

Social Forces, Health, and the Lifecourse (Credits: 4)

Sociology 397SF/Soc 356 Spring 2016; M & W 4:00-5:15p; Location: Machmer W-11

Instructor: Prof. Mark C. Pachucki, Ph.D., mpachucki@umass.edu

Office hours: to be arranged at class, 532 Thompson Hall

Overview. How healthy you are depends on far more than your genes, or the decisions that you make about your health. Where you grow up, who your family are, where you live, and who you know also play important roles in your well-being. Yet many of these characteristics change throughout your life, and early events can have important effects later in your life. This course provides an introduction to social determinants of health and how they matter throughout the lifecourse, with a special focus given to stages of human development and transitions between stages. In this course we will explore the following Qs:

- What are social determinants of health, and where do health disparities come from? How does where you live affect your health? How does who you know shape your health? How does one's social status matter to health? How does the social world interact with our genetic background to shape health?

Through twice-weekly lectures and discussion of the material, we'll explore these questions and many more using a *life course health perspective*. This way of thinking prompts questions such as:

- How might circumstances and events early in life shape later-life health outcomes? How is health transmitted between generations within a family? Which social factors matter most to our health when we're young? When we're older? What kinds of health risks are associated with life transitions? Are there some periods of the life course that are more consequential to our health than others?

Goal of the class: You should leave this course with an ability to think critically about how one's health may be shaped by a mix of social and biological circumstances, and to question how one's health could be related to the health of others. An equally important goal is to help develop skills that will transfer beyond this course: evaluating the quality of evidence, interpreting data in many forms, and writing.

Grading. This course uses Moodle to facilitate active learning, and it will reward consistent engagement with the material and with your classmates. Letter grades will be used (A: 93-100, A-: 90-92.9, B+: 87-89.9, B: 83-86.9; B-: 80-82.9; C+: 77-79.9; C: 73-76.9; C-: 70-72.9; D+: 67-69.9, D: 60-66.9, F: 0-59.9). There are multiple ways to do well; the grade composition consists of: 30% response papers; 20% in-class midterm; 20% final paper; 15% active attendance; 15% peer engagement. For all assignments, a full letter grade will be deducted for every day the assignment is turned in late.

Prerequisites. You are expected to come to class having read the material. There are no formal prereqs besides an active curiosity for the topics; a willingness to read material across the social sciences, public health, and medicine; and a willingness to engage with data presented in a variety of ways. We'll encounter a variety of data tables, graphs, and diverse kinds of qualitative and quantitative analytic methods, *but this is not a statistics course*. I'm more interested in you taking away the larger lessons from a paper than you being able to recall the particular statistical models used to make conclusions.

Workshops. During the first month, I will hold an hourlong evening methods workshop to provide a deeper understanding of statistical approaches for students who may have had limited exposure to statistical models or biomedical writing. There will be a 2nd hourlong evening writing workshop to give an overview of writing a tightly-argued and supported response paper. Everyone needs to sign up for at least one of these; you bring yourself and your questions, I'll give an overview and pizza. (dates TBD by consensus)

Readings. 75% of course materials are original scientific journal articles and videos. PDFs of readings and videos are available on Moodle. We will also read several chapters from Atul Gawande's "Being Mortal" and Katherine Newman's "The Accordion Family" throughout the term. ORDER THESE EARLY.

What I expect of you:

Active attendance (15%). Showing up is mandatory, but unless you participate in class, you won't get full credit for being there. The course material is challenging but rewarding – staying on top of the readings and engaging in class will help you get the most out of class. Each student is allowed one absence, no reason necessary. Get in touch if you have extenuating circumstances, and we'll work together to find a solution.

Peer engagement (15%). This will happen in several ways: (a) through interaction with each other in class. (b) Each student will sign up to start an online discussion thread pertaining to a given session during the term; (c) Each student will participate weekly in the discussion forum on the course Moodle page; (d) Each student will be randomly assigned to be part of a 3-person writing group that will critique each other's final paper proposal to help improve it. This critique is due **April 15**.

Short response papers (30%). There will be 3 of these due through Moodle throughout the term, at times of your choosing (*1st no later than **Feb. 5**; 2nd no later than **March 11**, 3rd by **April 22**). A well-written response paper will critically engage with the themes introduced in a given week's readings, advance an argument, and support it with evidence from the course material. Length should be no more than 800 words (i.e. 3-4p double-spaced, 12pt font). I will provide more guidelines on grading criteria during week 2.

