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Evaluation of the residency program in family and community medicine from the perspective of resident physicians

Avaliação de programa de residência em medicina de família e comunidade pela ótica dos médicos residentes

Samuel Carvalho Guimarães[1] samuel.carvalho.guimaraes@gmail.com
Emanoella Pessoa Angelim Guimarães[2] epaguimaraes@gmail.com
Otenberg Nogueira de Souza Júnior[1] otenberg21@yahoo.com.br
Maria de Fátima Antero Sousa Machado[3] fatimaantero@uol.com.br
Roberto Wagner Júnior Freire de Freitas[3] robertowjff@gmail.com
Sharmênia de Araújo Soares Nuto[3] shanuto@gmail.com

ABSTRACT

Introduction: Medical Residency (MR) is considered, both academically and professionally, the gold standard method in teaching university graduates. The Integrated Residency Program in Family and Community Medicine (PIRMFC) in Fortaleza-CE brings together the programs of Universidade Federal do Ceará, the School of Public Health of Ceará and the City Hall of Fortaleza and is the first of its kind on a large scale, with about 70 residents in the first edition, implemented in a capital city, concomitantly with the process of implementation of the Family Health Strategy (ESF) service network by the City Hall.

Objective: To evaluate an Integrated Residency Program in Family and Community Medicine, from the perspective of resident doctors.

Method: This is an exploratory study, with a qualitative approach, using the Kirkpatrick model in its first level, reaction and satisfaction of residents. Data collection was carried out with the participation of 18 residents (R2) in five Focus Groups, in the second half of 2020. Questionnaires with closed questions were also applied to characterize the sample, followed by multiple-choice questions graded on a Likert scale. The qualitative data were analyzed by the Thematic Analysis technique and quantitative data through simple frequency and percentage.

Results: The following main categories were identified: Teaching-learning strategies, Evaluation of the teaching-learning process, Production of autonomy, Transfer of training into practice, Weaknesses and Potentialities of the residency. Residents understand the responsibility they have in daily medical care, even if they are apprentices. They felt insecure as training subjects, feeling more comfortable when they are placed in the passive role. On the other hand, the program students recognize the active teaching-learning methodology as adequate for teaching adults but need strategies to be used to solve common problems in their professional practice.

Conclusion: The Program was not able to establish the basis for the engagement of residents in some simulated active teaching-learning strategies, such as Tutorial Groups. It is necessary to value the experiences and competences heterogeneously acquired by the residents to constitute moments of equalization of learning, seeking the student's protagonism instead of the imposition of knowledge.

Keywords: Teaching; Educational Measurement; Evaluation of Health Programs and Projects; Internship and Residency.

RESUMO

Introdução: *A residência médica (RM) é considerada acadêmica e profissionalmente o método padrão ouro no ensino de médicos egressos da universidade. O Programa Integrado de Residência em Medicina de Família e Comunidade (PIRMFC) de Fortaleza, no Ceará, reúne os programas da Universidade Federal do Ceará, da Escola de Saúde Pública do Ceará e da prefeitura, e é o primeiro do gênero em larga escala, contando com cerca de 70 residentes na primeira edição, implantado em uma capital, paralelamente ao processo de implantação da rede de serviços da Estratégia Saúde da Família (ESF) pela prefeitura.*

Objetivo: *Este estudo teve como objetivo avaliar um PIRMFC a partir da ótica dos residentes.*

Método: *Trata-se de uma pesquisa exploratória, com abordagem qualitativa, utilizando o modelo de Kirkpatrick no seu primeiro nível: reação e satisfação dos residentes. A coleta de dados foi realizada com a participação de 18 residentes (R2) em cinco grupos focais, no segundo semestre de 2020. Aplicaram-se também questionários com perguntas fechadas para caracterização da amostra, seguidas de questões de múltipla escolha graduadas em escala Likert. Os dados qualitativos foram examinados pela técnica de análise temática, e os quantitativos, por meio de frequências simples e percentuais.*

