

Strategies for the Promotion of Primary Health Care Research in Portugal: A Qualitative Study

Estratégias para a Promoção da Investigação nos Cuidados de Saúde Primários em Portugal: Um Estudo Qualitativo

Maria Beatriz MORGADO¹, Vera RODRIGUES², Raquel CARMONA RAMOS^{3,4,5}, Ana RENTE⁶, Paulo NICOLA⁷, Margarida GIL CONDE⁸

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ABSTRACT

Introduction: There are several barriers discouraging clinicians from undertaking research, including insufficient funding, lack of time, organizational issues and lack of support. The strengthening of research capacity is perceived from three levels: characteristics of the researcher, the environment, and organizational issues. To date, Portugal is lacking studies on this subject. The aim of this study was to identify the best practices to promote research in Portuguese Primary Health Care.

Methods: We conducted a qualitative study using semi-structured interviews with family doctors with broadly recognized research work and other stakeholders. We selected a sample by convenience and snowball sampling. From a total of 14 doctors invited by email, 12 responded positively, and we subsequently included two other stakeholders. We conducted the interviews in digital or face-to-face formats. Two team members handled the coding of interviews independently. We kept all recordings and transcripts confidential, only accessible to researchers.

Results: We identified 16 strategies: 1) increasing institutional support; 2) creating support structures; 3) redefining the residency program; 4) investing in research training; 5) redefining curriculum evaluation; 6) establishing dedicated time for research; 7) increasing funding; 8) improving access to research data; 9) being a research driver; 10) establishing a research culture; 11) working in collaboration; 12) creating formally organized research groups; 13) creating autonomous research centers; 14) improving the definition of the research subjects and study designs; 15) reviewing procedures for ethics' committees; and 16) reviewing the current selection of articles for publication.

Conclusion: Overall, a greater proportion of interviewees identified the following as the most relevant strategies for research promotion: institutional support, including technical and scientific support from public institutions, private entities and academic centers; the reorganization of working hours with protected time for research; increased funding directed towards research and breaking isolation in research, promoting teamwork with clinicians within the same area or from different professional backgrounds.

Keywords: Health Services Research; Portugal; Primary Health Care; Program Evaluation; Research

RESUMO

Introdução: Existem barreiras que desencorajam os profissionais de saúde de realizarem investigação, nomeadamente financiamento insuficiente, falta de tempo, questões organizacionais e falta de apoio técnico. A promoção da investigação organiza-se em três níveis: as características do investigador, o ambiente e o âmbito organizacional. Contudo, até à data, não existem estudos sobre esta temática em Portugal. O objetivo deste estudo foi identificar quais as melhores práticas para promoção da investigação nos Cuidados Primários em Portugal.

Métodos: Conduzimos um estudo qualitativo com entrevistas semiestruturadas a médicos de família com experiência reconhecida em investigação e outros decisores. Seleccionámos uma amostra por conveniência e em bola de neve. Dos 14 participantes convidados via e-mail, 12 responderam afirmativamente. Posteriormente, incluímos outros dois decisores. Conduzimos as entrevistas em formato presencial e virtual. Dois investigadores procederam à codificação das entrevistas de forma independente. Mantivemos as entrevistas e respetivas transcrições confidenciais.

Resultados: Identificámos 16 estratégias: 1) reforço do apoio institucional; 2) criação de estruturas de suporte à investigação; 3) revisão do programa de internato médico; 4) mais oportunidades de treino em investigação; 5) redefinição da avaliação curricular dos profissionais; 6) tempo protegido para a investigação; 7) aumento do financiamento; 8) melhoria do acesso aos dados para investigação; 9) perfil de liderança em investigação; 10) estabelecimento de uma cultura de investigação; 11) trabalho em equipa; 12) criação de grupos de investigação formalmente organizados; 13) criação de centros de investigação autónomos; 14) melhoria das questões de investigação e desenho de estudo; 15) revisão dos procedimentos relacionados com a Comissão de Ética; e 16) revisão da seleção de artigos para publicação.