In-class midterm (20%). This 2-hr exam on **March 7** (location TBD) will be a combination of short-answer and essay questions intended to test your grasp of key ideas from the first part of the semester.

Final research paper (20%). This research paper can be on a topic of *your choice*. The goal is for you to gain a better practical understanding of some health condition or disease outcome that you're interested in, and to gather evidence as to how social and biological factors may play into how an individual or population experiences that condition. Paper length should be between 8-10 pp. double-spaced, 12pt font, and the paper should probe how the condition is affected during at least two life course stages, if not the entire life-course. You should augment the course readings with 4-6 additional sources related to your chosen topic. A ~300-word paper proposal is due to me via Moodle no later than **April 4**. Additional guidelines will be distributed in early April. The final paper is due no later than **May 6**.

Other guidelines to help you succeed:

- There is a no technology in class policy – this means laptops, tablets, phones, etc. I've designed our sessions together as interactive, discussion-based lectures. Taking notes and asking questions will help you do well in class.
- Brief check-in. Every student is required to sign up for a 10-minute office hour meeting with me during the first 2 weeks. This is a small class – we'll all get to know each other. It will help me if I know more about your interests in the course material, and if there are ways that I can help you learn. (Tip: it's also easier for professors who know their students to write letters of recommendation for them. Think ahead.)

What you should expect from me:

To help co-create a constructive learning environment. This means being knowledgeable, prepared, and willing to puzzle through questions prompted by the material. It means helping us to take stock of where we've been each week, and where we're headed the following week. It also means being as responsive to your concerns as I can be.

To be available to you outside of class. I'll take a poll as to the best times for office hours and I'll set that time according to what works best for your schedules. *This is because I want these office hours to be helpful for you.* You can email or call my office. If you email, you can usually expect a same-day response (at latest, next day). I check email 2-3x/day during the week, and check the discussion forum daily.

To be transparent and clear about how you are being evaluated during the term. I want you to be apprised at all times about how you're doing in the class. This syllabus gives you an overview of how your grade is calculated. I will be providing additional grading rubrics for response papers, and the final paper as handouts during the semester. You can check your grade at any time on the Moodle website, or email me. I will also post a grade calculator spreadsheet in the "class documents" folder on Moodle so you can forecast what your grade will be if you were to get a [X] grade on assignment [Y].

Part I: Health in social context

Week 1. Overview & life-course perspective (Wed, Jan. 20)

The first lecture on Tues, Sept. 8 will give an overview of the course. What do we mean when we say “the life course”? Are there phases that are more important than others? What is a “sensitive period” or “critical window”? What are some of the major theories about how early-life conditions are linked to later-life health status?

Week 2. Social determinants of health (Jan. 25 & 27)

What is a “social determinant of health”, and how does it differ from a biological, genetic, or physiological determinant of health? How do social forces affect health behaviors and interact with the environment and biology to shape disease outcomes? How does individual health matter to population health? What are “upstream”, “downstream”, and “fundamental” causes of disease?

For Monday:

- Video: “How childhood trauma affects health across a lifetime.” Nadine Burke Harris, TedTalk. ([Moodle](#))
- Harris, Kathleen Mullan. 2010. "An Integrative Approach to Health." *Demography* 47(1):1-22.
- Halfon, N, K Larson, M Lu, E Tullis and S Russ. 2014. "Lifecourse Health Development: Past, Present, and Future." *Journal of Maternal and Child Health* 18:344-55 (**NOT to page 65**).

For Wednesday:

- Newman, Katherine. “The Slippery State of Adulthood”. Ch 1 of “The Accordion Family”
- Link, B. G. and J. Phelan. 1995. "Social Conditions as Fundamental Causes of Disease." *Journal of Health and Social Behavior* 35:80-94.

Week 3. Health disparities (Feb. 1 & 3)

Individuals and subgroups in society have vastly different health outcomes, as well as differential opportunities to access, and use, health care. Opportunities to access quality health care vary significantly by education background, income, occupation, and demographic background. Where do these inequalities originate? How do they vary across the lifecourse?

