteria for reporting qualitative research (COREQ): a 32-item checklist for interviews and focus groups". *International Journal for Quality in Health Care* 19 (2007): 349-357.

16. Instituto Brasileiro de Geografia e Estatística. "IBGE divulga estimativa da população dos municípios (2020).

17. Bardin L. "Análise de conteúdo. São Paulo: Edições 70 (2011).

18. Twigg MJ., *et al.* "The current and future roles of community pharmacists: views and experiences of patients with type 2 diabetes". *Research in Social and Administrative Pharmacy: RSAP* (2013): 777-789.

19. Costa AF., *et al.* "Provision of pharmaceutical care by community pharmacists across Europe: Is it developing and spreading?" *Journal of Evalition in Clinical Practice* (2017): 1336-1347.

20. Sartor VDB And Freitas SFT. "Model for the evaluation of drug-dispensing services in primary health care". *Revista de Saúde Pública* 48.5 (2014): 827-836.

21. Angonesi D and Rennó MUP. "Dispensation of pharmaceuticals: proposal of a model for dispensation". *Ciência e Saúde Coletiva* (2011).

22. World Health Organization. "Developing pharmacy practice a focus on patient care". (2006).

23. Al-Arifi MN. "Community pharmacists' attitudes toward dispensing errors at community pharmacy setting in Central Saudi Arabia". *Saudi Pharmaceutical Journal* 22.3 (2014): 195-202.

24. Inoue Y., *et al.* "Future expectations for Japanese pharmacists as compared to the rest of the world". *Research in Social and Administrative Pharmacy: RSAP* 11.3 (2014): 448-458.

25. Elliott RA., *et al.* "Prevalence and economic burden of medication errors in the NHS in England". *Policy Research Unit in Economic Evaluation of Health and Care Interventions* (2018).

26. Medeiros CDSO. "The Process of (re) Building Multiprofessionalism in PrimaryCare: Limits and Challenges for Effective Teamwork in FamilyHealth Strategy in Joao Pessoa – PB". *Revista Brasileira de Ciências da Saúde* 15.3 (2011): 319-328.

27. Araújo ALA and Freitas O. "Conceptions of the pharmaceutical professional about the pharmaceutical assistance in basic health care units: difficulties and elements for change". *The Brazilian Journal of Pharmaceutical Sciences/Revista* 42.1 (2006): 137-146.

28. Saramunee K., *et al.* "How to enchance public health service ultilization in community pharmacy? General public and health providers'perspectives". *Research in Social and Admisntrative Pharmacy* (2014): 272-284.

29. Hamrosi KK., *et al.* "Enhancing provision of written medicine information in Australia: pharmacist, general practitioner and consumer perceptions of the barriers and facilitators". *BMC Health Services Research* 14.183 (2014): 656-668.

30. Hamrosi KK., *et al.* "Pharmacist and general practitioner ambivalence about providing written medicine information to patients a qualitative study". *Research in Social and Administrative Pharmacy: RSAP* 9.5 (2013): 517-530.

31. World Health Organization. "The role of the pharmacist in the health care system preparing the future pharmacist: curricular development". Vancouver, Canada 27-29 (1997).

32. Dewulf., *et al.* "The invisible pharmacist". *American Journal of Pharmaceutical Education* 73.4 (2009): 74.

33. Ministério da Educação (BR). Conselho Nacional de Educação. Resolução CNE/ CES 6/2017. "Diretrizes Curriculares Nacionais do Curso de Graduação em Farmácia". *Diário Oficial da União* 1 (2017): 30.

34. Pitka K., *et al.* "Integrating internships with professional study in pharmacy education in Finland". *American Journal of Pharmaceutical Education* 78.9 (2014): 1-9.

35. Rezende VLM., *et al.* "Documentary analysis of the pedagogical project of a Medicine course and teaching in Primary Care". *Interface* 23.1 (2019).

36. Mattos LB., *et al.* "Contribution of the specialization course in primary health care to the practice of health professionals". *ABCS Health Sciences* 40.3 (2015): 184-189.

37. Bush CT and Lowery B. "Postgraduate Nurse Practitioner Education: Impact on Job Satisfaction". *The Journal for Nurse Practitioners* 12.4 (2016): 226-234.

38. Moraes KG and Dytz J LG. "Permanent Education in Health Policy: analysis of its implementation". *ABCS Health Sciences* 40.3 (2015): 263-269.

39. Tofade T., *et al.* "The Responsibility of Advancing Continuing Professional Development and Continuing Education Globally". *American Journal of Pharmaceutical Education* 79.2 (2015): 1-2.

Volume 3 Issue 3 March 2021