
ANNOTATED BIBLIOGRAPHY ON RESEARCH METHODS

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This document offers an annotated bibliography of key resources on applied quantitative and qualitative research methods and ethics to give guidance for development practitioners and researchers working in resource-poor settings and with orphans and vulnerable children (OVC). The bibliography was compiled based on an extensive literature search of the key resources for a broad range of social research methods, as well as through consultation with evaluation specialists and scientists focusing on the field of international development. Reading materials should be selected based on the research question, programmatic aims and the reader's level of expertise.

Each resource included has been assigned a ranking based on the level of research methods knowledge required for the reading, as follows:

 **Novice** (*appropriate for readers with no direct experience in conducting research*)

  **Intermediate** (*appropriate for readers with some basic knowledge of research methods & statistics*)

   **Advanced** (*appropriate for readers that have carried out research and data analysis before*)

Intervention Research

This section presents research methodologies commonly used for assessing and understanding the impact of interventions for OVCs. Evaluation methodologies should be selected taking into consideration the extent and quality of the existing evidence base, feasibility, and ethics.

The first three resources provide a very general, broad introduction to intervention research, namely the motivation behind researching social interventions; the links between developing, implementing, and evaluating social interventions; and the importance of context in our understanding of intervention impact. The subsequent resources are categorized by research design.

Chalmers, I. (2003). *Trying to do more good than harm in policy and practice: the role of rigorous, transparent, up-to-date evaluations. Annals of the American Academy of Political and Social Sciences, 589 (1), 22-40.* 🎓

This article is an essential introduction to evidence-based practice and fundamental principles of applied social research. The author asserts that international development, public health, and social work professionals, with the best of intentions, sometimes do more harm than good. According to the author, program developers and policy makers should therefore be guided by 'rigorous, transparent, up-to-date evaluations.' A key approach to evaluation entails a critical assessment of the existing evidence base as well as evidence gaps. Researchers should begin with a systematic review of the evidence base on a topic, and then, only if appropriate, conduct additional primary research.

Fraser, M.W. (2009). *Intervention Research: Developing Social Programs. Oxford University Press, USA.* 🎓

This book outlines a theory-based, systematic approach to intervention research; from conceptualization and development of an intervention, to implementation and evaluation. The author provides a step-by-step strategy and useful guidelines for writing a program manual, evaluating intervention effects, and disseminating findings. The book discusses nuances in intervention research and terminology, such as differences between program efficacy and effectiveness, distinctions between simple and complex interventions, and information about the different levels at which interventions can be targeted (e.g. individual, family, group, organizational, community, and social levels). It also explains how to cross-culturally adapt interventions from one context to another, and provides extensive examples of intervention research from child welfare and related fields.

Weiss, M.J., Bloom, H. S., & Brock, T. (2014). *A Conceptual Framework for Studying the Sources of Variation in Program Effects. Journal of Policy Analysis and Management, 33(3), 778–808.* 🎓

This paper moves beyond the one-dimensional question of whether a program is effective by guiding researchers to explore in detail *why, under which conditions, and for whom* it is effective (or remains ineffective). The paper examines variations in the effectiveness of an intervention for different program types and designs, for different groups, and for different settings and circumstances, including fidelity and quality of the implementation. It is argued that these factors need to be considered in any program evaluation in order to gain a better and more nuanced understanding of program success or failure. The paper builds a conceptual framework on the variations in program effects, enabling researchers to offer better guidance to policymakers and program operators on the characteristics that are associated with larger and more beneficial effects.

Systematic Reviews

Petticrew, M., & Roberts, H. (2005). Systematic Reviews in the Social Sciences: A Practical Guide. Malden, MA; Oxford: John Wiley & Sons. 🎓

If there is a large body of previous research on a certain research question or problem, additional primary research might not be required. A systematic review is a scientific tool that can help synthesize and appraise existing research and knowledge. This book provides a comprehensive overview of systematic reviews, including the rationale behind conducting a review. It describes the methods, ranging from database and literature searches and assessment of publication bias to quality ratings of identified studies, as well as quantitative meta-analysis of results from primary studies. The authors draw on a range of practical examples from different fields, including criminology, social welfare, public health, and education, thus demonstrating that the methodology can be applied across disciplines.

