

Book Review



Principles of Health Science Research:Key Concepts and Methods for Health Care Professionals by Mohan Raj Sharma

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When I look back to my post-graduate residency days, we had dearth of good books regarding how to carry on research in proper way . Thanks to training conducted by Nepal Health Research Council back then which put the insight into the subject to some extent. Most of the time,our mentors and seniors guided us .I always felt a lack of concise help book on research which contained all the aspect of research in simplified terms to help the novice researcher . Nearly twenty years later, this book “Principles of Health Science Research” written by Prof. Mohan Raj Sharma ,in my hand was what I was looking for back then. I feel grateful to the author who must have worked so hard through erudite tomes of research to bring forth this amazing consice and comprehensive book on health science research. The author himself clarifies the objective of writing the book is to bust the myth of the research process so that everyone can carry it out safely and effectively.

There are eight sections in the book with with 25 chapters.Section one with two chapters, explains overview of health

science research and research process. It has a fascinating brief description of world history of health research ,and of types of research with examples as quantitative research and qualitative research.The diagrammatic representation of the research cycle has depicted the stages of basic research regardless of subject area . This fundamental concept has been nicely explained as stages beginning with indentifying the problem , reviewing the literature , setting research question, objectives and hypothesis, choosing the appropriate research design, collecting the data, processing and analyzing data and reporting the results. In fact, this book is all about explaining concisely all these topics and serves as excellent handbook for novice researchers as well as experts for refreshing the topics as part of review of the articles.

In section two, elements of research proposal has been explained lucidly with Gantt chart work plan. This will be helpful for submitting the proposal in institutional review committee.I hope that Post Graduate residents will have great help from this chapter.

Many of us have problem formulating the study designs. It depends upon the types of research questions whether it is observational or interventional. The beauty of the book is the examples given with easy to understand diagrams of research designs such as cross sectional studies, case-control study or cohort studies or randomized control trials. Critical appraisal of the literature in section four will definitely help researchers to find out good quality references for their own quality of research work .

Health researchers usually have problems dealing with sampling and sample size calculation. Author has tried to solve this big problem in section five elaborating sampling methods and basic principle of sample size calculations for common research designs with examples such as if a researcher is interested in knowing the average weight of college students in a city. I strongly recommend health researchers to get help from biostatistician at the very beginning of conducting research regarding the sampling methods and sample size calculation. Author has mentioned two important software tools like Epi Info (www.cdc.gov?epiinfo/index.html) and openepi (www.openepi.com) which I think is very handy at sample size calculation and statistical analysis on our own. You should try it !

Reporting result is most cumbersome part of a research when data is in hand. It is a complex process. The bulk of the book is focussed on statistical concepts such as types of data, descriptive statistics, data visualization, inferential statistics, statistics to test confidence, significance of differences and compare risk, statistics to analyze relationships, diagnostic accuracy and survival. The use of figures, tables, pie charts, bar diagrams adds to grasping the

concepts. This chapter is full of terminologies which readers might find difficult to understand and needs re-readings. Ethical issues in health search is a major concern and because of this, researchers find their proposal not approved timely .There are practical tips given in section seven to address this issue. Lastly section eight highlights dissemination of research findings.

There is no doubt that this book will provide a simple step by step approach to conducting , analyzing and reporting research. There are practical pearls and references at the end of each chapter. Being a professor and head of department of neurosurgery and chairperson of institutional review committee at the institute of medicine, Dr. Mohan Raj Sharma has specialized in Epidemiology and Biostatistics in public health practice from Johns Hopkins University. Having extensive experience in research proposal reviews, research methodology training and journal editing, this book is an example of his research acumen. I have found him an avid enthusiast for promoting research in the country. I m sure this book will significantly glorify p value of your understanding of key concepts and methods of health science research.

About the book:

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