Introduction to biosocial concepts and frameworks

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What is biosocial research?
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• Biosocial research examines the interplay between social, behavioural and biological factors
• Attempts to resolve challenges in isolating causal processes

Different meanings and definitions

• Disciplinary perspectives
• Funders of research
What is biosocial research?

ESRC: Biosocial research …

• is concerned with the dynamic interplays between biology, experiences and behaviours over the life course.

• encompasses multidisciplinary science, brings together expertise from the biological, medical and social sciences.

• enables understanding of the complex pathways and mechanisms that shape physical and mental health, social behaviours and outcomes, and genomic, neurological and physiological systems.

Soc-B (ESRC-BBSRC funded) studentships are required to be based at least 50% in the social sciences
Intradisciplinary to Transdisciplinary
Disciplinary rankings by purity
But it's good to think outside the box
The biosocial lifecourse

Emerging framework with multiple disciplinary perspectives

• Bronfenbrenner (1977) bioecological model
• Dahlgren & Whitehead (1991) proximal and distal influences
• Krieger (1994) embodiment/ecosocial approach
• Kuh & Ben Shlomo (1997) lifecourse framework
• Hertzman (1999) biological embedding
• Kubansky, Seeman & Glymour (2014) biologically plausible mechanisms
• Harris & Schorpp (2018) integrating biomarkers in social stratification and health research
Bronfenbrenner bioecological model

- Individual
- Microsystems e.g. family, peers, school
- Mesosystem i.e. interaction of extended levels of Microsystems
- Exosystem e.g. media, services, neighbours
- Macrosystem e.g. society, culture
Dahlgren & Whitehead proximal and distal influences

Source: Dahlgren and Whitehead, 1991
Harris & Schorpp integrating biomarkers in social stratification and health research

Physiological and behavioral response to stressors.

Shown here is an adapted stress process model for different types of environmental and experiential stressors.

Perceived stress results in physiological responses that can be measured by biomarkers and behavioral responses that, in turn, affect physiology.

Individual differences influence both perception of stress and the physiological and behavioral responses to stress.

Adapted with permission from McEwen (1998).
Is my research question biosocial?
Summary

• Understanding what ‘biosocial’ is and where your research fits
• Disciplinary perspectives
• Development of a biosocial lifecourse framework – from Bronfenbrenner to Harris & Schorpp
Krieger embodiment/ecosocial approach
Kuh & Ben Shlomo lifecourse framework

Model (a)

Model (b)

Model (c)

Model (d)
Hertzman biological embedding
McEwen Protective and damaging effects of stress mediators - Homeostasis, Allostasis, Robustness, and Weathering
Kubansky, Seeman & Glymour biologically plausible mechanisms
Krieger N. Epidemiology and the web of causation: has anyone seen the spider? Social Science and Medicine 1994; 39: 887-903
Kubansky LD, Seeman TE, Glymour MM. Biological Pathways linking social conditions and Health. In Eds. Berkman LF, Kawachi I & Glymour MM. Social epidemiology, Oxford University Press, 2014
Harris KM & Schorpp KM. Integrating Biomarkers in Social Stratification and Health Research. Annual Review of Sociology 2018; 44: 361-386