Resultado: *Identificaram-se as seguintes categorias principais: estratégias de ensino-aprendizagem, avaliação do processo ensino-aprendizagem, produção de autonomia, transferência da formação para a prática, fragilidades e potencialidades da residência. Os residentes compreendem a responsabilidade que têm no atendimento médico diário, ainda que como aprendizes. Eles demonstram insegurança como sujeitos da formação, sentindo-se mais confortáveis quando são colocados no papel passivo. Contudo, os discentes do programa reconhecem a metodologia ativa de ensino-aprendizagem como adequada para o ensino de adultos, mas precisam que as estratégias estejam voltadas para a resolução de problemas comuns à prática profissional deles.*

Conclusão: *O programa não conseguiu firmar bases para o engajamento dos residentes em algumas estratégias ativas simuladas de ensino-aprendizagem, como grupos tutoriais. É preciso valorizar as experiências e competências adquiridas heterogeneamente pelos residentes para compor momentos de equalização do aprendizado, buscando o protagonismo do aluno em vez da imposição de conhecimentos.*

Palavras-chave: *Ensino; Avaliação Educacional; Avaliação de Programas e Projetos de Saúde; Internato e Residência.*

[1] Fortaleza City Hall and Professional Master's Degree in Family Health – PROFSAUDE, Fortaleza, Ceará, Brazil.
[2] Universidade Estadual do Ceará, Fortaleza, Ceará, Brazil.
[3] Fundação Oswaldo Cruz - Ceará, Postgraduate Program in Family Health - RENASF and Professional Master's Degree in Family Health - PROFSAUDE, Eusébio, Ceará, Brasil.

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INTRODUCTION

The evaluation of Educational Programs in health is a concept understood as a systematic approach to collecting, analyzing and interpreting any aspect of an educational program, from its conception, design, implementation and/or relevance to society[1].

Epistemologically, every evaluation of an educational program follows the principles of the scientific method aiming at generating knowledge that guides decisions that should impact society. In terms of medical training, it is clear that a Medical Residency Program (MRP) evaluation has an essential practical connotation, much greater than simple accreditation or even the hierarchical ordering of different programs. According to Kidd[2], the required competencies and educational objectives of medical training programs must be regularly reviewed to ensure that they are relevant to the conditions in which they find themselves, involving the needs of patients, communities, students and institutions that are served.

In the field of curricular evaluation, following the continuous evolution of human science from a global and instrumental rationality to a more communicative one, there was a shift from a positivist paradigm, based on a technical interest, to a naturalistic paradigm, based on a practical and emancipatory interest[3]. An assessment is no longer understood as a product, but as a process capable of providing interactions between students and teachers, so that they can improve teaching and learning[4].

Based on this evolutionary concept, it is assumed that a model for evaluating educational programs, to be considered effective and of good quality, needs to cover most, if not all, evaluative nuances, from the achievement of objectives, going through the needs that arise throughout the process, also including training and political perspectives, without leaving aside the usefulness of the training. The multilevel approach proposed by Donald Kirkpatrick in 1967 has been, to date, the most applied by entities that carry out training[1,4].

The Kirkpatrick model is a model for the final assessment of training results, which presupposes a sequence of distinct assessments with their own objectives, ultimately comprising a training pyramid that provides security and confidence in the process. Therefore, the evaluation levels can be defined as: level 1, listening to students and teachers to evaluate reaction and satisfaction; level 2, acquisition of skills; level 3, transfer of acquired skills into professional practice and level 4, assessment of the program impact on society[1].

Among so many nationally recognized medical specialties, each with its own training programs, Family and Community Medicine (FCM) is the medical specialty that has Primary Health Care (PHC) as its primary area of action, continually dealing with illnesses of people, families and the community. Therefore, the family doctor needs to develop technical skills alongside communication skills. According to the World Health Organization (WHO), family doctors must play a central role in achieving quality, cost-effectiveness and equity in health systems[5]. To fulfill this responsibility, the family doctor must be highly competent in patient care and must integrate individual and community healthcare, requiring appropriate training processes. In the literature, Medical Residency (MR) has been considered, both academically and professionally, the gold standard method for the teaching of doctors graduating from the University[6].

