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Virtual mentoring for rural health professionals: participant characterization, learnings and main challenges

Mentoria virtual para profissionais de saúde rurais: caracterização dos participantes, aprendizados e principais desafios

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Abstract

The shortage of healthcare professionals in rural areas leaves nearly two billion people without access to essential health services. To address this challenge, the Mentor Mentee Program was developed as a global virtual mentoring initiative to support healthcare professionals and students interested in rural health. Here we describe the creation of a virtual mentoring course and the implementation of the program Mentor Mentee 2.0. A qualitative research approach was adopted, involving mentors with at least five years of rural experience and mentees working or intending to work in rural areas. The program received 55 applications from 27 countries, resulting in 15 mentor–mentee pairs and two mentee groups. Despite challenges such as mentor withdrawal, limited participation of non-medical professionals, and connectivity barriers, the initiative demonstrated the feasibility and value of virtual mentoring as a tool for professional development, knowledge exchange, and reduction of professional isolation. Further studies are needed to deepen the understanding of mentoring as a strategy for professional development and to evaluate the impacts on the recruitment and retention of healthcare professionals in rural and remote contexts.

Keywords: Teaching; Mentor; Professional training

Resumo

A escassez de profissionais de saúde em áreas rurais deixa quase dois bilhões de pessoas sem acesso a serviços essenciais de saúde. Para enfrentar esse desafio, o Mentor Mentee Program foi desenvolvido como uma iniciativa global de mentoria virtual voltada a apoiar

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profissionais e estudantes interessados na saúde rural. Neste artigo, descrevemos a criação de um curso de mentoria virtual e a implementação do programa Mentor Mentee 2.0. Foi adotada uma abordagem de pesquisa qualitativa, envolvendo mentores com pelo menos cinco anos de experiência em áreas rurais e mentorados que atuavam ou pretendiam atuar nesse contexto. O programa recebeu 55 inscrições de 27 países, resultando em 15 duplas de mentoria e dois grupos de mentorados. Apesar de desafios como a desistência de mentores, a baixa participação de profissionais não médicos e as dificuldades de conectividade, a iniciativa demonstrou a viabilidade e o valor da mentoria virtual como ferramenta de desenvolvimento profissional, troca de conhecimento e redução do isolamento profissional. Estudos adicionais são necessários para aprofundar a compreensão da mentoria como estratégia de desenvolvimento profissional e avaliar seus impactos sobre o recrutamento e a retenção de profissionais de saúde em contextos rurais e remotos.

Palavras-chave: Ensino; Mentores; Desenvolvimento profissional

1. Introduction

There is a shortage of healthcare professionals in rural areas, resulting in approximately 2 billion people lacking access to essential health services simply because of the place they leave. Considering that half of the population resides in rural areas, creating strategies to improve access to basic services, such as healthcare, becomes a priority. (WHO,2021; Kim, 2023). It is known that factors such as lifestyle, family issues, financial incentives, and geographic location are some of the aspects that influence professionals' decisions to stay or not in rural areas. Moreover, professionals working in rural areas typically face barriers including cost and insurance, geographical dispersion, shortage and burnout. These challenges are multifactorial, requiring different strategies to address them. (Bourke,2014; WHO,2021; Maganty,2023)

Support strategies for healthcare professionals in rural areas are often not tailored to their specific professional and personal circumstances. Informal help from colleagues and friends rarely provides the sustained support needed to improve recruitment and retention. Given this scenario, mentoring programs stand out as one of the most promising formal approaches to addressing these issues. (Kim, 2023)

Mentoring is a mentee-centered model that focuses on the relationship between mentor and mentee. Moreover, unlike other models, mentoring does not aim to match a predetermined aspect to work on and limit the meeting to that aspect, but rather to create a fluid moment where the mentee's needs can guide the meeting. This process is an exchange between the parties involved, in which the mentor, being a more experienced professional in the field, seeks to advise and guide a less experienced professional. (Puls, 2020; Bourke, 2014; Sachdeva, 2021)

