

Strategies and Factors to Promote Research in Primary Care in Portugal: A Cross-Sectional Study

Estratégias e Fatores Promotores da Investigação nos Cuidados Primários em Portugal: Um Estudo Transversal

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ABSTRACT

Introduction: Research is crucial for building an efficient health system care. This reality is particularly evident in primary care, the cornerstone of health-care services. However, research in primary care is not consistently implemented across Europe. With this study we aimed to: 1) identify the factors and strategies that healthcare professionals consider relevant for promoting research in primary care in Portugal; 2) analyze whether the prioritized strategies vary according to the geographical area, professional group, workplace, interest, and experience in research of the participants.

Methods: We conducted an analytical cross-sectional study using an online survey applied in the first semester of 2023. We designed the survey based on strategies identified in a previous qualitative study. We included health professionals working in Primary Care in Portugal (continental and autonomous regions). We intended to obtain at least 200 answers for each professional category and geographical area. The survey was initially sent to a convenience sample to assess the acceptability and interpretation of the questions. We then disseminated the survey through all national Health Center Clusters and through professional associations. We conducted an analysis using a 5% significance level.

Results: The sample consisted of 1027 participants: 507 doctors, 377 nurses, 106 diagnostic and therapeutic technicians, and 30 secretaries. The majority worked in the Lisbon and Tagus Valley region (51.9%), followed by the North (22.1%) and Centre (17.1%). Around half of the participants worked in a Family Health Unit, 16.5% worked in a Personalized Healthcare Unit, 11% in a Community Care Unit, and 8.7% in a Public Health Unit. The factors promoting research mentioned by a greater proportion of participants were research training (76%), access to mentors (71%) and grants (56%). As for strategies to promote research, most participants supported the existence of dedicated time for research (82%), public grants (65%), institutional support (51%), access to support services (58%) and research data (57%).

Conclusion: There seems to be a consensus on which factors are currently promoting research and what future strategies might be useful for promoting research in primary care in Portugal. Nevertheless, there are some differences between certain sub-groups. This information might be useful to tailor initiatives directed at specific sub-groups. Our intention is to help form policies and strategies to promote research in primary care in Portugal, contributing to the national development on the subject.

Keywords: Primary Health Care; Research; Research Design

RESUMO

Introdução: A investigação constitui uma pedra basilar de um sistema de saúde eficiente. Esta realidade é particularmente evidente nos cuidados de saúde primários, a base do sistema de saúde. Contudo, na Europa, a investigação nesta área não se encontra implementada de forma consistente nem homogênea. Com este estudo pretendemos: 1) identificar os fatores e as estratégias que os profissionais de saúde consideram mais relevantes para promover a investigação nos cuidados de saúde primários em Portugal; 2) analisar se as estratégias priorizadas variam de acordo com a área geográfica, o grupo profissional, o local de trabalho, o interesse e experiência em investigação dos participantes.

Métodos: Conduzimos um estudo analítico transversal, utilizando um inquérito *online* aplicado no primeiro semestre de 2023. Desenhamos o inquérito com base no conhecimento e estratégias obtidas num estudo qualitativo prévio. Incluímos profissionais dos cuidados de saúde primários em Portugal (continental e regiões autónomas), visando um mínimo de 200 participantes por categoria profissional e região geográfica. Selecionámos uma amostra de conveniência para avaliar a aceitabilidade das questões. Posteriormente, divulgámos o inquérito pela totalidade dos Agrupamentos de Centros de Saúde e através de associações profissionais.

Resultados: A amostra foi constituída por 1027 participantes: 507 médicos, 377 enfermeiros, 106 técnicos de diagnóstico e terapêutica e 30 assistentes técnicos. A maioria pertencia à região de Lisboa e Vale do Tejo (51,9%), seguindo-se o Norte (22,1%) e o Centro (17,1%). Cerca de metade trabalhava numa Unidade de Saúde Familiar, 16,5% numa Unidade de Cuidados de Saúde Personalizados, 11% numa Unidade de Cuidados na Comunidade e 8,7% numa Unidade de Saúde Pública. Os fatores promotores da investigação mais comumente referidos foram as oportunidades de formação em investigação (76%), o acesso a mentores (71%) e a bolsas (56%). Quanto às estratégias futuras, a maioria apoiou a existência de tempo dedicado à investigação (82%), bolsas públicas (65%), o apoio institucional (51%), o acesso a serviços de apoio (58%) e a dados para investigação (57%).

Conclusão: Parece existir um consenso acerca dos fatores que promovem a investigação e quais as estratégias que poderão promover a investigação nos cuidados primários em Portugal. Verificam-se, contudo, algumas diferenças entre determinados subgrupos. Esta informação poderá ser útil para

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adaptar iniciativas dirigidas a subgrupos específicos. A nossa intenção é ajudar a formar políticas e estratégias para promover a investigação nos cuidados primários em Portugal, contribuindo para o desenvolvimento nacional nesta área.

Palavras-chave: Cuidados de Saúde Primários; Investigação; Projetos de Investigação

KEY MESSAGES

- There is a consensus about the factors and strategies that could promote primary care research in Portugal.
- However, there are some nuances when analysing certain professional categories. This information could be useful for adapting initiatives for specific subgroups.
- We intend to identify policies and strategies to promote national primary care research development.

