Doctors’ perceptions on distance education and contribution of Family Health specialization

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This article is contextualized in the Brazilian More Doctors Program (PMM). It was aimed at understanding the perception of distance education and its contributions to health practices in the Brazilian state of Rio Grande do Sul. Through a qualitative approach and using a focus groups methodology, this study was conducted with the participation of PMM doctors and family health specialization course students of Universidade Federal de Ciências da Saúde de Porto Alegre. The results show that, although distance education is still a new topic for most of PMM professionals, it did not hinder the identification of potentialities in this teaching modality. It contributed to the education and qualification of these professionals’ daily practice, both in terms of their individual clinical performance and of teamwork.

Keywords: Primary healthcare. Distance education. Permanent health education.
Introduction

In Brazil, in the last three decades, initiatives agreed upon between the areas of health and education have been developed as an attempt to advance towards universalization and to improve the access to the Brazilian National Health System (SUS). Therefore, it is not possible to consider the advance of health without considering its integration with education, both in terms of educational practices focused on the population and in terms of permanent health education focused on the professionals of this area.

Health is a universal right guaranteed by the Brazilian Federal Constitution of 1988. Since its establishment, technologies and SUS practices have been suggested and kept in order to guarantee this right. Just like any other health system from other countries, SUS faces difficulties in its operation due to lack and poor distribution of health professionals throughout its territory. The deficit of doctors, mainly in primary healthcare, for example, is recurrent and worsened by an education profile that oftentimes does not meet the population’s health needs. This condition hinders the development of actions advocated by the Family Health Strategy (ESF). ESF is an essential care model to the expansion and consolidation of primary care1-2.

Several initiatives have been developed over the last few years. They aim at implementing SUS as a successful health system capable of solutions and with easy access. The National Primary Care Policy3 deserves attention among the existing policies and programs. It guides family health as a priority strategy to the expansion and consolidation of primary care. This policy considers the terms “primary care” and “primary healthcare” as equivalents, considering their current conceptions.

Historically, the supply and distribution of doctors in the Brazilian territory did not keep up with its population’s growth and needs. Brazil is a country with continental dimensions and different realities. These conditions increase the difficulty in retaining doctors in several regions, particularly in locations far from large populational centers. Therefore, it is necessary to think of strategies, through public policies and programs, aimed at the education and distribution of professionals who are able to provide a high-level health service that meets the precepts of SUS legislation.

Following the need to reduce this lack of doctors in primary healthcare and the unequal distribution of professionals throughout the country, the Brazilian Ministry of Health instituted the More Doctors Program (PMM) in 2013. PMM was initially planned to last three years, with a possibility of extension. It was constituted of three dimensions of operation: improvement of the physical structure of the primary healthcare network; educational reforms of medical schools and residency; and supply of doctors in priority regions to SUS4.

In this perspective, one of the program’s dimensions also includes the education of doctors in primary care by integrating teaching and service. There is also an education through international exchange program and qualification through permanent health education, as well as postgraduate stricto sensu courses in primary care and family health.

The Ministry of Health has also been making efforts to provide educational offers through distance education. As a national strategy, a national collaboration network was created: SUS Open University (UNA-SUS). UNA-SUS was instituted on June 18,
2008. It is constituted of public education institutions that offer short-duration courses and *lato sensu* specialization courses mainly through distance education\(^4\).

Therefore, this study aimed at understanding the perception of distance education of the participants of a family health specialization course offered by UNA-SUS. It also aimed at identifying to which extent their perception results in changes in the daily routine of professional practice of PMM doctors in the Brazilian state of Rio Grande do Sul.

**Contextualization**

PMM was created with the objective of qualifying the structure and human resources to meet SUS needs, as well as supplying professionals to primary healthcare (that historically suffers with deficit of professionals). It was aimed at ensuring the presence of doctors in primary healthcare’s health teams, particularly in locations far from populational centers, with the participation of doctors from different nationalities\(^4\).

