Health Psychology

PSY 289

March 15

Outline

- Syllabus review & introductions
- General course expectations
- Unit 1: Introduction to Health Psychology
  - Defining the field
  - Social ecological model
  - Macro-social influences on health, Health disparities
  - Mind-body connections, Biopsychosocial model
  - Methodology and research methods in health psychology

Contact information

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  - Consultation hours by appointment

What is Health Psychology?

- Let´s start with some thought questions
  - How would you define Health Psychology?
  - What do we mean by health?
  - What determines health?
  - What role does psychology play in health?
  - What do health psychologists do?

What is Health Psychology?

- Health psychology is an interdisciplinary field concerned with the application of psychological knowledge and techniques to health, illness, and health care (Marks et al., 2011)
- It is wholistic, concerning itself with both physical and mental health

History of Health Psychology

1973 – the Board of Scientific Affairs of the APA appointed a task force to study the potential for psychology's role in health research.

1978 – APA established Division 38, Health Psychology

1982 – the journal Health Psychology began publication

Thought question

- How does Health Psychology differ from?
  - Psychosomatic medicine
  - Behavioral medicine
- How about other related fields?
  - Epidemiology
  - Public health
  - Sociology….

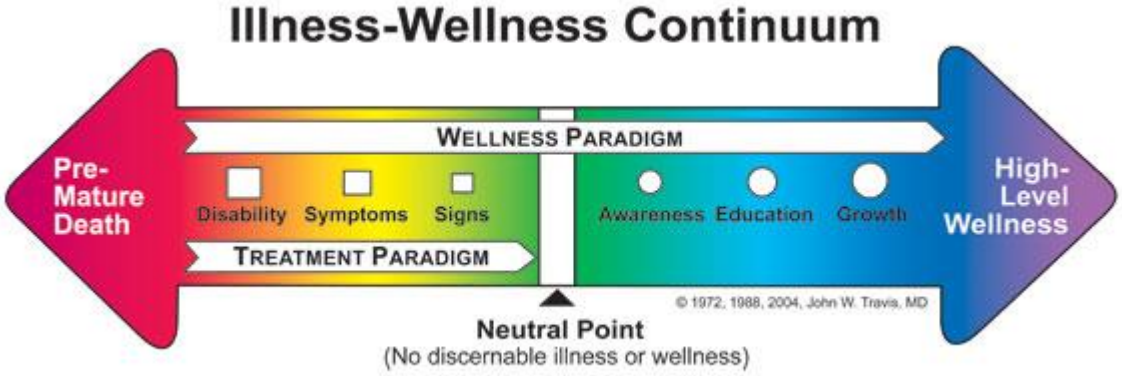
Aims of Health Psychology

- Promotion and maintenance of health (health habits)
- Prevention and treatment of illness (clinical)
- Identification of etiological and diagnostic correlates of health and illness (research)
- Analysis of the health care system and health policy formation (political)

(Matazarro, 1982)

What do we mean by health?

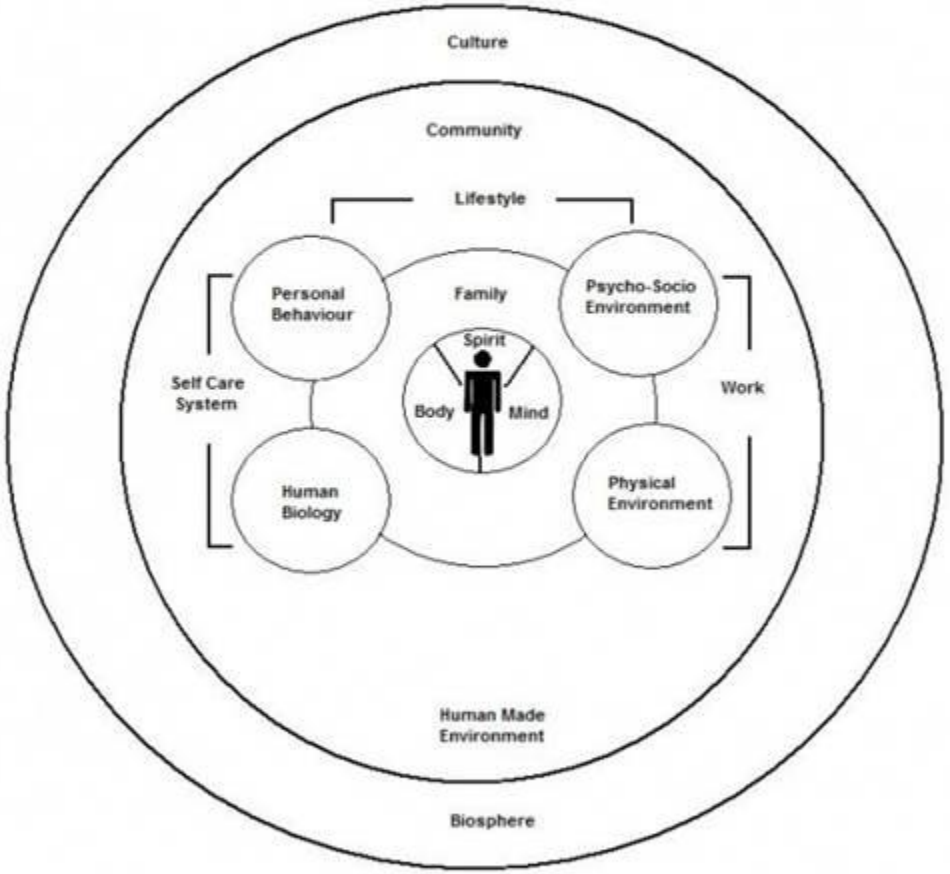
- Health is most commonly defined in terms of *absence of disease*, but may be better viewed as an illness/wellness continuum (attributed to John, Robins, Maslow 1972-1975)



World Health Organization

Definition of Health

Health is a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity.

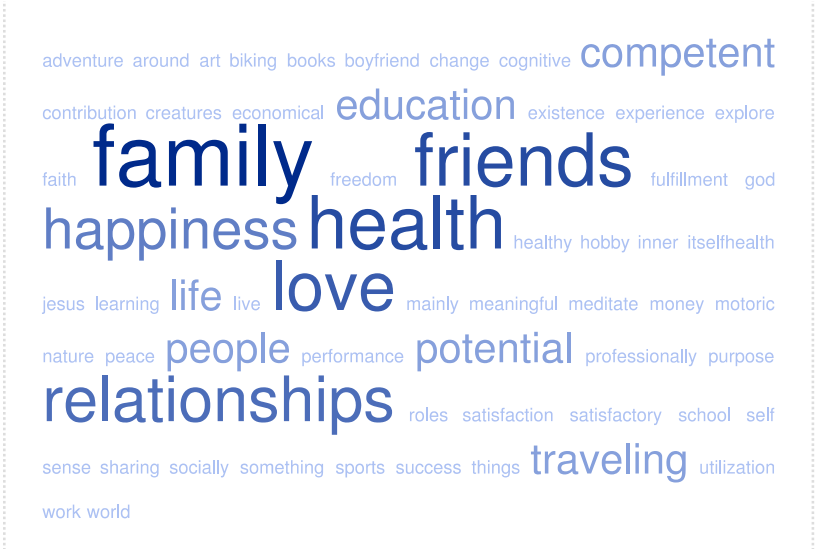


Source: Health Mandala described by Trevor Hancock in 1993 in Health, human development and the community ecosystem: three ecological models Health Promot. Int. (1993) 8 (1): 41-47. doi: 10.1093/heapro/8.1.41

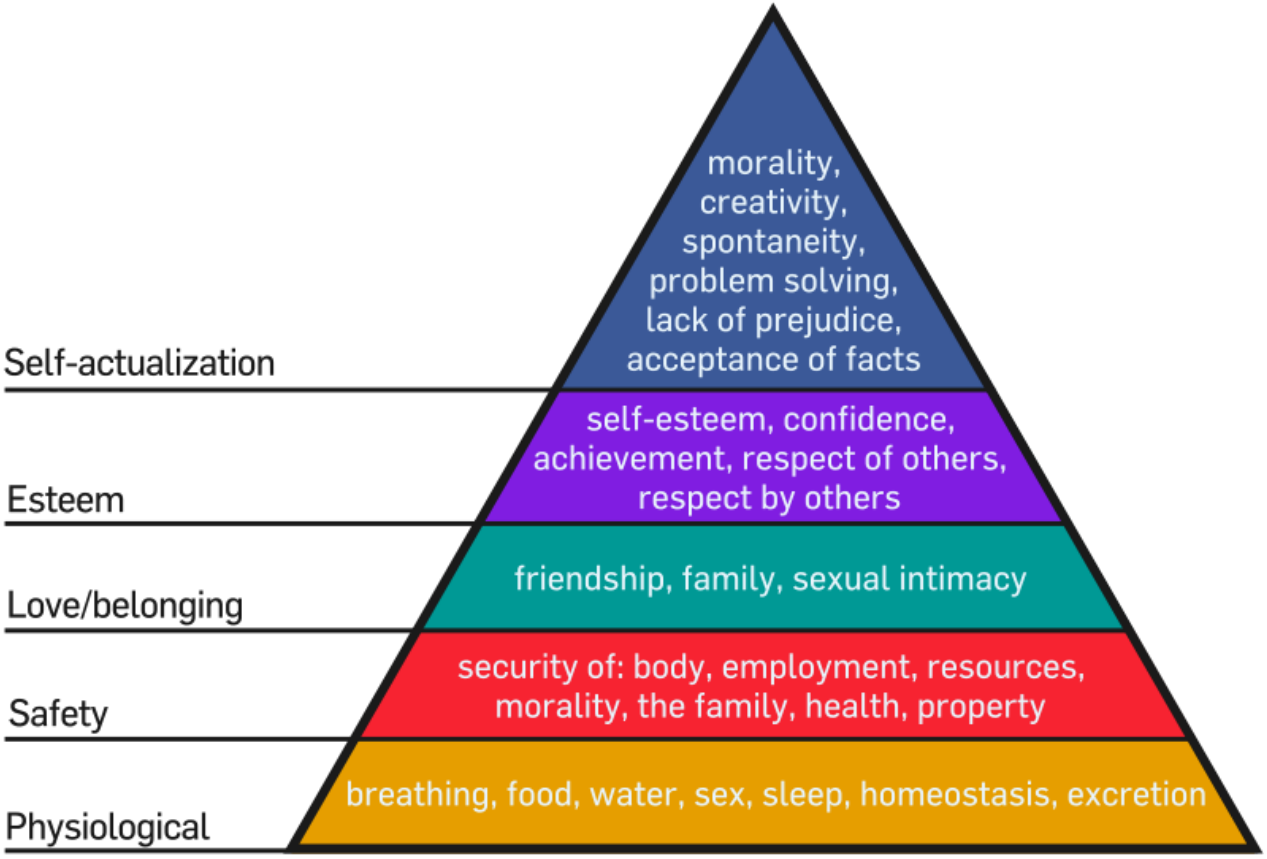
What is health?