In 2017, at the 14th WONCA World Rural Health Conference in Cairns, Australia, Rural Seeds — a network for students and young healthcare professionals eager to learn about rural health — launched a global virtual mentoring project called Mentor Mentee. The initiative sought to connect individuals worldwide and help address the shortage of healthcare professionals in rural areas. The Mentor Mentee pilot program ran for one year, aiming to link young professionals and undergraduate students with mentors experienced in rural healthcare settings. (Puls, 2020; Floss, 2020; Rural Seeds, 2017)

Following the pilot study, the Mentor Mentee 2.0 was developed. The primary objective of this article is to describe the creation of a virtual mentoring course for rural health professionals and the implementation of the program's second edition.

2. Methods

Below we present the methodological procedures applied in conducting this research.

2.1 Type of study

A qualitative research methodology, in which the researcher developed and implemented a virtual mentoring course for healthcare professionals in rural areas.

2.2 Universe and selection criteria

The target population and selection criteria for this research was divided into two categories:

- Mentors: Healthcare professionals with at least 5 years of experience in rural areas.
- Mentees: Healthcare professionals or students in healthcare-related courses, working or willing to work in rural areas.

2.3 Program’s promotion

A podcast explaining the program ("Rural Road to Health with Veronika Rasic," episode "Mentor Mentee Programme Launch with Dr. Karine Kersting Puls") was aired on 08/03/23. Additionally, short videos in Portuguese and English were created for sharing on social media, along with digital posters. It is worth saying that the program's material had a wider reach in the medical community.

2.4 Registrations

Registrations were made through a Google Forms questionnaire. The candidates completed an application form with personal information, such as age, gender, languages, time zone and profession. Also, expectations about the program, professional background and areas of interest. The initial sample corresponded to the number of people who completed the questionnaire (28 mentors and 27 mentees). The answers guided the researchers to select the participants and pair mentors and mentees. Table 1 presents the application form´s questions for mentors and mentees.

Table 1 –Application form's questions for mentors and mentees

Mentors	Mentees
What is your full name?	
What is your email?	
What is your date of birth?	
What is your gender?	
What is your country of birth?	
What is your country of residence?	
What is your city of residence/practice?	
What languages do you speak?	
-	Among the languages you speak, do you have a preference for which language to carry out the mentoring process?
Do you have a preference for a time zone region?	
What is your profession?	What is your career choice?
Which generation of your family in this profession are you? What does this mean for you?	
When did you graduate?	What is the year that you will graduate or your graduation year?
What is your academic background?	
What motivated you to work in rural areas?	
In your country, do health professionals who work in rural areas undergo any specific training for this (for example, residency)?	
Have you received any formal mentorship training?	-
Have you any experience of mentoring?	-
Why do you want to be a mentor and what are your expectations from the program?	Why do you want to be a mentee and what are your expectations from the program?
What do you expect from a mentee?	What do you expect from a mentor?

What do you expect to do as a mentor?	What do you expect to do as a mentee?
What is your expectation about the mentoring course?	-
-	Do you have a gender preference for your mentor? If yes, which one?
Do you have a contact preference with your mentee?	Do you have a contact preference with your mentor?
What are your main interest areas?	
Do you use any Social/Professional Media such as LinkedIn®, BranchOut® or anything similar? If yes, please paste the link to your profile.	
Do you want to add any additional information?	

Source: developed by the researchers (2025)

2.5 Mentor Mentee 2.0

The program was launched in 2023. In addition to what was offered in the pilot edition, the new version offered a theoretical course.

2.6 Mentoring Course

A virtual mentoring course was created and offered to mentors participating in Mentor Mentee 2.0. It lasted for 6 months, the same duration as the program, and consisted of both theoretical and practical components. The mentees had access to the material corresponding to the rural health module.

The pairs of mentors and mentees were expected to interact with autonomy to conduct the practical educational process. The theoretical educational materials were developed based on research from national (Brazilian) and international publications on mentoring and rural health. The main references used were WHO, 2020; WHO, 2021; Bellodi, 2023; Abelsen, 2020; Bourke, 2014.