Conclusão: Uma proporção considerável de entrevistados considerou como estratégias mais relevantes para a promoção da investigação: o apoio institucional, incluindo o apoio técnico-científico de instituições públicas, entidades privadas e Academia; a reorganização do horário de trabalho com tempo protegido para investigação; o aumento do financiamento dirigido à investigação e a quebra do isolamento dos investigadores, promovendo o trabalho de equipa com profissionais da mesma área ou de diferentes contextos profissionais.

Palavras-chave: Avaliação de Programas; Cuidados de Saúde Primários; Investigação; Investigação em Serviços de Saúde; Portugal

1. Unidade de Saúde Familiar Cova da Piedade. Agrupamento de Centros de Saúde Almada-Seixal. Amora. Portugal.

2. Centre for Research and Studies in Sociology. Universidade de Lisboa. Lisbon. Portugal.

3. Department of Family Medicine. Faculdade de Medicina. Universidade de Lisboa. Lisbon. Portugal.

4. Unidade de Cuidados de Saúde Personalizados Atlântica. Marinha Grande. Portugal.

5. Agrupamento de Centros de Saúde Pinhal Litoral. Leiria. Portugal.

6. Unidade de Saúde Familiar Jardins da Encarnação. Agrupamento de Centros de Lisboa Central. Administração Regional de Saúde de Lisboa e Vale do Tejo. Lisbon. Portugal.

7. Instituto de Medicina Preventiva e Saúde Pública. Faculdade de Medicina. Universidade de Lisboa. Lisbon. Portugal.

8. Comissão de Ética para a Saúde da Administração Regional de Saúde de Lisboa e Vale do Tejo. Lisboa. Portugal.

✉ Autor correspondente: Margarida Gil Conde. maria.conde@edu.ulisboa.pt

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INTRODUCTION

In 2018, the Astana Declaration recognized Primary Care (PC) as the cornerstone of a sustainable healthcare system.^{1,2} There is also increasing awareness that research in PC is essential to provide excellent clinical and population-oriented care, and develop effective health policies.^{3,4}

Healthcare provision in PC is both a consequence of and the setting for research itself.⁵ PC research is conducted in close contact with patients and in constant interaction with the entire system.⁵ In this context, clinicians, who have a practical understanding of the most relevant clinical issues, come to question the current literature and test new hypothesis on such matters.⁵

The reasons to perform research in PC are to develop additional competences, to increase job satisfaction, to explore identified problems, to foster intellectual stimulation, or to accelerate career progression and networking with universities and mentors.⁶ However, there are several barriers discouraging clinicians from undertaking research, including insufficient funding, lack of protected time for research, challenging work-life balance, insufficient mentors, organizational issues and lack of support.⁶⁻¹⁰ Therefore, many clinicians are neither motivated to undertake research nor aware about the full range of resources that are at their disposal.⁶⁻¹⁰

Developing research capacity can lead to policies and practices based on the best evidence,¹¹ and can be perceived from three distinct levels: researcher characteristics, research environment and organizational issues.^{11,12} Firstly, at the level of the individual researcher, mentored research training, peer learning and protected time are of the utmost importance.^{11,13,14} Secondly, the environmental level consists on the visibility of research, the support of national strategies and priorities, budget lines and effective communication among key-stakeholders.^{11,13,14} Finally, the organizational level is based on networks of clinicians and solid support structures.^{11,13,14} These three levels may overlap substantially, calling for integrated multilevel interventions on research capacity building.^{11,13}

In fact, the Research Strategy of the European General Practice Research Network (EGPRN) provides a plan to pursue specific objectives: to establish priorities, to build research capacity, to promote high standards of research practice and to encourage the use of the best evidence in practice.¹⁵ The strategies employed must be adapted to each particular system, taking into account the context in which they are implemented, the characteristics of the country, regional needs and the level of current research capacity.¹⁵ Following the recommendations of the EGPRN and the World Organization of Family Doctors (WONCA) Working Party on research, the aim of this study was to identify and customize strategies for the development of research

within the Portuguese PC scenario.

METHODS

Study design

We performed an explanatory qualitative data analysis through semi-structured interviews and used inductive and deductive approaches for subsequent analysis.