Considering the relevance of FCM for health systems worldwide and the importance of medical residency in the training of doctors, it is necessary to critically and reflexively assess whether residency programs lead graduates to good practices in Medicine and, thus, provide information for the evaluation of the training process, value effective experiences and strategies, and plan future actions aiming at contributing to the consolidation of the Unified Health System (SUS, *Sistema Único de Saúde*). Thus, this study aims to evaluate a Residency Program in Family and Community Medicine, from the resident doctors' perspective.

METHOD

This is an exploratory study, with a qualitative approach, aimed at the evaluation of an educational program, using Kirkpatrick's model at its first level, residents' reaction and satisfaction.

The Integrated Family and Community Medicine Residency Program (PIRMFC, *Programa Integrado de Residência de Medicina de Família e Comunidade*) of Fortaleza, state of Ceará, Brazil, brings together the programs of Universidade Federal do Ceará, School of Public Health of Ceará and Fortaleza City Hall and is the first of its kind on a large scale, having around 70 residents in the first edition, implemented in a capital city, in parallel with the process of implementing the Family Health Strategy (ESF, *Estratégia de Saúde da Família*) service network by the City Hall and with an occupancy rate higher than the national rate[7]. In 2007, the program obtained definitive accreditation. It operates under the Supervision Collegiate regime involving Universidade Federal do Ceará (UFC) and the School of Public Health (ESP/CE) in the Metropolitan Region of Fortaleza. With a two-year duration and a weekly workload of 60 hours, the in-service training represented 86% of the program total workload, with 60% carried out in Primary Health Care Units (UAPS, *Unidades de Atenção Primária à Saúde*) and territory, and 26% in outpatient clinics and emergency services in the

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secondary and tertiary care network, in addition to lectures and Tutorial Groups[8].

For data collection, free listening to the program participants was used in search of consensus and dissent, through five Focus Groups from July to December 2020. Questionnaires with closed questions were also applied to characterize the sample, followed by multiple-choice questions graded on a Likert scale (I fully agree, I agree, I neither agree nor disagree, I disagree, I fully disagree), to find out the relevance attributed by the respondents to the teaching and learning strategies and evaluation teaching-learning techniques of the program.

All second-year residents (R2) who were regularly enrolled and attending the Residency Program in Fortaleza in the first half of 2020 were included. Residents who were on vacation, maternity leave or sick leave during the data collection period were excluded from the study, comprising a total of 32 eligible participants. Of these, 18 participated in the focus groups.

The Focus Groups had a limited number of residents, considering that the meetings took place in the context of the COVID-19 pandemic, with restrictions on gatherings and social contact. The available means were used to protect the participants' health, with the provision of masks, alcohol gel and following the requirements of distancing and air circulation in the environments.

The analysis of data from the focus groups was carried out using the Content Analysis technique in the thematic modality, seeking to bring together the meaning cores of communication into thematic units, relating them to categories whose presence or frequency meant something for the targeted analytical object[9]. The data from the questionnaires were processed into simple frequencies and percentages using the Microsoft Excel software, version 16. The items "fully agree" and "agree" were added together as positive opinions on the Likert scale, while negative opinions were considered as "disagree" and "fully disagree".

The study was submitted to the Research Ethics Committee of the School of Public Health of Ceará (ESPCe, *Escola de Saúde Pública do Ceará*), according to resolutions n.466/2012 and 510/2016, authorized by the Research Ethics Committee (REC) according to the consolidated Opinion number 4.129.273 (CAAE: 29015119.1.0000.5037).

RESULTS AND DISCUSSION

Of the 18 interviewees, 10 declared themselves to be male, with ages varying between 25-45 years old, with an average of 30.1 years old. Of the participants, 12 were single and 17 did not have children.

Regarding academic training, 17 graduated from universities in the municipality of Fortaleza, Ceará less than 5 years ago and only three had any postgraduate degree before residency, all reporting specialization in Family Health. Half of the residents reported participating in other educational training programs in parallel to their residency, a third of which were in the area of Health Education (Preceptorship Course and Professional Master's Degree in Health Teaching).