The methodologies used consisted of expository video lessons, use of resources available on the YouTube platform, texts and banners, scientific papers, as well as moments of interaction through discussion forums.

The choice of a platform to organize the course should take into account not only accessibility in different countries and languages but also the cost of use. For that reason, the Moodle virtual environment linked to the Universidade Federal de Ciências da Saude de Porto Alegre (UFCSPA) was chosen.

Specific objectives of the mentoring course**:**

1) At the end of the course, mentors should be able to:

a) Understand what mentoring is and its challenges.;

b) Understand the difference between mentoring and other educational models; Understand different mentoring models (e.g. in groups, in pairs, face-to-face or virtual);

c) Understand the role of the mentor,

d) Understand the role of the mentee;

e) Understand the benefits of mentoring;

f) Understand the challenges of mentoring;

g) Recognize and apply teaching strategies used in mentoring processes.

2) At the end of the course, mentors and mentees should be able to:

a) Understand what rural health is;

b) Recognize the complexity of the concept of “rural” and its implications;

c) Recognize differences between the performance of health professionals in rural and urban settings.

d) Understand the impact of the current shortage of health professionals in rural areas;

e) Explore documents on recruitment and retention of health professionals in rural areas;

f) Understand which factors contribute to the choice of health professionals to work in rural areas;

g) Reflect on challenges and future perspectives in rural health;

h) Reflect on local and global strategies for improving rural health.

2.7 Program content of the mentoring course

The content was divided into two main topics: mentoring (available for mentors) and rural health (available for the mentors and mentees). The topics covered concepts below:

a) Mentoring: Concept of mentoring; Difference between mentoring and other educational models; Different models of mentoring (for example, in groups, in pairs, face-to-face or virtual); Role of mentor; Role of mentee; Benefits of mentoring; challenges of mentoring; Teaching strategies or teaching methodologies used in the mentoring process.

b) Rural Health: Different concepts of rural; Rural health in different parts of the world; Performance of the health professional in rural and urban settings.; Lack of health professionals in rural areas and their impacts on health; Recruitment and

retention of health professionals in rural areas; Challenges and future perspectives in rural health; Local and global strategies for improving rural health.

2.8 Evaluation

The evaluation of the Mentor Mentee Program was carried out through follow-up questionnaires administered at different stages to monitor participants' experiences and perceptions throughout the process. Data collection included a mid-program questionnaire in July 2023, a post-program questionnaire in October 2023, and a final follow-up planned two years subsequent to program completion. As the two-year follow-up has not yet been conducted, the results from this stage will be presented in future studies to provide a more comprehensive assessment of the program over time.

3. Ethical aspects

The study was approved by the Ethics Committee of UFCSPA, number 5.585.265 in August /2022. All participants signed the free and informed consent.

4. Results

The results are presented in sections for better reflection of the data.

4.1 Profile of applicants of the Mentor Mentee 2.0

The program received a total of 55 registrations, with applicants from 27 different countries. The characterization of participants who registered is available in Table 2.

Table 2 – Characteristics of applicants of the Mentor Mentee 2.0

	Mentors	Mentees
Registrations	28	27
Self-declared gender	Man (19) Woman (9)	Man (9) Woman (18)

Country of residence	India (6) Brazil (5) UK (3) Nigeria (3) Sudan (1) United States (1) Ethiopia (1) Italy (1) Kenya (1) Kuwait (1) Romania (1) Rwanda (1) Sri Lanka (1) Uganda (1) New Zealand (1)	Brazil (6) South Africa (2) Nigeria (2) Uganda (2) Australia (1) Botswana (1) Canada (1) Philippines (1) Ghana (1) Guatemala (1) British Virgin Islands (1) Italy (1) Latvia (1) Mexico (1) Nepal (1) Portugal (1) United Kingdom (1) Rwanda (1) Turkey (1)
Languages	English (24) Hindi (6) Portuguese (5)	English (25) Spanish (8) Portuguese (8)
Preference for a time zone region	Africa and Europe (10) No preference (9) Asia and Oceania (8) America (2)	Africa and Europe (10) America (9) No preference (6) Asia and Oceania (2)
Generation of profession within the family	1st Generation (16) 2nd Generation (11) 3rd Generation (1)	1st Generation (20) 2nd Generation (5) 3rd Generation (2)
Training to work in rural areas within the country	No (18) Yes (10)	No (16) Yes (11)
Formal mentorship training	Yes (14) No (14)	-