- Health is a state of well-being with physical, cultural, psychosocial, economic, and spiritual attributes, not simply the absence of illness
- To be healthy, one´s biological needs must be satisfied, as well as one´s needs to interconnect with others and be autonomous

What is the most important in your life?

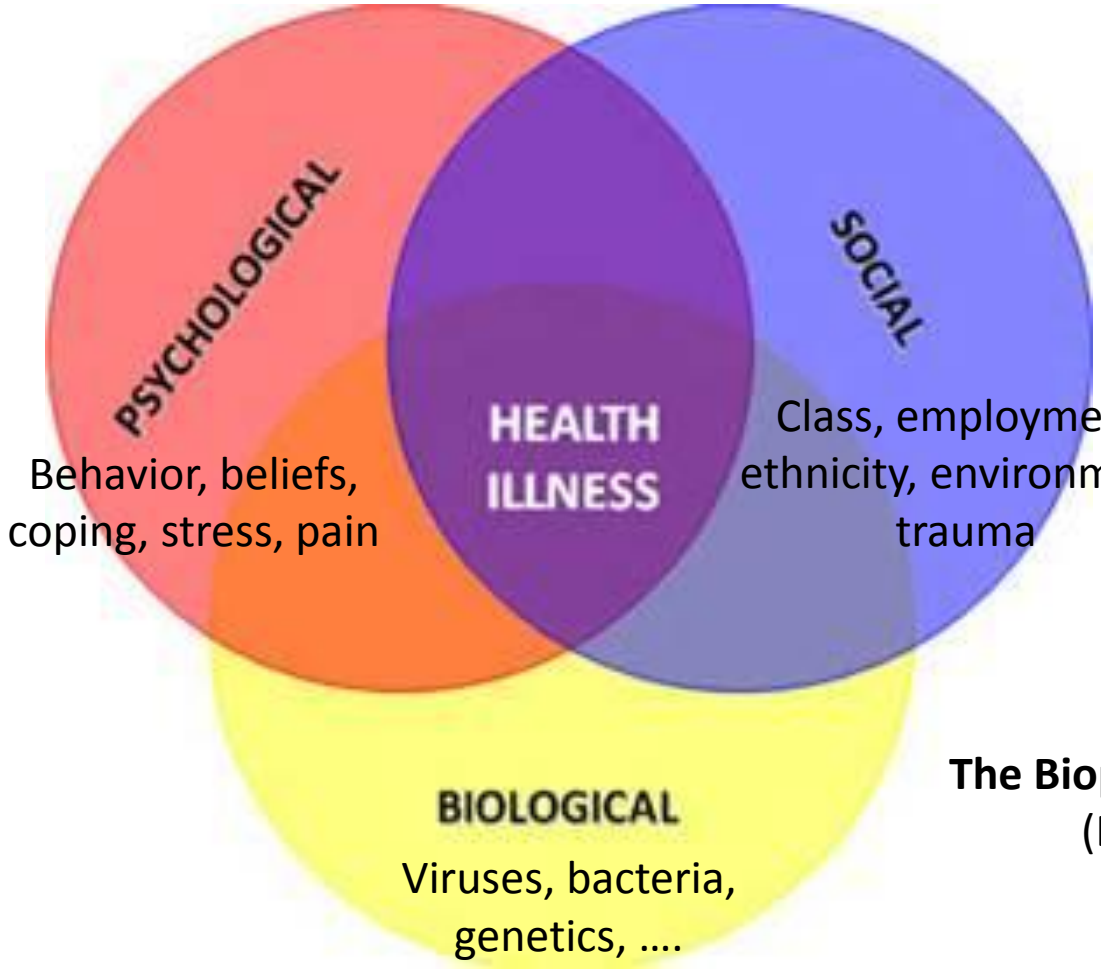


Health as needs satisfaction



Maslow (1943)

Different models of health



The Biopsychsocial Model
(Engel, 1977)

Models of health

Biomedical Model

- Reductionistic
- Single-factor
- Assumes mind – body dualism (two separate entities, not affecting each other)
- Emphasize illness over health
- Main focus on curing illness

Biopsychosocial

- Macro-level as well as micro-level factors considered
- Multiple factors
- Mind and body interact, influence each other
- Focus both on health and illness – both have mental and social components
- Main focus on health (prevention)



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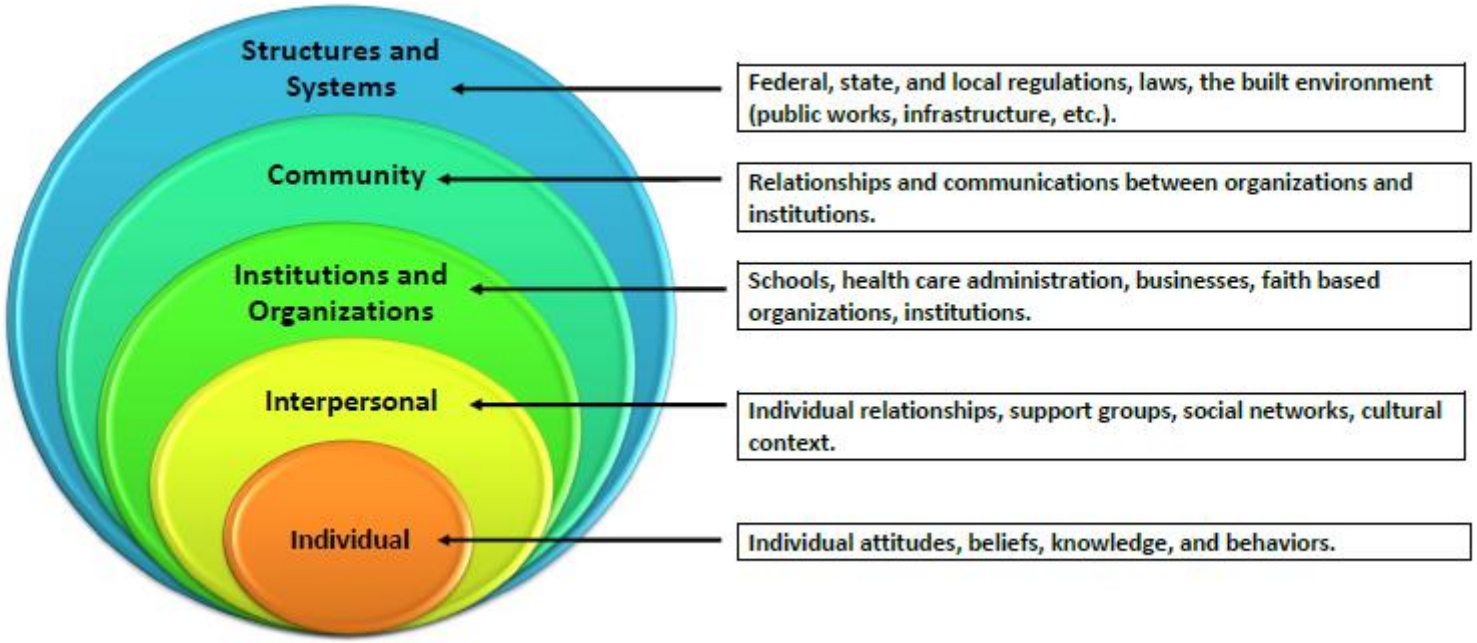
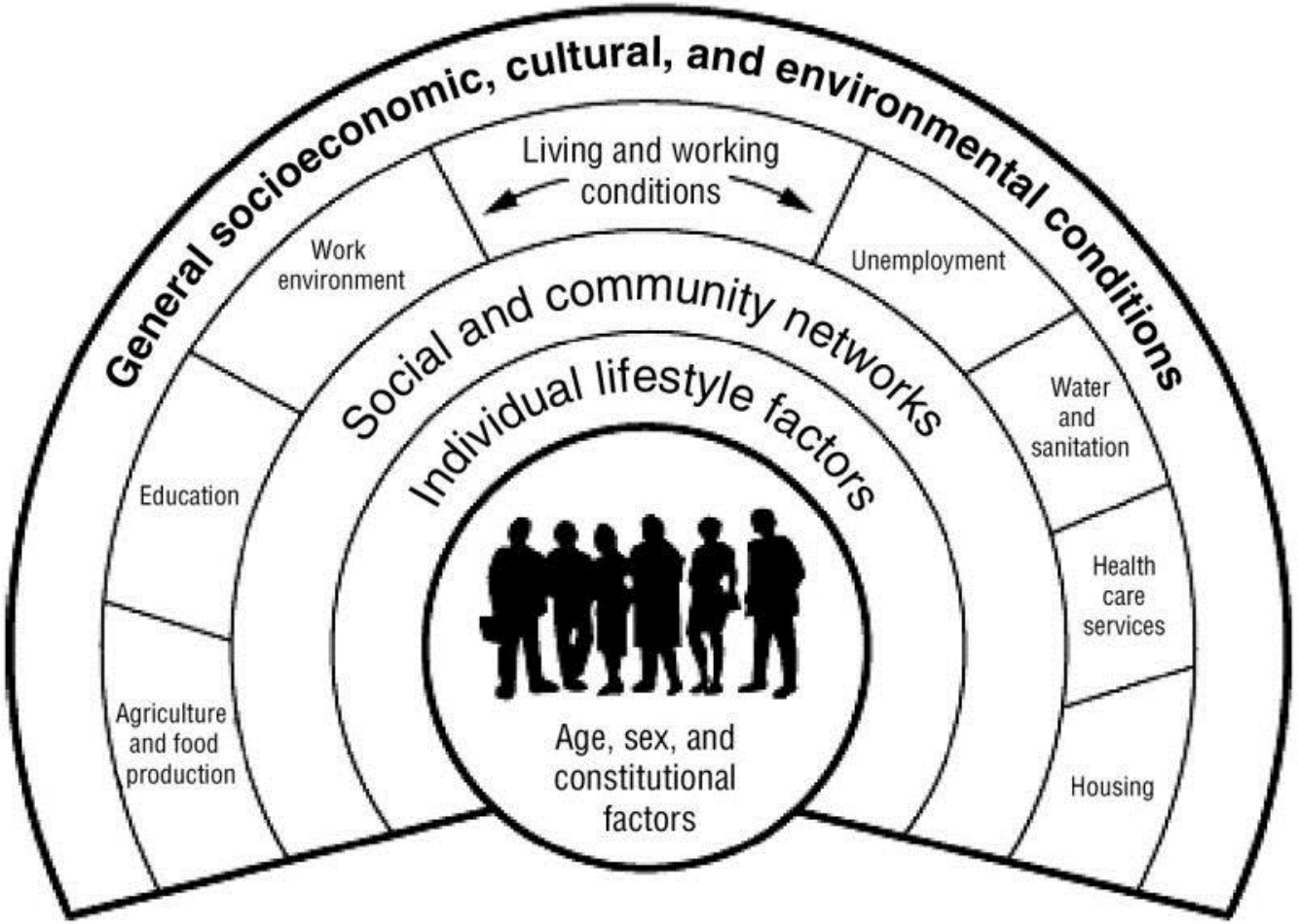
Discussion