For Monday:

- Video: “Unnatural causes. In sickness and in wealth.”, ~1 hour ([Linked on Moodle page](#)).
- Braveman, Paula. "What are health disparities and health equity? We need to be clear." *Public Health Reports* 129.Suppl 2 (2014): 5-8.
- Adler, Nancy E. and Katherine Newman. 2002. "Socioeconomic Disparities in Health: Pathways and Policies." *Health Affairs* Vol. 21(2):60-76.

For Wednesday:

- Williams, David R. "Miles to go before we sleep: racial inequities in health." *Journal of Health and Social Behavior* 53.3 (2012): 279-295.
- Braveman, P. A., C. Cubbin, S. Egerter, D. R. Williams and E. Pamuk. 2010. "Socioeconomic Disparities in Health in the United States: What the Patterns Tell Us." *American Journal of Public Health* 100 Suppl 1:S186-96.
- Jones, C. P. 2000. "Levels of Racism: A Theoretic Framework and a Gardener's Tale." *American Journal of Public Health* 90(8):1212-5.

Week 4. Social status and health (Feb. 8 & 10)

One of the fundamental mechanisms through which human (and many animal) societies are organized is a status-based system where some individuals become ranked higher or lower than others. This ranking has implications for stress levels, health behaviors, and happiness. In this week we'll discuss how social status is linked in a variety of ways to our well-being.

For Monday:

- Sapolsky, R. M. 2004. "Social Status and Health in Humans and Other Animals." *Annual Review of Anthropology* 33:393-418.
- Adler, N., A. Singh-Manoux, J. Schwartz, J. Stewart, K. Matthews and M. G. Marmot. 2008. "Social Status and Health: A Comparison of British Civil Servants in Whitehall-II with European- and African-Americans in Cardia." *Social Science & Medicine* 66(5):1034-45.
- Zerubavel, N., P. S. Bearman, J. Weber and K. N. Ochsner. 2015. "Neural Mechanisms Tracking Popularity in Real-World Social Networks." *Proc Natl Acad Sci U S A* 112(49):15072-7.

For Wednesday:

- Newman, Katherine. "Why Are Accordion Families Spreading?" Ch 2 of "The Accordion Family"

Week 5. Social relationships and health, Part I (Feb. 15 & 17)

Some of the most powerful observations in the social sciences are based in the fact that people are interconnected in society at many different levels. Further, because people are connected to each other, their health is also connected. In this week, we'll investigate how connections between people can shape how doctors decide to prescribe drugs, how spouses' health is linked to each other, and how a person's health decisions can diffuse through a much larger population at different stages of the life course.

For Monday (NO CLASS, UNIVERSITY HOLIDAY) / For Wednesday:

- Berkman, Lisa F., and S. Leonard Syme. "Social networks, host resistance, and mortality: a nine-year follow-up study of Alameda County residents." *American journal of Epidemiology* 109.2 (1979): 186-204.
- Elwert, F. and N. A. Christakis. 2008. "The Effect of Widowhood on Mortality by the Causes of Death of Both Spouses." *American Journal of Public Health* 98(11):2092-98.
- Thoits, Peggy A. "Mechanisms linking social ties and support to physical and mental health." *Journal of Health and Social Behavior* 52.2 (2011): 145-161.

Week 6. Networks (Feb. 22) & Neighborhoods (Feb. 24)

We will continue our discussion of networks started the prior week, and discuss how where a person lives can have a powerful impact on a person's everyday lived experiences, as well as affect well-being in myriad small, nearly imperceptible ways. What are the major environmental/social exposures associated with where one lives? How do common behaviors and disease statuses vary by neighborhood or city?

For Monday:

- Christakis, N. A. and J. H. Fowler. 2007. "The Spread of Obesity in a Large Social Network over 32 Years." *New England Journal of Medicine* 357(4):370-79.
- Zhang, Jun, et al. "Network Interventions on Physical Activity in an Afterschool Program: An Agent-Based Social Network Study." *American journal of public health* 105.S2 (2015): S236-S243.