The analysis of the students' speeches and their thematic categorization allowed constructing a chart with categories and thematic units described in Chart 1. The main categories were: teaching-learning strategies, evaluation of the teaching-learning process, production of autonomy, transfer of training into practice.

The PIRMFC in Fortaleza, Ceará, uses multiple teaching strategies, both active and traditional, to meet the students' need for meaningful learning. Student-centered teaching techniques and a competency-based curriculum seem to guide the program choices. However, critical issues in the teaching-learning process need to be considered and discussed. Below is a description of the main identified categories:

Teaching-learning strategies

Preceptorship, considered as "in-service teaching", deserves to be highlighted in the speeches and included

Chart 1. Frequency of speeches according to Thematic Units.

Categories	Thematic units	Frequency of speeches
Teaching-learning strategies	Tutorial groups	21
	Practical Workshops	4
	Clinical Cases	4
	Lectures	7
	Preceptorship	41
Evaluation of the teaching-learning process	Theoretical assessments	20
	Practical assessments	17
	Global Concept	4
	Feedback	4
	Portfolio	3
Production of autonomy	Knowledge	3
	Competency	6
	Performance	1
	Action	2
Transfer from training into practice	Competency-based training	6
	Adequacy to the job market	16

Source: Prepared by the authors.

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as a teaching-learning strategy. The understanding of Preceptorship as one of the teaching strategies, despite indicating a misunderstanding of the concepts of Method, Methodology and Strategies, did not influence the residents' choice of preferred ways of learning. The importance attributed to preceptorship made residents greatly value moments of contact and the preceptor-apprentice relationship. Shoulder-to-shoulder preceptorship[10] proved to be a technique that is recognized and valued by residents, even more so when they compared the style of preceptorship they were exposed to with other residency programs in Brazil.

> *FG5: preceptorship is fundamental. It is essential in this sense that we have good preceptors, preceptors who are family doctors, because, if we don't have a good preceptor, we will continue doing what we started doing in college and which wasn't OK. (...) You will have to enter people's homes, get to know their lives in depth (...) The preceptor, at this time, is crucial, we won't learn this by ourselves.*

> *FG5: this preceptorship has to be shoulder to shoulder. There are some programs in the country where the preceptor is not there, you attend alone, you are running the service alone.*

The emphasis on preceptorship time, the provision of contact with health services in focal specialties and the proximity of the resident to the preceptor in Primary Health Care (called shoulder-to-shoulder preceptorship) certainly left marks in the training of residents. The appreciation of the longitudinality of monitoring the teaching-learning process, the preceptor's understanding of the trainee role of residents within the program, the preceptor's professional experience in Family and Community Medicine, technical-scientific knowledge and the promotion of discussion of the reality of the job market were the positive characteristics of the preceptorship system.

The residents' understanding of the **Tutorial Groups** strategy, at some point, seemed to be mistaken or insufficient. There was an impression that Tutorial Groups are theoretical; therefore, more efficient for undergraduate contexts, in which the learner needs to discover concepts they are unaware of, than for a medical residency, in which a professional attitude is required from the student at the same time as cognitive learning is expected. Thus, unpleasant feelings of wasted time and oppression arose, which made the majority of residents disregard the Tutorial Groups as effective learning strategies.

> *FG3: if a child comes in and they suffered abuse and they tell me about it. What do I do? (...) the tutorial group did not help me in building a SUS flow in relation to this type of thing (...). I believe that there is no protocol on how to handle it if you are placed in a situation like this, and the tutorial group did not help at all in establishing any protocol.*

> *FG3: (TG) I actually saw it, in person, more as a suffering, a concern about creating a conceptual map, about having to speak. The routine life of the residency was now more practical, in short, the care you had to provide, to resolve those demands.*

> *FG4: we felt kind of forced to participate in something (that) no one saw any point in, (that) ended up lasting a long time. By the time we got to something that we actually thought was important, time had already run out (...).*