Higgins, J.P.T., & Green, S. (eds). (2011). Cochrane Handbook for Systematic Reviews of Interventions Version 5.1.0 [updated March 2011]. 🎓🎓🎓

The Cochrane Handbook is designed to guide systematic reviews of randomized control trials (RCTs). As such, it covers all of the technicalities that journal editorial boards, peer reviewers or systematic reviewers are looking for when appraising the methodological rigor of a trial and the reliability of its results. The handbook provides guidance on systematic database search and data extraction, defining inclusion criteria and eligibility, calculating effect sizes for assessing the strength of an effect, and a checklist for rating the risk of bias in the included trials, i.e. the risk that they will overestimate or underestimate the true intervention effect. For researchers looking to conduct a systematic review, the full Cochrane Handbook provides comprehensive and gold standard guidelines. The Cochrane Handbook is fully available online, free of charge, at: www.handbook.cochrane.org.

Randomized Control Trials

Glennerster, R., & Takavarasha, K. (2013). Running Randomized Evaluations: A Practical Guide. Princeton University Press. 🎓🎓

The book provides a detailed and accessible step-by-step guide to conducting rigorous randomized evaluations of social interventions, with a specific focus on developing countries. The authors draw on experiences and insights from a multitude of randomized impact evaluations conducted throughout the world by the Abdul Latif Jameel Poverty Action Lab to navigate their readers through all stages of a field experiment. The book first explains how randomized experiments help establish causal relationships between a program and its benefits (or harms). It then introduces a comprehensive practical toolkit on how to carry out randomized evaluations, including processes and mechanisms for randomization, choosing what data to collect (and assuring its quality), determining sample size using power calculations, as well as

pitfalls and challenges when running experiments in challenging and under-resourced environments. Lastly, the book features detailed guidance on the analysis of data from RCTs, ranging from balance checks to sub-group analyses. Commands for the statistical software program Stata® are provided for all analyses presented and illustrative examples make this more technical part of the book very user-friendly. The authors provide additional resources at a website they manage: <http://runningres.com/>.

Field, A., & Hole, G. (2002). How to Design and Report Experiments. SAGE Publications.



The book comprehensively maps the entire process of running RCTs, starting with a research question and its translation into a valid study design, through to the write-up and presentation of findings. Each part of the book contains concrete practical tips and illustrative examples and is written in an engaging, reader-friendly way. The author first elaborates on a few key aspects of experimental research, including the concepts of reliability and validity, choice of experimental design, and ethical considerations in running randomized studies. Following this, the book puts strong focus on basic econometric techniques, including summary statistics, confidence intervals, principles of hypothesis testing, t-tests and analysis of variance, as well as non-parametric tests. The final section is a detailed, step-by-step tutorial on writing up the research findings, touching on aspects such as writing style, time management, and referencing important previous literature.

Solomon, P., Cavanaugh, M.M., & Draine, J. (2009). Randomized Controlled Trials Design and Implementation for Community-Based Psychosocial Interventions. Oxford and New York: Oxford University Press.



The book puts explicit focus on RCTs implemented in non-medical, complex community settings. The book is highly relevant for research carried out in developing countries as it discusses the challenges that are unique to less controlled environments, including community buy-in, ethics of randomization, and fidelity to the intervention curriculum. The authors provide detailed guidance on culturally-competent recruitment and piloting procedures and highlight the utility of qualitative research methods in assessing implementation and contextual factors that may affect outcomes. The book further offers detailed conceptual guidelines on randomization procedures and the design of RCTs. It introduces and explains complex methods such as factorial multi-arm trials and the Solomon Four Group Design. It guides readers on aspects of sampling, defining outcome measurements, and timing of outcome measurement points. The last chapter discusses how evidence from RCTs can be translated into meaningful practical policy implications.

