Introduction to Life Course Epidemiology and Family Health Services Research: PHS 711

A course in the Program in Population Health

Spring 2013
Mondays and Wednesdays from 1:15-2:30pm
WARF 511

Department of Population Health Sciences
School of Medicine and Public Health
University of Wisconsin-Madison

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Office hours: Generally available following class; or, by appointment.

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Office hours: By appointment

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Email: kmandell@wisc.edu
Office hours: By appointment
OVERVIEW
This course will deepen our understanding of how health is produced over the life course. A life course approach focuses on how early life experiences influence health across lives and possibly generations. This includes the concept of “linked lives” or how health is produced in the context of familial and social relationships. Using a life course and human development framework, we will explore a number of concepts explaining how exposures in early life lead to health outcomes at later life stages. Namely, we will examine critical or sensitive periods (i.e., “Barker hypothesis” or “fetal or biological programming”), cumulative effects, pathways and trajectories, risk and resilience, and intergenerational impacts (transmission of health across one or more generations). Through this lens, we will consider the biobehavioral processes that underlie the development of health across the life course. Together this theoretical and empirical evidence will be applied to the understanding of the evolution and persistence of health disparities. Data sources, study designs, and statistical approaches used in life course epidemiology and family health services research will also be reviewed and evaluated. Finally, we will explore implications for clinical and public health practice, policy, and health system development with an eye towards the development of effective and sustainable life course interventions. We will conclude the course with an in-depth examination of three case-studies that will allow the students to apply their knowledge to specific life course and family health services research examples.

The purpose of this course is to provide students with a foundation for understanding: 1) the terminology and theoretical framework used in life course epidemiology and family health services research; 2) biobehavioral pathways by which early life experiences impact health across the life course; 3) the data sources, study designs, and statistical approaches used in life course epidemiology and family health services research; 4) the implications for clinical and public health practice, policy, and health system development with an eye towards the development of effective and sustainable life course interventions.

PREREQUISITES
Graduate standing and either POP HLTH 795 or POP HLTH 797; or consent of instructor.

COURSE OBJECTIVES
By the end of this course, students will be able to:

- Discuss the terminology and theoretical framework used in life course epidemiology and family health services research
- Describe the biobehavioral pathways by which early life experiences impact health across the life course
- Understand the methodological approaches (data sources, study design, and statistical analyses) in life course epidemiology and family health services research
- Discuss the implications of life course epidemiology and family health services research for practice, policy, and health systems
- Explain various preventive and intervention strategies for improving health across the life course and generations
COURSE ADMINISTRATION

Dr. Witt, Debanjana Chatterjee, and Kara Mandell will be responsible for all administrative issues and grading. A course website is set up on the LEARN@UW system. This is the electronic course home. The main purpose of this website is that it will be a repository of downloadable copies of the course readings and, where appropriate, copies of lecture slides (not all lectures will have slides made available in this manner, so good note taking will be important). Occasionally, announcements will be posted under the "News" heading on the course homepage. Students should check the course website frequently. Students may audio record lectures for their own personal use (i.e. not for distribution) with permission of the lecturer.

The lecture will be held in WARF Room 511 from 1:15-2:30 every Monday and Wednesday.

COURSE ENVIRONMENT AND ACADEMIC INTEGRITY/MISCONDUCT

Collaborative Environment & Academic Misconduct
Students are encouraged to discuss course material and content with each other. However, unless otherwise indicated, assignments, exams, and quizzes should be representative of your own work. Please refer to this website if you have questions about student misconduct: http://www.wisc.edu/students/saja/misconduct/misconduct.html

Non-Discrimination Policy
The UW–Madison is committed to creating a dynamic, diverse and welcoming learning environment for all students and has a non-discrimination policy that reflects this philosophy. Disrespectful behaviors or comments addressed towards any group or individual, regardless of race/ethnicity, sexuality, gender, religion, ability, or any other difference is deemed unacceptable in this class.

Special Needs or Disabilities
We wish to fully include persons with special needs or disabilities in this course. Please let Dr. Witt know if you need any special accommodations in the curriculum, instruction, or assessments of this course to enable you to fully participate.

Civility Policy
Members of the University of Wisconsin-Madison community are expected to deal with each other with respect and consideration. The civility policy for this course promotes mutual respect, civility and orderly conduct among the faculty, teaching assistants, and students. We do not intend this policy to deprive any person of his or her right to freedom of expression. Rather, we seek to maintain a safe, harassment-free work-place for the students, faculty, and teaching assistants. Positive communication is encouraged and volatile, hostile, or aggressive actions and language will not be tolerated. If the civility policy for this course is violated, then the individual is subject to removal from the class and possibly the course altogether. In addition, the proper authorities at the UW Departmental, School, and University levels will be notified of such behavior accordingly and further action may be taken if necessary.
STUDENT EVALUATION

The grading for the course is based on three elements:

1. **Presentation of Life Course conceptual models** using assigned articles (5% of grade; presentations will take place 1/30 and 2/4)

2. **Paper written in either grant application format** or as a scientific paper (50% of course grade)
   a. Draft Title and Narrative (this basically serves the purpose of "picking a topic"): Due 2/8
   b. Literature Review Matrix (minimum of 10 papers): Due 2/27
   c. Draft Specific Aims section: Due 3/6
   d. Draft Significance Section: Due 3/20
   e. Draft Abstract: Due 4/15
      Completed Revised Grant/Paper: Due 4/24

   Students will be expected to circulate a draft of their final grant application or paper one week prior to their in-class presentation for peer review (see below).

3. **Presentation** (20% of course grade). There will be an in-class presentation at the end of the semester.