Team background

Our team is composed of four family physicians and a Family Medicine (FM) resident, one of which, the only male in the team, has quit clinical functions and is dedicated to full time research, has a master's degree in Epidemiology and is concluding his doctoral studies. Another of the researchers is enrolled in a PhD program and has had previous training in research methodology; and the other three were not previously involved in formal research, having only conducted small observational studies during residency. Apart from Family Physicians, the team also includes a PhD candidate and specialist in urban studies and qualitative methodology.

Sampling

Three distinct family doctors, from the research team, conducted semi-structured interviews to other family doctors with broadly recognized research work. We selected a purposive sample to include participants with the following characteristics:

- Female and male gender;
- Academic researcher;
- Young researcher (completion of specialty training less than five years ago) and senior researcher;
- Member of a research group;
- Clinician-researcher;
- Former researcher;
- Researcher working abroad;
- Geographically distributed researchers (North, Centre, Lisbon and Tagus Valley region and South).

We also conducted a snowball sampling to achieve diversity. We recruited participants until all the strategies identified in their responses were considered redundant, indicating that we had reached data sufficiency. Posteriorly, we also used snowball sampling to contact and invite directors of institutes with particular interest in PC research.

Interview script and participant contact

We applied both the Consolidated Criteria for Reporting Qualitative research (COREQ 18) and Standards for Reporting Qualitative Research (SRQR 19) checklists.

We conducted two pilot interviews in order to assess the clarity of the script and interviewer questions, as well

as to standardize the approach of the researchers involved. The pilot interviews were conducted to assess the need to reformulate the interview script, increase the clarity of the questions and facilitate coding.

We invited participants individually by email (through institutional channels), in which we explained the study's objectives, asked for informed consent and provided clarity on the semi-structured interview format.

We asked participants for explicit recording permission and recorded all interviews using the interviewer's mobile phone, computer, or via digital platforms (i.e.: Zoom® and Microsoft Teams®).

The interviews were structured in the following way:

1. Gathering sociodemographic data and information on participant's workplaces;
2. Contextual questions about the participant's personal background in research;
3. Open-ended questions about which strategies could be adopted to foster research in PC.

Response rates and interview setting

From a total of 14 family doctors and seven stakeholders invited, 12 doctors and two stakeholders responded positively and took part in the study between October 2019 and March 2022. Five people did not respond to the invitation.

On average, each interview lasted approximately one hour and fifteen minutes, adopting either a virtual or face-to-face format. We conducted four interviews remotely (three over ZOOM® and one over TEAMS®) and the in-person meetings occurred in Lisbon (Portugal) or Sydney (Australia). There were no repetitions of interviews.

In only three out of the 14 interviews there was a previous relationship between the interviewer and the participant. In two out of the three interviews there was a previous relationship between the interviewer and the participant, the participants were not aware of the interviewer's opinion on the topics covered; whereas in the other one (one of the pilot interviews), the interview was applied to a team member, which implied the need to ensure the impartiality and veracity of the contents.

Data processing

We transcribed interviews verbatim and validated the transcription with the interviewee for accuracy. We uploaded transcriptions to the MAXQDA® software afterwards. Two team members (the interviewer and another team member) handled the interviews' coding independently. Whenever the coding was discordant, we discussed the issue with a third member. We carried out coding iteratively, considering the review of previous coding whenever a new code was identified. We did not conduct the validation of the final

codes by the interviewees.

We kept all recordings and transcripts in confidential folders, only accessible to researchers.

Ethics committee approval

This study was approved by the Research and Ethics Committee of the Faculty of Medicine of the University of Lisbon in October 2019.

RESULTS

We conducted a total of 14 interviews (Table 1). Eight out of the 14 interviewees were female. Ten of the interviewees worked in the Lisbon and Tagus Valley region, one of the interviewees worked in the North of Portugal, one in the Central region, one in the South and one lived abroad. Regarding their educational level and experience, nine of the interviewees had a PhD Degree, two were PhD students, two were directors of institutes with a particular interest in PC research and the last interviewee was a FM specialist with no additional academic qualifications. Their professional experience ranged from two to 32 years. In detail, four of the interviewees were young doctors. Ten of the interviewees considered the faculty or the institute as their main workplace, while the remaining four considered the Health Unit instead. Finally, regarding their current occupation, seven interviewees maintained their clinical activity, one quit a research career, and three belonged to one or more research groups.