INTRODUCTION

In Portugal, primary care (PC) serves as the entry point of the National Health Service and acts as the foundation of healthcare services.¹

In PC, there are three types of health units. Family Health Units (USF) consist of small groups of fixed teams composed of a family doctor, a family nurse, and a secretary.¹ Each team has a list of patients assigned.¹ These units are divided into USF-A and USF-B, according to the type of financial incentives received.¹ We also have personalized healthcare units (UCSP), where some professionals are organized according to specific tasks, such as home visits, diabetes clinic, maternal health, and others.¹ Additionally, there are also Shared Clinical Resource Units (URAP), Continued Care Units (UCC), Palliative Care Units and Public Health Units (USP).¹ These units were organized within Health Center Clusters (ACeS) and collaborated to provide continuous care, addressing the needs of the population within a specific geographical area.¹ At the time the study was conducted, the ACeS were grouped by region under Regional Health Administrations (ARS). Today, these units have been integrated into Local Healthcare Units (ULS).

A firm and vibrant PC relies on a strong research basis.² Research in PC aims to improve the quality, effectiveness and safety of healthcare services.² It plays a crucial role in developing health policies related to resource allocation and the organization of PC services.³ The recognition of the importance of PC research led to the creation of the European Research Agenda in General Practice/Family Medicine by the European General Practice Research Network (EGPRN), in 2009.⁴ The aim of this agenda was to provide guidance for future research policies.^{4,5}

However, PC research in Europe is still far from ideal. Several barriers were identified including little protected time, lack of connection with specialized centers, and the need for research training.^{4,6} As there were still inequities in the implementation of research across Europe, in 2021 the EGPRN updated its recommendations and research strategies.⁴ These strategies set a global direction and served

as a basis for more detailed plans in individual countries, adjusted according to each nation's specific needs and its current research capacity.⁴

In this context, between 2019 and 2022 we conducted a qualitative study to identify which are the best practices to promote research in Portuguese PC.⁷ Some strategies have been identified, such as implementing better networking between researchers and stakeholders, financial support, protected time for research, fair relationships with academic centers, support and implementation of research practice based networks.^{2,7} Nevertheless, this study is aimed at a small sample, which is not representative or generalizable to the national reality.⁷ Additionally, only doctors and stakeholders were included.⁷ However, there are other professionals who may conduct research and whose perspectives could have enriched the results.

In the present study, our aim was to identify the factors and strategies that healthcare professionals consider most relevant for promoting research in PC in Portugal, through a quantitative analysis. By conducting an observational study, we will understand whether research promoting factors and strategies vary according to the geographical area, professional group, workplace, interest and experience in research of the participants.

METHODS

Study design and context

We performed an observational, cross-sectional, analytical study by applying surveys.

This quantitative study follows a qualitative study, which used semi-structured interviews with family doctors with broadly recognized research work and other stakeholders, to identify the best practices to promote research in Portuguese PC. We identified 16 strategies for promoting research, such as strengthened institutional support, protected time, increased funding directed towards research, and promoting teamwork with clinicians within the same area or from different backgrounds.⁷

Using the strategies identified in the qualitative study,

we designed a questionnaire that was applied in this quantitative study.

This manuscript adheres to the “Strengthening the Reporting of Observational Studies in Epidemiology” (STROBE) checklist.

Population

We included professionals working in PC in Portugal, namely doctors (general practice/family medicine, public health or other specialties), nurses, psychologists, social workers, technicians (speech therapy, radiology, physiotherapy, nutrition and oral health).

We excluded professionals working in secondary healthcare. Administrative staff and support personnel were not included, as their roles typically do not involve research activities.

Sampling

Considering a group of 200 individuals, the accuracy of the estimates will be $\pm 6.5\%$ or better ($< \pm 6.5\%$) with a 95% confidence interval for characteristics with an approximate frequency of 50% (most conservative scenario). Therefore, we intended to obtain a minimum of 200 answers for each professional category (family medicine doctors, public health doctors, nurses, psychologists and technicians) and for each geographical region (North, Centre, Lisbon and Tagus Valley, Alentejo, Algarve, Azores and Madeira).

Questionnaire

We administered an online questionnaire (Appendix 1: <https://www.actamedicaportuguesa.com/revista/index.php/amp/article/view/22171/15609>), using Google Forms®, between January and July 2023. Its initial part covered the participants' sociodemographic characterization. The second part covered research experience (training, interest, and experience). We also inquired whether there was any connection to research groups, to ethics committees (EC) or to universities. Lastly, we invited the participants to indicate which factors they considered to be promoting research currently and what future strategies could promote PC research. For each question, each participant chose five aspects from a set of predefined options (established according to the results of the previous qualitative study). Participants were not allowed to submit blank answers.

Initially, we sent the questionnaire to a convenience sample to assess the understanding, acceptability, and interpretation of the questions.

We then requested the dissemination of the questionnaire to PC health professionals in Portugal through all executive directors of Health Center Clusters (continental and autonomous regions), as well as through three national professional associations (the Portuguese Association of Gen-

eral and Family Medicine, the Association of PC Nurses and the National Association of Public Health Physicians). The questionnaire was disseminated via email, social networks, and other institutional channels. We accepted responses obtained between January and July of 2023.

