Studies of Health and Social Policy at McGill in the 21st Century: In the Service of a Worthy Cause

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Social Determinants of Health: Central Issues/Problems:

- Social theory and epidemiologic theory
- Etiology (causal inference) vs description (surveillance)
- Modeling and adjustment
- Generalizability
- Population inference
- Development of evidenced-based policies
You observe: \( \Pr(Y|X=x) \)
You want to know: \( \Pr(Y|\text{SET}[X=x]) \)

The adjustment tradition in epidemiology and social sciences exists to link these quantities:

\[
\Pr(Y|X=x) \neq \Pr(Y|\text{SET}[X=x])
\]

\[
\sum \Pr(Y|X=x, Z=z) \Pr(Z=z) = \Pr(Y|\text{SET}[X=x])
\]
Consider two different bivariate associations:
1) Relation between ecologic levels of TV viewing and ecologic rates of dental caries, by country:

\[ \beta = \text{expected change in outcome per unit change in exposure} \]
Consider two different bivariate associations:

2) Relation between ecologic levels of refined sugar consumption and ecologic rates of dental caries, by country:

Adjust for level of socioeconomic development, and find that $\Pr(Y|SET[X=x])$ is null in scenario #1, and non-null in scenario #2.
Many researchers at many universities around the world study social determinants of health with an aim of informing health-related social policy. But McGill EBOH is SPECIAL....
We understand that “association is not causation” and that correlations are not a basis for sound policy:


and so we seek study designs that can identify causal effects, which then have direct policy implications:


We recognize that scale of contrast can arbitrarily changes the appearance of inequalities:


King NB, Harper S, Young ME. Use of relative and absolute effect measures in reporting health inequalities: structured review. BMJ. 2012 Sep 3;345:e5774. PMID: 22945952

We consider the implications of alternate modeling strategies for identifying causal effects:


and we consider the sensitivity of our inferences to unverifiable assumptions of the models:

We evaluate the effects of social and health policies in real-world settings in Canada:


and in the rest of the world:


We distinguish between descriptive work that traces trends and patterns across time, group and place:


from etiologic work that identifies mechanisms and pathways:


Studies of Health and Social Policy at McGill

- Health policy
- Population data
- Causal inference
- Subject matter areas
- Social sciences