- Have you been to another country?
- Consider any differences between that country and your own (e.g., access to health care, transport, sanitation, smoking regulation, diet, levels of exercisem etc.)
- How might these differences explain any differences in patterns of health and illness?

Social Ecological Model



https://www.cdc.gov/nccdphp/dnpao/state-local-programs/health-equity/framing-the-issue.html



Dahlgren & Whitehead's "Health Onion" (1991)

Tha Macro-Social Environment and Health

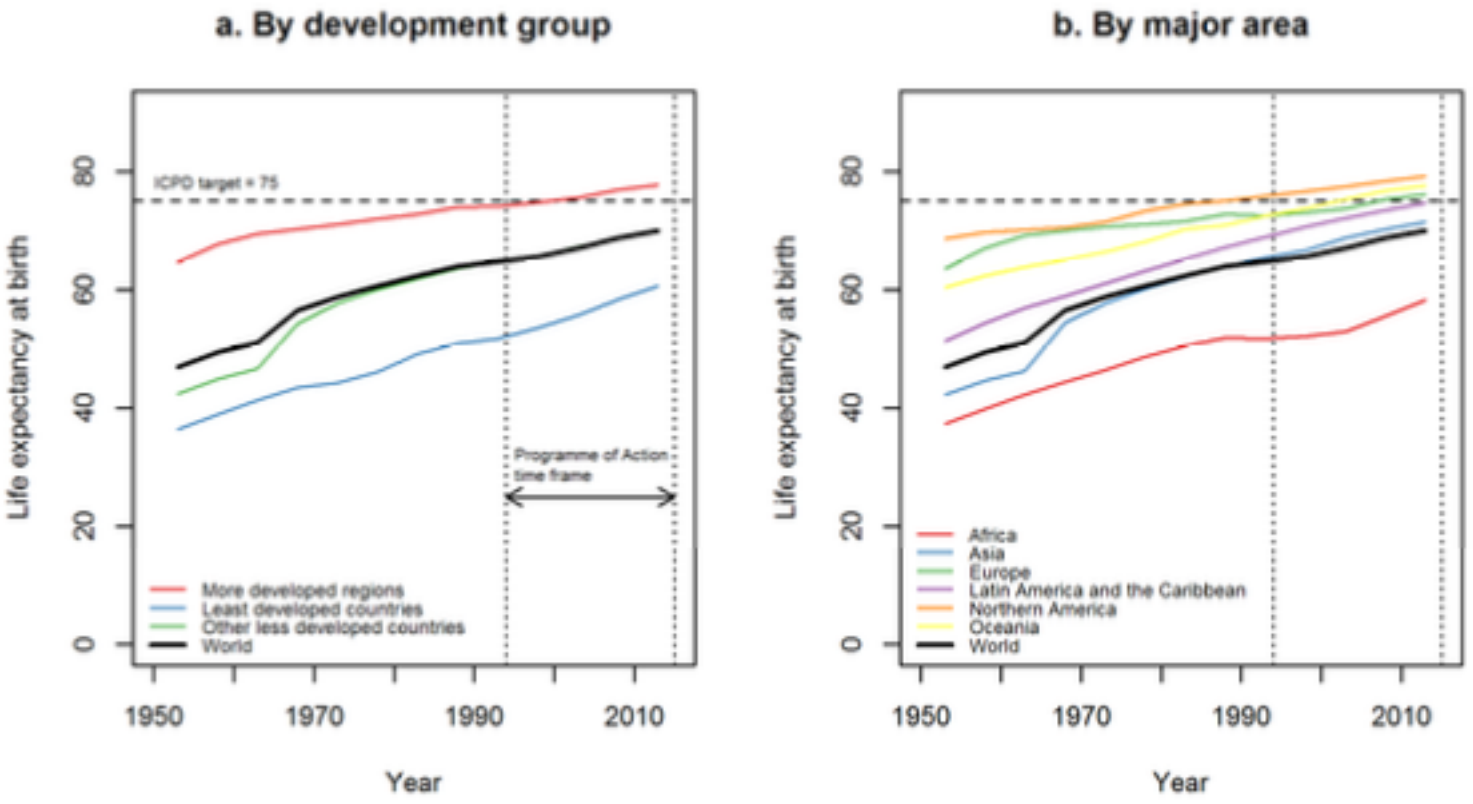
- Health, illness, and motality vary based on geographical location, time, SES, *ethnicity/race*, and gender.
  - SES is more important as determinant of health than ethnicity – however, one must consider the interplay of income, education, and occupation
- Dramatic increases in world population with negative impacts on poor nations
- The greatest influence on health for the majority of people is **poverty**

Poverty

- Poverty is a factor in disease rates & decreased life expectancy
- For example, in the US, disproportionate numbers of African-Americans, Latinos & Native Americans are poor
- Access to medical care is a factor that makes poverty a health risk
- Poverty is associated with poorer health habits
- Poverty puts poorer classes at increased risk for disease

Health inequalities by geographical location

Figure i. Life expectancy at birth by development group and major area, 1950-1955 to 2010-2015