Besides improving the structure and supplying professionals, one of PMM’s purposes is to prepare doctors for primary healthcare by offering specialization courses through public higher education institutions. It aims at developing teaching, research and extension program activities. The participants of the program are considered scholarship students. They are registered in a higher education institution connected to UNA-SUS in order to have access to *lato sensu* courses of improvement and specialization. On late December 2015, the Pan American Health Organization’s report showed that, from a total of 11,404 PMM doctors, 10,115 (88.7%) concluded or were taking a specialization course\(^5\).

Universidade Federal de Ciências da Saúde de Porto Alegre (UFCSPA) is part of the UNA-SUS network. UFCSPA offers educational resources to PMM participants, such as a mandatory specialization course required to remain in the program. The course has a workload of 360 hours and is organized into two axes that deal with relevant topics to the organization of SUS and of primary healthcare. It is accessed through a virtual learning environment (VLE) where audiovisual resources, support material and updated theoretical references are available. Its final product consists of a reflective portfolio organized into five chapters with previously indicated topics. Students are encouraged to report their experience or practice according to the content of the course.

Among PMM’s guidance, permanent health education is highlighted, in which professionals should organize their weekly workload of professional activities, among which eight hours should be dedicated to theoretical studies, being subsequently submitted to assessments. PMM’s education axis is an important step in the quest for changes in the professional profile towards the qualification of human resources for SUS. Therefore, the complementary education’s objective is to provide essential and necessary knowledge to work in the Brazilian primary healthcare context. Distance education was thus the established strategy because it enables to achieve the education and qualification of these professionals throughout the Brazilian territory\(^7\).

The daily routine of health professionals is dynamic, which requires managing their time in order to seek and keep a professional and academic qualification in the context of permanent health education. However, it is not necessary to be present in a regular classroom anymore, which could be an unfavorable factor when faced by an
intense work routine. Therefore, new teaching and learning methods arise to discuss this paradigm related to the formal and traditional educational model, such as distance education.

Distance education enables to reach a large number of people distributed in different locations. Professionals are provided with knowledge, being able to have critical and reflective abilities, skills and competencies to develop their functions. It also enables the use of new content, pedagogical practices and educational resources that encourage and facilitate the production of knowledge based on self-learning. Additionally, there is an increased availability of open-access educational resources, democratizing the permanent health education process to professionals and contributing to the establishment of spaces of discussion and socialization about the concepts dealt with in these processes.

Considering the possibilities of distance education and of communication and information technologies, it is possible to work on professional and human development by using different media. It is also possible to build significant discussions on relevant topics to primary healthcare’s daily routine. Therefore, one of the essential elements of this modality is communication, which is potentialized, given the technological advances that have facilitated the access to dialog, content and information in real time, directly in your workplace. This interactivity fosters and strengthens the virtual teaching and learning process. It creates opportunities to discuss content through multimedia educational resources that can be shared, such as audiovisual devices, video lessons and interactive content.

According to Dahmer, distance learning is an important tool of qualification of professionals in large developing countries, such as Brazil, since it is easier to reach professionals in regions that have fewer financial resources and that are far from large urban centers. This modality ends up being a means that enables to overcome deficiencies in permanent education of health professionals that work in primary healthcare, influencing the reconfiguration of professional practices. Distance education has been adopted in this perspective, contributing to the reduction of deficiencies in primary healthcare education and providing access to education in regions that are far from large urban centers where most of PMM professionals are located.

**Methodology**

This study’s methodology was based on the principles of an exploratory, descriptive and qualitative research with participation of PMM doctors who take the family health specialization course at UFCSPA/UNA-SUS. Data was generated throughout August 2017, when the course completion essays were presented by students of a class from the Brazilian state of Rio Grande do Sul. The criteria to participate in the study were: be a family health specialization course student, live and work in PMM in the state of Rio Grande do Sul, sign the authorization for publication and the consent document.

Data was collected through focus groups, since group discussions with the research participants enable to learn different perceptions and attitudes regarding a given fact, practice, product or service. Additionally, through the discussion among other participants and the dialogic possibility of sharing information, a wealth of data was obtained, enabling the group to go beyond the answers of a closed instrument.
A total of 48 active students able to present their course completion essays were invited in person and by email. This number was related to the total number of students of a class from the state of Rio Grande do Sul. Among this number, 19 students were available to participate. The invitation was sent by email given the possibility of sending the study proposal in advance. This means of communication is also frequently used in the distance learning processes. Refusals to participate were due to unavailability of time after presenting the course completion essay, since many professionals had to return to their cities of origin using the transportation provided by the municipal government.