> *FG5: we always feel like we are wasting a lot of time (...) we had to study everything in depth (...) so we could discuss, make a map (...) which everyone hated.*

Lima Filho and Marques[11], when studying the curricular transition at a medical school in the state of Maranhão, showed a more satisfactory evaluation in groups that used active teaching-learning methodologies from the first semester than those that had mixed teaching. The students' greatest satisfaction was related exactly to the use of active methodologies, interdisciplinarity, recommended bibliography, integration with the community, teaching practices, teaching qualifications and teaching equipment. On the other hand, the issues most often criticized by students were related to the number of teachers in relation to the number of students, teaching practices in more advanced semesters, library components and psycho-pedagogical support. It is worth noting that the dissatisfaction of the group that used active methodologies late throughout the course was related, among other items, to the lack of practical activities, poor integration with the community and inadequate relevance of the content.

In the **Practical Workshops**, residents reported the feeling of being directly observed by reliable professionals and the fact of receiving immediate feedback on the performance of the skills taught as positive points. They also valued the perception of gradual and progress learning, closely linked to practice.

> *FG1: (on the) issue of experience being the most important: I think it (serves) as a suggestion for the collegiate, to have more workshops.*

> *FG3: Practical (workshop) was much more interesting, as a professional, for my learning, because you got to do it hands-on. It was something that wasn't as boring as also attending a class.*

The strategy of presenting and discussing **Clinical Cases** was considered remarkable in the practical application of skills by residents. According to the Problematization Methodology (Charles Maguerez's Arc Method), the student needs to theorize about a problem to transform their global vision into an

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analytical one, understanding the structure of the problem in a broad way. Thus, one becomes capable of formulating solution hypotheses, selecting the most viable ones and returning to apply them into practice[12].

> *FG4: clinical cases, both those taught by the residents themselves, and in the form of matrix support (...) I think it is a more productive method, because that curiosity generates debate, generates learning, generates a gain in knowledge that is constructive. I learn from the knowledge of others, who (also) learn from my knowledge.*

As a result of the bad impression that residents had about active teaching-learning strategies, discussion of topics and **Lectures** were sometimes preferred over Tutorial Groups. The residents' positive opinion about Lectures refers to the formal, arbitrary and memorized teaching, to which they were exposed in the years prior to the residency. It is necessary to recall that teaching-learning methodologies in Medicine, throughout almost the entire 20th century, sought mechanical learning, aimed at knowledge of basic sciences, in line with what was advocated by the Flexner Report of 1910. Changes in political and social paradigms only brought innovations to health education at the end of that century, such as the concept of meaningful learning, characterized by the cognitive interaction between new knowledge and previous knowledge[13].

> *FG3: the tutorial group (...) is interesting, but it cannot be carried out as a single methodology. There needs to be an exhibition of what is common, what is used, so that residents can, with this presentation, pursue more things and more knowledge.*

Assessment of the teaching-learning process

Regarding the Medical Residency, the term Assessment can be used both as an internal normative assessment methodology, for the purpose of resident training and individual certification (Teaching-Learning Assessment), as a normative assessment or external research tool, with the purpose of authorizing, qualifying, certifying or even comparing Residency Programs (Educational Program Assessment)[1]. In this thematic, the residents were asked about the evaluation of the teaching-learning process to which they were submitted, which is different from the evaluation of the educational program intended by the study.

The residents' behavior in the assessments seemed passive and solitary, without requiring the assessments to correspond to the competencies proposed in the program political-pedagogical project[14]. The residents demonstrated a negative acceptability of theoretical evaluations, even questioning the very need for their existence.

The **Theoretical Assessments** for PIRMFC residents in Fortaleza are scheduled to take place annually, containing topics discussed in tutorial groups, lectures and practical workshops[14]. The syllabus of the theoretical assessments was intensely criticized. The residents stated that the topics were disconnected from the reality they experience on a daily basis. These characteristics of the theoretical assessments produced feelings of learning worthlessness, wasted time and lack of interest in the method. The students also felt the lack of an adequate feedback, with discussion of the results of the multiple-choice assessments in groups, which would enhance a formative assessment.