For Wednesday:

- Video: "Unnatural causes: Place matters." ([Linked on Moodle page](#)).
- Larson, N. I., M. T. Story and M. C. Nelson. 2009. "Neighborhood Environments: Disparities in Access to Healthy Foods in the US." *American Journal of Preventive Medicine* 36(1):74-81.
- Sampson, R. J., J. D. Morenoff and S. Raudenbush. 2005. "Social Anatomy of Racial and Ethnic Disparities in Violence." *American Journal of Public Health* 95(2):224-32.

Part II: Key health issues within and across life course stages

Week 7. Pre-natal & birth (Feb. 29 & March 2)

For Monday:

- Barker, D. J. and C. Osmond. 1986. "Infant Mortality, Childhood Nutrition, and Ischaemic Heart Disease in England and Wales." *Lancet* 1(8489):1077-81.
- David, R. J. and J. W. Collins. 1997. "Differing Birth Weight among Infants of Us-Born Blacks, African-Born Blacks, and Us-Born Whites." *New England Journal of Medicine* 337(17):1209-14.
- Video: "Unnatural causes. When the bough breaks". ([Linked on Moodle page](#))

For Wednesday:

- Colen, C. G. and D. M. Ramey. 2014. "Is Breast Truly Best? Estimating the Effects of Breastfeeding on Long-Term Child Health and Wellbeing in the United States Using Sibling Comparisons." *Social Science & Medicine* Vol. 109:55-65.
- Snowden, J. M., E. L. Tilden, J. Snyder, B. Quigley, A. B. Caughey and Y. W. Cheng. 2015. "Planned out-of-Hospital Birth and Birth Outcomes." *N Engl J Med* 373(27):2642-53.

Week 8. Midterm & Childhood, Part I (March 7 & 9)

For Monday: **prepare for Midterm** (4-6pm, room TBD).

For Wednesday:

- Boyce, W. T., J. Obradovic, N. R. Bush, J. Stamperdahl, Y. S. Kim and N. Adler. 2012. "Social Stratification, Classroom Climate, and the Behavioral Adaptation of Kindergarten Children." *PNAS* Vol. 109 Suppl 2:17168-73.
- Video: "Teach every child about food." Jaime Oliver. ([Link on Moodle page](#)).
- Daniel, Caitlin. 2016. "Economic constraints on taste formation and the true cost of healthy eating." *Social Science & Medicine* 148:34-41.

Week 9. SPRING BREAK! (March 14 & 16)

Week 10. Adolescence (March 21 & 23)

For Monday:

- Kramer, Laurie and Katherine J Conger. 2009. "What We Learn from Our Sisters and Brothers: For Better or for Worse." *New directions for child and adolescent development* 2009(126):1-12.
- Kimm, Sue YS, Nancy W Glynn, Andrea M Kriska, Bruce A Barton, Shari S Kronsberg, Stephen R Daniels, Patricia B Crawford, Zak I Sabry and Kiang Liu. 2002. "Decline in Physical Activity in Black Girls and White Girls During Adolescence." *New England Journal of Medicine* 347(10):709-15.
- Dahl, Ronald E. "Adolescent brain development: a period of vulnerabilities and opportunities. Keynote address." *Annals of the New York Academy of Sciences* 1021.1 (2004): 1-22.

For Wednesday (Guest lecture, Prof. Lindsay T. Hoyt, Fordham University):

- Haynie, Dana L. 2003. "Contexts of Risk? Explaining the Link between Girls' Pubertal Development and Their Delinquency Involvement." *Social Forces* 82(1):355-97.
- "How Girls Are Developing Earlier In An Age Of 'New Puberty.'" [NPR Podcast](#)
- Patton, George C., and Russell Viner. "Pubertal transitions in health." *The Lancet* 369.9567 (2007): 1130-1139.

Week 11. Adulthood (March 28 & 30)

For Monday:

- Merton, Robert. 1968. "The Matthew Effect in Science." *Science* 159: 56-63.
- Willson, A. E., K. M. Shuey and G. H. Elder. 2007. "Cumulative Advantage Processes as Mechanisms of Inequality in Life Course Health." *American Journal of Sociology* 112(6):1886-924.
- Mayer, Kenneth H., et al. 2008. "Sexual and gender minority health: what we know and what needs to be done." *American Journal of Public Health* 98(6): 989-995.