The issues introduced for discussion in the groups were: Which are the advantages and difficulties presented by distance learning? Which are the distance learning’s contributions to professional practice? In order to ensure the study subject’s anonymity, they were attributed codes: “S” followed by the corresponding number of their participation registration order. Meetings were held at UFCSPA. Participants were split into four groups. A total of four meetings were held, i.e., one with each group. Each session lasted one hour and a half and was coordinated by the researcher. Meetings were also attended by an observer and an assistant to help record the audio/video.

The research was approved by UFCSPA’s Research Ethics Committee under opinion no. 2.073.438. All aspects related to the research are in accordance with Resolution no. 196/96, of the Brazilian Ministry of Health’s National Health Council. Testimonies were recorded, transcribed and edited. The analysis was based on the thematic content analysis method, since it meets the qualitative investigation’s prerequisites and enables to identify and analyze topics related to a specific subject11. Therefore, the results were organized according to the following topics: distance learning’s advantages; distance learning’s difficulties; and specialization course’s perceptions and contributions to professional practice.

**Results and discussion**

From the total of participants (n=19), 9 (47.36%) were Cuban, 8 (42.12%) were Brazilian, 1 (5.26%) was Peruvian and 1 (5.26%) was Bolivian. As to the country where they graduated in Medicine, 13 of them (68.42%) were in Cuba, 4 (21.06%) were in Brazil, 1 (5.26%) was in Argentina and 1 (5.26%) was in Bolivia.

Figure 1 shows the distribution of participants according to the city where they work in the state of Rio Grande do Sul.
From the total number of participants (n=19), 12 (63.15%) did not have any prior experience with distance learning. Regarding internet access, 13 (68.42%) of them had access in their workplace, and all 19 (100%) participants had internet access at home.

Distance learning’s advantages

Dialogs in focus groups showed, as a first point to be highlighted about distance learning, a certain fear and unawareness of the teaching modality. For most professionals, this was their first experience with distance learning and VLE:

In Cuba, I did not have this experience. (S5)

In the beginning, it was really hard! We had some computer knowledge, but never had the opportunity to take a distance learning course. It was the first time. So, it was a bit difficult, but then we asked questions, and things worked out. (S9)

Most of these testimonies are attributed to characteristics of the research participants that reflect the profile of PMM professionals. More than half of the research participants are doctors from the collaboration between Brazil and Cuba. Oliveira² shows that, among all doctors hired through PMM, 11,150 are from this collaboration, representing approximately 80% of the total of PMM participants. In some cities, cooperative members represent all doctors who work in primary healthcare. In other
cities, on the other hand, they represent only 5% or less. In certain health units, both Brazilian doctors and doctors from other countries work together. This collaboration potentializes and helps in the exchange of information, doubts and difficulties regarding daily routine situations and distance learning. This teaching modality indeed expands possibilities to share and discuss content with the team in the work environment.

One of the aspects mentioned by professionals was the possibility of studying anywhere. This is related to the profile of PMM participants. Most of them migrate to the cities where they are designated to work at. However, they travel in vacation and time-off periods. With distance learning, they can keep accessing the course and work on the education activities from anywhere. They also do not need to go to the institution that offers the course. Having the content available at any time also enables students to organize their time and build their own study plan, encouraging them to be more proactive:

Something favorable is: wherever you are, you can access the material. I was on maternity leave and decided to continue the course, so I was able to keep it going. In the time I had left, I was able to organize, access and work on the activities. (S8)

I am in one city. On the weekends, I travel to another. This is one of the advantages of a distance learning specialization course. You can download the files and keep the progress on the internet. (S11)

Being away from their work place or from home was not an impediment for the students to work on their activities or keep contact with tutors and colleagues. Forums for the exchange of experiences enable being connected with colleagues and having discussions suggested by tutors according to the course’s syllabus. Rangel’s gives emphasis to the characteristic of interactivity of these processes, in which subjects can actively participate, share reactions and experiences, and discuss concepts and problematic situations.