> *FG4: I don't like exams, I find exams stressful.*

> *FG2: we are not worried about that now. We simply don't give any importance to the evaluation because it isn't given importance, and then it loses its value.*

The **Practical Assessment** is proposed in the FCM Residency Program Preceptors Manual to occur every semester. The instruments used are the Mini-CEX (Mini-Clinical Evaluation Exercise)[15] and Long Case, in the OSLER (Objective Structured Long Examination Record) style with multiple evaluators[16]. The connection with daily experiences seemed very evident and the residents reported that, in these assessments, they were observed by reliable technical eyes, with immediate feedback. This produced a sense of caring and meaningful learning. On the other hand, there was concern about the excessive value placed on the practical test as a defining factor for the learner's performance. The residents suggested that the preference for one instrument could harm them, as they distrust the regularity of personal behavior on the day of the assessment, and the reliability of the method, when there are different examiners.

> *FG4: it is very productive for us to be evaluated on the spot, in our daily lives, with a real patient, with real demands, to be evaluated on what we actually do and on what we can actually do in our routine care.*

> *FG4: in practical terms, it is interesting that we have the same external evaluator, not the unit's preceptor. When he evaluates you for the second time, he compares it to the first time and sees your development, but really twice still seems little.*

The **Global Rating Assessment** is a formative assessment with variable frequency (initially every semester, then quarterly or even monthly) in which the preceptor uses an instrument with grouped criteria, covering important attitudes for the program (patient care; relationship with the community, team, colleagues and preceptor; search for knowledge and updating; responsibility and interest in the module), classified on a scale as insufficient, regular, good and excellent[17]. Despite

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recognizing the importance of this method, there was distrust among the residents regarding its educational impact, as they perceived a lack of interest on the part of preceptors in applying it at the recommended frequency. Students also complained about a feeling of invaded privacy when receiving this assessment in the presence of colleagues.

> *FG1: my main preceptor took three months and did three assessments that were supposed to be done each month. She did all three in one day, so she could hand them over to the coordination team. Then I didn't feel very confident in that "feedback".*

> *FG2: (Assessment by global concept is) a very bizarre assessment for you to do together with the person. You sign, she signs and everyone sees that thing. This is because there is one preceptor for one resident, two residents. So, it's obvious that, any assessment we do, you know who did it.*

Production of Autonomy

The **Production of Autonomy**, in the context of medical education, is linked to the concept developed by Miller[18] of the Learning Pyramid (Knowledge, Competence, Performance and Action). Regarding **Knowledge (Knowing)**[18], the program residents were insecure about the knowledge they already had and there were difficulties in perceiving good progress in this item.

> *FG2: I started in Family Medicine and I felt very insecure about certain things, because we just do it in theory and go into practice, although we practice a lot during internship (...). I deeply regret saying that the difference between what I did before entering the residency and now is very small. I'm not going to say it's zero, no way, that would be unfair and it would be absurd too. Yes, there are some additions.*

Regarding **Competency (Knowing how)**[18], the residents recognized Preceptorship as an opportunity for training and personal development. On the other hand, the residents demonstrated their dependence on the preceptor.

> *FG1: The preceptor leads you to reach your own conclusions, they do not (usually) give you the answers.*

> *FG3: the coordination must agree with the on-call preceptorship that it is shoulder to shoulder, that the preceptor says: "come here", take your hand, "this is how it is, do this, do that". Not like this: "go there, do it.(...) You can call if anything happens".*

Regarding **Performance (Show how)**[18], residents recognized preceptorship moments as appropriate territory for that.

> *FG1: It went to the preceptorship in a minute. We would provide separate care, then, if we had any doubts, we would go back there to talk to the preceptor, to discuss the case with them, and confirm our conduct.*

Regarding **Action (Doing)**[18], the residents differed, with some describing this moment as natural and calm; but for others it seemed premature and distressing. This attitude may indicate a normal movement of learning anxiety, but it also points to the need, which the students demonstrate, to discuss this transition.

