

M2073.002000 Methods of Global Health Research

Fall 2022

Day and Time: Thursday (6:30-9:20pm)

3-credit hours

Classroom: building 221, suite 202

Office Hour: Thursday 9:30-10:30pm (building 221, suite 427, by appointment)

Instructor

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Course description

Recently the scope and interest of global health are being rapidly extended, affected by the recent consequences of the globalization processes, development of technologies, and the newly emerging infectious diseases, etc. In this light, research in global health has a correspondingly wide spectrum, ranging from qualitative studies to quantitative research to practical implementation research. The course introduces and discusses diverse research methods in global health and their applications to real-world examples, with an aim to help students develop their own research design and implementation skills in global health. The course also holds workshops to provide students hands-on experience.

Learning objectives

By the end of the course, students will be able to do the following:

- Understand the recent trends in the field of global health
- Understand the scopes and types of research methods used in global health
- Describe ethical issues in global health research
- Explain the challenges in conducting research in resource- and information-poor settings.

Course format

- This course is a **semi-flipped course** – Students will obtain the basic knowledge on each session's subject through reading assignments, and the level of students' understanding of the subject will be tested through quiz questions during the first 10 minutes of each session.
- Then, the first half of each class will be spent on the instructor's short lecture (focusing on the gist of the session subject and introducing expanded concepts and

recent trends, mostly beyond the contents covered in reading materials). The second half will be spent on class activities such as hands-on exercises or group discussion.

- In addition, there will be four practical hands-on Workshop sessions, given to drill students' skills in conducting their own global health research.

Prerequisite (*not mandatory, but recommended*)

- Global Health (902.618B)
- For the students who have not taken the Global Health course, additional readings on the introduction of global health will be assigned before Session 1.

Course materials

There is no required textbook for this course. The required (and/or supplementary) readings for reading assignments for each topic are listed under the detailed Course Schedule of this document. All of the readings will be posted on the eTL site ahead of time for each session. For students interested in further readings, below are some relevant textbooks:

Optional supplementary books:

- Commission on Health Research for Development. Health research: essential link to equity in development. USA: Oxford University Press; 1990.
- Aellah G, Chantler T, Geissler PW. Global Health Research in an Unequal World: Ethics Case Studies from Africa: CABI; 2016.
- Guest G, Namey EE. Public Health Research Methods. SAGE Publishing; 2015.

Course requirements

Attendance

- Students are expected to attend all classes. In case of unavoidable absence, students should let the instructor know ahead of time.

Reading assignments

- All students are expected to read all reading materials before attending class.

Class participation

- Students are expected to proactively participate in class discussion and class activities including group work and in-class exercises.

Tutorial session (optional)

- There will be two optional tutorial sessions for the students who do not have experience in using the R package or have not taken any statistics courses.
- The first tutorial will be on the basics of R (including the software package download and install). The second will be on the basics of statistics, linear regression, and logistic regression using R.
- The tutorials will be scheduled during the early weeks of the course, and written guiding materials will be distributed to the students who will have signed up.

Quiz

- For most sessions, the first 5-10 minutes will be spent on reviewing the students' understanding of the reading assignments through QUIZ questions (*Readings for QUIZ questions are marked with **).

Assignments

- Homework will be assigned for some topics.
- Each assignment will consist of 2-5 questions or exercises using a statistical software package that aim to check students' understanding of the key concepts of the research methodology.
- Students may use any resources for completion of homework, but problem solving should be individual work. **Group work or consultation with colleagues is NOT allowed.** Any violation of this policy will lead to no grade points assigned to the student.
- All class assignments should be submitted on eTL before the start of class on each due date (*Late submissions will get penalty on grading*).

Final project

- Each project team will consist of 3-5 students (depending on the final size of the class).
- Each team will develop its own research proposal on any global health issue in a resource-poor setting, by describing research question, background, rationale for study, research methods, expected results, and discussion.
- More detailed guidance will be provided throughout the class by the instructor.
- A preliminary topic proposal is due the day before the class for Session 12. Each team will present its own topic (15 minutes each) during the class for Session 12.
- A final paper is due by the day before the class for Session 15. Students in each team will present (20 minutes each) their final proposal during the last class.

