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Pharmacist's work in primary health care for municipalities in southern Brazil

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Abstract

Objectives: The objective of this study is to analyze the work of pharmaceutical pharmacists working in primary health care in municipalities in the state of Rio Grande do Sul. **Methods:** The study included the 18 municipalities that host the Regional Health Coordination of the Health Secretariat of the State of Rio Grande do Sul and municipalities, with more than 100 thousand inhabitants, totaling 30 municipalities. Data collection was used an electronic questionnaire distributed from March to May 2021 through electronic means. **Results:** We obtained 77 respondents with a mean age of 39.9 years, prevalence of white color and women. Of all participants, 58 (86.6%) had a post-graduation in *Lato Sensu*. In professional practice, 33 (42.9%) were pharmacists in charge of the technical and 12 (15.5%) worked in more than one function in the municipality. Regarding the working day, an average working day of 35.3 hours per week was observed. **Conclusion:** Asymmetry in the distribution of the pharmacist's workforce and work in more than one function stands out. This study can help the management of pharmaceutical care in the organization and ensure the quality of the services provided, and it is suggested studies that evaluate the intensity of work of pharmacists.

Keywords: Work; Pharmacists; Education, Professional; Primary Health Care; Health Services Research.

Trabalho do farmacêutico na atenção básica em saúde de munícipios da região sul do Brasil

Resumo

Objetivos: O objetivo deste estudo é analisar o trabalho dos farmacêuticos da assistência farmacêutica atuantes na atenção básica em saúde (ABS) de municípios do estado do Rio Grande do Sul. **Métodos:** Foram incluídos no estudo 18 municípios sede das Coordenadorias Regionais de Saúde da Secretaria de Saúde do Estado do RS e municípios, com mais de 100 mil habitantes, totalizando 30 municípios. Para a coleta de dados utilizou-se um questionário eletrônico distribuído no período de março a maio de 2021 através de meios eletrônicos. **Resultados:** Obteve-se 77 respondentes com média de idade de 39,9 anos, prevalência da cor branca e mulheres. De todos os participantes, 58 (86,6%) tinham pós-graduação na modalidade *Lato Sensu*. Na atuação profissional, 33 (42,9%) eram farmacêuticos responsável técnico e 12 (15,5%) atuavam em mais de uma função no município. Em relação à jornada de trabalho, observou-se uma média de jornada de trabalho de 35,3 horas semanais. **Conclusão:** Destaca-se assimetria na distribuição da força de trabalho do farmacêutico e laboração em mais de uma função. O presente estudo pode auxiliar a gestão da assistência farmacêutica na organização e garantir a qualidade dos serviços prestados e sugere-se estudos que avaliam a intensidade de trabalho dos farmacêuticos.

Palavras-chave: Trabalho; Farmacêuticos; Educação profissional; Atenção Básica à Saúde; Pesquisa de serviços de saúde,

Introduction

During the expansion of the Unified Health System (*Sistema Único de Saúde*, SUS), the Ministry of Health (*Ministério da Saúde*, MS) approved the National Medications Policy (*Política Nacional de Medicamentos*, PNM) and the National Pharmaceutical Assistance Policy (*Política Nacional de Assistência Farmacêutica*, PNAF), reasserting Pharmaceutical Assistance (PhA) as an inseparable part of the health system. In addition, by means of these actions it ensured access for the population to the medications considered essential, as well as safety, efficacy and quality in their rational use[1,2].

As a result, significant advances were made in pharmaceutical policies regarding Primary Health Care (PHC) in the SUS scope, such as computerized systems for management in the municipalities, expansion of access to medications, and creation of a list of standardized drugs[3]. However, despite all the efforts, there are still a number of challenges that require attention and development of national strategies[4]. Such challenges are related to the excessive concentration of pharmacists in the capital cities, places where pharmaceutical services are provided with an inadequate structure, as well as the lack of duly trained personnel[5,6]. According to the World Health Organization (WHO), training of the workforce aims at striking a balance between a sufficient composition, distribution and number of workers to guarantee good quality actions and services for PHC users. Thus, in order to preserve this balance it is necessary to understand the needs offered by the labor market, by the educational system, and by the functioning and organization of the workplace.