Data processing

We collected the data anonymously and confidentially in a Microsoft Excel® database.

Analysis

We analyzed the data using statistical software IBM® SPSS® Statistics 23. We performed descriptive and comparative analysis, according to the following:

- Numeric variables:
 - Age (continuous variable);
 - Interest (Likert scale: 1 - not interested; 5 - very interested).
- Categorical variables:
 - Geographic region (North, Centre, Lisbon and Tagus Valley, Alentejo, Algarve, Azores and Madeira);
 - Professional group (doctor, nurse, technical assistant, diagnostic and therapeutic technicians, other);
 - Workplace (UCSP, USF-A, USF-B, URAP, UCC, USP);
 - Training in research (post-graduate diploma, master, doctorate, course with > 40 hours or < 40 hours);
 - Previous experience in research (yes/no);
 - Connection to research groups (yes/no), EC (yes/no) or university (yes/no);
 - Promoting factors [mentors, grants, prizes, training, pharmaceutical industry support, Foundation for Science and Technology (FCT) support, research teams, support from private foundations];
 - Strategies (FCT grants, data access, professionalization of the EC; single EC for multicenter studies, single EC platform, support services, institutional support; protected time; link to the academy; teamwork; accounting for research for career progression).

We reclassified the ‘interest in research’ into ‘not interested’ (options 1 and 2) and ‘interested’ (3, 4, and 5).

We calculated the absolute and relative frequencies of the categorical variables.

We used chi-square test (in the presence of categorical variables) and Mann-Whitney U test (in the presence of categorical and continuous variables), considering a 5% significance level.

Ethical considerations

This study was approved by the EC of the Regional Health Administration of Lisboa e Vale do Tejo, Centro, Norte, Algarve and Norte Alentejo. All participants signed an informed consent form for the participation in the study.

RESULTS

Sociodemographic and professional characterization

The sample was composed of 1027 participants (78.8% female). The average age was 42, with a minimum of 23 and a maximum of 70 [Appendix 2, Table 1 (Appendix 2: <https://www.actamedicaportuguesa.com/revista/index.php/amp/article/view/22171/15610>)].

Participants in this study included 507 doctors, 377 nurses, 106 diagnostic and therapeutic technicians, 30 secretaries, and 8 people with other professional positions. Within the doctors' group, 464 worked in general practice/family medicine, 41 in public health, 1 in endocrinology and 1 in stomatology; 161 were medical residents and 346 were medical specialists. Within the nurses group, 213 were specialist nurses and 152 were non-specialist nurses.

The majority of participants worked in the Lisbon and Tagus Valley region (n = 533), followed by the North (n = 227), Centre (n = 176), Algarve (n = 67), Alentejo (n = 14), Azores and Madeira (n = 5 each).

Around half of the participants worked in a USF (206 in USF-A and 322 in USF-B); 169 worked in UCSP, 113 in UCC, 89 in a USP, 67 in URAP, 34 in the ACoS institution, 7 in Local Health Units (ULS), 6 in the ARS institution, 3 in palliative care and 3 in the private sector.

Factors promoting research

Figure 1 summarizes which factors promoting research were mentioned by the participants [Appendix 2, Table 2 (Appendix 2: <https://www.actamedicaportuguesa.com/revista/index.php/amp/article/view/22171/15610>)].

Geographical region

There were no statistically significant differences in the factors promoting research selected by participants from different geographical areas.