Source: answers from mentors and mentees (developed by the researchers)

4.2 Pairing and group organization process

A detailed analysis of the mentors' and mentees' registration questionnaires was conducted to establish pairs based on compatibility and to minimize potential barriers. The matching process considered spoken languages and time zone preferences to prevent communication and scheduling difficulties. Gender preference was also taken into account, although only three mentees expressed it. Professional affinity was another relevant factor, giving priority to pairing participants from the same field, such as a nutritionist mentor with a nutritionist mentee, though this was not an exclusive criterion. Additionally, all other questionnaire responses were reviewed to understand expectations, prior experiences, and motivations, aiming to create pairs with greater potential for engagement and meaningful exchange.

An email was sent to all applicants confirming their interest. However, 12 (43%) mentors and 2 (7%) mentees who had already been paired, did not respond or replied indicating that they could not participate. A new round of pairing was conducted.

As the original idea of the program was to conduct mentoring in pairs, 10 mentees who had been previously selected would not be able to participate due to the lack of available mentors. It was proposed to these participants to engage in peer mentoring among themselves, forming 2 groups of 5 mentees each. One of the mentees expressed no interest in continuing, resulting in two groups of mentees, one with 5 and the other with 4 participants.

An individual email was sent to each mentor-mentee pair, introducing the duo with initial information provided during registration (such as name, country of origin and residence, profession, and educational stage). The same introductory email template was sent to the groups of mentees.