Quasi-Experimental Designs

Gertler P.J., Martinez, S., Premand, P., Rawlings, L.B., & Vermeersch, C.M.J., (2011). Impact Evaluation in Practice. Washington D.C.: The World Bank. 🎓

The book provides an excellent and accessible introduction to the topic of impact evaluation and is specifically geared towards development practitioners and activists. The book presents a range of research designs that can establish robust and credible causal conclusions about the effects of a program on its participants. These are not limited to RCTs, but include alternative, strong quasi-experimental methods such as regression discontinuity, difference-in-difference, and matching designs. The book then provides detailed practical guidance on how impact evaluations are implemented, discussing issues of sampling and power calculations, developing and conducting questionnaires, and setting up and training research teams in field. The book also includes advice on establishing the cost effectiveness of a program, as well as disseminating research findings to policy makers. Throughout the book, the authors draw on a broad range of real-world examples of impact evaluations in development work across the globe. The handbook as well as accompanying presentations and lectures can be accessed online, free of charge, at: <http://www.worldbank.org/ieinpractice>.

Shadish, W.R., Cook, T.D., & Campbell, D. T. (2002). Experimental and Quasi-experimental Designs for Generalized Causal Inference. Houghton Mifflin. 🎓🎓🎓

The book is a key resource for understanding and designing robust impact evaluations of interventions. The book begins with a theoretical overview of the concepts of experimentation and causation. It then moves beyond the gold standard of RCTs and sheds light on a range of robust quasi-experimental evaluation methods. These methods can provide a credible alternative if randomization is not feasible for practical or ethical reasons. The authors discuss regression discontinuity designs, interrupted time series designs, and designs that use both pre-tests and control groups. The last part of the book is dedicated to a discussion of causal inference. Parts of this book are quite technical and sophisticated and it is therefore not recommended as an introduction to quasi-experimental research design.

Foundational Research

The following section presents key resources for guiding observational studies, which are used for two main purposes. First, observational studies can be used to inform the development of new programs and the formulation of a theory of change. In such cases, observational studies largely focus on the identification of risk and protective factors, as well as the prevalence of a certain problem (e.g. HIV risk behavior). Second, if we want to examine the effects of risk or protective factors that we cannot (and often should not) administer to people through interventions, observational studies enable us to do so. Similarly, observational studies allow us to examine effects of interventions that are already being rolled out through policy, making it ethically and practically impossible for the researcher to withhold the intervention from

individuals for the sake of studying its effects. This section provides resources related to how and when to administer observational studies.

Bowling, A. (2014). *Research Methods in Health: Investigating Health and Health Services (4th edition)*. Open University Press. 📖

This best-selling book is a helpful introduction to all the practicalities involved in designing and implementing research. Importantly, it provides insight into how to choose the appropriate research design and methods depending on the specific research question. It further provides information on defining a research question, drafting a research proposal, selecting adequate research methods and data analysis strategies, and considering potential ethical issues. It provides detailed information on considerations for quantitative and mixed-methods studies, with particular attention to: sample size calculations, sampling methods, survey development, and analytic approaches to inferring causality or assessing the extent of bias. This book focuses on healthcare research and therefore includes a comprehensive discussion of cohort studies, but is suitable for any applied social science research as well. The full book can be accessed online, free of charge, at:

http://www.dphu.org/uploads/attachements/books/books_2615_0.pdf.

Coggon, D., Rose, G., & Barker, D.J.P. (2003). *Epidemiology for the Uninitiated (5th Ed.)*. London: BMJ Books. 📖

This book is an excellent introduction to epidemiology and, as such, provides a critical discussion of the benefits and drawbacks of a range of quantitative observational methods. Practical issues and complexities of ecological, prospective cohort, retrospective cohort, case-control and cross-sectional studies are discussed, which can help researchers select the most appropriate method for their study. However, the book does *not* provide assistance in choosing analysis methods or conducting statistical analyses. This BMJ book can be accessed online, free of charge, at:

<http://www.bmj.com/about-bmj/resources-readers/publications/epidemiology-uninitiated>.

Murray, J., Farrington, D.P., & Eisner, M.P. (2009). *Drawing conclusions about causes from systematic reviews of risk factors: The Cambridge Quality Checklists*. *Journal of Experimental Criminology* 5(1): 1–23. 📖📖

This article describes the Cambridge Quality Checklists (CQC), which were designed to assess the rigor of observational studies. As such, the CQC are helpful both for conducting a systematic review of observational studies, as well as for designing an observational study. According to the authors, the causal predictor score is the most important indicator, as it assesses the extent to which the risk factor (or the intervention in the case of programmatic research) is causally related to the outcome. The causal score is determined based on two key features: (1) the extent to which within-individual changes in the outcome are associated with within-individual changes in the predictor (analysis of change); and (2) whether the study design

and statistical analysis account for alternative explanations of the findings. To score highest among observational studies, models have to assess within-individual change in the outcome and control for relevant confounding variables. For people who read this paper to inform their design of an observational study, a prior basic understanding of observational studies is required. For those looking to conduct a systematic review of observational studies, this resource should be combined with the Cochrane Handbook and/or Petticrew and Roberts' book on systematic reviews.