From the data analysis, we identified 16 strategy groups to promote research in PC: 1) increasing institutional support; 2) creating support structures; 3) redefining the residency program; 4) investing in research training; 5) redefining curricular evaluation; 6) establishing dedicated time for research; 7) increasing funding; 8) improving access to research data; 9) being a research driver; 10) establishing a research culture; 11) working in collaboration; 12) creating formally organized research groups; 13) creating autonomous research centers; 14) improving the definition of the research subjects and study designs; 15) reviewing ethics committee procedures and 16) reviewing the current selection of articles for publication. Each one of these topics has been divided into macro strategies and micro strategies (Appendix 1: <https://www.actamedicaportuguesa.com/revista/index.php/amp/article/view/19514/15149>).

1. Institutional support

As a macro strategy, two interviewees raised the importance of support from professional associations used to perform clinical research, such as the Directorate General of Health (DGH), public health institutes or nursing associations: "I think it is fundamental to work with institutions, it may be with the DGH or other institutions that are already

Table 1 – Characteristics of the interviewees

Characteristics		Interviewees
Gender	Female	8
	Male	6
Local administrative regions	North	1
	Centre	1
	Lisbon	10
	South	1
	Abroad	1
Academic background	Specialist in Family Medicine	1
	PhD Student	2
	PhD Degree	9
Clinical experience	Young Doctor	4
	Senior Doctor	8
Primary workplace	Healthcare Unit	4
	Faculty	8
	Stakeholders	2
Currently practicing	Clinical activity	7
	Dropout research	1
	Part of one or more research groups	3
Total		14

more used to carrying out research” (Interviewee 2). Interviewees also addressed the importance of raising the profile of FM within the boards of the Medical Schools. Two researchers even considered the support from academic centers, including the creation of a support group which could be responsible for research methodology support: “To have a support team which can be a partnership with universities. A team composed of one project manager, one statistician and one epidemiologist, someone who knows about research methodologies, a project manager, or a project secretary to do the administrative tasks” (Interviewee 3). One interviewee defended the creation of a set of best practices in research by an idoneous and impartial entity: “It is important to rely on an entity that can establish references and showcase good practices. It is necessary to open a safe-space for experimentation so we may learn, install good practices, and recreate references” (Interviewee 4). Two interviewees alluded to the creation of a Research Unit within the Portuguese Association of General Practice and FM for establishing clinical research guidelines: “Within the association, we need to create a research core. It should be composed of people from distinct regions of the country and that team would think about the guidelines, the lines of research and how to get enough research funding” (Interviewee 8).

In terms of micro strategies, one interviewee indicated not only the support of public institutions, but also from pri-

ivate entities: “Some of the possible agents are public entities (the Ministry of Health, the Ministry of Science and Education) and private entities (commercial or non-commercial)” (Interviewee 5). Three other interviewees mentioned the importance of academic institutions - one of them assessed the possibility of having a support group in universities, another one suggested bringing professional associations and universities closer, and the last one defended the interconnection among medical and non-medical schools: “There should even be a network of communication with other non-medical schools. FM could act like an orchestrator for distinct subjects” (Interviewee 14). Additionally, one researcher defended resource centralization, contemplating the creation of a society or council that would channel major resources for research: “I was thinking of a scientific society (or the creation of such) that would mobilize and centralize funds and other important resources for research” (Interviewee 8).

2. Support structures

In terms of macro strategies for improving PC research, two researchers referred to the technical support in areas such as statistics, study design and submission to the Ethics Committee to be paramount: “We must have a highly personalized structure set up to perform the technical work. Not the creative part, which is the noble part of research. That structure actually does the procedural part which takes

a lot of time" (Interviewee 13).

Regarding micro strategies, three interviewees stated the importance of technical support structures, which would "organize the bureaucratic tasks, such as a methodology team which could be paid to run questionnaires and collect standardized data" (Interviewee 3) and the creation of "a structure that allows researchers to free up some of their time, with the support of people who are specialized in these areas" (Interviewee 5).