The PhA workforce is crucial to cope with the challenges related to managing access to medications in the country[7]. In this context, the evaluation of social health programs and services, especially management and planning of actions, ensures maintenance of the quality of the services offered by the State[8]. The role played by pharmacists is fundamental for the quality of the Primary Care PhA workforce, given that they are professionals who must be integrated with the health care network, aligning pharmacy services in the care scope. Their role guarantees improvements in terms of safety, effectiveness and efficiency in medication use at the individual and population levels, facilitating the professionals' clinical decision-making and regarding the patients themselves[9]. Therefore, basic training of professional pharmacists should confer competencies to ensure quality of life to the population[10,11].

Two major fields stand out in terms of the performance of the pharmacists that comprise PhA in order to support the health actions required by the Health Care Networks. The first involves the technical-managerial activities, which range from selection to distribution of the medications and are related to drug management. In turn, the second one encompasses the clinical-assistance activities related to Pharmaceutical Care[9,12]. The demand for technical-managerial activities and the technical training of most pharmacists surpass the assistance-related activities and, consequently, pharmaceutical care actions become restricted to the health system users[13]. However, this predominance in drug management actions presents an imbalance, sometimes in terms of distribution and others in drug selection[14,15,16].

According to Soares[17], drug dispensing in Brazil consists in welcoming the user, analyzing the prescription, separating and distributing the medications, and counseling many patients. Excessive demand for work in dispensing compromises provision of services and meeting the users' needs, with the possibility of weakening the work process and generating work overload for the professionals. Dispensing can demand too much time from the pharmacist, which in some cases can result in delegation of this Pharmaceutic Care service to other technicians[18,19]. Given the challenges found in drug management, planning and investments in the PhA workforce are fundamental, so that: work processes can be reorganized; workers can attend qualification programs (with permanent and continuing education actions); and pharmaceutical care services offer expanded access, effectively contributing to the needs of the population[13].

Given the above, the importance of the following as some of the pillars required to guarantee quality of the workforce exercised by the pharmaceutical professional is understood: permanent education in health qualification/training programs, number of pharmacists working in the PhA, care with the excessive demand of activities during the workday, and number of functions performed. It is noted that this study aimed at analyzing the PhA pharmacists' work in Primary Health Care in 30 municipalities from the state of Rio Grande do Sul, considering the sociodemographic aspects, performance areas, services performed, training and professional development.

Methods

This research consists in a cross-sectional study elaborated from the source project entitled "Assessment of Pharmaceutical Assistance in Primary Care in the Municipalities of Rio Grande do Sul: Structure, Process and Results". The current study was carried out with the participation of pharmacists working in PHC from 18 municipalities where the Regional Health Coordination Offices belonging to the Health Department of the State of Rio Grande do Sul and municipalities, by convenience criterion and with more than 100,000 inhabitants, totaling 30 municipalities that gather more than 50% of the state's population.

In elaboration and organization of the research instrument, the items in relation to the possible difficulties and doubts during its application were considered, and they were validated in a qualitative way by a panel of experts to ensure feasibility and prevention of eventual problems and doubts in the application. The experts were selected based on their involvement and experience in the subject matter addressed[20]. Thus, this panel consisted of three coordinating members of the source project and a female pharmacist who is a PhD student at the UFRGS Graduate Program in Pharmaceutical Sciences.