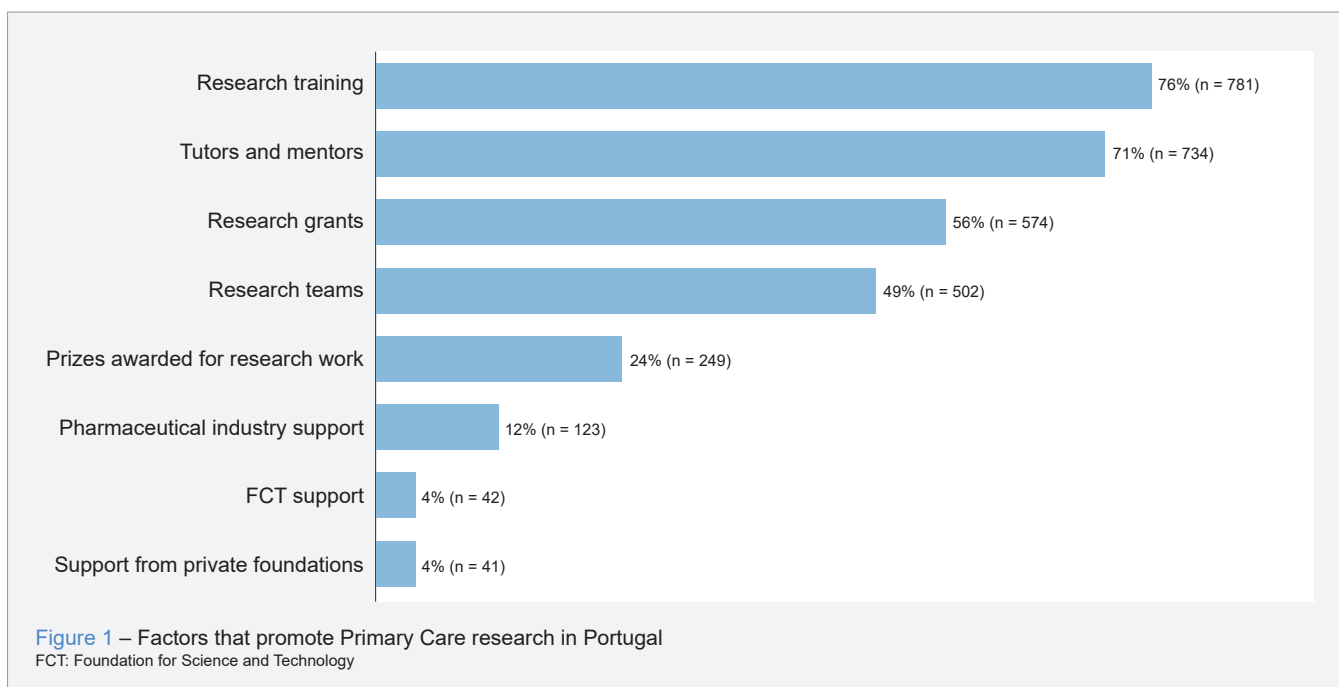
Professional career

All the professional groups mentioned research training, access to mentors and grants as the main factors promoting PC research.

More than half of the doctors selected these factors: research training (74.2%), access to mentors (75.0%) and grants (50.9%). The pharmaceutical industry support was more valued by doctors (16.6%) compared to nurses (6.4%). In a sub-analysis, there was a difference between medical residents and specialists (14.3% vs 17.7%). Additionally, access to research grants and to mentorship were also valued differently by residents and specialist doctors (44.7% vs 54.3% and 80.1% vs 72.9%, respectively).

Nurses defended the same factors that promote research: training (78.2%), access to mentors (69.2%) and research grants (62.3%). Nurses (62.3%) valued research grants even more than doctors (50.9%). In a sub-analysis, there was a difference between specialist and non-specialist nurses (62.4% vs 67.1%).

Diagnostic and therapeutic technicians and secretaries considered the three aforementioned aspects to be the



main factors promoting research: training (83.3%), access to mentors (70.0%), and grants (56.7%).

Workplace

Professionals working in USF (15%) selected support from the pharmaceutical industry more often than professionals of other contexts ($p = 0.036$).

The FCT's support was seen as a promoting factor by URAP professionals more frequently than by other professionals ($p < 0.001$).

There were no other statistically significant differences in the factors promoting research selected by participants working in different contexts.

Interest in research

Participants with a research interest tended to mention research teams more often ($p = 0.007$) and prizes and FCT support less often ($p = 0.002$ and $p = 0.036$, respectively).

Research training

Participants with research training valued less the training component and the FCT's support as factors promoting research ($p = 0.032$ and $p < 0.001$, respectively).

Previous experience

There were no statistically significant differences in the research-promoting factors selected by participants with or without previous research experience.

Membership of a research group or academy

Participants who were members of research groups or academics tended to value the training component less ($p = 0.003$ and $p = 0.004$, respectively).

Participants with academic ties tended to value the FCT's support more ($p = 0.012$).

Membership of ethics committee

There were no statistically significant differences in the research-promoting factors selected by participants who were members of EC or not.

Strategies for the future promotion of research

Figure 2 describes the strategies for promoting research referred by the participants [Appendix 2, Table 2 (Appendix 2: <https://www.actamedicaportuguesa.com/revista/index.php/amp/article/view/22171/15610>)].

Geographical region

No statistically significant differences were identified in the strategies chosen by participants from distinct geographical areas.

Professional career

Doctors selected protected time dedicated to research (85.8%), improved access to research data (62.1%) and public grants for research (61.9%) as their main strategies (Fig. 3). A sub-analysis suggested that residents valued