Quantitative Data Analysis

The below resources cover the most widely used statistical analysis methods for making sense of data and avoiding biased inferences.

Altman D.G. (2000). Statistics with Confidence: Confidence Intervals and Statistical Guidelines. London: British Medical Journal. 📖

This is a clearly written, short introduction to statistical methods. It focuses on the use and misuse of confidence intervals, with illustrative examples, guidelines and checklists to help new researchers. This book provides a thorough introduction to applied statistics and reflects on the extent to which inferences can be made from the study results to the 'wider world'.

Field, A. (2013). Discovering Statistics Using IBM SPSS Statistics (4th edition). SAGE Publications. 📖📖

This bestselling book is designed to guide university students from introductory statistics and basic terminology, onto advanced concepts and analysis methods. It provides theoretical underpinnings to different analysis methods as well as practical examples and datasets to practice using SPSS® analytical software. The author is a strong proponent of explaining statistics in an accessible way and is very good at explaining how data can mislead researchers if the appropriate method is not used, or the sources of bias are not considered. This book is simultaneously comprehensive and simple, and is a helpful resource for both complete novices and experienced researchers. The author has filled the book with humor that will make learning or advancing statistics skills a fun endeavor, not only for students but also for all practitioners interested in statistics and data analysis.

Qualitative Research

Adding a qualitative component to intervention or observational studies can have a number of benefits. Qualitative work is instrumental in designing quantitative studies and considering the acceptability and appropriateness of the tools used. Qualitative work is needed to cross-culturally adapt intervention manuals and questionnaires from one context to another. Finally, qualitative research in the form of process evaluations can strengthen our capacity to understand the *why's* and *how's* of quantitative findings and observed intervention effects.

Berg, B.L., & Lune, H. (2013). Qualitative Research Methods for the Social Sciences (8th edition). Harlow: Pearson. 🎓

The book is an excellent introduction for anyone interested in, but unfamiliar with, qualitative research. It takes its readers through the stages of designing a study, and collecting, analyzing and presenting qualitative data, with great attention to scientific rigor. The book also has a strong emphasis on ethical considerations in each of these stages. Although this book is primarily targeted at sociologists, it can serve as an important guide across all social science disciplines.

Denzin, N.K., & Lincoln, Y.S. (eds.). (2017). The SAGE Handbook of Qualitative Research (5th edition). SAGE Publications. 🎓🎓

This handbook is a state-of-the-art resource for conducting qualitative research. First, the book provides a comprehensive overview of paradigms in qualitative inquiry, reflecting a broad range of perspectives, including those from anthropology and ethnology. The handbook then introduces different strategies of inquiry such as the grounded theory approach, participatory observations, or case studies. A range of qualitative methods are explained in detail and the handbook then discusses practices for data interpretation and analysis.

Hennink, M.M., & Leavy, P. (2014). Understanding Focus Group Discussions. Oxford University Press. 🎓

This book offers in-depth guidance on the practical and theoretical considerations in running focus group discussions. First, the book outlines processes for recruitment of participants and development of discussion guides. It then further describes how training of the field team should be carried out, and introduces methods and techniques for facilitating focus group discussions. This includes a description of the role of the moderator in guiding discussions, managing dynamics of the group, and prompting certain themes to encourage the flow of the discussion. Next, the authors outline different approaches to analyzing data collected in focus group discussions. The authors provide specific advice on how the research methodology and results should be written up in order to support scientific rigor, including the development of an argument, the synthesis of narrative accounts, and the use of supporting quotations. The book draws on numerous examples from different disciplines and international contexts.