Assessment of performance

- A total of 100 points are possible in this course. Grading will be based on the following performance:
 - Class participation: 10
 - Quiz: 20
 - Assignments: 30 (3 assignments, 10 points each)
 - Final project: 40
 - ✧ Instructor evaluation: 25, peer evaluation: 10, within-team peer evaluation of contributions to the team project: 5
- Final letter grades will be assigned according to the following scale:
 - A = 88-100
 - B = 80-87
 - C = 70-79
 - D = 60-69

At-a-Glance Course Calendar

Session (Date)	Topic	QUIZ (points)	Tutorial	Assignment/ Final project
Session 1 (9/1/22)	Introduction/ Overview of research, health research and global health research	--		
Session 2 (9/8/22)	Qualitative research methods for global health	Quiz1(2)		
(9/15/22)	No class		R basics	
Session 3 (9/22/22)	Workshop 1: Qualitative data collection (in-depth interview/FGD) and analysis	Quiz2(2)	Linear/Logistic regression	
Session 4 (9/29/22)	Quantitative research methods: An overview	Quiz3(2)		
Session 5 (10/6/22)	Survey and primary data collection in global health	Quiz4(2)		Assignment 1 (Qual. data coding)
Session 6 (10/13/22)	Workshop 2: Demographic and Health Survey-questionnaire, sampling and weighting	Quiz5(2)		
Session 7 (10/20/22)	Secondary data analysis using global health data	Quiz6(2)		
Session 8 (10/27/22)	Workshop 3: Secondary analysis using DHS data	--		
Session 9 (11/3/22)	Literature review: An overview	Quiz7(2)		Assignment 2 (DHS data analysis)
Session 10 (11/10/22)	Scoping review (ScR) and Systematic review (SR)	Quiz8(2)		
Session 11 (11/17/22)	Workshop 4: Systematic search for global health literature using electronic databases	--		
Session 12 (11/24/22)	<i>Presentation of topic proposal</i>	--		<i>Topic proposal due</i>
Session 13 (12/1/22)	Implementation research (IR) and mixed-methods	Quiz9(2)		Assignment 3 (Systematic search of lit.)
Session 14 (12/8/22)	Ethical issues in global health research	Quiz10(2)		
Session 15 (12/15/22)	<i>Presentation of final paper</i> Class wrap-up	--		<i>Final paper due</i>

* Tutorials will be scheduled for out-of-class times and be held online (through zoom).

** There is no class on September 15 due to the instructor's business trip.

Detailed Course Schedule

Session 1	Introduction/ Overview of research, health research and global health research	9/1/22
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Topics:

- Course overview/administration
- Research, health research, and global health research: A brief overview
- The role of research in global health
- Research agenda in global health

Reading assignments:

Guest G, Namey EE. Public Health Research Methods. Chapter 1. Introduction to Public Health Research Methods. SAGE Publishing; 2015.

Rudan I. Global health research priorities: Mobilizing the developing world. *Public Health* 2012;126:237-240.

Garcia-Basteiro AL, Abimbola S. The challenges of defining global health research. *BMJ Global Health* 2021;6(12):e008169.

Supplementary readings:

Vidyasagar D. Global notes: the 10/90 gap disparities in global health research. *J Perinatol* 2006;26(1):55-6.

Maher D, Biraro S, Hosegood V, et al. Translating global health research aims into action: the example of the ALPHA network. *Trop Med Int Health* 2010;15(3):321-8.

Badenhorst A, Mansoori P, Chan KY. Assessing global, regional, national and sub-national capacity for public health research: a bibliometric analysis of the Web of Science in 1996–2010. *Journal of Global Health* 2016;6(1).