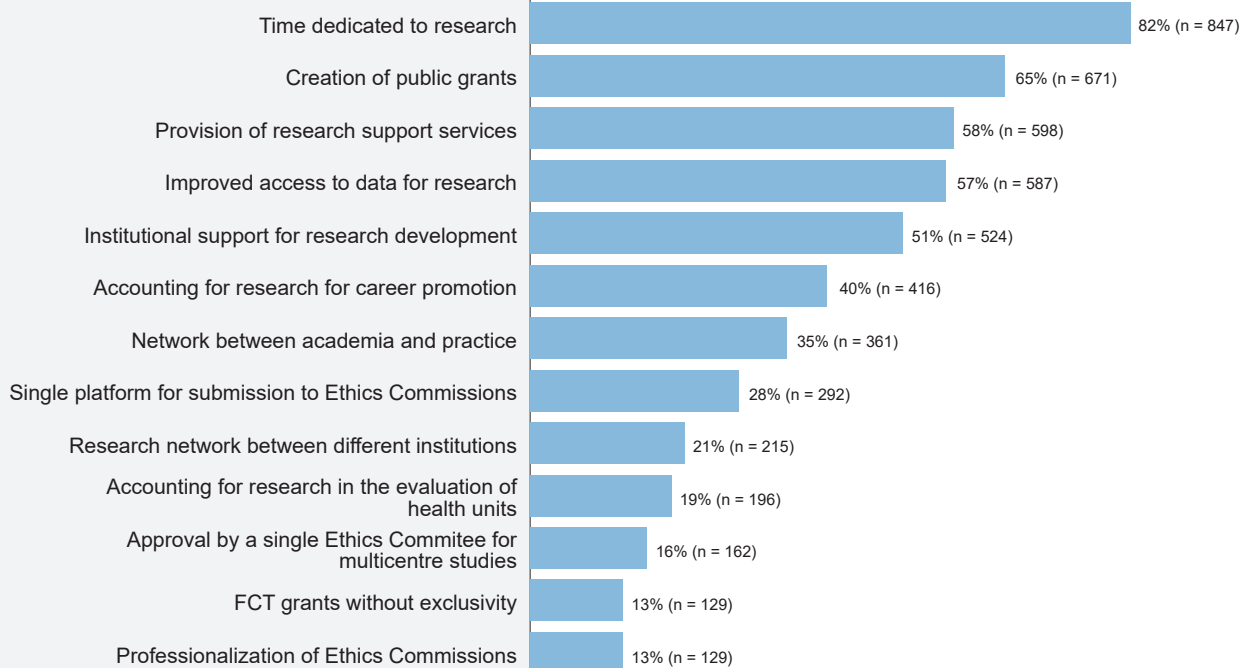


Figure 2 – Strategies for promoting Primary Care research
FCT: Foundation for Science and Technology

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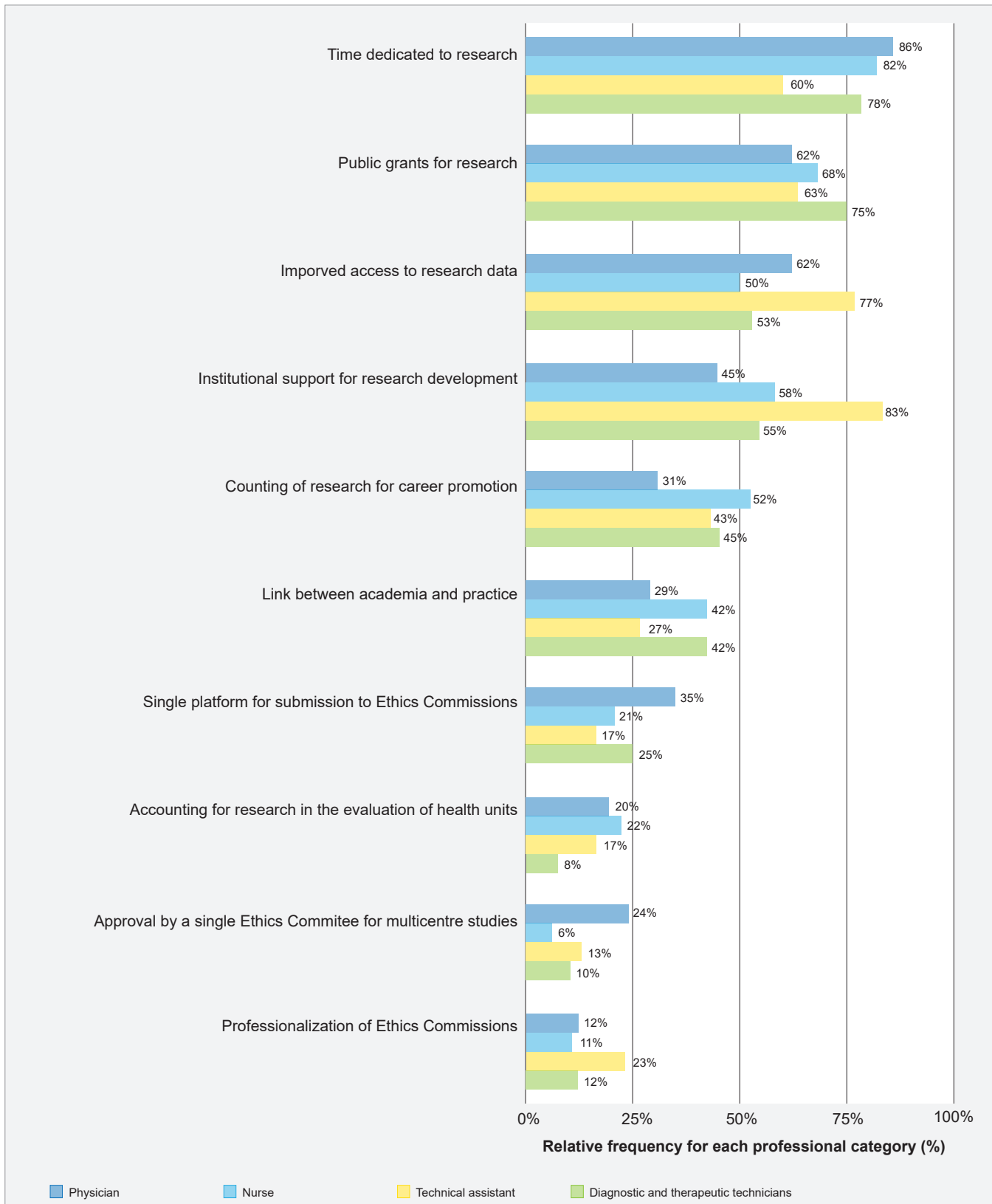