3. Residency program

As a macro strategy, two respondents mentioned that restructuring the residency program to encompass a module on research could boost the volume of scientific research being undertaken nowadays: "a research module with a requirement to do a research project during internship could help" (Interviewee 13).

4. Research training

Interviewees did not overlook the need for more and better research training throughout the career of clinicians, stressing the importance of mentorship as an important macro strategy: "Greater preparation in the research part, in the development of the research method itself and access to mentors to guide us" (Interviewee 12).

5. Curriculum evaluation

In terms of macro strategies, two interviewees defended that scientific production should be evaluated in the performance assessment of clinicians and their Health Units: "It has to be valued in the performance assessment processes. It is important for people to know that having a doctoral degree will give them some advantages in performance evaluations" (Interviewee 13).

In terms of micro strategies, four interviewees mentioned curriculum enhancement. However, they presented distinct opinions. Three interviewees defended that research should be considered a criterion for valuing the clinician's curriculum ("Whenever evaluation is included in the research curriculum, importance will be given to these areas. Being included in performance evaluations will make the research develop" – Interviewee 13), while a young researcher defended that this reality could distort the researcher's real motivations for undertaking research assignments: "We could try to understand how we could separate the motivation of career progression from research production. One idea was to detach research from the curriculum" (Interviewee 12).

6. Time for research

Most interviewees (eight) mentioned the protected time for research as a fundamental macro strategy for promoting

research, due to the importance of planning ahead and to ensure there is protected time for research: "Whoever really wants to take part in research must dedicate time. If I had consultations, then the sheer volume of patient lists and/or the amount of weekly consultations must be reduced. This way there will be compensation and better balancing of dedicated time and effort put into research" (Interviewee 1).

Moreover, three researchers specified the need of redistributing working hours between research and the clinical schedule, "so doctors can choose how many clinic hours they wish to do and how many hours of research" (Interviewee 12).

7. Funding

As a macro strategy, four interviewees mentioned the relevance of funding as one of the most important resources to conduct research. One of them hypothesized about the eventual sponsorship by the pharmaceutical industry, stating as follows: "There are a number of foundations and scientific societies that receive sponsorship from the industry, which could be contacted for research support" (Interviewee 8). However, a young doctor defended the opposite: "One thing that could improve is the independence of sponsorships. I think it is very important to work on this independence of power" (Interviewee 12).

In terms of micro strategies, three interviewees supported the review of research incentives and proposed funding to be channeled from distinct sponsors: "I would like to see more private institutions funding scientific endeavors. I wish there was a larger share of the budget of the Ministry of Science and Education. Another possibility is for clinicians themselves to provide scientific patronage. In Denmark, family doctors had a fund – one cent of each consultation is used to fund research" (Interviewee 5).

8. Research data

Two researchers mentioned the availability of data for scientific purposes. As a macro-strategy, they pointed out the need of having a single source that provides accurate and updated data: "We need to standardize access to a set of data under the responsibility of the Ministry of Health as a central agency. We need a research infrastructure, set at the European level, where we can quickly know which variables there are and which type of information is available to conduct research" (Interviewee 2).

9. Research driver

Regarding macro strategies, some respondents mentioned the importance of the professional's inner motivation and commitment towards the research practice: "Being a research leader, the person who encourages others to run

research, participating in research collectives, is not for everyone, but it should be for most family doctors” (Interviewee 3).

10. Research culture

Interviewees mentioned the professional gratification and the establishment of a research-related culture as a micro-strategy: “As there are more researchers and we are producing more and more research, the culture is strengthening by the day” (Interviewee 5); “we can only do that when the doctor feels gratification. And when I say gratification, it’s not financially driven, but it’s realizing that what he investigated yielded results, improved his quality of life and his work” (Interviewee 10).

11. Working in collaboration

In terms of macro strategies, six interviewees defended multidisciplinary work streams with a collaborative environment, promoting the added value from teams composed of researchers from different backgrounds: “It is important to break people’s isolation and get people to work together. It is essential to bring FM clinicians to take joint and collaborative paths” (Interviewee 4); “Perhaps we would like to work with anthropologists, sociologists, psychologists... FM could be the aggregator of different scientific perspectives” (Interviewee 14).