Session 2	Qualitative research methods for global health	9/8/22
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Topics:

- Principles and basic concepts of qualitative research
- Qualitative approaches to research design and data collection in the context of global health
- Examples of qualitative studies on global health issues

Class Activity:

- Group work on developing in-depth interview questions for pregnant women about maternal health service utilization in a developing country setting

Reading assignments:

*Chandler, C.I.R., Reynolds, J., Palmer, J.J., & Hutchinson, E. (2013) ACT Consortium Guidance: Qualitative Methods for International Health Intervention Research. Available from <http://www.actconsortium.org/qualitativemethodsguidance>. [For the quiz, read through Chapters 1 & 2 (pp.12-65); Skim the other chapters of the guidance for class discussion]

*Titaley CR, Hunter CL, Dibley MJ, Heywood P. Why do some women still prefer traditional birth attendants and home delivery? a qualitative study on delivery care services in West Java Province, Indonesia. *BMC pregnancy and childbirth* 2010;10(1):1.

Supplementary readings:

Malterud K. Qualitative research: standards, challenges, and guidelines. *Lancet* 2001;358(9280):483-8.

Session 3	Workshop 1: Qualitative data collection (in-depth interview / FGD) and analysis	9/22/22
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Topics:

- Recap: Methods for qualitative data collection
- Steps and issues in qualitative data collection: in-depth interview, Focus Group Discussion (FGD)
- Hands-on exercise: Question development for FGD and in-depth interview

Class Activity:

- Hands-on exercise: Create your own FGD and in-depth interview questions on the given topics
 - A. Topic for FGD: Factors associated with MHM in Bangladesh
 - Target groups: adolescent girls, mothers of adolescent girls
 - B. Topic for in-depth interview: Effectiveness of mHealth programs in Ghana
 - Target groups: stakeholders at community, district, and state levels

Reading assignments:

Isaacs A. An overview of qualitative research methodology for public health researchers. *International Journal of Medicine and Public Health* 2014;4:318.

Willcox M, Moorthy A, Mohan D et al. Mobile Technology for Community Health in Ghana: Is Maternal Messaging and Provider Use of Technology Cost-Effective in Improving Maternal and Child Health Outcomes at Scale? *Journal of Medical Internet Research* 2019;21:e11268.

van Eeuwijk, Peter; Angehrn, Zuzanna. How to Conduct a Focus Group Discussion (FGD). Methodological Manual. Basel: University of Basel, 2017.

Guion L, Diehl D, McDonald D. Conducting an In-depth Interview. University of Florida 2011;FCS6012:1-3.

Conducting in-depth interviews: A Guide for Designing and Conducting In-Depth Interviews for Evaluation Input. Pathfinder international, 2006.

Alam M, Luby S, Halder A et al. Menstrual hygiene management among Bangladeshi adolescent schoolgirls and risk factors affecting school absence: results from a cross-sectional survey. *BMJ Open* 2017;7:e015508.

Supplementary readings:

Cropley A. Qualitative research methods: A practice-oriented introduction for students of psychology and education, 2nd ed. Riga: University of Hamburg, 2019.

Example of Focus Group Discussion Guide (Caregiver) mHealth Self-Management and Support System for Chronic and Complex Health Conditions (Phase 1- Development and Refinement). JMIR mHealth and uHealth.

Kastner J, Milford C, Akatukwasa C, Kembabazi A, Smit J. Implementing a Global Health Qualitative Research Study: Experiences of a Project Coordinator in Uganda. *East African Health Research Journal* 2017;1:113-122.

Krueger R. Designing and Conducting Focus Group Interviews. University of Minnesota, 2002.

Ulin P, Robinson E, Tolley E. Qualitative Methods in Public Health- A Field Guide for Applied Research. Jossey-Bass, 2005.

Session 4	Quantitative research methods: An overview	9/29/22
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Topics:

- An overview of quantitative research
- Selected types of quantitative data analysis
 - Cross-sectional vs. time-series (e.g., panel data analysis)
 - Types of regression
 - Moderation, mediation, and moderated mediation effect
- Quantitative data collection methods
- Examples of quantitative research on global health issues

Reading assignments:

* Rahman, Ab. Quantitative Methods in Global Health Research, In: Kickbusch I, Ganten D, Moeti M. (Eds.) *Handbook of Global Health*. Springer; 2021.