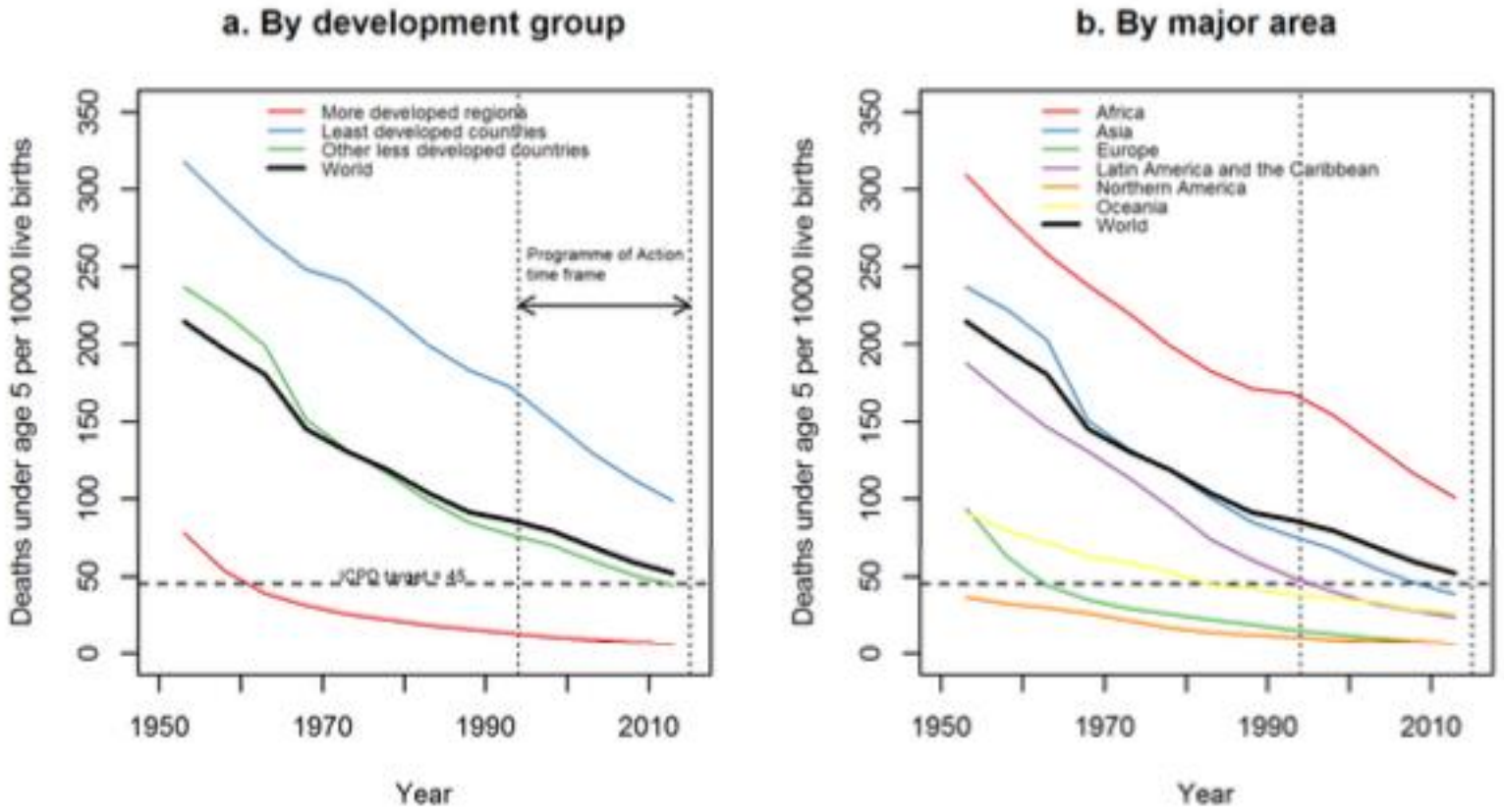


Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2013). *World Population Prospects: The 2012 Revision*. New York: United Nations.

http://www.un.org/en/development/desa/population/publications/pdf/mortality/WMR2013/World_Mortality_2013_Report.pdf

Health inequalities by geographical location

Figure 7. Under-five mortality by development group and major area, 1950-1955 to 2010-2015

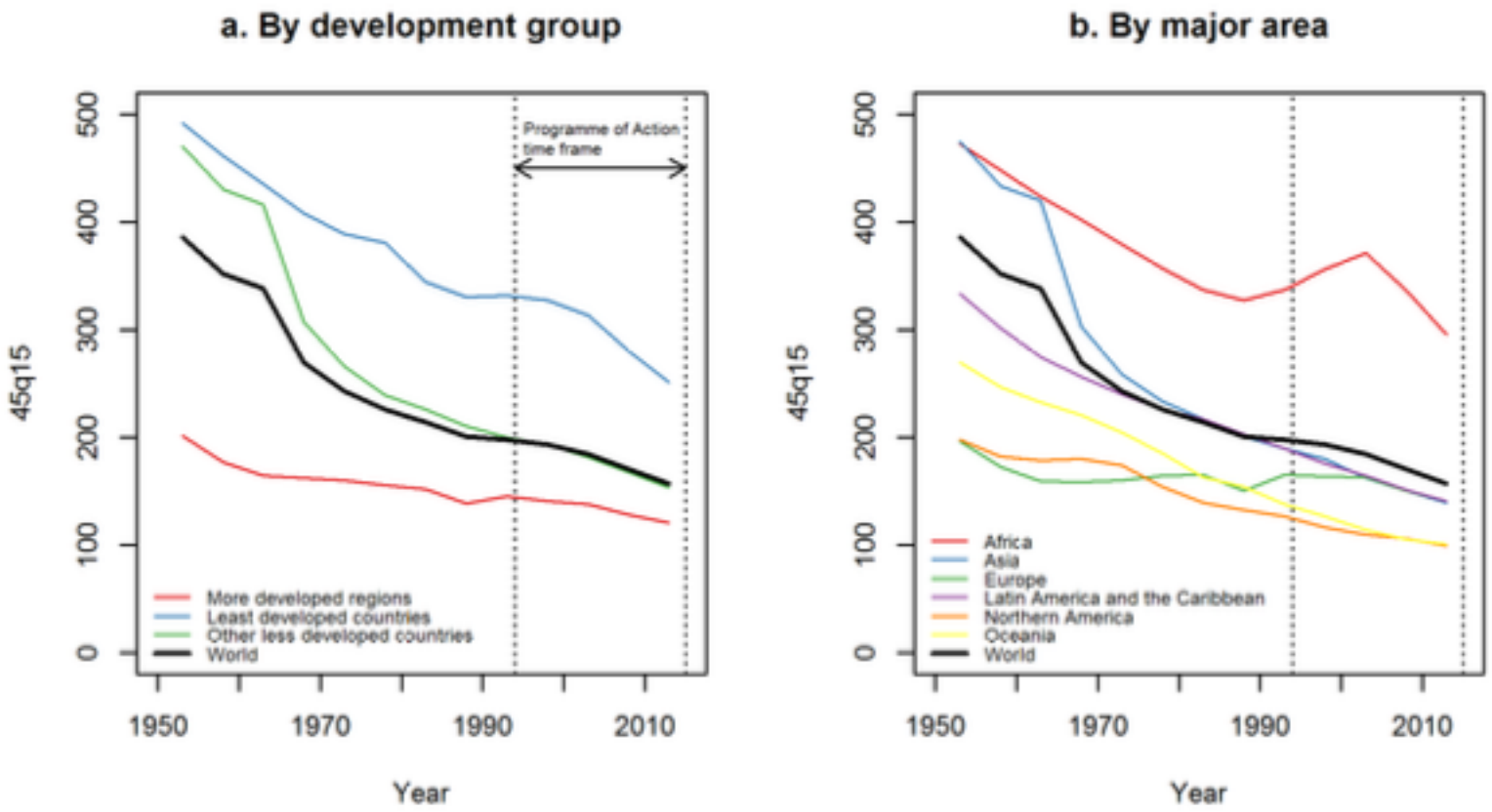


Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2013). *World Population Prospects: The 2012 Revision.* New York: United Nations.

http://www.un.org/en/development/desa/population/publications/pdf/mortality/WMR2013/World_Mortality_2013_Report.pdf

Health inequalities by geographical location

Figure 10. Probability of dying between ages 15 and 60 by development group and major area, 1950-1955 to 2010-2015



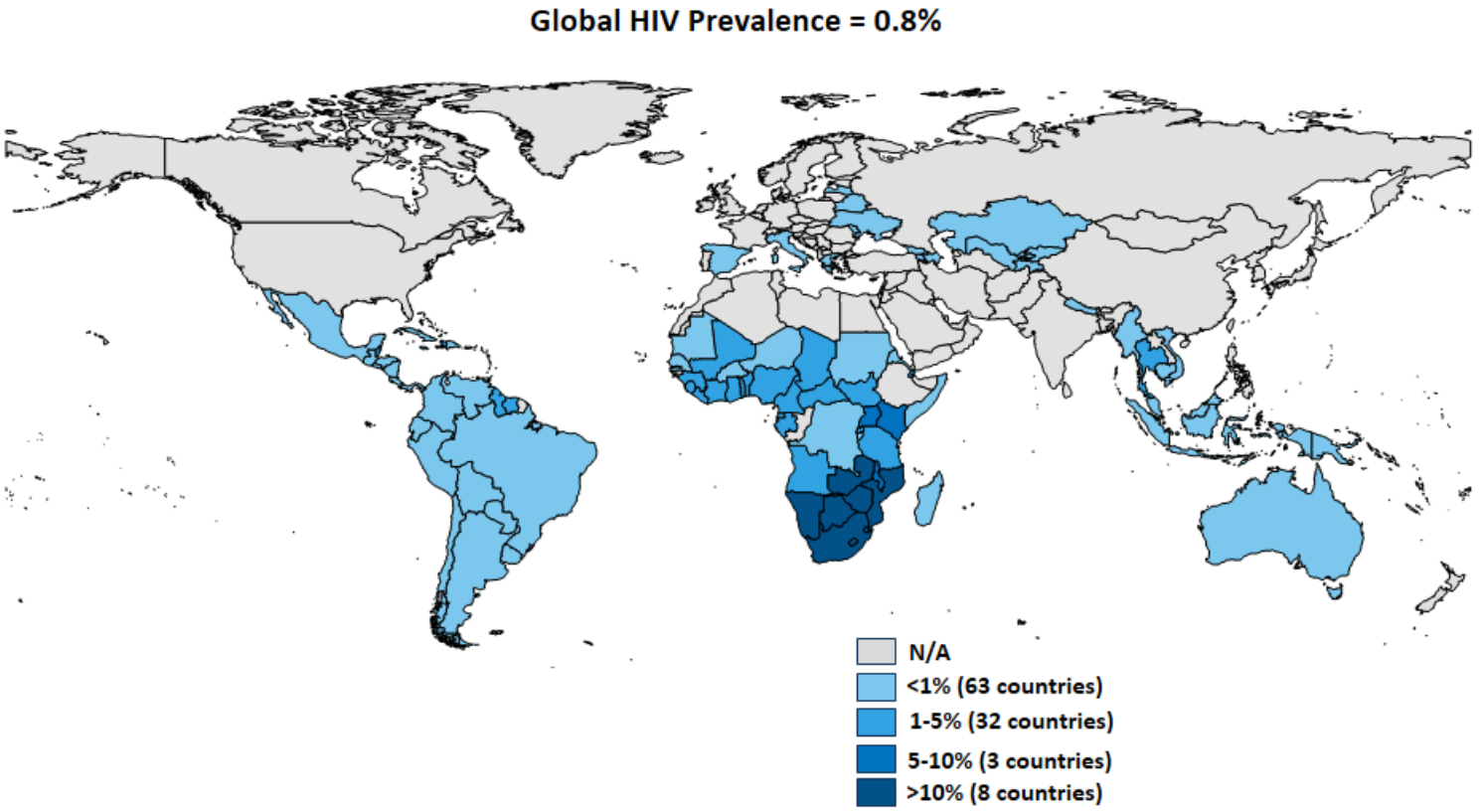
Source: Population Division of the Department of Economic and Social Affairs of the United Nations Secretariat (2013). *World Population Prospects: The 2012 Revision*. New York: United Nations.

