Fundamental Causality and the Challenge of Understanding Socioeconomic Health Disparities

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"Disparities in health status have increased in the United States in the last 50 years despite remarkable advances in our ability to prevent, diagnose, and treat disease"

Sankar et al. 2004 *JAMA*

"Disparities in health status have increased in the United States in the last 50 years mostly because of remarkable advances in our ability to prevent, diagnose, and treat disease"

Sankar et al. 2004 *JAMA*

objective: articulate tensions and opportunities in "fundamental causality" as an animating concept for the contributions that medical sociology can make to how socioeconomic health disparities are understood

“fundamental causality”

- term used by many sociologists and others for talking about within-population relationships between resources and health
- developed most extensively in line of papers by Link & Phelan
- argues for a sense in which the SES-health relationship is irreducible to a decomposition of risk factors
- argues for the importance of the extent to which markers of SES are ‘resources’ that are useful for long-run attainments like health

“fundamental causality” as a specific type of causal relationship

1. massively multiple potential mechanisms linking cause to effect
2. no dominant mediating variable
3. systematic asymmetry in which most mechanisms work in same direction
4. this ‘systematic-ness’ is explicable by reference to a durable narrative that leads us to expect relationship to be preserved as particular mechanisms change

key conceptual challenges to the causal part of fundamental causality

1. spuriousness: it's really the influence of Z on both X and Y that explains the observed association
2. reverse causality: it's really that Y causes X
3. simple reducibility (!): the influence of X on Y is dominant the result of X on Z on Y
4. no durable narrative (!): no overarching reason(s) to expect relationship to be preserved and pervasive over space and time

'resources' durable narrative of fundamental cause relationship between social standing and health

1. variation in SES encompasses various means that are relevant to attaining valued ends
2. differential use of effective means can be expected to be sufficient for observing disparity in health attainment under a broad range of conditions

consider: how would we explain no causal relationship between SES and health?

1. people are mostly indifferent to being in better/worse health or living longer/shorter
2. people (and their agents) lack information about what they can do to increase their health
3. additional resources cannot be used to produce additional returns to health
4. resource attainment could introduce offsetting harms (e.g., status pursuit, increased access to toxic wants)

points about 'resources' as durable narrative for fundamental cause relationship

- a sufficient explanation does not imply that this metamechanism explains aII/most of causal relationship between SES and health in any population or even all/most of the role of 'resources'
- Link & Phelan provide various examples of potential SES-health mechanisms that do not fit a durable narrative centered on agency
- resulting dilemma: when LP use agentic language to express their theory, it is conceptually clear but empirically inadequate, and when they use encompassing language, it is conceptually slippery but yet seemingly more empirically apt

key problem cases for ‘resources’ durable narrative

1. SES-related circumstances that may have implications for health but are not the result of any personally directed effort to improve health (“living in neighborhoods where garbage is picked up often” or “having children who bring home useful health information from good schools”)
2. health-producing behaviors whose costs are minimal and for which information about benefits have widely diffused (“wearing seat belts”)

possible solutions to dilemma

1. these cases might exemplify how SES causes health in a particular (i.e., our) population, but do not actually speak more broadly to why SES is a fundamental cause of health
2. these cases can be regarded as exemplifying distinct durable narratives of health inequality

'externalities' durable narrative of fundamental cause relationship between social standing and health

1. variation in SES and status homophilies combine to produce differences in the means of those whose actions have the greatest externalities for one's health
2. difference in the externalities of the differential use of means by can be expected to be sufficient for observing disparity in health attainment under a broad range of conditions

'motivation' durable narrative of fundamental cause relationship between social standing and health

1. variation in SES produce systematic differences in the extent to which people are motivated to be healthy or live longer
2. difference in motivation can be expected to be sufficient for observing disparity in health attainment under a broad range of conditions

methodological synergies suggested by fundamental cause concept

1. naturalistic observation and interviews can provide compelling description of disadvantage and can suggest and roughly evaluate potential mechanisms
2. experiments and rigorous observational studies can evaluate the causal potency of different pathways
3. historical understanding of disease information and treatment can suggest patterns of increased leverage and diffusion of leverage in the management of disease
4. quantitative studies over time can examine how changes in apparent leverage are associated with changes in the magnitude of disease gradients

policy tensions underscored by fundamental cause argument

1. the optimization ethic of health research and ‘trickle-down’ therapeutic attainment
2. disparity and incentives for the supply of innovation more generally
3. the places of paternalism and preference modification in health policy
4. the implications for disparities of the hypersupply of health information and services