4. **Peer Review** (10% of course grade). Students will be responsible for participating in a “peer review” process in evaluating another student’s application/paper and presentation. The peer review will involve evaluating: 1) the effectiveness of the presentation; and 2) the proposed research study (from the conceptualization of the research questions all the way through to the policy implications).

5. **Participation** in discussion, presentations, and lectures (15% of grade).

Grade Distribution:

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<tr>
<th>Letter Grade</th>
<th>Final Percentage</th>
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<tbody>
<tr>
<td>A</td>
<td>93-100</td>
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<td>AB</td>
<td>87-92</td>
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<td>B</td>
<td>80-86</td>
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<td>BC</td>
<td>73-79</td>
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<td>C</td>
<td>65-72</td>
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<td>D</td>
<td>58-64</td>
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<td>F</td>
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READINGS

Required Reading

Required and additional readings for each particular lecture or module will be posted on the course webpage at Learn@UW. Most readings will be available for download from the course webpage or will be available electronically from UW-Madison Libraries.

The following books are required for the course. They will be available for purchase at University Book Store Health Sciences (located inside HSLC) and on course reserve in Ebling Library.


Recommended Reading

The following books are recommended for the course. They will be available for purchase at University Book Store Health Sciences (located inside HSLC) and on course reserve in Ebling Library. You should consider purchasing these books if the life course approach will be used in your long-term program of research.

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<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Topic</th>
<th>Lecturer</th>
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<tbody>
<tr>
<td>Wednesday January 23, 2013</td>
<td>1</td>
<td>Terminology and Theory</td>
<td>Witt</td>
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<tr>
<td>Monday January 28, 2013</td>
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<tr>
<td>Wednesday January 30, 2013</td>
<td>2</td>
<td>Theory</td>
<td>Witt</td>
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<tr>
<td>Monday February 4, 2013</td>
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<tr>
<td>Wednesday February 6, 2013</td>
<td>3</td>
<td>Biobehavioral Processes</td>
<td>Witt</td>
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<tr>
<td>Wednesday February 13, 2013</td>
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<td>Health Disparities</td>
<td>Witt</td>
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<td>Monday February 18, 2013</td>
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<td>Wednesday February 20, 2013</td>
<td>5</td>
<td>Health Disparities Methodological Considerations—WEBINAR (2/25/13)</td>
<td>Witt</td>
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<td>Monday February 25, 2013</td>
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<td>Wednesday February 27, 2013</td>
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<td>Methodological Considerations</td>
<td>Witt</td>
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<td>Monday March 4, 2013</td>
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<tr>
<td>Wednesday March 6, 2013</td>
<td>7</td>
<td>Implications for Clinical Practice</td>
<td>Witt</td>
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<td>Wednesday March 13, 2013</td>
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<td>Implications for Public Health Practice</td>
<td>Witt</td>
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<td>Monday March 18, 2013</td>
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<td>Wednesday March 20, 2013</td>
<td>9</td>
<td>Implications for Health Systems</td>
<td>Witt</td>
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<td>SPRING RECESS March 23-March 31, 2013</td>
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<td>Monday April 1, 2013</td>
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<td>Case Study 1</td>
<td>Witt</td>
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<td>Wednesday April 3, 2013</td>
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<td>Monday April 8, 2013</td>
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<td>Case Study 2</td>
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<td>Monday April 15, 2013</td>
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<td>Monday April 22, 2013</td>
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<td>Future Research and Directions PRESENTATIONS</td>
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<td>Wednesday April 24, 2013</td>
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<td>Students</td>
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<td>Wednesday May 8, 2013</td>
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**READINGS**

Please read all required readings prior to the class session. Readings listed as "additional" are not required and their content will not be included on as part of the student’s evaluation.

<table>
<thead>
<tr>
<th>Date</th>
<th>Week</th>
<th>Topic</th>
<th>Readings</th>
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</table>
• Chapter 1 of Pickles  
• Chapter 4 of Healthier Societies |
| 1/28/13|      |                               |                                                                                                                                         |
**Assigned Articles (for presentations):**  
• Witt WP, Wisk LE, Cheng ER, Hampton JM, Creswell PD, Hagen EW, Spear HA, Maddox T, Deleire T. Poor Prepregnancy and Antepartum Mental Health Predicts Postpartum Mental Health Problems among |


Additional/Recommended Reading


• Geronimus AT, Hicken M, Keene D, Bound J. "Weathering" and age patterns of allostatic load scores among blacks and white in the United States. Am J Public Health. 2006;96:826-33.


• Chapter 4-- Life course approaches to socioeconomic differentials in health from Kuh, D and Shlomo, YB. A Life Course Approach to Chronic Diseases Epidemiology. Oxford University Press.


Additional/Recommended Reading


3/13/13  8  Implications for Public Health Practice


3/20/13  9  Implications for Policy and Health Systems


4/1/13  10  Case Study: Pregnancy History, Birth Outcomes, and Women’s Future Health

Ethnicity and Disease 2010;20(S2):62-76.


4/8/13  11  Case Study: Social Ties and Health Outcomes Across the Life Course

4/15/13  12  Case Study: Life Course Approach to Health Services and Health Systems

4/22/13  13  Future Directions for Research and Interventions

4/24/13  13  Student Presentations

4/29/13  14  Student Presentations

5/1/13


- http://www.chmcla.org/Who_We_Are/Serving_the_Community/181663

- Chapters 17 and 18 of Kuh, D and Shlomo, YB. A Life Course Approach to Chronic Diseases Epidemiology. Oxford University Press.

- No readings

- No readings
5/6/13  15  Student Presentations  • No readings
5/8/13