Figure 3 – Strategies for promoting Primary Care research, according to professional groups

strategies related to institutional support ($p = 0.002$), access to data ($p = 0.005$) and the submission to the EC more than specialists [approval by a single Committee for multicenter studies ($p < 0.001$) and the use of a single platform for submitting projects to the EC ($p < 0.001$)]. In turn, specialist doctors valued academic links ($p < 0.001$), grants ($p = 0.044$), protected time ($p = 0.006$) and counting scientific production towards career progression ($p < 0.001$).

Nurses favored protected time for research (82.0%), public grants (68.2%), institutional support (58.4%) and counting scientific production toward career progression (52.3%). Specialist nurses valued the submission of projects to EC through a single platform ($p < 0.001$), the association of research with academia ($p < 0.001$) and counting scientific production for career progression ($p < 0.001$) more than non-specialists. Non-specialist nurses tended to value access to data ($p = 0.001$), institutional support ($p < 0.001$), and approval by a single EC for multicenter studies ($p = 0.001$).

Secretaries considered the following strategies: institutional support (83.3%), improved access to data (76.7%), support services (66.7%), grants (63.3%), and protected time for research (60.0%).

Diagnostic and therapeutic technicians favored protected time (78.3%), followed by public grants (74.5%), institutional support (54.7%), and improved access to data (52.8%).

There were no statistically significant differences regarding the provision of FCT public grants, research support services or having a research network.

Workplace

Across all groups, dedicated time was the most popular strategy (Fig. 4).

Professionals from UCSPs chose protected time (86.4%) and public grants (73.4%) as their main strategies. This group also emphasized the value of career progression (46.0%).

Professionals from USF-A also chose protected time (81.1%) and public grants (65.0%), along with improved access to data (57.3%). Professionals from USF-B advocated the same strategies as USF-A professionals: protected time (83.9%), grants (63.0%) and access to data (59.9%). However, the USF-B group emphasized two other options: the professionalization of EC (42.6% of the participants who selected this option) and valuing research in the performance evaluation of Health Units (41.1% of the participants who selected this option).

Professionals from URAP defended the importance of protected time (79.1%), public grants (74.6%), and valuing research in career progression (52.2%).

Professionals from UCC mentioned protected time

(85.8%), availability of support services (62.8%), and grants (57.5%), as well as associating academia with practice and valuing research in career progression (both 54.0%).

Public Health Unit professionals defended protected time (78.7%), improved access to data (67.4%), and grants (64.0%).

In an overall analysis, there were no statistically significant differences regarding the acquisition of FCT grants, the use of a single platform for submission to the EC, the availability of support services, institutional support or the creation of a research network between institutions.

Interest in research

The selection of strategies was independent of the participants' interest in conducting research, except for the professionalization of EC, an option chosen more frequently by professionals without interest in research ($p = 0.01$).

Research training

Participants with research training chose time dedicated to research ($p = 0.009$) more than those without training.

Previous experience

Participants with research experience chose dedicated time ($p = 0.031$) more than those without experience. Regarding EC, participants with experience in research selected the approval of multicenter studies by just one EC ($p = 0.014$) and did not choose the professionalization of EC ($p = 0.033$).

Membership of a research group or academy

Participants who were members of a research group were less likely to choose public grants compared with those who were not members ($p = 0.047$). The same was verified for participants who were affiliated to academia ($p = 0.008$).

Participants with academic ties attributed less value to the availability of support services ($p = 0.011$) and institutional support ($p = 0.014$) compared with those without.

DISCUSSION

Research is one of the cornerstones of robust PC. The main factors promoting research identified in this study were research training, access to mentors, and access to grants. However, there is still a significant margin for improvement, which is the reason why it is important to adopt strategies to foster PC research.

In general, the respondents' choices were aligned regarding the priority strategies to be adopted for promoting research. There are small differences in the order of the selected strategies when evaluating subgroups within some variables. When evaluating the sample in relation to the