* Park HA. An introduction to logistic regression: from basic concepts to interpretation with particular attention to nursing domain. *J Korean Acad Nurs*. 2013;43(2):154-64.

Supplementary readings:

Eom TH, Lee SH, Xu H. Chapter 32: Introduction to Panel Data Analysis: Concepts and Practices, In: Yang, K., Miller, GJ. (Eds.), *Handbook of Research Methods in Public Administration*. Boca Raton; 2008.

Bukuluki P, Kisaakye P, Mwenyango H, Palattiyil G. Adolescent sexual behaviour in a refugee setting in Uganda. *Reproductive Health* 2021;18(1):131.

Negeri KG, Halemariam D. Effect of health development assistance on health status in sub-Saharan Africa. *Risk Management Healthcare Policy* 2016;9:33-42.

Sekine K, Carter DJ. The effect of child marriage on the utilization of maternal health care in Nepal: A cross-sectional analysis of Demographic and Health Survey 2016. *PLoS One* 2019;14(9):e0222643.

Session 5	Survey and primary data collection in global health	10/6/22
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Topics:

- Importance of primary data collection on crucial global health issues
- Skills in questionnaire development and survey methods on global health-related topics
- Challenges in primary data collection in resource-poor settings
- Introduction to the Demographic and Health Survey (DHS)

Class Activity:

- Group work and impromptu presentation for learning about DHS

Reading assignments:

*Hageman K, Kim A, Sanchez T, Bertolli J. Chapter 12: Survey Design and Implementation, In: G. Guest, and E. E. Namey (Eds.), *Public health Research Methods*. Sage Publications; 2014.

*Corsi DJ, Neuman M, Finlay JE, Subramanian SV. Demographic and health surveys: a profile. *Int J Epidemiol* 2012;41(6):1602-13.

Short Fabic M, Choi Y, Bird S. A systematic review of Demographic and Health Surveys: data availability and utilization for research. *Bull World Health Organ* 2012;90(8):604-12.

Supplementary readings:

University of Michigan, Institute for Social Research, Survey Research Center. (2016), *Guidelines for Best Practice in Cross-Cultural Surveys* (4th ed.). Retrieved from <http://ccsg.isr.umich.edu/index.php/chapters>.

United Nations. Household Sample Surveys in Developing and Transition Countries, 2005.

Cutts FT, Izurieta HS, Rhoda DA. Measuring coverage in MNCH: design, implementation, and interpretation challenges associated with tracking vaccination coverage using household surveys. *PLoS Med* 2013;10(5):e1001404.

Session 6	Workshop 2: DHS – questionnaire, sampling and weighting	10/13/22
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Topics:

- Hands-on exercise for developing survey questions on antenatal care utilization in a resource-poor setting and sampling schemes

Reading assignments:

*Corsi DJ, Neuman M, Finlay JE, Subramanian SV. Demographic and health surveys: a profile. *Int J Epidemiol* 2012;41(6):1602-13.

*Rutstein SO, Rojas G. Guide to DHS statistics. *Calverton, MD: ORC Macro* 2006. (pp.1-25 only; e.i., Chapter I. Introduction & Chapter II. Overview of Key Aspects of the Organization of DHS Data)

Session 7	Secondary data analysis using global health data	10/20/22
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Topics:

- Overview of secondary data analysis
- Types of data that may be used in a secondary data analysis in global health
- Issues in secondary data analysis
- Examples of secondary data analysis on global health issues

Class Activity:

- Group discussion of an example paper on DHS analysis

Reading assignments:

*Boslaugh S. An introduction to secondary data analysis. *Secondary data sources for public health: a practical guide* 2007:2-10.

*Khanal V, da Cruz JLNB, Mishra SR, Karkee R, Lee AH. Under-utilization of antenatal care services in Timor-Leste: results from Demographic and Health Survey 2009–2010. *BMC pregnancy and childbirth* 2015;15(1):1.

Supplementary readings:

Deaton A. The Analysis of Household Surveys: A Microeconomic Approach to Development Policy. World Bank, 2018.