Data collection was conducted through an electronic questionnaire and made available for the participants of this research via the SurveyMonkey® tool. The questionnaire was sent to the pharmacists by means of the snowball technique, via email or through the WhatsApp® and/or Telegram® social media. Such resources contributed dynamism, optimization and safety to the participants during the COVID-19 pandemic (period during which the study was carried out), as it was developed virtually from March to May 2021. Upon receiving the questionnaire, the participants read the Free and Informed Consent Form (FICF) with the study objectives, possible benefits and risks and signed it.

The data collection instrument evaluated the following sociodemographic variables: gender, race/skin color and age; in relation to the professionals' qualification, the following was evaluated: graduation year; attending graduate studies, as well as their modality; availability and release to attend courses in the PhA area; and, regarding the professional area variables: employment contract, performance component, workplace, workday, pharmacists' functions, and pharmaceutical services. In addition to that, the respondents' participation in the permanent education in health actions was considered, such as training, update and qualification courses. The questions related to academic training included diverse information, namely: graduation year; graduate studies completion year; and graduate studies modality (*Lato Sensu* or *Stricto Sensu*).

Secrecy of all the answers was preserved, without identifying them and being solely used for statistical purposes. It is noted that the project from where this text derives was approved by the UFRGS Ethics Committee and by the Rio Grande do Sul State Health Department, under opinion number 2,437,516. The data were analyzed with the aid of the IBM SPSS® software, version 22, in order to obtain the descriptive statistic measures.

Results

A total of 104 pharmacists answered the invitation; however, 27 questionnaires were incomplete, which precluded analyzing them. Given the above, a sample of 77 pharmacists working in PHC was considered, with a mean age of 39.9 years old and a standard deviation (SD) of 6.80 among the respondents. Their age varied from 22 to 57 years old. In relation to their academic training and considering 2020 as time frame, all the participants had finished their undergraduate studies a mean of 14.9 years ago, with an SD of 6.7. When observing the mean time between conclusion of the undergraduate studies and conclusion of the first graduate course attended, either *Lato Sensu* or *Stricto Sensu*, the values ranged between 1 and 26 years, with a mean of 8.3 and an SD of 6.5. All the professionals with a minimum interval of 10 years between graduation and conclusion of their first graduate studies (24.7% of the total) chose some specialization course (TABLE 1).

Regarding the authorization issued by the Municipal Health Department (*Secretaria Municipal da Saúde*, SMS) to attend courses offered by the Ministry of Health (MS), the State Health Department (*Secretaria Estadual de Saúde*, SES), the Regional Pharmacy Council (*Conselho Regional de Farmácia*, CRF) and the Federal Pharmacy Council (*Conselho Federal de Farmácia*, CFF), 51 (66.2%) pharmacists answered that they were allowed to participate; 6 (7.8%) answered that they were not; and 20 (26%) answered that they did not know.

Regarding time availability to attend courses in the PhA area, 25 (32.5%) stated that they always have time available; 29 (37.7%) reported that they are occasionally available; 19 (24.7%) indicated that they rarely have availability and 4 (5.2%) pointed out that they never have time. Sixty-two of the participants (80.5%) had already attended some type of course and/or training for PhA professionals, whereas 15 (19.5%) had not done so.

As for the contribution of the courses carried out in PhA within their performance area in the municipality, 63 participants reported that the courses contributed at some point; 1 (1.6%) answered that they rarely contributed; 11 (17.5%) indicated that they sometimes contributed; 21 (33.3%) pointed out that they contributed many times; and 30 (47.6%) participants stated that the courses always contributed.

Subsequently, the pharmacists' work contracts by weekly hour load was verified (TABLE 2), as well as the frequency of pharmaceutical assistance services, in which it was identified that those with a workday of 11 to 20 hours per week do the following every day: 2 (33%) drug dispensing/guidance; 2 (33%) assessment and promotion of therapeutic adherence; 1 (17%) pharmacotherapy review; 1 (17%) medication reconciliation; 1 (17%) pharmacotherapy follow-up; and 1 (17%) pharmacovigilance activities.