In terms of micro strategies, one interviewee raised awareness to the importance of being part of a team, striving towards a shared vision: “This can only be supported with a team and a structure to give us security” (Interviewee 13).

12. Formal research group

Two interviewees considered the creation of goal-oriented research teams, with target dates and priorities set at all project stages: “How can we have facilitators to achieve what is needed in terms of the research agenda, the support, the required time for research, or the training needed” (Interviewee 10).

13. Autonomous research centers

During this study, an interviewee suggested the development of autonomous research centers within PC Health Units (like the hospital model) was a micro-strategy: “There’s no reason why health centers can’t carry out research, something to provide them with financial support. Consider for instance small research groups within health units or health units that form research networks with centralized management. There are models that work very well at the hospital level and that can be tried out in health units” (Interviewee 4).

14. Research subjects and study designs

In terms of macro strategies, three interviewees approached the study designs applicable to PC and the importance of using a robust research methodology: “We have to start doing good studies in prospective cohorts, randomized clinical trials and mass control trials” (Interviewee 8). A young researcher specified the need of “guidance on how to ask good research questions – what questions are relevant and prioritized? We must also consider outcomes that are relevant to the patient” (Interviewee 12).

In terms of micro strategies, one interviewer defended the direct involvement of clinicians from the earliest stages of the project: “the ideal would be a bottom-up reading. Why couldn’t clinicians themselves propose research projects?” (Interviewee 10).

15. Ethics’ committee

Two interviewees addressed the submission of protocols to the Ethics Committee. One of them defended the recognition of favorable verdicts between different Ethics Committees: “If an Ethics Committee issues a positive opinion, you should attach that positive opinion to the next Ethics Committee so that there could be a tacit recognition” (Interviewee 5). The other respondent considered the possibility of a subscription-based payment model, a standard practice in the Nordic countries: “In Sweden, any project that is submitted to an Ethics Committee pays for submitting the project. Therefore, the Ethics Committee has the necessary resources to pay its clinicians for overtime or compensatory hours” (Interviewee 3).

16. Articles for publication

One researcher mentioned the current access to a (restricted) selection of published articles and assessed the possibility of increasing the number of articles published per scientific journal as key to promoting research and knowledge dissemination among clinicians. This could be achieved based on online content made available in digital platforms: “If the journals are now all online, why can you only have X articles? You can have more!” (Interviewee 8).

DISCUSSION

The interviewees defended the following strategies for promoting PC research: seeking technical and scientific support (from public institutions, private entities, academic centers and socio-professional associations); improving the definition of research subjects and creating support structures for statistics and study design; redefining the residency program (including research in formative plans) and improving research training; revising curriculum evaluation and performance assessment of PC Health Units; reorganizing the working hours with dedicated time for research;

increased funding from different sources; facilitating the access to accurate and updated data for scientific purposes; fostering a research culture and promoting teamwork with clinicians from distinct backgrounds; creating formally organized research groups and autonomous research centers within the PC Health Units; reviewing procedures for ethics' committees and the current selection of articles for publication.

Building research capacity depends on the individual researcher, the research environment, and the organizational field.^{11,12} These three levels must be articulated in order to develop a capacity building infrastructure.^{11,12}

Strategies for the promotion of research start with the researcher's own posture. One's curiosity and motivation can be the trigger to galvanize a whole team of researchers. Researchers also defend the mentored research training in both under and post-graduate education,⁹ and redistribution of working hours. Protected time for research is a strategy currently used in countries such as Australia and United Kingdom (either by work planning or releasing clinicians from some clinical duties).⁸

In terms of research environment, PC involves contact with a considerable number of patients and conditions. This is an opportunity for the implementation of cohort studies, mass control trials and randomized controlled trials – with the opportunity to perform patient and community centered research. Additionally, the improvement of research culture in healthcare has been found to have benefits for patients, clinician productivity, and efficiency rates.⁸ To establish a research culture in PC, it is necessary to enhance the research visibility and to foster the researcher's gratification. Another strategy is to improve the technical and scientific support from public and private entities. Greater proximity to academic centers would also promote contact with medical and non-medical schools, leading to multidisciplinary projects, which embrace the holistic vision of FM.³ In addition, the development of recommendations of good practice by a qualified entity would enhance the replication of good examples in PC research.