Useful sites:

- UPenn Library - Global Health Research Guide: Data & Statistics (<http://guides.library.upenn.edu/c.php?g=475939&p=3255265>)
- Harvard Library – Health Data Resources: International (<http://guides.library.harvard.edu/healthinternational>)
- University of Toronto Library – Global Health in Family & Community Medicine (<http://guides.library.utoronto.ca/c.php?g=251259&p=1673656>)

Session 8	Workshop 3: Secondary analysis using DHS data	10/27/22
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Topics:

- DHS data management and coding using R
- Hands-on exercise for replicating a published study using DHS data on antenatal care services

Reading assignments:

Khanal V, da Cruz JLNB, Mishra SR, Karkee R, Lee AH. Under-utilization of antenatal care services in Timor-Leste: results from Demographic and Health Survey 2009–2010. *BMC pregnancy and childbirth* 2015;15(1):1.

Session 9	Literature review: an overview	11/3/22
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Topics:

- Introduction to literature review
- Types of literature
- Types of review
- Publication/reporting/ guidelines by study type

Class activity:

- Hands-on exercise for discerning different types of literature and reviews

Reading assignments:

*Samnani SS, Vaska M, Ahmed S, Turin TC. Review typology: the basic types of reviews for synthesizing evidence for the purpose of knowledge translation. *Journal of the College of Physicians and Surgeons Pakistan* 2017;27(10):635-641.

*Pautasso M. Ten simple rules for writing a literature review. *PLoS Computational Biology*. 2013;9(7):e1003149.

Supplementary readings:

Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Info Libr J* 2009;26(2):91-108.

Pawson R, Greenhalgh T, Harvey G, Walshe K. Realist review--a new method of systematic review designed for complex policy interventions. *J Health Serv Res Policy* 2005;10 Suppl 1:21-34.

Vandenbroucke JP. STREGA, STROBE, STARD, SQUIRE, MOOSE, PRISMA, GNOSIS, TREND, ORION, COREQ, QUOROM, REMARK, and CONSORT: for whom does the guideline toll? *J Clin Epidemiol* 2009;62(6):594-6.

Guidelines by study type:

Cochrane Handbook (available from <http://handbook.cochrane.org>)

Higgins J. Green S. Cochrane handbook for systematic reviews of interventions version 5.1.0. The Cochrane Collaboration, 2011.

PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) statement (available from <http://www.prisma-statement.org>)

Moher D, Liberati A, Tetzlaff J, Altman DG. Preferred reporting items for systematic reviews and meta-analyses: the PRISMA statement. *Annals of internal medicine* 2009;151(4):264-9.

PRISMA Extensions for Scoping Reviews (available from <https://prisma-statement.org/Extensions/ScopingReviews>)

Tricco, AC, Lillie, E, Zarin, W, et al. PRISMA extension for scoping reviews (PRISMA-ScR): checklist and explanation. *Annals of internal medicine* 2018; 169(7):467-473.

AMSTAR (A Measurement Tool to Assess Systematic Reviews) checklist (available from http://amstar.ca/Amstar_Checklist.php)

Shea BJ, Grimshaw JM, Wells GA, et al. Development of AMSTAR: a measurement tool to assess the methodological quality of systematic reviews. *BMC medical research methodology* 2007;7(1):1.

GRADE (Grading of Recommendations Assessment, Development and Evaluation) approach (available from <http://gradepro.org/guidelines-development>)

Guyatt G, Oxman AD, Akl EA, et al. GRADE guidelines: 1. Introduction—GRADE evidence profiles and summary of findings tables. *Journal of clinical epidemiology* 2011;64(4):383-94.

MOOSE (Meta-analyses Of Observational Studies in Epidemiology) approach (available from <https://jamanetwork.com/journals/jama/fullarticle/192614>)

Stroup DF, Berlin JA, Morton SC, Olkin I, Williamson GD, Rennie D, Moher D, Becker BJ, Sipe TA, Thacker SB. Meta-analysis of observational studies in epidemiology: a proposal for reporting. Meta-analysis Of Observational Studies in Epidemiology (MOOSE) group. *JAMA*. 2000; 283(15):2008-2012.