http://www.un.org/en/development/desa/population/publications/pdf/mortality/WMR2013/World_Mortality_2013_Report.pdf

Health inequalities by geographical location

Figure 1

Adult HIV Prevalence, 2015

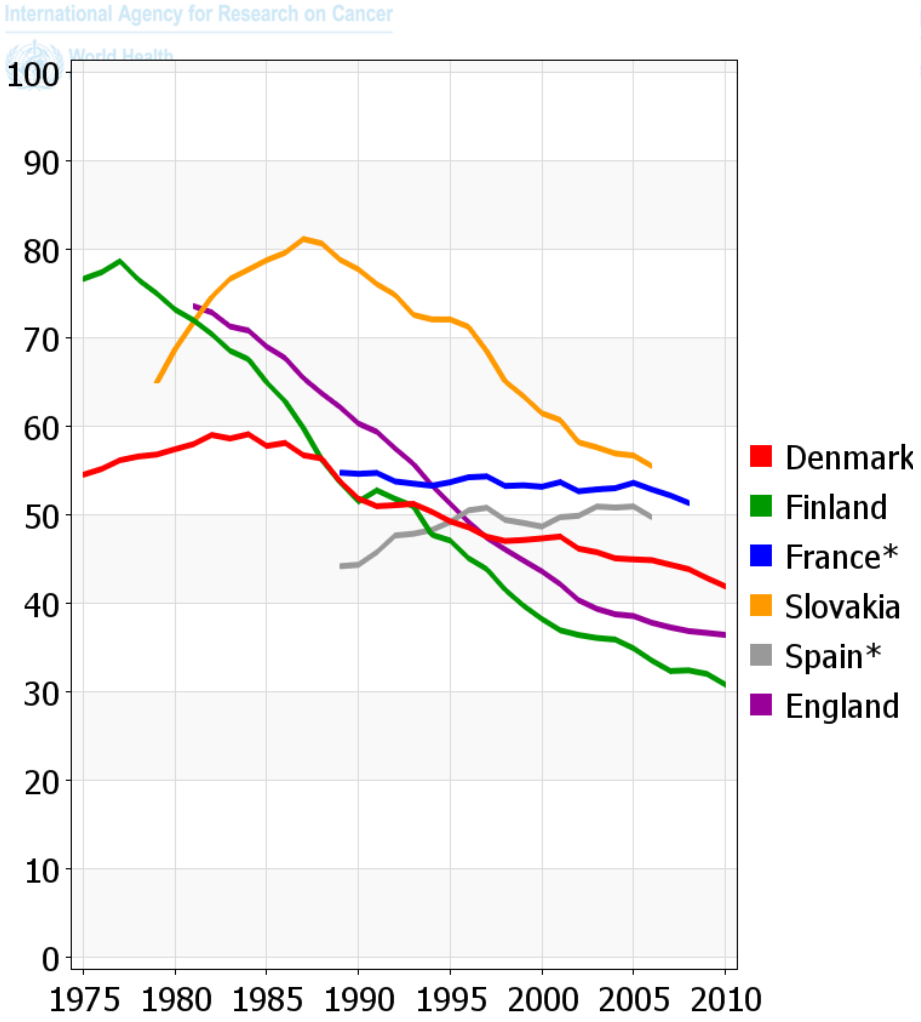


NOTES: Data are estimates. Prevalence includes adults ages 15-49.
SOURCES: Kaiser Family Foundation, based on UNAIDS, AIDSinfo, Accessed June 2016

