A Reading List
For
“Biomarkers, Genetics, and Social Science” Workshop

This workshop was sponsored by the Center for Demography and Ecology (CDE), the Center for Demography of Health and Aging (CDHA) and the Robert Wood Johnson (RWJ) Health and Society Scholars Program. Jason Fletcher from Yale University and Elliot Friedman from University of Wisconsin-Madison were the presenters. It was held in Room 8417 Sewell Social Sciences Building, University of Wisconsin-Madison on July 7, 2010.

Reading List for Genetics compiled by Jason Fletcher

*key readings

Behavioral Genetics and Heritability

  Overview and critique
  Overview and critique
  Overview and critique
  Critique
  Overview of regression based heritability estimation
  Recent example of regression based heritability estimates
  Example of adoption study
  “Random” assignment of adoptees

Other examples

Molecular Genetics

Overview Papers:


  Example

Gene x Environment Studies

Classic Example

Recent Example

Overview

Example of GxE with family design

Social Science with Genetics


Overview

“first” genetic instrumental variable paper in social science

Extension, first use of “genetic lotteries” (family design)

Additional Presentations:

GWAS
http://www.youtube.com/watch?v=b9GIBWqpinE&feature=related

Genetics of Addiction (NIDA)
http://drugabuse.gov/about/organization/Genetics/geneticsepigenetics/index.html

Reading List for Biomarkers compiled by Elliot Friedman

Overview


Excellent, easy to follow overview of role of psychosocial factors in the SES-health link


Thorough overview of candidate biological processes linking social factors and health

Organizational Model: Psychosocial Stress and Physiological Dysregulation

A. Regulatory Pathways


Introduction to the use and measurement of salivary cortisol

Overview of autonomic regulation of biological factors related to health
In-depth, technical overview of stress system biology

Latent growth curve modeling applied to multi-day cortisol measurements

One aspect of the daily cortisol pattern – the awakening response – discussed

Links between another aspect of the daily cortisol pattern – decline across the day – and SES

Same group looking at association of SES and autonomic function

Another large-scale study linking SES and cortisol decline across the day

B. Inflammation


Editorial discussing the ways in which CRP screening should and should not be used

Looking at whether inflammatory and other factors improve mortality prediction over traditional (e.g. Framingham) markers

Linking CRP and SES in a national sample

A life-course perspective on inflammation and SES associations

McDade has pioneered the use of blood spots as an alternative to blood draws for measurement of blood proteins.

Use of blood spots in a national survey

C. Summary Indices – Allostatic Load


Early paper outlining the concept of allostatic load – group discussion at the end of the paper

This paper outlined the concept of allostasis, a forerunner of allostatic load. Long paper, but good read

Assessing the link between SES and allostatic load

Testing the hypothesis that stress results in allostatic load – mostly negative findings

Tests the role of all obstetric load as mediator of the SES-health link – again, a negative finding


Using Grade of Membership analysis as an alternative method for assembling a risk index

Physiological Dysregulation: Potential Role for Epigenetic Processes

Link to NOVA video outlining the basics of epigenetics (http://www.pbs.org/wgbh/nova/sciencenow/3411/02.html)

Interesting, 13 minute video that introduces the idea of epigenetics and how it works at the molecular level


Examines the role of epigenetic changes in effects of and transmission of maternal behavior


Excellent, somewhat technical paper establishing a pathway from social isolation to inflammation via autonomic regulation of gene expression