Table 1. Characteristics of the pharmacists working in Primary Health Care from 30 selected municipalities (Rio Grande do Sul, Brazil, 2021). n=77 participants

Characteristics	n	%	Age	
			Mean	Standard Deviation
Self-declared skin color				
White	72	93.5	39.15	6.65
Brown	5	6.5	40.0	9.62
Gender				
Male	17	22.1	42.00	6.55
Female	57	74.0	38.70	6.75
I prefer not to answer	3	3.9	42.0	6.24
Undergraduate training year				
1980|--1990	3	3.9	32.00	8.89
1990|--2000	9	11.7	37.56	9.53
2000|--2010	45	58.4	39.36	5.80
2010|--2021	20	26.0	40.70	6.97
Graduate training				
No graduate training	10	13.0	39.30	6.82
Graduate training	67	87.0	39.19	6.85
Lato Sensu	58	86.6		
Stricto Sensu	28	41.8		
Year corresponding to the most recent graduate training				
2000|--2005	3	4.5	44.00	2.65
2005|--2010	3	4.5	39.00	1.73
2010|--2015	13	19.4	41.38	6.20
2015|--2020	22	32.8	38.18	7.55
2020+	20	29.9	36.70	4.69
Not reported	6	9.0	43.50	10.56
Attending some course on COVID-19				
Yes	40	51.9	38.45	6.94
No	37	48.1	40.03	6.64
Attending the Qualifar-SUS* training program				
Yes	31	40.3	37.81	7.23
No	35	45.4	39.54	6.09
Not informed	11	14.3	42.09	7.25

*Courses offered by DAF/SCTIE/MS which make up the education axis of the National Pharmaceutical Assistance Qualification Program ***(Qualifar-SUS)*** in 2020.Source: Prepared by the authors.

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Table 2. Description of the work contracts by the participating pharmacists' working time and weekly hour load (Rio Grande do Sul, Brazil, 2021).

Contract	n	%	Working time (months)		Weekly HL	
			Mean	Standard Deviation	Mean	Standard Deviation
Commissioned position	4	5.2%	94.00	103.83	38.75	2.50
Public tender	63	81.8%	80.17	64.61	34.89	7.43
Intermunicipal Consortium - Agreement	1	1.3%	8.00		30.00	
Intermunicipal Health Consortium (*Consórcio Intermunicipal de Saúde*, CIS)	1	1.3%	13.00		30.00	
Indefinite Term Contract (CLT)	1	1.3%	6.00		40.00	
Temporary Contract (CLT)	1	1.3%	24.00		40.00	
Outsourced Company	1	1.3%	9.00		44.00	
Simplified Selective Process	3	3.9%	83.67	134.66	34.67	9.24
Residency	1	1.3%	0.00		40.00	
RPA	1	1.3%	8.00		40.00	
Totals	77	100.00%	74.6	68.9	35.3	7.2

*RPA: Autonomous Payment Receipt (***Recibo de Pagamento Autônomo***); HL: Hour Load; SICs: Social Impact Contracts; CLT: Consolidation of Labor Laws (***Consolidação das Leis do Trabalho***); Source: Prepared by the authors.

Pharmacists working from 21 to 30 weekly hours performed the following services every day: 14 (82%) drug dispensing/guidance; 7 (41%) team management; 4 (24%) assessment and promotion of therapeutic adherence; 3 (18%) pharmacotherapy follow-up; 3 (18%) drug disposal; 2 (12%) medication reconciliation; 2 (12%) pharmacotherapy review; 1 (6%) technical-pedagogical activities; and 1 (6%) pharmacovigilance.