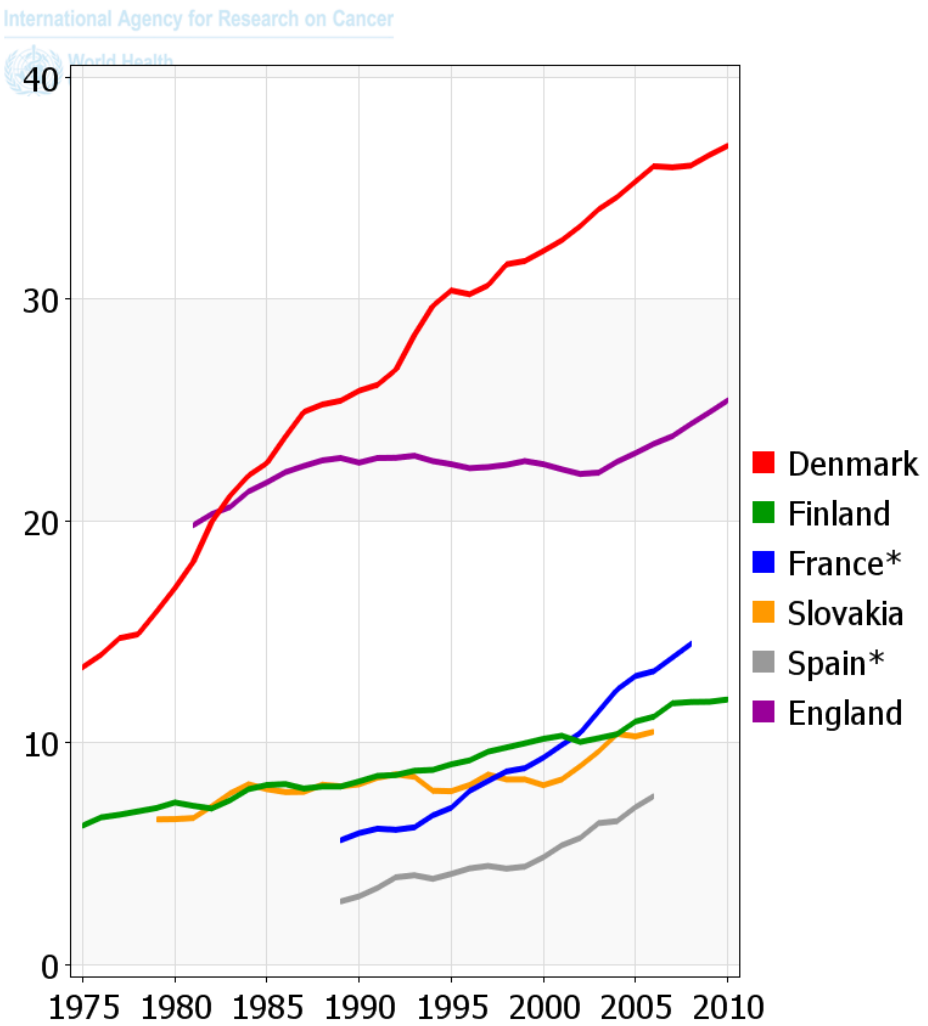
THE HENRY J. KAISER FAMILY FOUNDATION

Health inequalities by geographical location

MEN

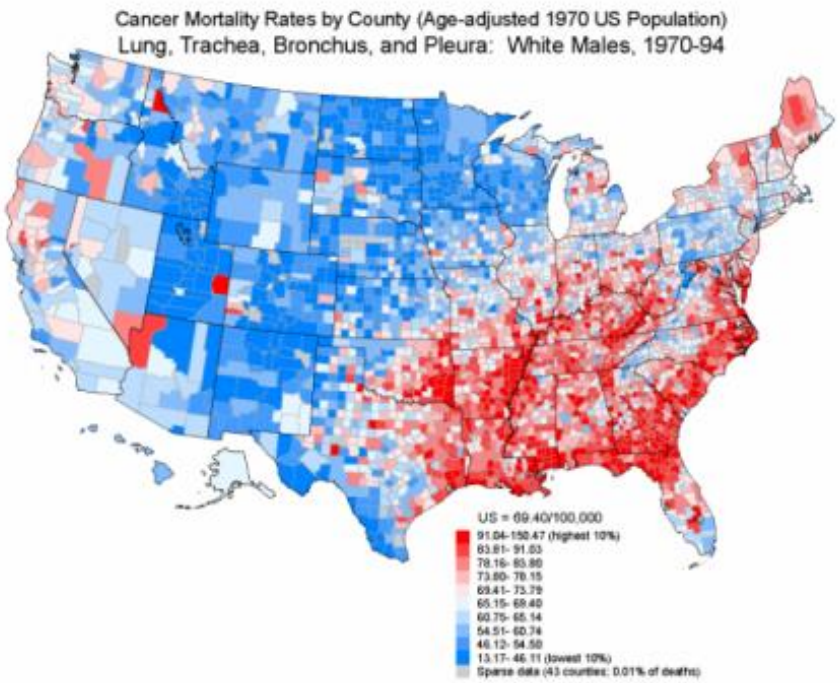


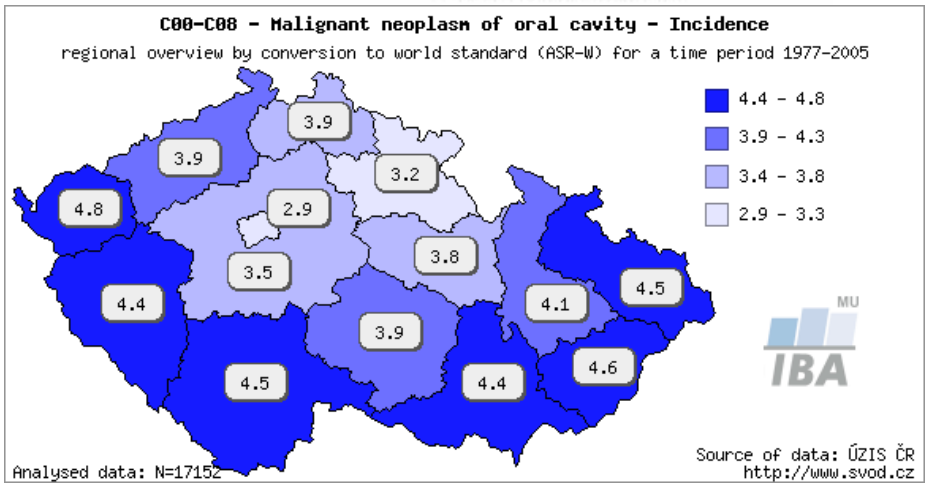
WOMEN

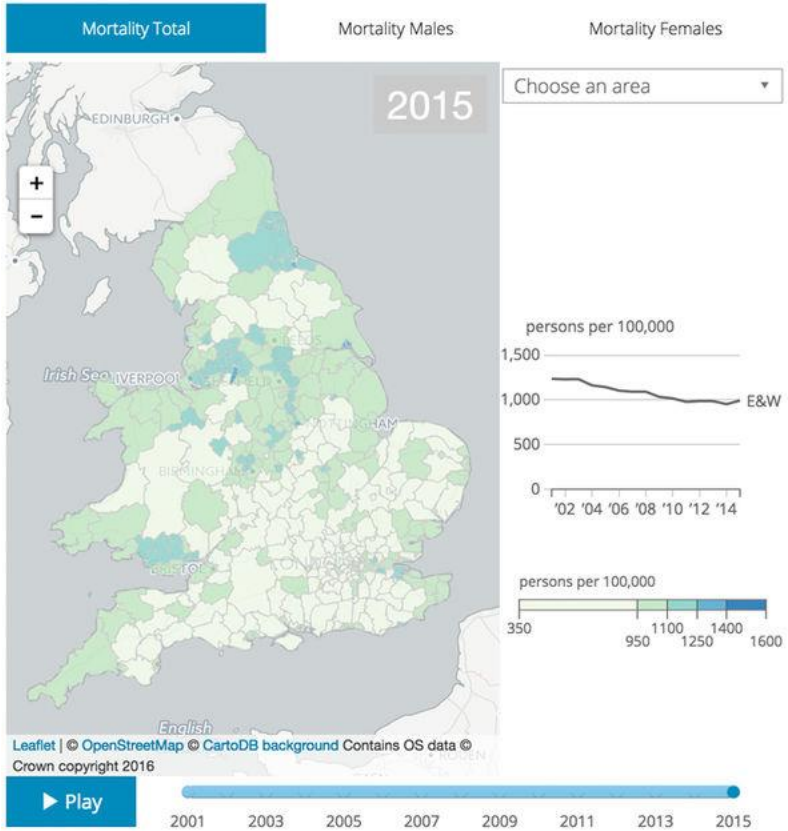


http://globocan.iarc.fr/Pages/fact_sheets_cancer.aspx?cancer=lung

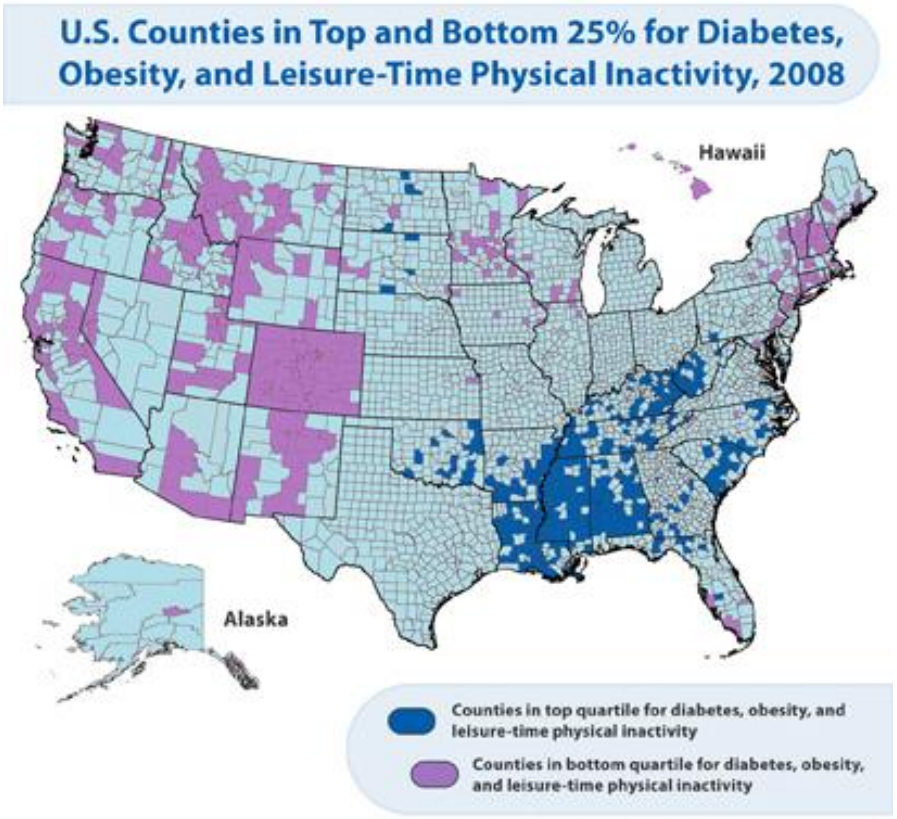
Health inequalities by geographical location

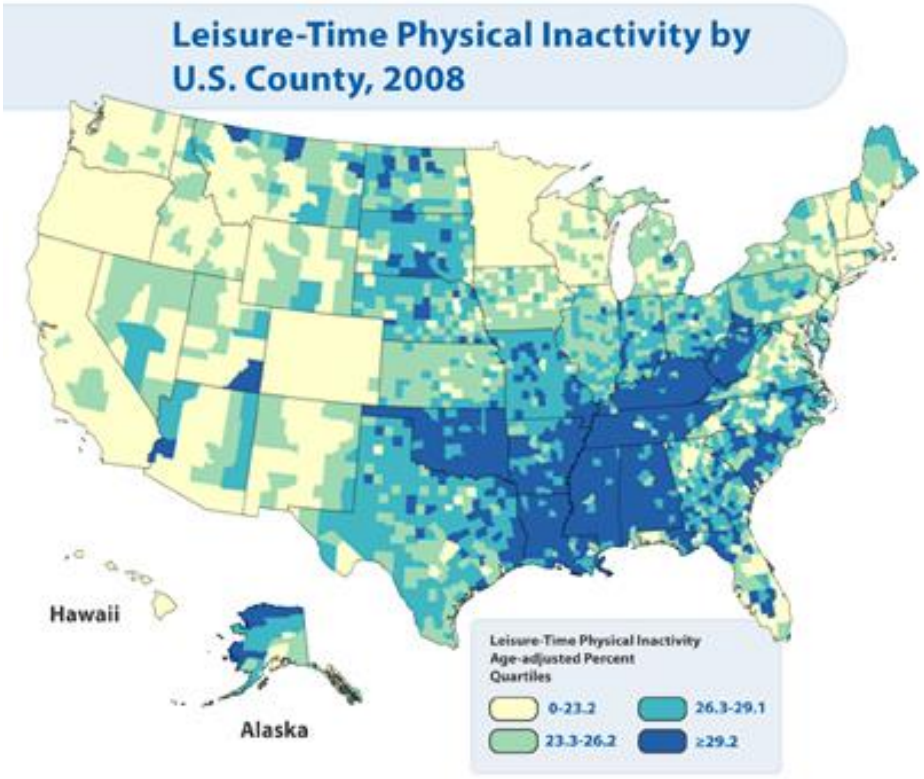






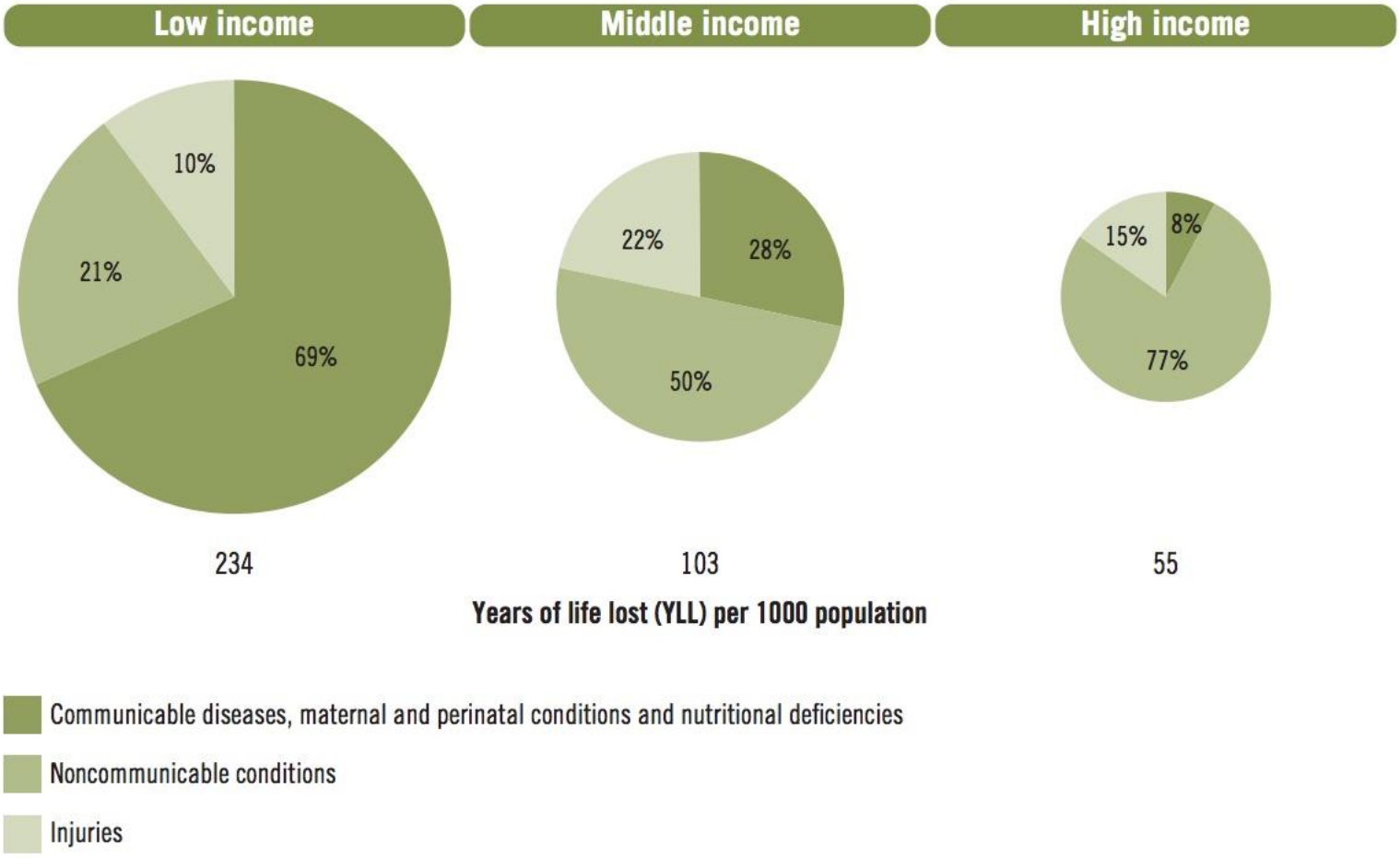
Source: Mortality Statistics: Deaths Registered in UK by Area of Usual Residence, 2015