However, scientific production is frequently limited by insufficient funding.^{3,9} Therefore, one of the strategies that many researchers favour is the existence of increased financial support from the Ministry of Science or from funds obtained by clinicians themselves in their professional activity. A previous study found that increased research funding was associated with increased research opportunities, research outputs, confidence and had a positive influence on the research culture.⁸ However, in the present work, the possibility of funding by the pharmaceutical industry and the curriculum enhancement of clinicians who are dedicated to research were not consensual, as some researchers consider that there might be an associated conflict of interest.

Regarding organizational issues, the main strategy corresponds to the creation of support structures to aid with administrative and statistical tasks. This support could be channeled through a formal research group, acting as a facilitator in acquiring support for different projects. The development of a standardized data source that would allow researchers to know which variables are available for their project, as well as the tacit recognition of Ethics Committee verdicts by other Ethics Committees at a national and even international level was also proposed. Finally, the importance of collaborative work was reinforced, as research can only be produced by working as a team.

In summary, these results are in line with the key facilitators for research identified by Research Strategy of EG-PRN:

1. Promotion of research training and collaborative work;
2. Mentored work;
3. Timeliness of the research;
4. Close contact with stakeholders;
5. The importance of fair relationships with academic centers;
6. Strengthening relations with national research institutes and university departments;
7. Peer support;
8. Envisioning sustainability within healthcare and research practice-based networks.¹¹

This study identified the main strategies associated with strengthening PC research as an initial assessment of the local context. The next step is the effective implementation of these strategies in Portuguese practice. The proper monitoring and evaluation of these measures will enable us to understand their real impact. The impact of each approach may be measured by the scientific productivity it provides, the establishment of collaborations since its implementation, the involvement of stakeholders, and finally the involvement of populations and the improvement of health outcomes.^{14,15}

To our knowledge, this is the first study evaluating the macro and micro strategies for the promotion of PC research in Portugal. We included researchers from different regions of Portugal and at various stages of their career. We analyzed strategies until "data sufficiency" was reached. This study creates an opportunity to inform a quantitative study nationally, to reflect and analyze the reality at a national level.

In terms of limitations, this study used a small sample of doctors, which is probably neither representative nor generalizable to the national reality. Most doctors that were interviewed work in the Lisbon and Tagus Valley region. This may be due to the fact that most of the interviewees with a PhD worked in this region at the time the study

began (2019), the members of the research team are from this region (so there may be easier access to local researchers' contacts) and that snowball sampling was carried out. On the other hand, apart from doctors and stakeholders, there are other healthcare professionals who may do research and whose perspective could have enriched the obtained results.

CONCLUSION

A greater proportion of interviewees identified the following as the most relevant strategies for research promotion: the need for institutional support (technical and scientific support from public institutions, private entities, academic centers and socio-professional associations), reorganization of working hours with protected time for research, increased funding directed towards research and the breaking of isolation, promoting teamwork with clinicians from different professional backgrounds.

A practical solution may be found in the Practice-Based Research Networks, that are sustained collaborations between clinicians, researchers, and members of the community, who share the interest of generating high-quality research for PC.^{16,17} These could act as a point of reference for research and collaboration between academic centers, policymakers, community-based services, and PC.^{16,18}

In the future, considering the results of this study and data collected during interviews, we will conduct a quantitative analysis, at a national level, to be applied to all PC health professionals, in order to describe the real panorama of PC research in Portugal and formulate robust and effective recommendations for its promotion.