The students pointed out that the variety of educational resources that can be used in distance learning is a positive factor. The family health specialization course offered by UFCSPA/UNA-SUS is organized into two thematic axes. The first axis deals with content related to collective health. The second axis works with content focused on clinical practice. The content enables to build relationships from professional experiences and work in the territory. The knowledge axes of the course’s pedagogical project were organized based on a multiprofessional research and development work. The result was an aesthetically pleasant content that aims at keeping attention and encouraging students to develop themselves following the content that is essential to practice. This process is reflected on the research participants’ speech when they mention the quality and diversity of the educational resources: “The course has plenty of teaching material, which shows quality – the videos, the classes. I thought it was really good, because they showed the reality we live in” (S3).

The course’s pedagogical material aims at using the greatest number of educational resources possible. As a result, the teaching and learning process is effective and
attractive to professionals. In order to do that, it is necessary to integrate different areas of knowledge, resulting in a joint construction that takes into consideration the knowledge of the pedagogical areas, of the design and of the health area. The result is a material that encourages professionals. As the following testimony shows, it enables to use and share knowledge with the rest of the ESF team:

Being straight to the point, I used to print even the tables and keep them in the unit. (S15)

I used to really use the material with the team. It was quite useful. (S19)

These testimonies show that the course’s educational objects were also used in permanent health education processes, not only by PMM doctors. They were extended to the entire team, particularly the content comprising axis 1, “Collective Health Field.” This is due to the fact that the material is focused on all health professionals from the primary healthcare team, since the content can be used by Nursing, Medicine and Dentistry.

Even when not familiar with distance learning, students understood the educational process can be performed in different moments, and sharing material and resources can be a tool for permanent health education processes.

Distance learning has several potentialities, such as its use and incorporation into processes of education and qualification of health professionals, particularly in a large country such as Brazil. However, there still are obstacles to be overcome. Among them, unawareness of this teaching modality is highlighted, since 63.15% of the research participants say this was their first experience with distance learning: “So, it was a new experience to us. We had some computer knowledge, this stuff, but we never had the opportunity of taking a distance learning course in Cuba” (S3).

In order to help in the adaptation, the course starts off with a module called “Introduction to distance learning.” In this module, students are equipped and prepared to use VLE tools. The module aims at helping students in the beginning of the course, presenting the communication and interaction tools, and introducing them to the tutor, who is an important person in the teaching and learning process in distance learning.

In this sense, the distance learning’s purpose is to facilitate students’ access to information, making them more proactive towards the academic and professional education. In the course, every student is an agent of their own education and should create, within certain limits, their own learning profile:

There is the issue of proactivity. You have to be more dedicated. (S8)

I think distance education is good. But it also depends on the student’s style. (S9)

An aspect mentioned by students is that the experience in a distance learning course enables students to reflect more, when compared to classroom teaching. Classroom teaching, in turn, can result in a banking education, i.e., teachers deliver and deposit
content on students. This reflection indicates a necessary competency to the learning process. According to Behar, this is due to potential moments of abstraction, reflection and critical analysis of situations, activities and ways of acting in the teaching and learning process.

I think it is interesting, because we end up reflecting way more than in the classroom, in which knowledge ends up not being absorbed enough, and enables us to reflect upon the presented content. (S10)

Therefore, the advantages of distance learning motivate students, and encourage dialog, the exchange of experiences and the use of the platform at any time. The available time is thus better leveraged, and the educational material and resources are shared with other health professionals.

**Distance learning’s difficulties**

The need for a good internet connection is an unfavorable factor that has compromised the access of some professionals during the course. Although all participants had access, some of them work far from the city’s central area, in rural zones. This distance oftentimes hinders the access to the course due to lack of a quality internet connection to follow the resources, such as videos and animations.

PMM professionals are allocated eight weekly hours to dedicate to educational activities that are considered permanent health education. However, this workload is not always enough to work on all activities scheduled for a given week due to poor internet connection. Participation in forums also required students to be present every day in the VLE in order to follow up with the discussions between the group of students and the tutor.

