

WHO Regional Publications Eastern Mediterranean Series 30

A Practical Guide for Health Researchers

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World Health Organization
Regional Office for the Eastern Mediterranean
Cairo, 2004

WHO Library Cataloguing in Publication Data

Fathalla, Mahmoud F.

A practical guide for health researchers / by Mahmoud F. Fathalla and Mohamed M.F. Fathalla.

p. (WHO Regional Publications, Eastern Mediterranean Series; 30)

ISBN 92-9021-363-9

1. Research–Scientific 2. Writing–Guidelines 3. Publishing–Guidelines 4. WHO Regional Office for the Eastern Mediterranean I. Fathalla, Mohamed M.F. II. Title

[NLM Classification: Q 179.9]

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Cover design by Ahmed Hassanein

Printed in Cairo, Egypt, by Dar Mourad for Printing

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Foreword

The central role of health research in improving health and stimulating national economic growth is now well established. Health research supports health systems in the delivery of better, fairer and more equitable health care to people. It does so by identifying challenges and providing best solutions, monitoring how health systems perform and producing new knowledge for better technologies and improved approaches to public health. The World Health Organization (WHO) has, time and again, affirmed that all national and international health policies should be based on valid scientific evidence; that such evidence requires research; and that the application of the knowledge, information and technology emanating from health research has enormous potential in promoting health.

Shifting epidemiological trends in disease patterns, rapid increase in populations, new and emerging health problems, increasing commercial interests of the private health sector and ever shrinking financial resources all contribute to the global inequity in health care. It is therefore extremely important that research addresses priorities and focuses on the most important health issues, conditions and determinants. Health research must serve as a driver for health policy and practice. For this to happen, the health research systems not only have to be fully accountable for the sake of transparency, but also have to be capable of delivering the desired returns, to justify the allocation of scarce resources to research and development.

Inadequacy in capacities for research and development remains a major impediment for the developing world. Despite over three decades of efforts to build capacities, during which thousands of scientists from developing countries have been trained, most of the expected breakthroughs have not happened. Large numbers of trained scientists are not working in their countries of origin. Therefore, building indigenous capacity for health research must move to centre stage, as this is vital for sustainable development. The WHO's Regional Office for the Eastern Mediterranean recognizes this acute need. Supporting health research for better health and building regional capacities for better quality research is an important priority.

The literature on research methodologies is vast. Researchers and scientists worldwide nowadays have access to enormous, and growing, information resources which provide in-depth knowledge, training and education to enhance and improve research. This *Practical Guide for Health Researchers* is, however, quite unique. It is different in that it is not a classical textbook on research methodology, but focuses directly on those who carry out health research or aspire to do so in the future. It embodies the seriousness, the sincerity and the passion of the authors as they try to guide and direct

the reader in her or his pursuit of research to seek new knowledge, identify problems and provide answers. The authors, with great skill, have articulated and shown the way forward for anyone who seeks the value of research, desires to undertake good quality research and aspires to draw benefits from it.

The book begins with a very strong message: health research is not a luxury, but an essential need that no nation can afford to ignore. The authors first reason out why it is so important, especially for the developing countries, to do research and explain the consequences of ignoring research as a tool for evidence on which to base planning, practice and actions. They describe the research process, beginning with the selection of a research topic, the narrowing down of specific objectives and how best to achieve the stated objectives. They describe the characteristics of a good research proposal—one that has potential for obtaining the required financing, is feasible and will produce valid information and knowledge that will ultimately have an impact on health. The various options are discussed with regard to research methodologies and strategies, and invaluable guidance is provided on data collection and its analysis.

There are other unique aspects to this book. In describing the different research approaches and methods, it underscores the merits (as well as demerits) of both quantitative and qualitative research methods, and reminds the reader of how and under what situations one or the other strategy (or both) can be helpful to the research question in mind. Another strength is the authors' emphasis on the ethics of health research. Throughout, the reader is reminded constantly of the ethical principles that govern health research, and the need for upholding and defending moral and ethical values in such practices. Some key international guidelines are indexed for the benefit of the reader.

The book provides useful tips for the health researcher, which are ordinarily absent in classical textbooks on health research methodology. It tells them how to find information pertinent to their research and how to seek funds for their research. It discusses the various ways of communicating research results to different audiences, as well as preparation of manuscripts for submission to medical journals and presentations, with an overall reminder that the culmination of the research effort should be in its application in order to bring about the required changes in policies, actions and practices.

The greatest strength of this book is that it reflects the first hand experience of the authors, especially Prof. Mahmoud Fathalla. It is heartening to note that he chose to share his expertise and the richness of his experience in health research in this manner. The book is easy and simple to follow. It demystifies health research. It is a book that every health researcher will treasure, and a ready reference that he or she will want to keep close by.



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Regional Director for the Eastern Mediterranean

Preface

The intended audience of this book, as indicated in its title, is health researchers. Health researchers are not limited to scientists pursuing a research career. Health research can and should be pursued by a broad range of people. Health research can be simply defined as the process for systematic collection, description, analysis and interpretation of data that can be used to improve the health of individuals or groups. Health professionals, health administrators, health policy-makers and nongovernmental organizations, among others, can and should use the scientific method to guide their work for improving the health of individuals and communities. Even if they do not pursue much research themselves, they need to grasp the principles of the scientific method, to understand the value and also limitations of science, and to be able to assess and evaluate results of research before applying them.

Most textbooks on the subject of health research are written in a language that is highly technical, and for an audience of trained scientists. There is a need to demystify the research process for a broader community of health researchers. The research process is largely about good sense and reason. We have tried to make this book as reader-friendly as possible, but not at the expense of scientific accuracy.

We have attempted in this guide to cover the broad spectrum of the research process. The research process is not simply about the methodology of research design. Before considering research design, researchers need to know how to define and refine the research question. After settling on research design, they need to be able to write a research protocol, submit a proposal for funding, properly conduct the research, describe, analyse and carefully interpret the research results, and finally communicate the findings to all who stand to benefit from the research, through writing and publishing papers and making scientific presentations. Researchers need also the skills to be able to assess and evaluate the research done by others. Beginners in health research have to consult different sources if they want to get a complete grasp of this whole spectrum of the research process. Our objective was to provide a concise practical guide to cover these areas, rather than a comprehensive manual. To be able to obtain more technical detail and information on the issues discussed, we have provided a list of useful sources for each chapter, as well as a number of annexes.

We hope that this guide will help in expanding the community of health researchers, beyond the traditional groups of trained scientists. We hope it will help health researchers to plan, conduct and disseminate good research.

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Acknowledgements

We are grateful for Dr Mohamed Abdur Rab, Regional Adviser, Research and Policy Coordination, WHO Regional Office for the Eastern Mediterranean for encouraging us to complete the task of writing this guide, for providing useful comments and suggestions and for bringing it before the regional publications committee. Ms Jane Nicholson, Editor at the Regional Office for the Eastern Mediterranean, was extremely helpful throughout the process of preparing the book for publication.

Many colleagues persuaded us about the need for such a guide, and provided us with constructive comments. It would be difficult to try to name them all. The sources written by previous authors and listed under the references and additional sources have been very helpful in putting together the material for this book.

Finally, we are grateful to our students who taught us how to teach, and to our families, on whose time this book was written.