Pharmacists with a weekly hour load of 31 to 40 hours were active every day in the following pharmaceutical services: 36 (71%) dispensing/guidance; 30 (59%) team management; 13 (25%) medication reconciliation; 11 (22%) pharmacotherapy follow-up; 11 (22%) assessment and promotion of therapeutic adherence; 7 (14%) pharmacotherapy review; 8 (16%) pharmacovigilance; 7 (14%) drug disposal; 3 (6%) pharmacoepidemiology; and 2 (4%) technical-pedagogical activities. Finally, 2 pharmacists, with 41 to 50 hours per week, performed drug dispensing/guidance every day and 1 pharmacist carried out pharmacotherapy review, medication reconciliation, assessment and promotion of therapeutic adherence and team management.

According to Table 3, the participants' work contracts by performance component, function and workplace were determined. When asked about their performance component, 23 (29.9%) pharmacists stated being active in 2 PhA components, whereas 13 (15.6%) stated working in 3 PhA components. Regarding accumulation of functions, 12 (15.5%) pharmacists stated performing more than one function. It is important to note that 39 pharmacists (50.6%) worked in more than one area.

Table 3. Description of the work contracts by the participants' performance component, function and workplace (Rio Grande do Sul, Brazil, 2021).

Contract	Commissioned position	Public tender	Intermunicipal Consortium - Agreement	Intermunicipal Health Consortium (CIS)	Indefinite Term Contract (CLT)	Temporary Contract (CLT)	Outsourced Company	Simplified Selective Process	Residency	RPA	Total	
Performance component(s)											**n**	**%**
Basic	4	49	1	0	1	0	1	2	1	1	60	78
Specialized	3	32	1	1	0	0	0	1	0	1	39	51
Strategic	3	20	0	0	0	1	0	0	0	0	24	31
Others	0	3	0	0	0	0	0	0	0	0	3	4
Function											**n**	**%**
Chief Pharmacy Technician (CPT)	1	31	0	1	1	1	0	2	0	0	37	48
Assistant Pharmacist	1	17	1	0	0	0	1	1	0	1	22	29
Manager	2	15	0	0	0	0	0	0	0	0	17	22
Others	0	5	0	0	0	0	0	0	0	0	5	6
Workplace											**n**	**%**
SAE	2	13	0	0	0	0	0	1	0	0	16	21
SICLON	0	13	0	0	0	0	0	1	0	0	14	18
CAF	4	17	0	0	0	1	0	0	0	1	23	30
Management	2	17	0	0	0	0	0	0	0	1	20	26
Health Surveillance	0	4	0	0	0	0	0	0	0	0	4	5
Pharmacy	3	49	1	1	1	0	1	1	0	1	58	75
Others	0	10	1	0	0	0	0	1	1	0	13	17

SAE: Specialized Care Service (***Serviço de Atendimento Especializado***); SICLOM: Medication Logistic Control System (***Sistema de Controle Logístico de Medicamentos***); CAF: Pharmaceutical Supply Central (***Central de Abastecimento Farmacêutico***); RPA: Autonomous Payment Receipt (***Recibo de Pagamento Autônomo***).Source: Prepared by the authors.

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Of the total respondents, 14 (18.2%) worked in two places, 19 (24.7%) did so in 3 workplaces, 5 (6.5%) worked in 4, and 1 (1.3%) worked in 5 places. Regarding the higher frequency of the pharmacists' workplace with a contract in the municipality, the following was found for those who worked in CAF, pharmacy and management: 1 had a commissioned position contract; 9 were hired by public tender and 1 by RPA. There were 4 pharmacists with contracts through public tender who worked in SAE, SICLOM and pharmacy. Finally, 1 pharmacist had a public tender contract and worked in SAE, SICLOM, CAF, management and pharmacy.

When asked about which pharmaceutical services would be developed, the link with the services in the context of drug management and care management in each of the participants' workplace was verified (Table 4).

Table 4. Description of the pharmaceutical services in the scopes of drug management and care management by workplace (Rio Grande do Sul, 2021).

