DEVELOPING FAMILY PRACTICE RESEARCH: RECOMMENDATIONS FOR YOUNG RESEARCHERS FROM A RESOURCE-LIMITED COUNTRY

ROZWÓJ BADAWCZY W PRAKTYCE LEKARZA RODZINNEGO: ZALECENIA DLA MŁODYCH NAUKOWCÓW POCHODząCYCH Z KRAJÓW O OGRANICZONYCH ZASOBACH

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SUMMARY

The importance of research in family practice is widely acknowledged by leading international organizations and is recognized as a fundamental element for improving the quality of health care provision. Early-career family practice researchers often face significant difficulties related to lack of training, resources and capacity. The aim of this paper is to present the experiences gained from a country of limited resources and to provide practical guidance for young researchers to strengthen their research competencies by expanding their professional networks, utilizing funding sources and effectively presenting their research findings to the public and the international scientific community. Young family practice researchers, in particular those working in low-resource settings, may encounter many diverse obstacles from the start of their career, and actions to strengthen research capacity is needed around the world to assist in mitigating these barriers. There is, however, a great deal young researchers can achieve, despite the potential difficulties. Based on our research experience and knowledge gained in building a successful family practice research network in a low-resource country, we have attempted to offer some practical recommendations to enhance the personal competitiveness and capacity of young family practice researchers. Not to be forgotten, however, is that passion and enthusiasm will always be key factors in improving health care globally.

KEYWORDS: research in the field of healthcare, family practice, capacity building, funding, science publishing

STRESZCZENIE

Znaczenie badań w praktyce lekarza rodzinnego zostało powszechnie uznane przez czołowe organizacje międzynarodowe i uważane jest za podstawowy element poprawy jakości opieki zdrowotnej. Lekarze specjalizujący się w medycynie rodzinnej będący w swojej kariery naukowej często napotkają znaczną trudność związane z brakiem szkolenia, zasobów i umiejętności. Celem niniejszej pracy jest przedstawienie doświadczeń zdobytych w kraju o ograniczonych zasobach oraz przekazanie praktycznych wskazówek młodym naukowcom, aby zwiększyć ich kompetencje badawcze poprzez poszerzenie sieci kontaktów zawodowych, wykorzystanie źródeł finansowania i skuteczne prezentowanie wyników badań opini publicznej oraz międzynarodowej społeczności naukowej. Młodzi naukowcy z praktyk lekarzy rodzinnych, zwłaszcza pracujący w warunkach niskich zasobów, mogą napotkać wiele różnych przeszkód od początku swojej kariery, a działania na rzecz zwiększenia potencjału badawczego są niezbędne na całym świecie, aby pomóc im złagodzić te bariery. Mimo potencjalnych trudności, wielu młodych naukowców może to osiągnąć. W oparciu o nasze doświadczenie w dziedzinie badań i wiedzę zdobytą w tworzeniu udanej sieci badań w zakresie praktyki rodzajowej w kraju o niskich zasobach staramy się zaproponować praktyczne zalecenia mające na celu zwiększenie konkurencyjności osobistej i potencjału młodych badaczy praktyk rodzinnych. Nie można jednak zapominać, że pasja i entuzjazm będą zawsze kluczowymi czynnikami poprawiającymi opiekę zdrowotną na całym świecie.

SŁOWA KLUCZOWE: badania naukowe w dziedzinie opieki zdrowotnej, medycyna rodzinna, budowanie potencjału, finansowanie, publikowanie w nauce
INTRODUCTION

The value of research in family practice is widely acknowledged by world-class organizations, such as the World Organization of National Colleges and Academies and Academic Associations of General Practitioners/Family Physicians (WONCA), who have highlighted the fundamental role of family practice research in improving health care worldwide [1]. Especially in the recent years of global economic recession, the importance of family practice research in enabling clinicians to provide sound and valid evidence for high quality, everyday clinical practice is well justified and recognized [2].

Choosing a career in family practice research is a rewarding yet challenging decision. The continuous changes occurring in socio-economic and political contexts often have an impact not only on global health, but also on individuals’ preferences and career paths. Innovative solutions need to be explored, and international and interdisciplinary collaborations and networking are more necessary than ever. In this sense, a young medical researcher can explore an exciting and promising field, with significant opportunities for personal and professional development.