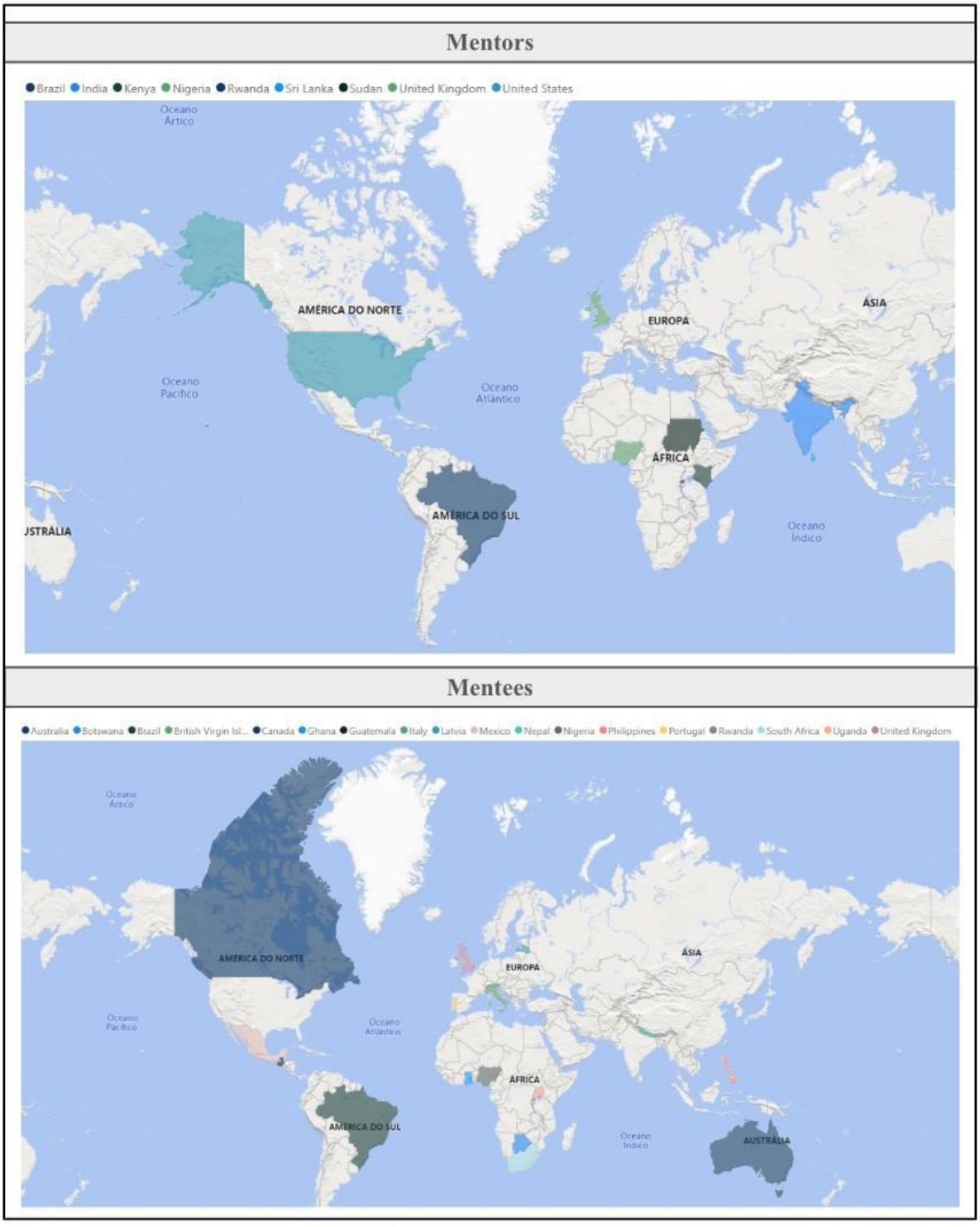
Following this stage, there were a total of 15 mentor-mentee pairs and 9 mentees divided into 2 groups, totaling 15 mentors and 24 mentees. The participants' profiles can be seen in Table 3. Figure 1 shows the distribution of participants worldwide. Divisions of participants into pairs and groups are presented in Table 4.

Table 3 – Profile of participants who were assigned into pairs or groups

	Mentors	Mentees
Self-declared gender	Man (9)	Man (7)
	Woman (6)	Woman (17)
Generation	1st (8)	1st (18)
	2nd (6)	2nd (4)
	3rd (1)	3rd (2)
Countries with training to work in rural areas	Yes (5)	Yes (11)
	No (10)	No (13)
Formal mentoring training	Yes (9)	-
	No (6)	-
Profession	Physician (11)	Physician (17)
	Researcher (5)	Nurse (3)
	Medical Anthropology (1)	Researcher (2)
	Nurse (1)	Community Health Worker (1)
	Nutritionist (1)	Dentist (1)
	Retired Physician (1)	Public Health Worker (1)
	University Lecturer/ Professor (1)	Medical Family Therapist (1)
		Nutritionist (1)
Age groups	30-39 (4)	20-29 (9)
	40-49 (8)	30-39 (13)
	50-59 (1)	40-49 (1)
	60-69 (1)	60-69 (0)
	70-79 (1)	70-79 (0)

Source: answers from mentors and mentees (developed by the researchers)

Figure 1 – Countries of distribution from mentors and mentees.



Source: developed by the researchers

Table 4 – Mentor-mentee pairs and mentees' groups - by self-reported gender, country of residence, profession, year of graduation (for mentees) and professional generation within the family.