Workplace / Pharmaceutical services	Specialized Care Service (*Serviço de Atendimento Especializado*, SAE)		Medication Logistic Control System (Sistema de Controle Logístico de Medicamentos, SICLOM)		Pharmaceutical Supply Center (Central de Abastecimento Farmacêutico, CAF)		Management		Health Surveillance		Pharmacy		Others (specify)	
	n	%	n	%	n	%	n	%	n	%	n	%	n	%
Drug selection	14	88%	13	93%	22	96%	19	95%	0	0%	34	59%	6	46%
Drug scheduling	13	81%	12	86%	20	87%	16	80%	0	0%	36	62%	8	62%
Drug acquisition	9	56%	8	57%	18	78%	14	70%	0	0%	25	43%	4	31%
Drug storage	14	88%	14	100%	20	87%	15	75%	0	0%	51	88%	10	77%
Drug distribution	13	81%	13	93%	21	91%	16	80%	0	0%	46	79%	9	69%
Drug disposal	13	81%	13	93%	22	96%	18	90%	1	25%	52	90%	12	92%
Drug dispensing/guidance	15	94%	14	100%	20	87%	17	85%	0	0%	57	98%	11	85%
Pharmacotherapy review	14	88%	12	86%	18	78%	16	80%	0	0%	40	69%	9	69%
Medication reconciliation	12	75%	10	71%	11	48%	12	60%	0	0%	30	52%	8	62%
Pharmacotherapy follow-up	12	75%	11	79%	8	35%	9	45%	0	0%	28	48%	10	77%
Assessment and promotion of therapeutic adherence	11	69%	10	71%	11	48%	12	60%	0	0%	33	57%	9	69%
Technical-pedagogical activities	11	69%	10	71%	19	83%	18	90%	1	25%	33	57%	8	62%
Pharmacoepidemiology	11	69%	8	57%	10	43%	10	50%	1	25%	20	34%	7	54%
Pharmacovigilance	11	69%	8	57%	12	52%	14	70%	2	50%	27	47%	7	54%
Team management	13	81%	12	86%	22	96%	20	100%	0	0%	45	78%	7	54%
Totals	16		14		23		20		4		58		13	

Source: Prepared by the authors.

Discussion

The sociodemographic variables presented predominance of women and white-skinned individuals with a mean age of 39.9 years old, followed by men and, to a lesser extent, those who chose not to answer. This female presence in the municipal PhA management activities can be a result of the increase in the number of women attending universities and of their large numbers in the pharmaceutical labor market. In 2020, women represented 65% of the professionals working in the public and private sectors, both in assistance-related activities in hospitals and in Primary Care[21,22].

This study considered the workforce of PhA pharmacists as one of the pillars with potential contributions to rational medication use. Furthermore, it is understood that it is up to the municipal management to enable, encourage and intensify participation of the PHC professionals in PEH actions. To this end, it is fundamental that they address issues related to the pharmacists' routines through actions with matrix support and in-person or remote courses, in order to ensure that these professionals develop the necessary skills to ensure efficacy in meeting the demands generated by the health system[2,23].

In addition, this research evidenced the prevalence of participants with graduate studies, mostly in the *Lato Sensu* modality and specifically in specialization courses. This result is close to a study conducted with pharmacists in 2015, which indicates that 55.1% of this population group has graduate studies, with specialization courses accounting for 80.8%. This percentage of *Lato Sensu* graduate studies can be related to the large number of specialization courses available, to the programmatic content of these courses being also aimed at the professional practice, and also to the difficulty offering professionalizing *Stricto Sensu* courses[24].

In Brazil, the curricular guidelines for undergraduate health courses and governmental programs drive the curricula for pharmaceutical care practices; however, there are still dissonances between the academic curricula and the health demands[25]. Considering this scenario, this research showed the pharmacists' participation in courses and/or training for PhA professionals and the contribution of PEH courses to the performance of the participants of this research in the municipalities where they carry out their professional activities. The professionals working in PHC who actively participate in permanent education in health actions as a tool for continuous and up-to-date learning ensure qualification of the services provided to the population[26].