We have eight hours a week for the course. However, I had to log in every day, because I would begin the activities, but not conclude them. (S2)

Another point highlighted by the participants is related to in-person meetings during specialization. The course provides for at least three in-person meetings in its schedule for tests and presentation of the course completion essay. Several professionals point out that, since they are located in distant cities from the capital and the university, it would be difficult to include more in-person meetings to follow up with the specialization. Others believe that more in-person meetings could help during the course, solving doubts and activities, particularly related to the difficulty in following a distance learning course.

I think that maybe meetings were too far apart throughout the specialization. (S7)

It was good. For example, many of us live far from the classroom. Can you imagine having to come all the way here to take the course? (S10)
However, even with a reduced number of in-person meetings, the use of tools aimed at bringing students closer to the course is also a positive factor highlighted by the participants. The forum enables a closer approach among professionals who work in territories and realities that are totally different from each other, enabling a discussion of cases, problems and situations. The following testimonies exemplify the potentiality of forums in the suggestion of ideas and solutions to problematic situations in the primary care’s daily routine: “When I post something on the forum, for example, I write a situation from my health unit, I have the opportunity of sharing and discussing it with colleagues from other cities” (S5).

During a focus group’s sessions, students discussed some aspects in the tutor-student relationship. The difficulty to communicate was highlighted as an unfavorable point in this relationship, since tutors are not required to reply in real time. This perception can also be related to the traditional teaching model where students question teachers in real time in the classroom and immediately receive an answer.

Distance learning can establish both an asynchronous and a synchronous dialog. In order to meet this immediate need for an answer, it is possible to use chats, increasing the synchronous interaction between students and tutors. Therefore, tutors should guide students towards being managers of their own knowledge, among other main responsibilities. However, tutors help mediate the content presented and the development of evaluative activities, such as the creation of reflective educational texts, projects and activities in order to moderate and encourage participation in forums, quizzes and collaborative texts.

The entire communication between tutors and students was conducted through the VLE (chats, direct messages and posts in forums). These interaction processes are recorded and can be monitored. Nevertheless, some students think that an in-person contact can be more effective to clarify doubts or discuss concepts: “I think that, especially for us, who are used to having a teacher in the classroom, it would help to have direct contact with the person” (S18).

However, even with different communication resources available, some students still prefer to have an in-person interaction, which could help in the teaching and learning process in distance learning.

Perceptions on distance learning and contributions of the specialization course to professional practice

One of the main contributions mentioned by students was the encouragement to improve the work process and the daily routine of the practice developed in ESF. The process of change in the practice of professionals does not depend only on the in-service subjects and on the educational processes. It is necessary to consider the work organization and conditions. These factors potentialize the educational process, providing subsidies to apply the knowledge built throughout the educational process in practice.

Therefore, this change of practices goes through the possibility of a dialog with other professions in order to search for solutions that have already been applied in other services and to exchange knowledge between tutors and students, given the experience
of tutors in health and primary healthcare practice in Brazil. These possibilities reflect students’ opinions, as observed by their testimonies.

The state of Rio Grande do Sul has a large geographical area, with 497 cities. It is the largest southern state of Brazil. Consequently, PMM professionals are spread in distant cities with regional, socioeconomic and cultural differences, although the population’s illness conditions are similar. Therefore, the reported situation results in exchange of information and experience in potentializing the solution of daily problems in primary healthcare using VLE. This was confirmed by students when they reported that forums and chats enabled the discussion and solution of specific problems of their territories. Therefore, it shows that, even though they were geographically distant, their realities were similar: “There were colleagues in similar situations, but who were trying to do their best [...] On the forums, for example, we see what everyone posts and writes, we see new suggestions and are able to identify what can be implemented in our own unit” (S17).

The family health specialization course was not the only educational offer available for PMM professionals. There are different options of platforms and portals with short-duration courses with tutors or self-instructional focused on health professionals. UNA-SUS portal regularly offers different courses with content based on the daily routine of SUS professionals and on their needs. Some professionals were motivated to search for knowledge in courses according to the needs of the population from their territory or according to emerging topics related to prevention of diseases, treatment, maintenance and promotion of health.