However, there are many barriers that may hamper the progress of young researchers, especially in developing countries, where the significance of family practice research may still be unrecognized [3]. Limited resources and capacity often prevent young researchers from producing high-quality work. Lack of funding and weak administrative support may also contribute to excessive workloads and anxiety, reducing their productivity and enthusiasm for research. Difficulties may exist from their years of education, since both personal or institutional economic difficulties and potential deficiencies in educational systems may result in insufficient training, as well as the lack of opportunities to engage in research.

This paper focuses on early-career family practitioners and researchers who are challenged from the beginning of their professional and academic careers. We present the experiences gained in a low-resource country and provide practical guidelines and recommendations for young researchers to enhance their personal research competencies, capacity and academic competitiveness. We also intend to give prominence to the necessity of boosting research in family practice and offer guidance to practitioners who may be interested in pursuing a career in family practice research.

CAPACITY BUILDING IN FAMILY PRACTICE – WHAT HAS BEEN LEARNED?

In low-resource settings, lack of funds and infrastructure, limited access to technology and information and lack of scientific networking may be a few of the factors impeding involvement in high quality research [4]. One of the primary focuses of the WONCA conference held in Kingston, Canada in 2003 was to strengthen research around the world, taking into account the specific needs of each country [1]. Several integrated capacity building models were presented, leading to the formation of the “Three General Objectives for Capacity Building”, which make up the main aspects of any capacity building strategy. These objectives include: creating solid links between clinical practice and research, reinforcing networking and the collaborations of family practice researchers with scientists from diverse disciplines and improving the training and career opportunities of family practice researchers. In addition, nine recommendations were issued in order to broaden the knowledge base and capacity of family practitioners. These recommendations stressed the importance of developing national organizations focused on family practice research, promoting research expertise and dissemination of research results internationally, facilitating the funding of research collaborations and establishing practice-based research networks (PBRNs) worldwide.

PBRNs consist of groups of community-based primary care providers which collaborate in order to provide answers to health-related questions and translate research into practice [5]. Apart from facilitating research, they also serve as peer groups, motivating professional evolution through mutual feedback and support. The development of PBRNs is crucial for the continuous improvement of the quality of primary care services and research [1]. The European General Practice Research Network (EGPRN), in co-operation with the European Rural and Isolated Practitioners Association (EURIPA), have explored the idea of a PBRN connecting family practice scientists throughout Europe and have concluded that such an effort may be both feasible and necessary for promoting health in remote areas with limited resources [6].

The successful establishment of a PBRN on the island of Crete in Greece may serve as a practical example of capacity building efforts in a low-resource setting. The Cretan PBRN was established in 2006 and consists of family practitioners working in rural areas that share a common interest in tackling the clinical and research challenges in Crete [7]. The PBRN has been very active in research and has produced several publications [8–10]. A stepwise model was implemented in Crete in order to create the PBRN, which involved a set of actions which placed scientific networking, knowledge of local circumstances and recording of patients’ data and health needs as prerequisites for developing family practice research [11]. The PBRN’s sustainability offers evidence of these steps being important components for implementing research in a low-capacity country that may be replicated elsewhere.

PRACTICAL GUIDELINES AND RECOMMENDATIONS FOR YOUNG RESEARCHERS TO TAKE INTO CONSIDERATION WHEN DESIGNING AND IMPLEMENTING RESEARCH

Lessons learned from the collaborative efforts in Crete suggest that despite the many challenges, there
are certain steps that young researchers may take into consideration in order to build a research strategy and enhance their international competitiveness. These steps include:

1. Thinking about research questions and raising ideas for research;
2. Developing links and networking;
3. Formulating study hypotheses and discussing study design;
4. Engaging communities, raising their awareness about the study’s purpose and inviting them to support the research;
5. Implementing and evaluating research;
6. Reporting research findings.

An essential prequisite for being able to think about research questions and raise ideas is to formulate an overall view of the local circumstance and the health needs of the population [12] and to have sufficient knowledge of similar situations globally. It is also crucial to be able to prioritize local health needs [12] and to explore what is already known from national and international literature. This combined with one’s existing research and clinical background could lead to the identification of potential gaps in knowledge or experience that could be addressed by an innovative research proposal. One of the barriers that may be encountered in countries with low resources is a lack of local data and registries, as well as insufficient technological infrastructure [4] that could limit access to online versions of renowned journals and biomedical databases, such as the PubMed (https://www.ncbi.nlm.nih.gov/pubmed), Scopus (https://www.scopus.com/) and Embase (https://www.embase.com/login). Recommendations that could be helpful here include:

a. Get to know the local population and identify research opportunities by sincerely listening to and understanding the needs of local populations;

b. Carefully search for all available data, either clinical or research-based, and explore regional registries, as well as international reports;

c. Develop affiliations with a research organization, either an academic or an independent institution, in order to maximize one’s access to technology and information;

d. Develop affiliations with a research organization, either an academic or an independent institution, in order to maximize one’s access to technology and information.