In addition, in terms of the permanent education in health dimension, it was verified that some pharmacists had not attended courses related to COVID-19. It is important to note that, according to the MS, Ordinance No. 639/2020 published on March 31st, 2020, provides for registration and mandatory training for all health professionals (with the exception of those who belong to the risk group) to cope with the COVID-19 pandemic, regardless of their involvement in serving the population[27]. In synthesis, the pharmacists' participation in training courses funded through *Qualifar-SUS* is evidenced. The presence of the program in the municipalities where the participants of this research work contributes to the process of improvement, implementation and systemic integration of PhA activities in health actions and services[28].

When analyzing the pharmacists' productivity and observing the existence of work intensity, it is verified that most of the participants were Chief Pharmacist Technicians, this being their main function in the municipality where they work, with a total mean of 35.3 working hours. However, some participants were active in more than one workplace, namely in the pharmacy, CAF and drug management scopes. In addition, when analyzing the pharmaceutical services performed in each workplace, the intensity of the pharmacists' performance is noticed in more than one activity.

In general terms, the workday of the pharmacists participating in this research is from 21 to 40 weekly hours, for those who were active in 8 pharmaceutical services every day. In turn, those who exceeded 31 to 40 weekly hours worked in 10 pharmaceutical services every day, both in the drug management area and in care management. Work intensification in terms of performance and more than one function tends to reduce the professionals' ability to maintain the necessary criteria to provide good quality services[29].

The increase in work intensity can be a result of the reduced number of job positions, which intensifies the process flow and/or extends the workdays. Intensification of the work process is a consequence of a flexibility and precariousness of work process, which can trigger early wear out of the workforce[30,31].

In addition, Vieira *et al.*[32] point out that, due to the insufficient number of pharmacists in the dispensing area, drug deliveries to the users of the 43 pharmacies analyzed was carried out by administrative assistants, pharmacy assistants, assistant pharmacists, interns and nursing technicians. In addition to that, De Bernardi *et al.*[33] showed that 20 municipalities from the Northwest area of the state of Rio Grande do Sul presented problems related to human resources. Only five of these municipalities had a Chief Pharmacist Technician, whereas in the others, the people in charge were nurses and nursing assistants, among other professionals.

Conclusion

The current study points out that the pharmaceutical assistance pharmacists working in Primary Health Care (PHC) in 30 municipalities from the state of Rio Grande do Sul have qualifications/training in permanent health education. On the other hand, the asymmetry in the distribution of pharmaceutical work is analyzed, as well as working in more than one place and an excessive demand for pharmaceutical services. In view of this, when analyzing the number of professionals working in PhA, as well as quality training, when they lack good management and are not adequate to the demands generated by the population, it is observed that these factors directly affect the pharmacists' workforce. Consequently, this can trigger problems in planning the entire pharmaceutical assistance process.

As limitations of this study, it is worth noting that the period when the paper was carried out coincided with the change of municipal management of the municipal health departments, which may have caused changes in the pharmacists' job positions. Another important factor was the COVID-19 pandemic, which may have exerted an impact on the research data. As it was a cross-sectional study, this paper was susceptible to reverse temporality. Due to the outdated National Registry of Health Institutions (*Cadastro Nacional de Estabelecimentos de Saúde*, CNES) platform, it was decided to use the snowball technique, consequently not identifying the total number of pharmacists working in primary care in each municipality. The questionnaire also imposes limitations, such as impersonality and privacy problems. Finally, studies on monitoring, evaluation and distribution of the workforce of pharmaceutical professionals in PHC are recommended, in order to avoid increased work intensity and, consequently, work overload.

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Collaborators

PSO, DP, VLM and DB: Conception, design, and data collection, analysis and interpretation. PSO, DP and DB: Writing of the article and relevant critical review of the intellectual content.

Conflict of interest statement

The authors declare no conflict of interest.

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