I received all courses by email and I was able to take a total of ten courses with topics related to nutrition in primary healthcare, dengue, among others... This was fantastic for being able to work in education in health for the population I assist. (S5)

According to the students’ profile, being most of them foreign or Brazilian, but graduated in other countries, it was necessary to work with aspects related to SUS history and organization in details during the first education axis. In the second axis, aspects of family Medicine clinic are covered, presenting the essential content to help professionals handle aggravations that are not prevailing or that are eradicated in their countries of origin.

As foreigners working in a country with a totally different health system, we learn about diseases we knew only from literature, diseases that were eradicated there (in our country) and that you still have here. (S12)

Content regionalization was also a highlighted point. Given the need for a large-scale education, the course is offered in six states, besides Rio Grande do Sul. Therefore, the content of axis 2, “Clinical Cases,” follows regional and local specificities, taking into consideration the most prevailing health aggravations in a certain region of operation of health professionals, as well as the sociocultural characteristics of the population. This adaption enables the achievement of a more significant learning: Since the content addresses aspects related to the local context of professionals, they can exchan-
ge experiences in informal moments or in the interaction tools available in the VLE: "I also exchanged ideas with professionals who live in other parts of Brazil. The material offered is quite different. The content of the course is not the same" (S5).

Since PMM participants are mostly comprised of foreign professionals, it was necessary to cover the content in order to introduce a discussion on primary healthcare, but focused on the Brazilian context, on the protocols instituted by the Brazilian Ministry of Health and on updated references related to the health situation and the prevailing aggravations. Regarding these last ones, professionals point out different conducts and management of aggravations depending on their previous experience: "We learned a lot about the conducts and treatments here in Brazil, which are a lot different, in some aspects, from what we were familiar with" (S7).

It is also worth highlighting that the use of management and planning tools enabled students to immerse in SUS complexity based on the reality of the ESF territory:

The course helped a lot in structuring practices developed in ESF, how to organize the team and the schedule with spontaneous walk-in and with groups. The course also discusses these topics. (S15)

In different moments, it instigates us to think and discuss some situations with the unit, to question, try to see some situations from a different point of view. I discussed a lot of things with the unit, and we ended up changing a lot, for the better, our way of working throughout the year. (S14)

One of the course’s objectives is the permanent health education of health professionals, not only those who are taking the course, but also the entire team, considering the possibility of sharing resources and using topics in in-service education.

Conclusion

This study aimed at understanding the perception of PMM professionals about distance learning and the contributions of the course to the daily routine of professional practice throughout the family health education process. Distance learning is an essential tool to consolidate permanent health education and to qualify professionals who work in primary healthcare, given their distribution in distant places from large education centers or the possibility of organizing the study schedule according to their daily routines. Besides the exchange of experiences related to the work processes with other students, distance learning enables to share material with the health team.

Although it is still something new to most of PMM professionals, as some testimonies show, it was not an impediment to the identification of its potentialities. However, difficulties are inherent to educational processes, especially when it is necessary to adapt to a new education methodology. One of the greatest advantages of distance learning, as reported by the students, was the possibility of accessing the course material from anywhere, also taking advantage of permanent health education moments with the team. This possibility potentializes the qualification of primary healthcare by sharing an updated, dynamic and interactive content.
The communication with tutors was mentioned as one of the difficulties. Many professionals still think education should have an in-person characteristic, where students have contact with teachers in real time. In distance learning, it is necessary to organize time and activities, considering students send their doubts to the tutor and receive feedback through the VLE.

The possibility of rethinking ways to potentialize permanent health education in the context of the conceptions and practices of health professionals is highlighted. Distance learning is also ratified as a powerful and democratizing tool in the access to professional qualification and practice in health services. It welcomes professionals from different geographical regions, provides in-service education and adapts the educational resources according to the professional’s local reality, as well provides interlocution with different realities. The teaching modality itself is not questioned, but rather its potential to meet an education policy, such as PMM, and its immediate results in the social reality into where health professionals in education are inserted.

Authors’ contributions

Diego Menger Cezar participated in the conceptualization, creation of the manuscript, discussion of the work’s results and in the review and approval of its final version. Creidilene Ramos Magalhães and Márcia Rosa da Costa participated in the conceptualization, discussion of the work’s results and in the review and approval of its final version. Adriana Aparecida Paz and Maria Eugênia Bresolin Pinto participated in the discussion of the work’s results and in the review and approval of its final version.

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