Mentor-Mentee pairs		
Pairs	**Mentor**	**Mentee**
1	Woman, Brazil, nutritionist, 1st generation	Woman, Brazil, nutritionist, 1st generation
2	Woman, Brazil, physician, 2nd generation	Woman, Canada, physician (2019), 1st generation
3	Man, Kenya, physician, 2nd generation	Woman, United Kingdom, medical student (2024), 1st generation
4	Man, Sri Lanka, physician and researcher, 2nd generation	Woman, Australia, nurse, biomedical student planning to start medicine (2019), 1st generation
5	Man, Brazil, physician, 1st generation	Woman, Brazil, nurse (2015), 1st generation
6	Man, Nigeria, physician and researcher, 2nd generation	Woman, Uganda, researcher (2021), 1st generation
7	Woman, India, nurse, 1st generation	Man, Ghana, nurse (2019), 3rd generation
8	Man, India, physician and researcher, 3rd generation	Woman, Nepal, physician (2023), 1st generation
9	Man, United States, physician, 1st generation	Woman, British Virgin Islands, physician (2022), 1st generation
10	Woman, Sudan, physician, 1st generation	Woman, Mexico, physician and family therapist (2022), 1st generation
11	Man, Rwanda, physician, 2nd generation	Woman, South Africa, physician (2024), 1st generation
12	Man, India, researcher, physician, and anthropologist, 1st generation	Man, Nigeria, community health worker (2024), 1st generation
13	Woman, Nigeria, physician, 1st generation	Woman, Botswana, family and community medicine resident (2023), 1st generation
14	Man, United Kingdom, retired physician and professor, 2nd generation	Woman, Guatemala, physician (2024), 1st generation
15	Woman, United Kingdom, physician and researcher, 1st generation	Woman, Brazil, physician (2018), 2nd generation
Mentees' groups		
Group 1	Man, Rwanda, dentist (2026), 1st generation	
	Man, Brazil, physician (2021), 1st generation	
	Man, Brazil, physician (2019), 2nd generation	
	Man, Philippines, physician (2024), 2nd generation	
Group 2	Woman, Portugal, physician (2020), 3rd generation	
	Man, Nigeria, physician and researcher (2015), 1st generation	
	Woman, Uganda, public health (2021), 1st generation	
	Woman, Latvia, physician (2025), 1st generation	
	Woman, Italy, physician (2026), 2nd generation (also a lawyer)	

Source: answers from mentors and mentees (developed by the researchers)

5. Discussion

The symbol of the Mentor Mentee Program consists of two birds, one larger — representing the mentor and their experience — and one smaller, symbolizing the mentee at the beginning of their journey "learning to fly." Both birds are looking in the

same direction, envisioning a path of possibilities and shared growth. Figure 2 shows the symbol. (Puls, 2020; Floss, 2020)

Figure 2 – Mentor Mentee Program symbol.

Source: print screen by the researcher in the program interface

This imagery encapsulates the essence of mentoring, where the mentor, with their knowledge and experience, guides and supports the mentee in their professional development. It emphasizes the symbiotic relationship between mentor and mentee, highlighting the mutual benefits derived from the exchange of expertise, guidance, and insights. (Bui, 2022; Bourke, 2014; Sachdeva,2021; Bellodi, 2023)

The literature is still scarce, and there are not many reported models of this methodology with this audience. Formal mentoring programs can assist in the exchange of knowledge, development of leadership skills, and career progression. Additionally, it can increase the productivity of the mentee, performance, and professional satisfaction, which can also be a rewarding experience for the mentor. (Wozniak, 2020; Bellodi, 2023; Bui, 2022)

In this way, we realize the potential the mentoring strategy can have, especially if we think about a virtual model. The idea of the Mentor Mentee Program is precisely to bring people together and provide exchanges of different realities, reducing professionals' sense of isolation when working in rural and remote areas while enhancing education in these settings. (Bui, 2022; Oshiro, 2023)

Some important considerations regarding mentoring for healthcare professionals in rural areas include the challenges of having a limited number of professionals in these locations, which can also make it difficult to find suitable

mentors. In addition, face-to-face meetings may be challenging, as professionals in remote areas are often the only ones in their field over large distances. This highlights the need for technological solutions to help bridge the gap between mentors and mentees. Even when professionals are in the same geographic area, mentoring with a colleague or in a familiar environment might make the mentee hesitant to share personal situations due to concerns about confidentiality. These challenges were key factors in the decision to design the Mentor Mentee 2.0 Program as a virtual model, facilitating connections between individuals from different locations. (Bourke, 2014; Kim, 2023; Bui, 2022; Puls, 2020; Floss, 2020; Rural Seeds, 2017)