Willis, G.B. (1999). Reducing Survey Error through Research on the Cognitive and Decision Processes in Surveys. Meeting of the American Statistical Association. Research Triangle Institute. 🎓

This document offers cognitive interviewing as a method for cross-culturally adapting quantitative questionnaires. Cognitive interviewing can uncover inconsistencies between the intended meaning of questionnaire items and the way members of the target population understand and interpret these items. If not detected and addressed, such inconsistencies can

introduce serious bias into conclusions drawn from data from these instruments. The author describes two main approaches to cognitive interviewing for adapting surveys: think-aloud interviewing and verbal probing techniques. This resource will help researchers improve their questionnaires and enhance validity of quantitative findings.

Ethics

In all research, ethical considerations play a fundamental role. They become even more important when research and programs target vulnerable populations in under-resourced and power-unequal contexts. According to the seminal Belmont report published in 1979, all research involving human participants needs to be based on three principles. The first principle is *respect* and the right of individuals to make their own autonomous decisions. Second, research has to follow the principle of *beneficence*, or maximizing possible benefits while minimizing risks. Third, research should guarantee *justice*, which entails a reciprocity claim suggesting that those faced by adversity (such as poverty) should benefit from research on this adversity. Below is a non-exhaustive selection of resources on research ethics.

Osrin, D., Azad, K., Fernandez, A., Manandhar, D. S., Mwansambo, C. W., Tripathy, P., & Costello, A. M. (2009). Ethical challenges in cluster randomized controlled trials: experiences from public health interventions in Africa and Asia. Bulletin of the World Health Organization 87(10): 772–779. 📖

The paper discusses common challenges in conducting field experiments within resource-poor settings, and draws on experiences from trials carried out in Bangladesh, India, Malawi, and Nepal. The authors put specific focus on cluster RCTs, in which whole villages, schools, or clinics – rather than individuals – are randomized to receive or not receive a service or intervention. In a nuanced discussion, the authors shed light on different consent procedures, including through representative cluster guardians or opinion leaders, open community meetings, and oral consent by individual study participants. They also discuss timing of consent seeking, contending that it should occur prior to randomization. Further, the authors shed light on ethical considerations for trial control groups and argue that these should receive some sort of benefit for participation (e.g. ancillary care), following the maxim of “no survey without service”.

Bhutta, Z.A. (2004). Beyond informed consent. Bulletin of the World Health Organization 82(10): 771–777. 📖

This paper differentiates between informed consent and “understood consent”, where the latter is described as a process that encompasses a broad understanding of the proposed research, the risks and benefits associated with it, and a genuine agreement to participate. The author explains why informed consent can often be a problematic concept when working with vulnerable populations and scrutinizes the conditions for truly ‘informed’ and comprehended consent. Particularly in the context of high poverty and risk, the paper argues that a voluntary

decision to participate is always a function of the degree of empowerment and autonomy for decision-making.

Graham, A., Powell, M., Taylor, N., Anderson, D. & Fitzgerald, R. (2013). *Ethical Research Involving Children*. Florence: UNICEF Office of Research – Innocenti. 📖

This compendium provides important general guidance on ethical considerations when conducting research with children. The primary focus lies in ensuring the human dignity and well-being of children participating in the research. It introduces the guiding principles of non-maleficence and beneficence and offers detailed practical advice on consent procedures and ensuring privacy and confidentiality. More philosophical considerations are accompanied by numerous case studies that first present the ethical challenges and then present researchers' responses to these. The resource can be accessed online, free of charge, at:

<http://childethics.com/wp-content/uploads/2013/10/ERIC-compendium-approved-digital-web.pdf>

(also available in several other languages at <http://childethics.com/>)

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About the HES Research Dialogues

In 2014, FHI 360's ASPIRES Project and the SEEP Network recognized that, while HES was a growing area of practice and research, gaps in HES research and evidence remained. To respond to this evidence gap, SEEP facilitated an HES Research Dialogues initiative, bringing together HES researchers and practitioners to define a collaborative learning agenda. Through a series of collaborative activities, the initiative aimed to identify key research questions within HES, as well as draw on existing experience related to appropriate research methods and tools.

This document is complemented by a series of research methods and evidence briefs developed out of the HES Research Dialogues initiative. Access them on FHI 360's ASPIRES Project web page on Microlinks at: <http://bit.ly/1rwRue3>