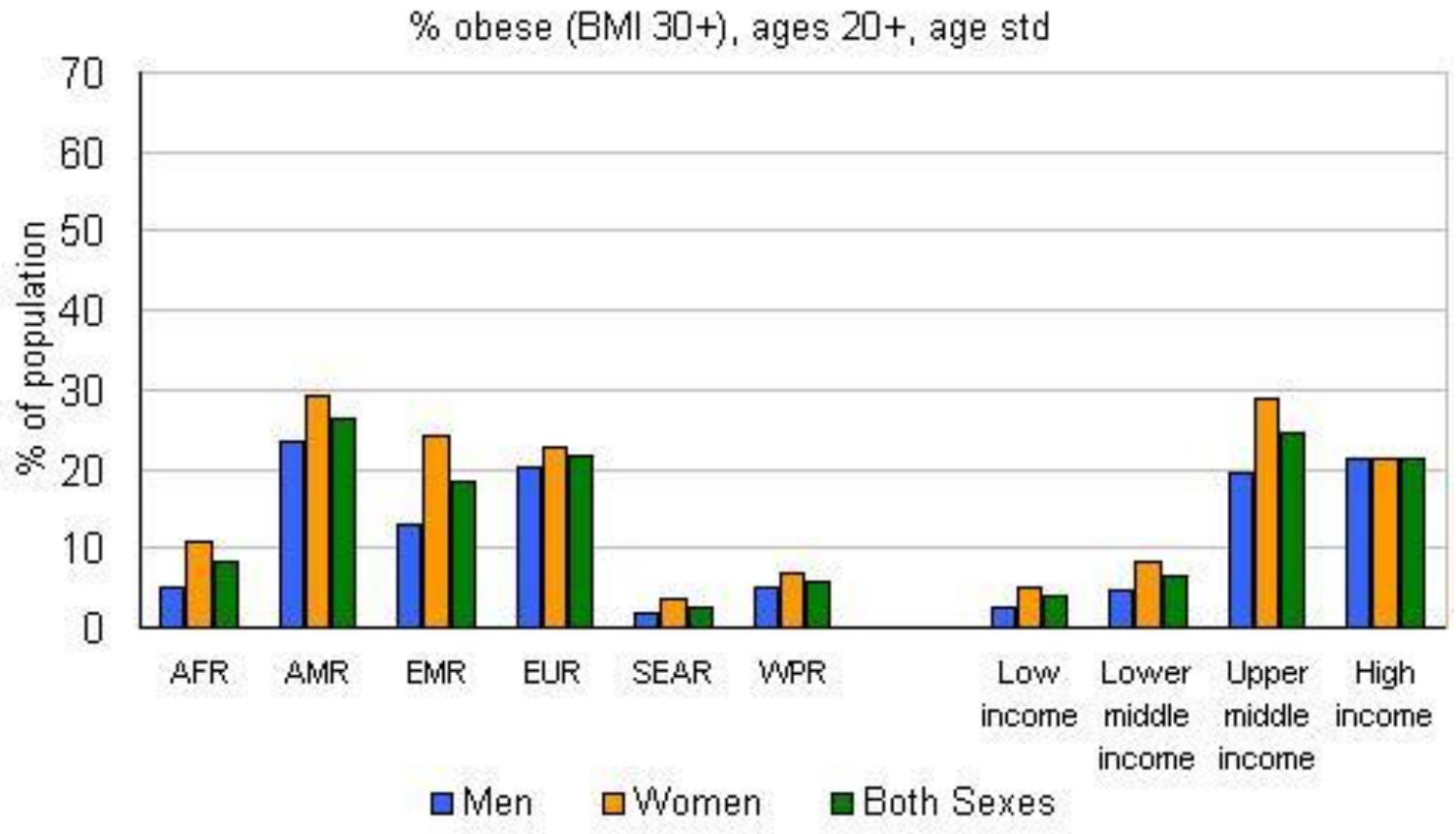
Content source: [National Center for Chronic Disease Prevention and Health Promotion, Division of Diabetes Translation]

Health inequalities by SES



WHO (2010)

Health inequalities by SES



http://www.who.int/gho/ncd/risk_factors/obesity_text/en/

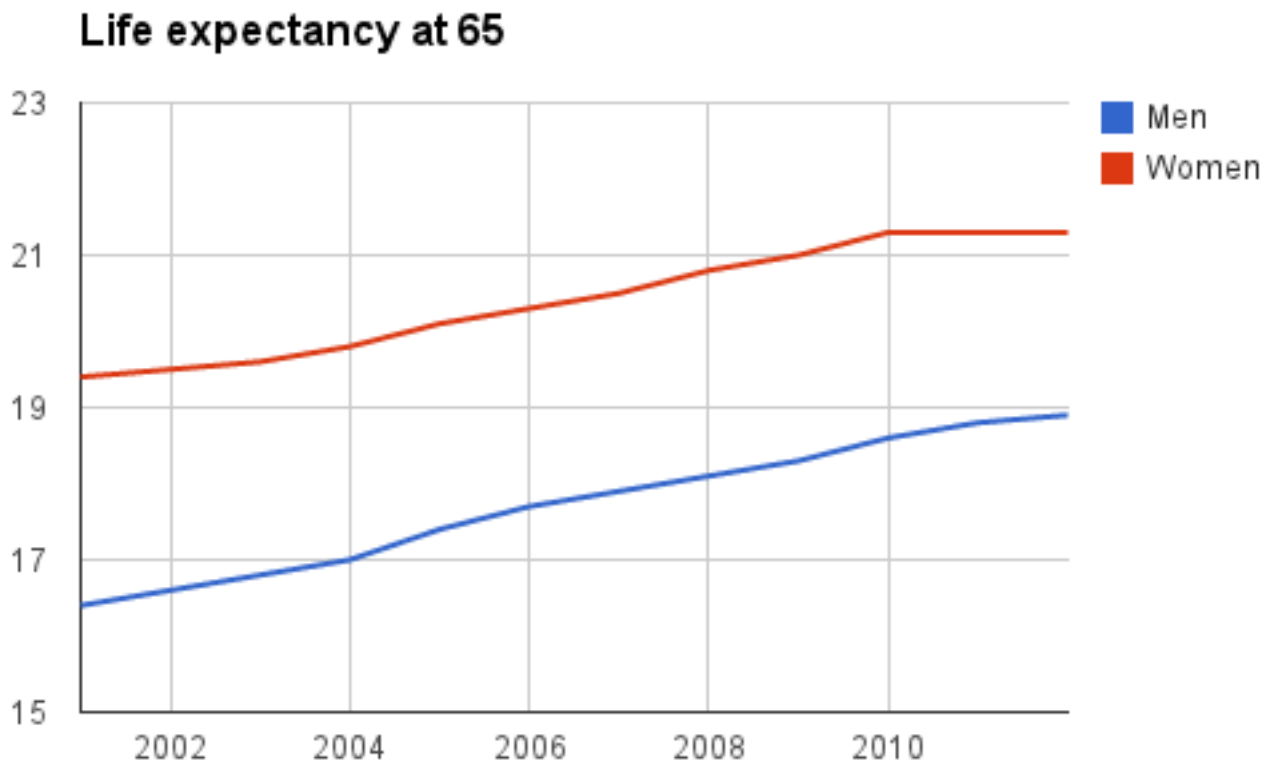
Health inequalities by SES

- Multiple disadvantages accumulate with low SES
  - Families, schools, neighborhoods
  - Peer groups
  - Parental support systems, parental workplaces
  - Social policy

Health inequalities by SES

- Psychosocial explanations for social variations in health
  - Perceived inequality
  - Stress
  - Lack of control
  - Less social connection
- Material explanations for social variations in health
  - Reduced income
  - Reduced access to services
- Political explanations for social variations in health
  - Political philosophies, social policies

Health inequalities by gender



http://www.citymetric.com/horizons/life-expectancy-england-isnt-falling-were-reaching-upper-limit-638

Health inequalities by gender

- Men have shorter lifespans and are more likely to die from different causes
- Women live longer but have greater morbidity and utilize health care services more
- *What are the likely explanations for men's shorter life expectancy?*

What do health psychologists do?