In addition to the issue of finding mentors with experience in rural health, many mentoring programs do not have financial incentives, making this process a voluntary work. In the case of the Mentor Mentee Program, the strategy was chosen to link the program to a mentoring course, with certificates issued at the end of the course, to make the program more attractive to mentors. However, even with this incentive, the initial number of 28 registered mentors was reduced by almost half before the program began, as 47% of the male mentors and 33% of the female mentors withdrew prior to its start. (Bourke,2014; Kim,2023)

Our hypotheses for these dropouts were personal reasons, some of which may be related to the job itself, since, as mentioned earlier, sometimes healthcare professionals in rural areas do not have other professionals around, which can lead to work overload. Another hypothesis would be the lack of remuneration for the work or the mentoring course not being attractive enough, since out of the 28 registered mentors, 14 had already undergone formal mentoring training, and only 9 of these remained in the program. (Bourke,2014; Kim,2023)

To address these challenges and reduce mentor dropout rates, several feasible solutions could be implemented. Offering financial incentives or stipends could recognize the mentors' contribution and increase program commitment. Additionally, providing workload relief, such as designated hours within their work schedule for mentoring activities, could alleviate the burden of participation. Establishing partnerships with academic institutions or political and health sector organizations could also strengthen the program's sustainability, provide institutional recognition, and create a shared responsibility framework that values mentoring as a key strategy for professional development in rural healthcare settings.

An interesting observation is that, although there were some dropouts among those who initially signed up to be mentored, the number of withdrawals prior to the program's start was smaller compared to the dropout rate among mentors. Out of the 27 mentees originally registered, 24 still expressed interest in participating. This could reflect a gap in training for working in rural areas across different locations. In fact, 18 mentors and 16 mentees reported that there was no specific training available to work in rural areas in their respective countries (Kim, 2023).

Among the mentees, there was a balanced composition of participants, with 46% still in training and 54% already graduated. This balance highlights the relevance of mentoring across different stages of professional development and reinforces its applicability as an educational strategy capable of addressing learning and support needs throughout various stages of career development (Sng, 2017).

Although the program is not exclusive only to the medical community, the highest number of participants, both mentors and mentees, corresponded to this audience. This was an expected result since the program's means of promotion reached more of this audience. There were also participants who had more than one education background. One mentee was working as a nurse but studying biomedicine with a plan to start medicine later. Another mentee worked as a nurse and had completed a master's and PhD in women's health in rural contexts.

To increase the participation of non-medical professionals, it is essential to expand the program’s visibility — for example, by promoting it through universities and healthcare centers. The literature shows that mentoring programs can benefit not only the medical community, and play a key role in retaining other healthcare professionals in rural areas (Cosgrave, 2020; Mackay, 2021).

Another important aspect is that, despite the growing number of female doctors working in rural areas, the percentage of men is still higher. In addition, the likelihood of a female doctor choosing to stop working in a rural area is higher than that of a male doctor. Some factors that seem to be more relevant to women's choices to work or not in rural areas, would be the difficulty of employment for the spouse, the precariousness of education for children, and social isolation. (Paladine, 2019; O’Sullivan,2022)

In the Pilot Program of the Mentor Mentee, the highest participation, both mentors and mentees, was from a male audience, with 14 male mentors and 12 mentees, while there were only 3 female mentors and 6 female mentees. As mentioned

earlier, male representation in the field of rural health is more significant than female, a fact reflected in the representation in programs aimed at this audience. The literature suggests that women receive less mentoring than men and are underrepresented among the leading experts in the field. Therefore, one example from the literature sought through the "Catalyse Mentorship Program (the "Program")" to identify the needs of women working in healthcare in geographically isolated areas in Australia. The program lasted for one year, with 10 mentees chosen to participate, each with two mentors (one academic and one corporate), with the corporate mentor meeting with the mentees more often on average, focusing on strategies and leadership skills. Women mentees, at the end of the program, reported improvements in workplace interconnection and increased confidence. (Puls, 2020; Wozniak, 2020).