ARRIVE (Animal Research Reporting In Vivo Experiments) approach (available from <https://www.nc3rs.org.uk/arrive-guidelines>)

Carol K, William J B, Innes C C, Michael E and Douglas G A. The ARRIVE Guidelines. The National Centre for the Replacement, Refinement and Reduction of Animals in Research 2013.

ENTREQ (ENhancing Transparency in REporting the synthesis of Qualitative research) approach (available from <https://bmcmmedresmethodol.biomedcentral.com/articles/10.1186/1471-2288-12-181>)

Tong A, Flemming K, McInnes E, Oliver S, Craig J.. Enhancing transparency in reporting the synthesis of qualitative research: ENTREQ. *BMC Medical Research Methodology*, 2012, 12:181)

CONSORT (CONSOLIdated standards of Reporting Trials) approach (available from <http://www.consort-statement.org/downloads/consort-statement>)

Kenneth F Schulz,¹ Douglas G Altman,² David Moher. CONSORT 2010 Statement: updated guidelines for reporting parallel group randomised trials, *British Medical Journal*, 2010

TRIPOD (Transparent reporting of a multivariable prediction model for Individual Prognosis Or Diagnosis) approach (available from <http://annals.org/aim/fullarticle/2288549/transparent-reporting-multivariable-prediction-model-individual-prognosis-diagnosis-tripod-tripod>)

Gary S. Collins, PhD; Johannes B. Reitsma, MD, PhD; Douglas G. Altman, DSc; and Karel G.M. Moons. Transparent Reporting of a multivariable prediction model for Individual Prognosis Or Diagnosis (TRIPOD): The TRIPOD Statement, *Ann Intern Med*. 2015;162(1):55-63.

SRQR (Standards for Reporting Qualitative Research) approach (available from <https://insights.ovid.com/pubmed?pmid=24979285>)

Bridget C. O'Brien, PhD, Ilene B. Harris, PhD, Thomas J. Beckman, MD, Darcy A. Reed, MD, MPH, and David A. Cook, MD, MHPE, Standards for Reporting Qualitative Research: A Synthesis of Recommendations, Acad Med. 2014 Sep;89(9):1245-51.

CARE (CAsE Report) approach (available <https://www.care-statement.org/>)

CARE. CARE Checklist – 2016: Information for writing a case report, CARE 2016.

CARE. CARE Checklist – 2015: Create a Case Report Timeline using Microsoft Word, CARE 2015.

STROBE (STrengthening the Reporting of OBservational studies in Epidemiology) approach (available from <https://www.ncbi.nlm.nih.gov/pubmed/17947786>)

von Elm E1, Altman DG, Egger M, Pocock SJ, Gøtzsche PC, Vandenbroucke JP. Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) statement: guidelines for reporting observational studies. BMJ. 2007 Oct 20;335(7624):806-8.

REMARK (REporting recommendations for tumour MARKer prognostic studies) approach (available from <https://www.nature.com/articles/6602678>)

McShane LM, Altman DG, Sauerbrei W, Taube SE, Gion M, Clark GM. REporting recommendations for tumour MARKer prognostic studies (REMARK). Br J Cancer. 2005;93(4):387-391.

STARD (STAndards for Reporting of Diagnostic accuracy) approach (available from <https://bmjopen.bmj.com/content/6/11/e012799.citation-tools>)

Cohen JF, Korevaar DA, Altman DG, et al STARD 2015 guidelines for reporting diagnostic accuracy studies: explanation and elaboration BMJ Open 2016;6:e012799. doi: 10.1136/bmjopen-2016-012799

Session 10	Scoping review (ScR) and Systematic review (SR)	11/10/22
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Topics:

- Introduction to systematic review
- Steps in conducting a systematic review
- Examples of systematic reviews of global health research

Class Activity:

- Group work on developing search strategies for a systematic review

Reading assignments:

*김수영, 박지은, 서현주 외. NECA 체계적 문헌고찰 매뉴얼. Part I. 체계적 문헌고찰 (pp.1-125) *NECA 연구방법 시리즈* 2011.