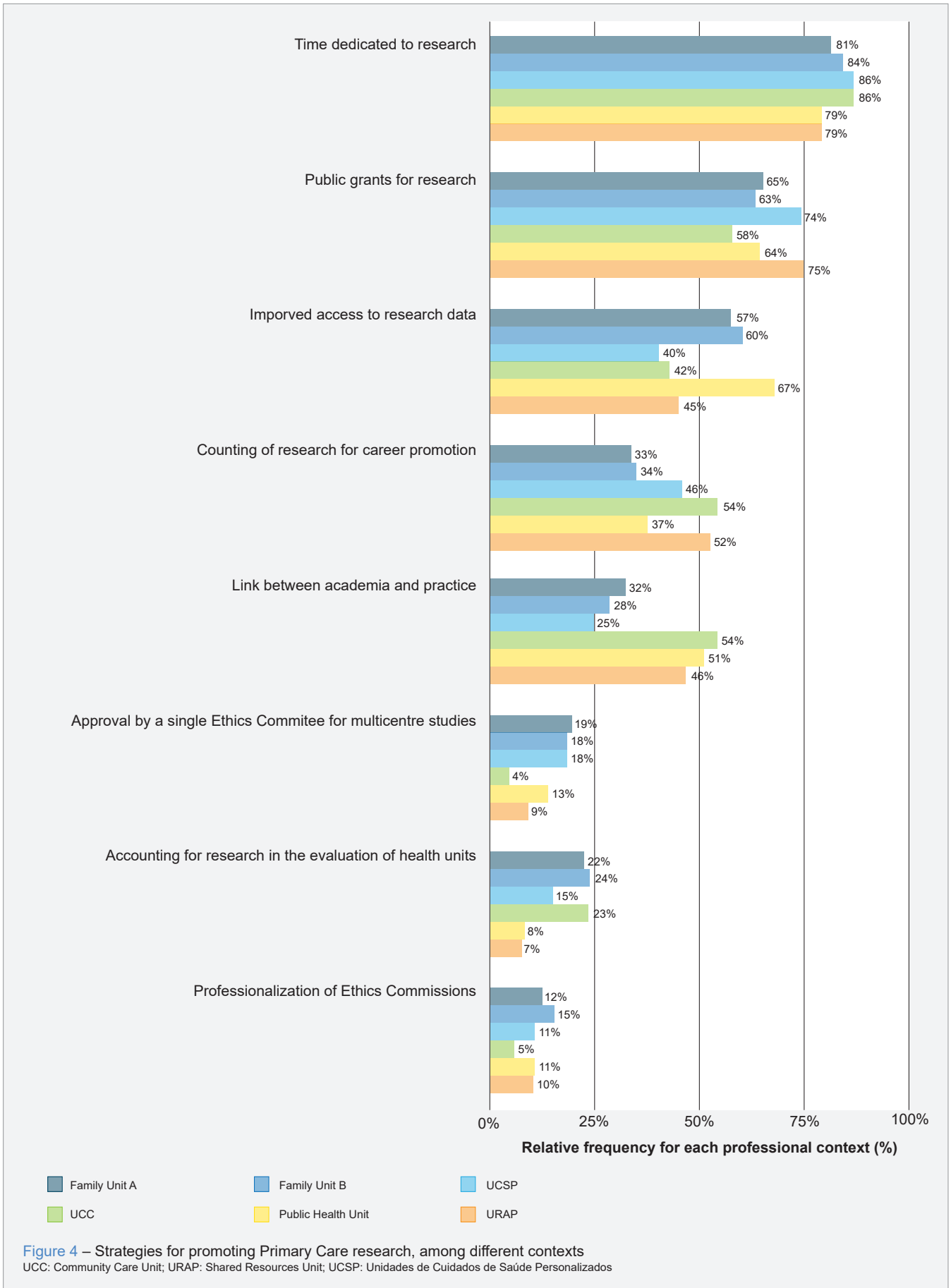


Figure 4 – Strategies for promoting Primary Care research, among different contexts
 UCC: Community Care Unit; URAP: Shared Resources Unit; UCSP: Unidades de Cuidados de Saúde Personalizados

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geographical area, no differences were found in the order of choices among the different regions of Portugal.

Protected time for research emerged as a predominant strategy, unanimously identified across all categories. Despite variations in professional backgrounds or organizational contexts, the consensus remains steadfast: allocating protected time for research is indispensable for driving meaningful advancements in PC. Protected time, away from clinical duties, is a strategy for promoting research that has also been identified in previous international studies.^{8,9} It is in practice in countries such as the United Kingdom. The British system provides protected time for the researcher (through job planning and reduced clinical tasks) and for the project manager.^{8,10} There are also recommendations that will make protected time for research become a reality in Australia.⁸

Other strategies most frequently listed were the access to public grants, research support services and data; greater institutional support and professional valorization for those who conduct a research project.

Investing in research grants was selected by professionals from all careers and settings. The importance of the support and funding obtained through grants is therefore evident. Investing in research funding is associated with an increase in research opportunities, confidence, and knowledge of research teams, and has a positive impact on research culture. In turn, fostering a research culture is associated with better productivity in healthcare.⁸

Although institutional support was selected by fewer than half of the doctors, it was one of the most selected strategies among nurses, secretaries and diagnostic and therapeutic technicians. Institutions can strengthen a supportive, flexible and equitable research culture (e.g., through PhD training and the development of a research agenda).^{9,11} Institutions can also create new funding systems and opportunities, as well as provide administrative and research support (in areas as study design, communicating, and publishing research results).^{9,11}

Access to research data was one of the strategies most advocated by doctors and secretaries. Nowadays, although there are official digital platforms for monitoring health outcomes in PC (MIM@UF[®] and BI-CSP[®]), these platforms do not cover all the data recorded by professionals in their practice. Easy and automated data access could have a positive impact on the ability to conduct a research project.