Furthermore, O'Sullivan (2022) highlights that attracting and retaining female doctors in rural areas requires targeted policies, such as co-designing supportive roles with flexible hours aligned to childcare, strengthening peer mentorship, and expanding flexible rural postgraduate training programs. The author also emphasizes the need to promote aspects of rural practice that appeal to women, like the chance to connect with communities and to make meaningful impact.

In the Mentor Mentee 2.0, there is still a higher number of male mentors (we had a number of 19 men and 9 women enrolled), with 9 men and 6 women starting the program. However, an interesting fact about this edition is that the number of enrolled mentees was inversely proportional in terms of gender, with 9 men and 18 women completing the initial questionnaire, and 7 men and 17 women starting the program. This data is likely related to the changing profile with the entry of women into the workforce, occupying spaces that were previously considered masculine.

Reflecting on some of the barriers to the mentoring process, issues such as gender and cultural differences can be highlighted, as well as other obligations that compete for the time available to dedicate to mentoring. The Mentor Mentee Program seeks to minimize these challenges by including questions about the preferred gender of the mentor and by pairing participants based on similarities. However, the availability of time and the prioritization by both participants to remain in the program for the predetermined period were among the challenges encountered in the program's first version. (Puls, 2020; Kim, 2023)

Organizing a virtual global mentoring course presented several challenges, especially in ensuring the platform was accessible to all participants. We chose UFCSPA's Moodle platform due to its availability, but some participants encountered issues accessing the platform due to location-based restrictions and password problems. However, with the help of technical support, these challenges were resolved, and participants were still able to fully engage in the program.

Limited access to technological resources, particularly stable internet connections, represented an additional challenge for some participants living in rural and remote areas. This limitation can restrict the accessibility of virtual programs and hinder engagement in online learning environments. Nevertheless, given the significant shortage of healthcare professionals in these regions, finding a local mentor with adequate expertise would have been equally challenging — especially in places where digital infrastructure remains limited. Therefore, despite connectivity constraints, the use of virtual platforms proved to be a valuable strategy for bridging geographic gaps and enabling mentorship opportunities that would otherwise be inaccessible. Despite these challenges, in the Mentor Mentee Program all participants were able to secure at least minimal access to the technological resources necessary to take part in the program (Cosgrave, 2020).

6. Conclusions

The main objective of this study was to report the development of a virtual mentoring course for rural health professionals and the implementation of the second edition of the Mentor Mentee Program. The program attracted interest from participants across five continents, with a balanced demand from both mentors and mentees. The mentees were equally represented by undergraduate students and young professionals, highlighting that mentoring can be valuable at different stages of training.

Among the study's findings, it is noteworthy that the initial dropout of mentors reflects the difficulty in finding professionals with appropriate training and availability to fulfill this role, especially considering the scarcity of these professionals in rural areas.

Although the majority of mentors were male, the mentee group was predominantly female, which may reflect differences in the profiles of healthcare professionals. This trend also suggests a growing representation of women in the field.

While previous studies have demonstrated that mentoring can serve as an effective professional development strategy across diverse healthcare disciplines, participation in the present study consisted primarily of medical professionals. This predominance limits the generalizability of our findings to other health professions. Future research should aim to examine the benefits and applicability of similar mentoring models among a broader range of healthcare professionals.

In international virtual programs, cultural, linguistic, time zone, and resource-related challenges — such as those involving virtual platforms and internet connectivity — are likely to emerge. To better understand both the barriers and benefits of the Mentor Mentee Program, a longitudinal evaluation was designed with follow-up questionnaires. The analysis of these data will provide important insights into the program's short- and medium-term outcomes and support further research aimed at deepening the understanding of its results and guiding potential improvements.

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