For Wednesday:

- Case, Anne and Angus Deaton. 2015. "Rising Morbidity and Mortality in Midlife among White Non-Hispanic Americans in the 21st Century." *Proceedings of the National Academy of Sciences*:201518393.
- Binswanger, Ingrid A., Patrick M. Krueger, and John F. Steiner. "Prevalence of chronic medical conditions among jail and prison inmates in the United States compared with the general population." *Journal of epidemiology and community health*. 2009;63:912-919

Week 12. Older adulthood, Part I (April 4 & 6)

For Monday:

- Flori, K. L., T. C. Antonucci and K. S. Cortina. 2006. "Social Network Typologies and Mental Health among Older Adults." *Journals of Gerontology Series B-Psychological Sciences and Social Sciences* 61(1):P25-P32.
- Gawande, Atul. "Being Mortal". Introduction & Chapter 1 (pp. 1-24)

***Due in Moodle by Monday April 4 @ 5pm: 2-paragraph final paper proposal. ***

For Wednesday:

- Gawande, Atul. "Being Mortal". Chapter 2 (pp. 25-54)

- Gawande, Chapters 3 & 4 (pp. 55-110)

Week 13. Older adulthood, Part II (April 11 & 13)

For Monday:

- Gawande, Chaps 7, 8 (pp. 191-258)

For Wednesday:

- Flori, K. L., T. C. Antonucci and K. S. Cortina. 2006. "Social Network Typologies and Mental Health among Older Adults." *Journals of Gerontology Series B-Psychological Sciences and Social Sciences* 61(1):P25-P32.
- Satariano WA, Scharlach AE, Lindeman D. Aging, place, and technology: toward improving access and wellness in older populations. *Journal of Aging & Health*. 2014;26(8):1373-89.

Due via email to me by Fr. April 15 @ 5pm: your critique of your group members' paper proposals.

Part III: Current developments and future directions

Week 14. How social and biological forces jointly shape health (April 18 & 20)

How is the synthesis of genetic, epigenetic, and social scientific perspectives changing our ability to not only gain deeper understandings of a range of health conditions, but to refine interventions based on new forms of knowledge? Can we assess how much of our health we inherit from our parents, and how much of our health is due to the social environment, or culture?

For Monday (NO CLASS, PATRIOT'S DAY)/ For Wednesday:

- Hertzman, C. and T. Boyce. 2010. "How Experience Gets under the Skin to Create Gradients in Developmental Health." *Annual Review of Public Health* 31:329-47.
- Needham, B. L., N. Adler, S. Gregorich, D. Rehkopf, J. Lin, E. H. Blackburn and E. S. Epel. 2013. "Socioeconomic Status, Health Behavior, and Leukocyte Telomere Length in the National Health and Nutrition Examination Survey, 1999-2002." *Social Science & Medicine* 85:1-8.
- Polderman, T. J., B. Benyamin, C. A. de Leeuw, P. F. Sullivan, A. van Bochoven, P. M. Visscher and D. Posthuma. 2015. "Meta-Analysis of the Heritability of Human Traits Based on Fifty Years of Twin Studies." *Nature Genetics*.

Week 15. Big data, Interventions, and Conclusions (April 25 & 27)

How is the era of “big data” and complex computing affecting how we understand human health and well-being? How are new technologies making the observation of health-related phenomena possible? What are the advantages of these new approaches? What are some of the challenges, limitations, and even dangers?

For Monday:

- Barrett, Meredith A, Olivier Humblet, Robert A Hiatt and Nancy E Adler. 2013. "Big Data & Disease Prevention: From Quantified Self to Quantified Communities." *Big Data* 1(3):168-75.
- McKenna, Maryn. 2013. "The new age of medical monitoring." *Scientific American* 308.3: 33-34.
- Lee, Monica, and John Levi Martin. "Surfeit and surface." *Big Data & Society* 2.2 (2015).

For Wednesday:

- Thorndike, Anne N., et al. "A 2-phase labeling and choice architecture intervention to improve healthy food and beverage choices." *American Journal of Public Health* 102.3 (2012): 527-533.
- Thorndike, A. N., J. Riis, L. M. Sonnenberg and D. E. Levy. 2014. "Traffic-Light Labels and Choice Architecture: Promoting Healthy Food Choices." *American Journal of Preventive Medicine* 46(2):143-9..
- Muennig, Peter, et al. "Effects of a prekindergarten educational intervention on adult health: 37-year follow-up results of a randomized controlled trial." *American Journal of Public Health* 99.8 (2009): 1431-1437.