*Colquhoun HL, Levac D, O'Brien KK, Straus S, Tricco AC, Perrier L, Kastner M, Moher D. Scoping reviews: time for clarity in definition, methods, and reporting. *J Clin Epidemiol* 2014;67(12):1291-4.

Supplementary readings:

Hobbs AJ, Moller AB, Kachikis A, Carvajal-Aguirre L, Say L, Chou D. Scoping review to identify and map the health personnel considered skilled birth attendants in low-and-middle income countries from 2000-2015. *PLoS One* 2019;14(2):e0211576.

Cho YM, Lee S, Islam SMS, Kim SY. Theories applied to m-Health interventions for behavior change in low- and middle-income countries: A systematic review. *Telemed J E Health* 2018;24(10):727-741.

Lee S, Lee Y, Lee S, Islam SMS, Kim SY. Toward developing a standardized core set of outcome measures in mobile health interventions for tuberculosis management: Systematic review. *JMIR Mhealth Uhealth* 2019;7(2):e12385.

Session 11	Workshop 4: Systematic search for global health literature using electronic databases	11/17/22
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Topics:

- A detailed review of core electronic databases
- Hands-on exercise for retrieving literature on maternal health services in LMICs using core electronic databases

Reading assignments:

Målqvist M, Yuan B, Trygg N, Selling K, Thomsen S. Targeted interventions for improved equity in maternal and child health in low-and middle-income settings: a systematic review and meta-analysis. *PLoS One* 2013;8(6):e66453.

Session 12	<i>Presentation of topic proposals</i>	11/24/22
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Topics:

- Student presentation of research proposals
- Discussion

Preliminary proposal due

Session 13	Implementation Research (IR) and mixed-methods	12/1/22
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Topics:

- A brief introduction to implementation research
- The role of implementation research in achieving global health goals
- Methodological issues in implementation research
- Student presentation of research topic proposals / Peer-review and discussion

Reading assignments:

*Peters D, Adam T, Alonge O, Agyepong I, Tran N. Implementation research: what it is and how to do it. *BMJ (Clinical research ed)* 2013;347:f6753.

*Hales S, Leshner-Trevino A, Ford N, Maher D, Ramsay A, Tran N. Reporting guidelines for implementation and operational research. *Bull World Health Organ* 2016;94(1):58-64.

*Palinkas LA, Aarons GA, Horwitz S, Chamberlain P, Hurlburt M, Landsverk J. Mixed method designs in implementation research. *Adm Policy Ment Health* 2011;38(1):44-53.

Bhardwaj S, Carter B, Aarons GA, Chi BH. Implementation research for the prevention of mother-to-child HIV transmission in sub-Saharan Africa: existing evidence, current gaps, and new opportunities. *Current HIV/AIDS Reports* 2015;12(2):246-55.

Supplementary readings:

Peters DH, Tran NT, Adam T. Implementation research in health: a practical guide: World Health Organization; 2014.

Research topic proposal due

Session 14	Ethical issues in global health research	12/8/22
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Topics:

- Ethical issues in global health research
- The role of research in examining the social factors that impede effective health interventions in developing countries
- The role of research in understanding the cultural perceptions of disease in the global health context

Class Activity:

- Group discussion (devil's advocate discussion on some ethical issues in global health research) and live polling

Reading assignments:

Cash R, Capron AM, Saxena A, Wikler D. Casebook on ethical issues in international health research: World Health Organization, 2009. [*Skim the entire report for a general overview*]

*Ijsselmuiden CB, Kass NE, Sewankambo KN, Lavery JV. Evolving values in ethics and global health research. *Global Public Health* 2010;5(2):154-63.

*Lavery JV, Green SK, Bandewar SV, et al. Addressing ethical, social, and cultural issues in global health research. *PLoS Negl Trop Dis* 2013;7(8):e2227.

Session 15	<i>Presentation of final paper / Class wrap-up</i>	12/15/22
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Topics:

- Student presentation of final projects
- Peer-review and class discussion
- Class wrap-up

Final paper due