As soon as an individual has become affiliated with a research institution, it is important to develop further links and networking that could facilitate mutual exchange of knowledge and team-based research. Lack of official networks interested in providing support for research activities is a common limitation faced in low-resource areas. However, as mentioned above, the importance of networking has been stressed by the WONCA Kingston conference and is in line with previously reported models for conduct-
b. Ensure that one’s results will benefit the community and search for potential incentives that will be ethical and adequate to enhance the community’s trust;
c. Invite the community to actively participate and support the research;
d. Utilize well-established approaches, including PLA and NPT, to engage local stakeholders.

Implementing and evaluating research is one of the most challenging aspects of building a research strategy. As soon as a young researcher has planned their research according to the abovementioned steps and has finalized a novel proposal, funding for implementation will need to be secured. In low-resource settings, lack of funding is one of the major factors limiting research [4]. While there are plenty of ways to pursue research funding, lack of experience on how to apply may often be a barrier to securing necessary funding support. The following recommendations may assist in guiding young researchers when seeking to secure research funding:

a. Seek participation in national or international collaborative research grants in order to obtain more experience in the grant writing process and preparation of successful funding applications;
b. Make use of external sources, such as European funding calls and frameworks (e.g. HORIZON 2020, CHAFEA, etc.), following the steps presented in a previous publication [21];
c. Seek inclusion in an competitive international consortia in order to boost existing resources and increase scientific visibility;
d. Utilize available research capacity, especially PBRNs, to join collaborative research proposals in response to European funding calls.

Upon gaining funds and eventually conducting the planned research, it is essential to disseminate and adequately report the research findings. In order for research findings to be translated into health services and for them to be adopted by local communities, it is imperative to ensure the results are disseminated to all involved stakeholders, including community members, patients, local authorities and international bodies [1]. Publishing in high-impact journals is an important strategy. As soon as a young researcher has planned their research according to the abovementioned steps and has conducted the research, the following recommendations may assist in the context of the above pitfalls; young researchers may benefit from taking into consideration the following final key points when reporting research results in scientific papers:

a. Ensure that the abstract summarizes the paper adequately. This will be the window to one’s work and the part that will predispose readers to the study and the value of the paper. It is essential that this be written clearly and concisely;
b. Report clearly in the introduction the overall aim and the secondary objectives of one’s paper. It is important to present that one has an important and explicitly defined purpose for the research;
c. Visit the steps that were published in the previous report [22].

Experience from membership on the editorial boards of renowned journals has shown that reporting research findings, i.e. writing scientific papers, is a procedure that is challenging for young researchers, especially those working in low-resource settings. Apart from flaws in the presentation of papers, one can regularly observe serious issues in the research methodology, which may not allow for publication in high-impact journals [22]. The pitfalls presented in Table 1 summarize personal experiences encountered during years of editorial activity in several European and international journals. This is an attempt to highlight the most common reasons for not achieving high-quality papers and to provide a selection of real-life examples to avoid for young researchers who seek to be competitive during the demanding, yet necessary, race for publication and citation.

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Table 1. Common pitfalls in reporting research findings.
c. Describe the methods in detail, providing all the necessary information to prove that the approach to research is correct and in accordance with the aims;

d. Sufficiently present the main findings;

e. Explain the results logically and honestly. Prepare a thorough discussion that flows from the results; do not omit anything, and sincerely acknowledge all of the potential limitations of the study and provide grounds for future research.

CONCLUSIONS

Young family practice researchers, in particular those working in low-resource settings, may encounter many diverse obstacles from the start of their career, and actions to strengthen research capacity is needed around the world to assist in mitigating these barriers. There is, however, a great deal young researchers can achieve, despite the potential difficulties. Based on our research experience and knowledge gained in building a successful family practice research network in a low-resource country, we have attempted to offer some practical recommendations to enhance the personal competitiveness and capacity of young family practice researchers. Not to be forgotten, however, is that passion and enthusiasm will always be key factors in improving health care globally.

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