Review/Q&A for final papers, which are due in Moodle by *****Friday, May 6*****.

UMass Amherst statement on academic honesty

<http://www.umass.edu/ombuds/honesty.php?q=honesty>

All members of the University community must participate in the development of a climate conducive to academic honesty. While the faculty, because of their unique role in the educational process, have the responsibility for defining, encouraging, fostering, and upholding the ethic of academic honesty, students have the responsibility of conforming in all respects to that ethic.

Intellectual honesty requires that students demonstrate their own learning during examinations and other academic exercises, and that other sources of information or knowledge be appropriately credited. Scholarship depends upon the reliability of information and reference in the work of others. Student work at the University may be analyzed for originality of content. Such analysis may be done electronically or by other means. Student work may also be included in a database for the purpose of checking for possible plagiarized content in future student submissions. No form of cheating, plagiarism, fabrication, or facilitating of dishonesty will be condoned in the University community.

Academic dishonesty includes but is not limited to:

- Cheating - intentional use or attempted use of trickery, artifice, deception, breach of confidence, fraud and/or misrepresentation of one's academic work
- Fabrication - intentional and unauthorized falsification and/or invention of any information or citation in any academic exercise
- Plagiarism - knowingly representing the words or ideas of another as one's own work in any academic exercise. This includes submitting without citation, in whole or in part, prewritten term papers of another or the research of another, including but not limited to commercial vendors who sell or distribute such materials
- Facilitating dishonesty - knowingly helping or attempting to help another commit an act of academic dishonesty, including substituting for another in an examination, or allowing others to represent as their own one's papers, reports, or academic works

Sanctions may be imposed on any student who has committed an act of academic dishonesty. Any person who has reason to believe that a student has committed academic dishonesty should bring such information to the attention of the appropriate course instructor as soon as possible.

Formal definitions of academic dishonesty, examples of various forms of dishonesty, and the procedures which faculty must follow to penalize dishonesty are contained in the [Academic Honesty Policy](#).

The policy can also be found in the [Code of Student Conduct](#), available on the Dean of Students web site. If you are charged with a violation of the policy, you have the right to appeal. Appeals must be filed within ten days of notification by the Academic Honesty Office that a formal charge has been filed by an instructor who suspects dishonesty. Information on the appeals process is also contained in the [Academic Honesty Policy](#). Appeals are filed in writing with the Academic Honesty Office. Finally, more information about the policy can be found at the [Faculty Senate's Academic Honesty Page](#) or the [Writing Program's Avoiding Plagiarism page](#).

Accommodations and Services For Students

Disability Services provides a wide variety of services to students with disabilities. Our office promotes the empowerment of people with disabilities and their full integration into campus life and the community.

Accommodations

An accommodation is a modification or adjustment to a course, program, service, job, activity, or facility that enables a qualified student or employee with a disability to participate equally in a program, service, activity, or employment at the University. A “reasonable” accommodation refers to an accommodation that is appropriate as well as effective and efficient, and is agreed upon by the University and the consumer with a disability.

Many accommodations are available at the University to ensure that students with disabilities participate fully in academic and student life. They provide a student with a disability equal access to the educational and co-curricular process, without compromising essential components of the curriculum. Accommodations are determined on an individual basis, based on the student’s documentation. For accommodations to be timely, they must be arranged well in advance. Students are responsible for contacting Disability Services at the beginning of each semester so that reasonable accommodations can be made in a timely manner (first two weeks of classes, or first week of summer or winter session).

Common Accommodations For Students

The accommodations most frequently provided include, but are not limited to:

- Additional time to complete assignments
- Alternate Formats for Printed Course Materials
- Alternate Types of Exams
- Assistive Technology
- Captioning Services Classroom Access Assistants
- Document Conversion
- Extended Time on Exams
- Extension of Statute of Limitations
- Exam Proctoring
- Learning Specialists
- Modification of Graduation Requirements
- Note-Taking Services
- Paratransit Services
- Prepared Materials Before Class
- Reduced Course Load
- Sign Language Interpreters and Oral Transliterators
- Tape Recorders