Access to support services was also emphasized by the participants. This could include close contact with mentors and professionals dedicated to searching for funding opportunities, study design, statistical analysis, and database management.¹²

The results we obtained in this study are in line with the EGPRN key factors for promoting research: research

training, protected time, the establishment of connections between the academy and researchers, access to mentors, and the creation of sustainable research practice-based networks.² In addition, the idea of keeping research processes simple is advocated, so that researchers can focus on the research itself – which is aligned with the strategy of reformulating the submission of a project to the EC.²

We did not find differences in the strategies and factors promoting research selected by professionals from different regions. This suggests that, despite any organizational nuances that may exist, geography does not impact how research is integrated into clinical practice, and the difficulties experienced seem to be similar.

Nevertheless, there are differences in the strategies advocated by professionals from different professional categories. The fact that both doctors and nurses favor protected time for research could be related to the high workload felt by these professionals. Data collection can also be a highly time-consuming process, so easy access to data (reported by doctors and technicians) would be an advantage. In turn, institutional support increases confidence and security of research teams, as defended by nurses, secretaries, and diagnostic, and therapeutic technicians.

There were also some variations in the strategies selected by professionals from different workplaces. Professionals from UCSPs, URAPs and UCCs valued research as a facilitator of career progression, which may be in line with the criteria for valuing professionals' curriculums and the performance evaluation of their health units. On the other hand, facilitating access to data was one of the strategies mostly selected by USF and USP professionals. This may be due to the fact that, in their clinical practice, these professionals register a large volume of clinical and epidemiological data on digital platforms. However, this data is not fully available for automated extraction and not all regions have departments to help professionals obtain the information they need.

Differences observed within the categories of "profession" and "workplace" draw our attention to the fact that diverse backgrounds and competencies shape our knowledge and the places where we find opportunities. This underscores the importance of multidisciplinary teams in research, composed of individuals with varied research skills.

The limitations of this study include the possibility of selection bias, given the partial representativeness of some professional categories and some geographical regions (like Alentejo, Madeira, and Azores). Additionally, the participants were more likely to have a greater interest in research, to answer according to what is socially accepted, and to change their perspective on the strategies to be implemented over time – a characteristic that the questionnaire did not assess. Another limitation is that we applied a

questionnaire with predefined answers, even though it was based on a previous qualitative study. Lastly, we did not include an evaluation of the implementation of the identified strategies (who is responsible for their application and their results).

As for the strengths, this study provides a national portrait of professionals' preferences regarding the strategies for promoting PC research in Portugal. This study also contributes to the future adaptation of strategies to specific subgroups.

Overall, the results of the present study are consistent with evidence from the international context. Nonetheless, the data is only representative of the Portuguese population, so it cannot be generalized to other populations, nor can it guarantee the representativeness of certain professional subgroups.

Since 2024, the National Health Service has been reorganized into ULS, which allow greater coordination between PC and hospitals (that now share the same executive board).¹³ Additionally, the USF-B model was generalized, with most USF-A and UCSP units transitioning to USF-B.¹⁴ This organizational change could be an opportunity to galvanize PC research.

It is expected that promoting PC research requires several simultaneous strategies. Our future aim is to prioritize actions, integrate strategies and organize them according to their feasibility. This study serves as the basis for a future forum that will bring together PC professionals and policymakers. The conclusions of this forum will be summarized in a policy brief that aims to guide collective efforts and policies to strengthen PC research, translating scientific evidence into practical recommendations to promote PC in Portugal.

In the future, it will be important to evaluate the impact of the adopted strategies according to the scientific production and dissemination of results, the number of grant-funded research studies, the establishment of collaborative networks, the involvement of stakeholders, the results that have modified clinical practice and, ultimately, the improvement of patient health.^{4,10}

CONCLUSION

The main factors promoting research available in PC in Portugal were research training, access to mentors, and grants. As for the strategies to be developed in the future to foster research, the following were emphasized: protected time dedicated to research; the creation of public grants to support and finance new projects; institutional support; and access to support services for the different phases of research. Although there were small differences in the choice of strategies by different professional categories, there were no significant differences in the strategies chosen by profes-

sionals from different regions of the country. These results are consistent with the evidence from the international context, but the data is only representative of the Portuguese population, so it cannot be generalized to other populations.

Overall, the findings underscore the need for strategic investments and systemic changes to improve research capacity and culture in Portuguese PC. Implementing these strategies can lead to significant enhancements in health-care delivery and patient outcomes, ensuring that PC services are evidence-based, effective, and innovative.

PREVIOUS AWARDS AND PRESENTATIONS

This research study was presented at the 41st National Meeting of General and Family Medicine of the Portuguese Association of General and Family Medicine and was awarded the prize for best oral communication in the area of 'Research'.

AUTHOR CONTRIBUTIONS

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

CP, RC: Writing, revision and validation of the final text.

SA: 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.

All authors approved the final version to be published.

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 October 2024.

DATA CONFIDENTIALITY

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

COMPETING INTERESTS

MGC has a leadership or fiduciary role in Comissão de Avaliação de Tecnologias de Saúde, INFARMED.

RP is the clinical director and executive member of the board of directors of Unidade Local de Saúde do Algarve.

PJN participated on a data safety monitoring board or advisory board for Merck Sharp and Dohme; is the department coordinator for Associação Portuguesa de Médicos de Medicina Geral e Familiar (APMGF); received research

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All other authors have declared that no competing interests exist.

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