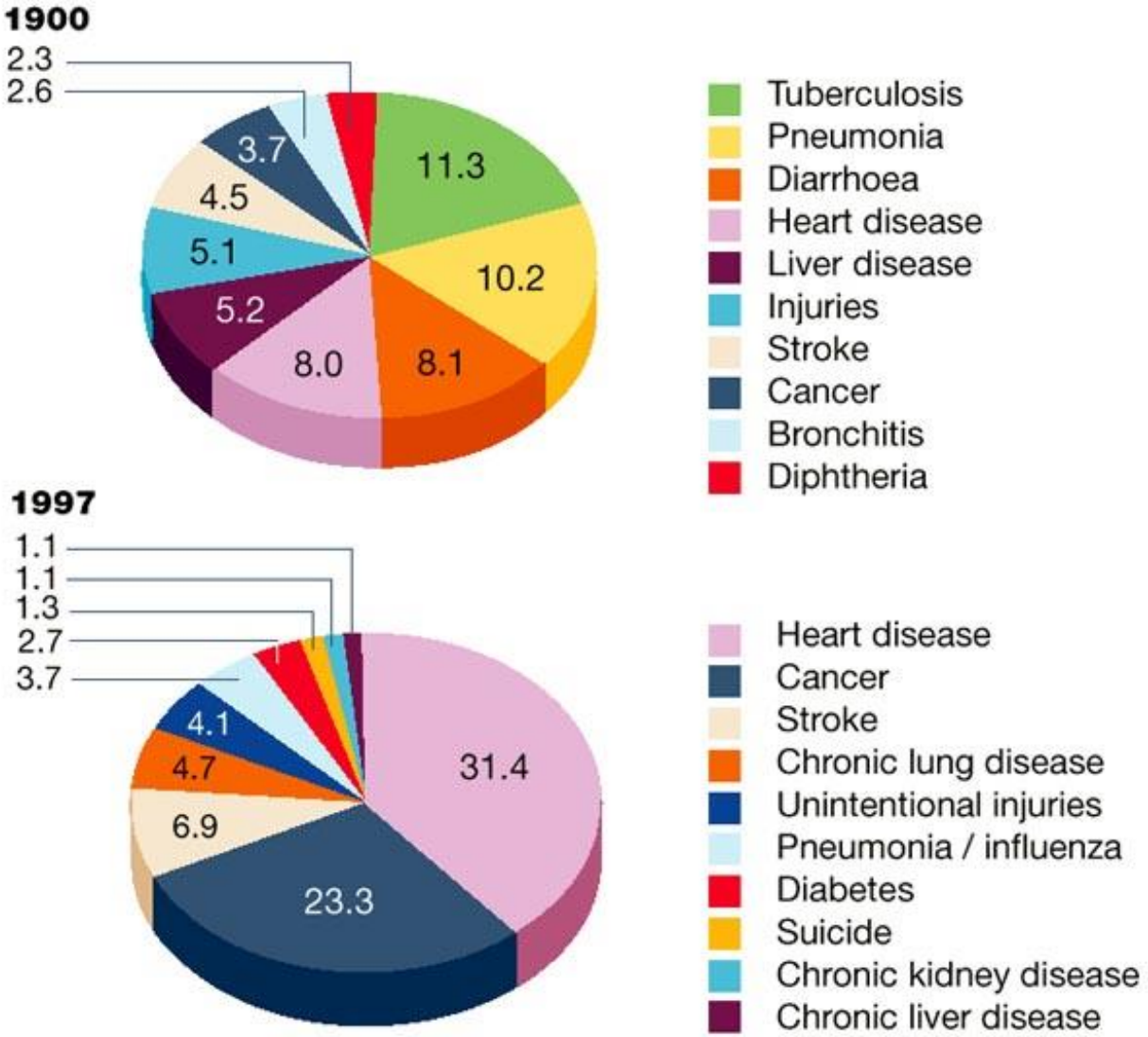
- Clinical health psychologist
  - Clinical psychologist with expertise in health (stress, pain, coping; rehabiliation for patients with chronic illness; etc.)
- Professional health psychologist
  - Trained in health psychology (research, teaching, consulting)
- Academic health psychologist
  - PhD in a health-related psychology area (academic position)

Rationale for Health Psychology

Causes of Death

FIGURE 1. The ten leading causes of death in the United States in 1900 and 1997.

From the following article:
Changing patterns of infectious disease
Mitchell L. Cohen Nature 406, 762-767(17 August 2000)
doi:10.1038/35021206



Preventable causes of death

- Assignment 1

Deaths with preventable causes

- In 1990, more than 1 million deaths (about half the deaths in the U.S.) had preventable causes*

Tobacco	400,000 Deaths	19%
Diet & Physical Inactivity	300,000	14%
Alcohol, firearms, sexual behaviors, motor vehicles & illicit drugs	200,000	9%

McGinnis & Foege (1993)

Research Methods in Psychology

- Health Psychology is a science
- Goal of Science
  - To explain, understand, and predict behavior through systematic theory building
  - Systematic, controlled, empirical (unbiased)
  - Designed to challenge veracity of commonly held myths
- Theory
  - General rule or principle about the relationships among variables that describe and predict behavior

Scientific Method

- SYSTEMATIC
  - Does the relationship hold under all conditions?
- CONTROLLED
  - Potential external influences are taken into account and “controlled” so as not to influence key relationships
- EMPIRICAL
  - Relationships are based on observation (must be objective evidence to support the relationship)
- CRITICAL
  - The methods is open to rigorous evaluation by the researcher and other scientists… ensures reliability of conclusions

Some Important Terms

- CONSTRUCT
  - A concept defined for scientific purpose
  - You cannot see constructs…inferred through behavior
- OPERATIONAL DEFINITION
  - Defining constructs in observable and measureable terms
- RESEARCH SETTINGS
  - Studies … often involve observation of relationships in naturalistic settings
  - Experiments … involve manipulation of variables as well as observing them – often involve control groups and are conducted in controlled settings (labs)

Validity

- The extent to which theoretical relationships can be consistently demonstrated

Internal Validity

- The extent to which we have confidence in a relationship between two variables

External Validity

- Degree to which results of a study are generalizable to other situations and populations

Which is more important?

Summary

- Scientific method is:
  - Highly reliable
  - Systematic and controlled
  - Objective and unbiased
- This leads to it being:
  - Reductionistic – experiments are isolated to smaller parts (no “big picture”)
  - Lacks external validity (generalizability)
  - Conservative (slow to evolve)

Importance of theory

- Basis for effective techniques lies in the theoretical substrate of the discipline of psychology
- Development of new therapies/interventions depends upon this theoretical basis
- Application to complex or new problems requires a theoretical basis
  - E.g. Walby (1970) … systematic desensitization for phobias previously thought untreatable.
- Causal processes and mechanisms of change

Importance of Empiricism

- Evaluation of the efficacy of treatments
- Empirical justification for claims
- Delineation of limits of claims (rarely unequivocal)
  - Success rates, breadth of response, long-term outcome
- Study of predictors of outcome
- Best practice protocols

Research Methods

- “Health” involves many variables - hard to research
- But research does not have to be perfect to be useful!

- Types of research design…
  - Experiment
  - Ex post facto design (quasi experimental)
  - Single-subject
  - Correlational
  - Retrospective
  - Prospective (longitudinal)
  - Epidemiology

Experiment

- Manipulate independent variable and measure dependent variable
- Able to determine causality
- Example: randomized controlled trial (RCT)
- Characteristics of a good experiment…
  - .
  - .
  - .
  - .
  - .

Experiment

- Manipulate independent variable and measure dependent variable
- Able to determine causality
- Example: randomized controlled trial (RCT)
- Characteristics of a good experiment…
  - Random sampling
  - Random assignment
  - Valid manipulation of independent variable
  - Valid and reliable measurement of dependent variable
  - Control extraneous variables

  WHY?

Placebo

- Active treatment
  - substance or procedure that is explicitly directed at the symptoms of the condition in question.
- Placebo
  - substance or procedure that does not specifically target the condition being treated
- Provide about 35% of improvement for a variety of conditions.
  - Physical conditions - headaches, warts, etc
  - Psychological conditions - pain, depression, etc

Example – Depression

Cognitive-Behaviour……. 65-70%
Antidepressant medication……. 65%
Placebo drug…… 30%

Implications for research

Double-blind trials

1. Diagnosis
2. Intervention Independent variable

3. Assess on relevant dependent variables
4. Follow-up (long-term gains)

OFTEN NOT POSSIBLE IN BEHAVIORAL INTERVENTIONS

Quasi-experiment

- Not always able to manipulate the independent variable
  - Ethical and practical reasons

- Not able to determine causality
  - Groups self-select (no random assignment or manipulation)
  - Observe dependent variable
  - Able to identify “risk factors”

Correlational designs

- Observe two (or more) variables

- Data analysis
  - Simple correlations (2 variables),
  - Path analysis/structural equation modeling (multiple variables)

- Not able to determine causality
  - Able to identify "risk factors"
  - Correlational studies are often misunderstood

Prospective studies

- Begin with whole population and observe over time
  - Initially healthy
- Cross lagged correlations
- Problems…
  - Expensive
  - Time consuming
  - Attrition rates

Epidemiology

- Scientific discipline that considers the various factors determining the frequency, distribution, and cause of a disease or disorder
- Risk Factor = any characteristic or condition which occurs with greater frequency in people with a disease than people without.
- Morbidity = disease
  - Incidence = number of new cases in a specified time interval
  - Prevalence = total # of cases in a specified time interval
- Mortality = death
  - # of deaths to a known cause
  - (premature death = death before age 75)

Class Activity

We are interested in whether higher levels of physical activity are associated with better cognitive functioning.

1. Design an ex-post facto (quasi-experimental) study to test this. What can you conclude?

2. Design a “true” experiment. What can you conclude?

Assignment 2

- Start in groups today
- Please take notes
- Write assignment individually based on provided instructions