Epid 827 - Social Epidemiology: Analysis and Interpretation

Instructor: Whitney R. Robinson, Ph.D
Department of Epidemiology
UNC Gillings School of Global Public Health
2104B McGavran-Greenberg Hall
campus mail address: Epidemiology, CB#7435

Usual Time and Place: Thursday 2:00 - 3:50 pm
Room: Rosenau 235

Learning objectives:
• To identify how the field of epidemiology researches the social determinants of health differently than other disciplines, such as sociology, psychology, or health policy
• To identify the methodological challenges that are addressed by different study designs and analyses used in social epidemiology
• To apply methods from the field of social epidemiology to research questions of interest to the student

COURSE STRUCTURE: Most sessions will consist of short lectures from respected interdisciplinary researchers, followed by structured discussions of selected scientific publications relevant to the lecture. Readings will be available on Sakai or PubMed. To facilitate high-quality discussions, all assigned readings should be completed prior to class. Come to class ready to evaluate the quality of readings and explain in what situations a technique or concept would apply to research questions of interest to you.

Course Requirements & Grading Criteria

<table>
<thead>
<tr>
<th>Requirement</th>
<th>% of Grade</th>
<th>Due Date</th>
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<tbody>
<tr>
<td>Class participation</td>
<td>29%</td>
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<tr>
<td>3 Lab responses (due Tuesdays 9 am)</td>
<td>21%</td>
<td>see calendar</td>
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<tr>
<td>Presentation 1: research question &amp; challenge</td>
<td>25%</td>
<td>Mar 3</td>
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<tr>
<td>Presentation 2: Two approaches for addressing challenge</td>
<td>25%</td>
<td>Apr 21</td>
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Course evaluations (online) last 3 weeks of class

Assignment formatting for papers and presentation:
Presentation slides should be saved using this standardized file name format:
YY_MM_DD_Epid827_last-name_assignment (e.g.,
15_03_08_Epid827_Robinson_presentation1.docx). Within the document for the Paper, include a title and bolded headings for each section. Paper should be single-spaced, with Arial 11 point or Times New Roman 12pt font, and 1" Margins.

Submitting assignments:
* Submit assignments (e.g., lab responses, presentation slides) electronically via Sakai. Sakai will not accept assignments after the posted deadline.
* In fairness to those who meet the deadlines, late papers may be penalized 10% per day.
* If you are unable to submit an assignment by the deadline, please e-mail me as soon as possible, preferably at least 36 hours ahead of time.
Honor code: The University of North Carolina at Chapel Hill has had a student-administered honor system and judicial system for over 100 years. The system is the responsibility of students and is regulated and governed by them, but faculty share the responsibility. If you have questions about your responsibility under the honor code, please bring them to your instructor or consult with the office of the Dean of Students or the Instrument of Student Judicial Governance. This document (the Instrument), adopted by the Chancellor, the Faculty Council, and the Student Congress, contains all policies and procedures pertaining to the student honor system. Your full participation and observance of the honor code is expected.

Required readings: listed in table below

Optional readings:

<table>
<thead>
<tr>
<th>Date</th>
<th>Topic</th>
<th>Speaker</th>
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<tbody>
<tr>
<td>Jan 14</td>
<td>TOPIC: What is social epidemiology for?</td>
<td>Whitney Robinson, PhD Asst prof, UNC Epidemiology</td>
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<td>Introduction to course</td>
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<td>Discuss progressive class project – mid-semester presentation &amp; final</td>
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<tr>
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<td>presentation</td>
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<td></td>
<td>LAB: Demonstrate remote server for Stata access First part of Fixed</td>
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<td>Effects lab to trouble-shoot</td>
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<tr>
<td>Jan 21</td>
<td>TOPIC: What kind of cause are you looking for?</td>
<td>Whitney Robinson, PhD Asst prof, UNC Epidemiology</td>
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<td>Intra-population versus inter-population variation</td>
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<td>LAB: Stata exercise: Fixed effects</td>
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<td>Jan 28</td>
<td>TOPIC: Survey weights</td>
<td>Ping Chen, PhD Carolina Population Center (CPC)</td>
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<td>Presentation: Application of survey weights in Add Health (National</td>
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<td></td>
<td>Longitudinal Study of Adolescent Health)</td>
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<td>Feb 4</td>
<td>Location change: Mayes Center VIDEOCONFERENCE!</td>
<td>Dan Taber, PhD Asst Prof, U Tx-Austin Health</td>
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<td>TOPIC: Epidemiologic approaches to evaluating health effects of policy</td>
<td>Promotion &amp; Behavioral Science</td>
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<td>Feb 11</td>
<td>Studying health effects of neighborhoods</td>
<td>Sandra Albrecht, PhD Asst Prof, UNC Nutrition</td>
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<td>LAB: Multilevel models</td>
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<td>Feb 18</td>
<td>Selection bias: example of large population-based studies vs selected</td>
<td>Nancy Dole, PhD CPC/Epid Dept.</td>
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<td>samples</td>
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<td>*Feb 25</td>
<td>Measuring tough-to-measure constructs at the</td>
<td>Amar Hamoudi, PhD</td>
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<tr>
<td>Date</td>
<td>Topic</td>
<td>Presenter, Affiliation</td>
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<td>Mar 3</td>
<td>Class presentations 1: Present a research question of interest &amp; the biggest methodologic challenge or limitation of previous research (e.g., measurement bias, confounding, selection bias, positivity, generalizability)</td>
<td>students</td>
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<td>Mar 10</td>
<td>Studying the social context: Qualitative methods to complement quantitative analysis</td>
<td>Marta Mulawa, Doctoral student, UNC HB</td>
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<td>Mar 17</td>
<td>Spring break</td>
<td>No class</td>
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<td>*Mar 24</td>
<td>Crafting compelling, theoretically-driven, policy-relevant research questions: Examples from law enforcement and civil rights</td>
<td>Frank Baumgartner, PhD Professor, UNC Political Science</td>
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<td>*Mar 31</td>
<td>Measuring disparities: interactive discussion</td>
<td>Whitney Robinson, PhD Asst prof, UNC Epidemiology</td>
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<td>Apr 7</td>
<td>Population-relevant estimates</td>
<td>Daniel Westreich, PhD Assoc Prof, UNC Epidemiology</td>
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<td>Apr 14</td>
<td>Novel data sources: Novel data sources: using non-traditional data sources to study neighborhood influences on health</td>
<td>Jana Hirsch, PhD CPC Post-doctoral Fellow</td>
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<td>Apr 21</td>
<td>Class presentations 2: Evaluate two attractive approaches for addressing the methodologic challenge discussed in presentation 2, finally choosing one and justifying that decision</td>
<td>students</td>
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* Change in dates from original syllabus
READINGS (Tentative reading list in GRAY)

Jan 14 What is Social Epidemiology?
Speaker: Whitney Robinson, PhD

Optional:

Jan 21 What kind of cause are you looking for? Intra-population versus inter-population variation
Speaker: Whitney Robinson, PhD

Optional:

Jan 28 Survey weights
Speaker: Ping Chen, PhD

Optional:

Feb 4 Epidemiologic approaches to evaluating health effects of policy
Speaker: Daniel Taber, PhD
Optional:
- Colchero MA, Popkin BM, Rivera JA, Ng SW. Beverage purchases from stores in Mexico under the excise tax on sugar sweetened beverages: observational study. BMJ. 2015: 352:h6704. doi: 10.1136/bmj.h6704
- Supplemental Stata code

Feb 11 Studying Health Effects of Neighborhoods
Speaker: Sandra Albrecht, PhD

Optional:

Feb 18 Selection bias: example of large population-based studies vs selected samples
Speaker: Nancy Dole, PhD:

Optional:

Feb 25 Measuring tough-to-measure constructs at the population level: Example of psychosocial measures in lifecourse research
Speaker: Amar Hamoudi, PhD

Mar 3 Class presentations

March 10 - Studying the social context: Qualitative Methods to complement quantitative analysis
Speaker: Marta Mulawa, MHS

Optional:
• Early Detection of Cervical Cancer among Native American Women: A Qualitative Supplement to a Quantitative Study. Lynne Messer, Allan Steckler and Mark Dignan. 1999 Health Educ Behav

**March 24 -- Crafting compelling, theoretically-driven, policy-relevant research questions**
Speaker: Frank Baumgartner, PhD:

• (Brief mid-semester review prior to speaker)

**March 31 – Measuring disparities: interactive discussion**
Class discussion:

Optional:
• Robinson WR. Interpreting “race” in regression models: application of causal framework in disparities research. PowerPoint presentation

**April 7 Population-relevant estimates**
Speaker: Daniel Westrich, PhD

**April 14 – Novel data sources: using non-traditional data sources to study neighborhood influences on health**
Speaker: Jana Hirsch, PhD


*Optional:*

OTHER READINGS