> *FG1: over time, the preceptorship was more of a "clarification of doubts" after the consultation, a brief discussion of the day's cases(...) I started to have a lot of autonomy in daily practice.*

> *FG2: as soon as R2 started, in one of our team meetings (...) the preceptor already said: "look, you're in R2, you know that you're going to be alone for a long time now, right?"*

Transferring Training into Practice

The study participants seemed to recognize the skills that a family and community doctor needs to develop. However, the scope of these skills seems to generate anxiety.

> *FG2: (It would be good) if there was a step-by-step guide on the competencies, how this will be put into practice for each territory, for each resident of a different sector.*

> *FG3: Family medicine (has) very broad, very diverse concepts. It's not, for example, (like) cardiology, where I have to learn electrocardiogram: you know where you have to look for the electro. But (in family medicine it is): "go there, learn the person-centered clinical method. Go there, learn how to approach an elderly patient in their home. Go there, learn how to manage a child who has been abused." How are you going to learn that?*

The residents felt that the learning might be deficient regarding competencies they knew were needed. Consequently, some residents started to question the educational impact of the program on their medical practice.

> *FG2: the program is to qualify. So, if I leave every man for himself and God for all, we will not be able to guarantee that the quality of the professionals being trained will be adequate enough for us to improve the quality of the SUS.*

> *FG2: How am I going to change health indicators if I can't train the professional who is responsible for doing this? If I can't train them to be competent in management and not just in assistance? If I can't train them in other areas of health, which are our responsibility?*

There is a growing understanding among medical educators that academic instruction based on traditional

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knowledge must develop into competency-based training. The reliable demonstration of competent performance in the tasks recommended for a specific type of professional should be the aim of medical residency. To achieve competency-based learning objectives, they must be clear and specific. Thus, they can be understood by the student and the teacher, aiming at the performance of specific observable behaviors that can be measured in a quantifiable and reliable way[2].

The residents felt they needed greater emphasis on learning objectives regarding skills valued in the job market. However, communication with the program preceptors and supervisors about the job market of the family and community physician seemed to be limited and often only existed through the resident's own intervention.

> *FG1: (It would be good) if the residency paid a little more attention to the areas that the market values. The market values generalist physicians for PHC. (It would be good) if the residency placed greater emphasis on what differentiates the (specialty), such as palliative care, such as occupational medicine.*

> *FG2: regarding the job market, I didn't have much guidance. I only had it because I really stopped, asked and discussed about what the job market was like and how I could fit in after the residency.*

Regarding the program contribution to medical practice, it is necessary to highlight the relevance of Family and Community Medicine as a medical specialty. According to WHO/WONCA[5], family doctors must play a central role in improving health systems, through quality, cost-effectiveness and equity.

The increased access to low-cost primary care is associated with better health indices in a population. In the same sense, data show that this success is proportional to the density of doctors trained in PHC, especially family doctors. Health systems value educating medical professionals with greater competency in more practical skills. Ultimately, adequate educational programs result in people being cared for by higher quality, more prepared and more confident medical professionals. This is the only way to provide people with what they really need to improve their health[2].

Contributions of pedagogical strategies and evaluation techniques

The residents were asked about the program pedagogical strategies and teaching-learning evaluation techniques and their contributions regarding three aspects: individual learning (IL), understanding the job market (JM) and the construction of the SUS (SUS).

Reinforcing the students' speeches, **Preceptorships** in the Primary Care Unit and in outpatient clinics were evaluated as markedly positive influences on IL, JM and SUS. Preceptorship in PHC had a higher percentage of positive opinions (16 for IL, 14 for JM and 16 for SUS), similar to Preceptorship in Outpatient Clinics (16 for IL, 16 for JM and 13 for SUS). However, the On-Call Preceptorship showed more divergent opinions, as it showed only 10 positive answers for IL, 6 for JM and 9 for SUS (Table 1).