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REFERENCES

1. Ponka D, Coffman M, Fraser-Barclay KE, Fortier RD, Howe A, Kidd M, et al. Fostering global primary care research: a capacity-building approach. *BMJ Global Health*. 2020;5:1-7.
2. World Health Organization. Declaration of Astana. Global Conference on Primary Health Care: Astana, Kazakhstan, 25 and 26 October 2018. 2018. [cited 2022 Sept 20]. Available from: <https://www.who.int/docs/default-source/primary-health/declaration/gcphc-declaration.pdf>.
3. O'Neill B, Aversa V, Rouleau K, Lazare K, Sullivan F, Persaud N. Identifying top 10 primary care research priorities from international stakeholders using a modified Delphi method. *PloS One*. 2018;13:e0206096.
4. Abreu J, Reis P, Cardoso S, Reis S. Investigação em medicina geral e familiar: tendências e vazios. *Rev Port Med Geral Fam*. 2020;36:408-14.
5. Flénady T, Dwyer T, Kahl J, Sobolewska A, Reid-Searl K, Signal T. Research capacity-building for clinicians: understanding how the research facilitator role fosters clinicians' engagement in the research process. *Health Res Policy Sys*. 2022;20:1-13.
6. Pager S, Holden L, Golenko X. Motivators, enablers, and barriers to building allied health research capacity. *J Multidiscip Healthc*. 2012;5:53-9.
7. McIntyre E, Brun L, Cameron H. Researcher development program of the primary health care research, evaluation and development strategy. *Aust J Prim Health*. 2011;17:114-21.
8. Hilder J, Mickan S, Noble C, Weir KA, Wenke R. Outcomes of a funding initiative to promote allied health research activity: a qualitative realist evaluation. *Health Res Pol Sys*. 2020;18:1-11.
9. Borkowski D, McKinstry C, Cotchett M, Williams C, Haines T. Research culture in allied health: a systematic review. *Aust J Prim Health*. 2016;22:294-303.
10. Yaphe J. Expandir a capacidade de investigação em cuidados primários em Portugal: uma proposta. *Rev Port Med Geral Fam*. 2015;31:370-1.
11. Huas C, Petek D, Diaz E, Muñoz-Perez MA, Torzsa P, Collins C. Strategies to improve research capacity across European general practice: the views of members of EGPRN and Wonca Europe. *Eur J Gen Pract*. 2019;25:25-31.
12. Weber-Main AM, Finstad DA, Center BA, Bland CJ. An adaptive approach to facilitating research productivity in a primary care clinical department. *Acad Med*. 2013;88:929-38.
13. Vogel I. Strengthening learning from experience. UK collaborative on development research | UKCDR. 2011. [cited 2022 Jul 10]. Available

AUTHOR CONTRIBUTIONS

MBM: Formal analysis, research, writing of the original draft, writing, revision and validation of the final text.

VR: Conceptualization, methodology, software, validation, formal analysis, research, resources, writing, revision and validation of the final text.

RCR, AR: Conceptualization, methodology, software, validation, formal analysis, writing, revision and validation of the final text.

PN: Conceptualization, methodology, resources, writing, revision and validation of the final text, supervision.

MGC: Conceptualization, methodology, software, validation, formal analysis, research, writing, revision and validation of the final text, supervision.

PROTECTION OF HUMANS AND ANIMALS

The authors declare that the procedures were followed according to the regulations established by the Clinical Research and Ethics Committee and to the Helsinki Declaration of the World Medical Association updated in 2013.

DATA CONFIDENTIALITY

The authors declare having followed the protocols in use at their working center regarding patients' data publication.

COMPETING INTERESTS

The authors have declared that no competing interests exist.

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from: https://www.ukcdr.org.uk/wp-content/uploads/2018/03/UKCDS_Capacity_Building_Report_July_2012.pdf.

14. Ried K, Farmer EA, Weston KM. Bursaries, writing grants and fellowships: a strategy to develop research capacity in primary health care. *BMC Fam Pract.* 2007;8:1-13.
15. Collins C. The EGPRN research strategy for general practice in Europe. *Eur J Gen Pract.* 2022;28:136-41.
16. Binienda J, Neale AV, Wallace LS. Future directions for practice-based research networks (PBRNs): a CERA survey. *J Am Board Fam Med.* 2018;31:917-23.
17. Peters S, Chakraborty SP, Barton C, Sturgiss EA, Mazza D, De Leon Santiago M, et al. Building a practice-based research network for healthcare integration: a protocol paper for a mixed-method project. *BMJ Open.* 2022;12:1-7.
18. Elder NC. Practice-based research today: A changing primary care landscape requires changes in practice-based research network (PBRN) research. *J Am Board Fam Med.* 2019;32:647-50.