Comparing the questioned Teaching-learning Strategies, the Tutorial Groups showed that they contributed little to learning in the three evaluated aspects, as they only showed positive opinions of 6 residents for IL, 3 for JM and 2 for SUS. These data corroborate the opinions collected in the Focus Groups (Table 1).

According to residents' opinions regarding the contribution of teaching-learning assessments to professional development, it is possible to observe that Theoretical Assessments contribute less to IL (10), JM (4) and SUS (2) than Practical Assessments (IL: 13 ; JM: 12; SUS: 9) and Global Concept Assessments (IL: 11; JM: 9; SUS: 8) (Table 2).

These data reinforce the understanding that residents consider their personal experiences as important drivers of learning.

Table 1. Percentage of agreement (I fully agree and agree) of teaching strategies for individual learning, the job market and the construction of the SUS, according to the residents (N=18). Fortaleza-CE, 2021.

Contribution of the Teaching Strategy to...	Individual Learning	Understanding the Job Market	Construction of the SUS
Preceptorship in Primary Health Care	16	14	16
Preceptorship in Focal Specialty Outpatient Clinics	16	16	13
Discussion of Clinical Cases	15	10	10
On-call preceptorship	10	6	9
Tutorial Groups	6	3	2

Source: Prepared by the authors.

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Table 2. Percentage of agreement (I fully agree and agree) of the strategies for evaluating the teaching-learning process for individual learning, the job market and the construction of the SUS, according to the residents (N=18). Fortaleza-CE, 2021.

Contribution of the Evaluation Strategy to...	Individual Learning	Understanding the Job Market	Construction of the SUS
Theoretical Assessment	10	4	2
Practical Assessment	13	12	9
Global Concept Assessment	11	9	8

Source: Prepared by the authors.

FINAL CONSIDERATIONS

At PIRMFC in Fortaleza, students bring their own views regarding the ways of learning, which is sometimes more linked to traditional pedagogical processes than to what Andragogy proposes. The program, ultimately, was unable to establish bases for the residents' engagement in some active simulated teaching-learning strategies, such as Tutorial Groups, since the cases developed in these groups did not correspond to the experiences that residents were facing in the services.

The emphasis on the residents' daily practice seems to represent an important key to training at PIRMFC in Fortaleza. Thus, it is necessary to value the experiences and competencies acquired heterogeneously by residents to constitute moments of equalization of learning, seeking the true protagonism of the student and their experiences, instead of the imposition of knowledge, even if the learning objectives vary within acceptable parameters. To value the learning that occurs in daily practice, it is necessary that the program teaching-learning tools take the residents' experiences as their starting point. Tutorial groups, clinical case presentations and theoretical assessments need to get closer to the real problems brought by the residents themselves, as there is a greater acceptance of content arising from the residents' daily practice.

Despite the low power of generalization, considering that the study focuses on a single program and had a restricted number of participants, it is valid to suggest that the application of new teaching tools, which make visible to the resident the evolution of their own skills acquired throughout the program, can strengthen the nature of transfer of training into practice in Family and Community Medicine, which is so necessary for the Unified Health System. One of these techniques is known as Log Book: in essence, encouraging recording in a notebook of gradually developing skills, in the sense of Miller's Pyramid (know, know how, show how, do), can help direct the student in search of the highest level of learning, called Being a Professional.

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AUTHORS' CONTRIBUTION

Samuel Carvalho Guimarães: conception and design of the study; data collection and analysis; manuscript writing. Emanoella Pessoa Angelim Guimarães: data collection and analysis; reading and critical review of the manuscript. Otenberg Nogueira de Souza Júnior: reading and critical review of the manuscript; approval of the final version of the manuscript. Maria de Fátima Antero Sousa Machado: reading and critical review of the manuscript; approval of the final version of the manuscript. Roberto Wagner Júnior Freire de Freitas: reading and critical review of the manuscript; approval of the final version of the manuscript. Sharmênia de Araújo Soares Nuto: conception and design of the study; manuscript writing; approval of the final version of the manuscript.

CONFLICT OF INTERESTS

The authors declare no conflicts of interest.

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