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NEWSLETTER
by PHASE III NODE
OF ESRC
NATIONAL CENTRE FOR
RESEARCH METHODS
(NCRM)

Pathways

Biosocial influences on health

This issue

Pathways publications

Pathways courses

Project 3: Social disadvantage and infant mortality

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Pathways courses

http://pathways.lshtm.ac.uk/courses/

9-11 September 2013

Studying pathways between social and biological factors using modern causal inference methods: an example using data from the ONS Longitudinal Study

BSPS Conference
Swansea

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13 September 2013

New approaches to biosocial research: using genes in social and epidemiological studies

Royal Statistical Society
London

17-18 September 2013

A short course on concepts and methods in causal inference

London School of Economics

Book here:
http://pathways.lshtm.ac.uk/courses/

Social disadvantage and infant mortality

Bianca De Stavola and Rhian Daniel

Infant mortality is strongly patterned by socio-economic conditions, even in developed countries. It is also strongly and negatively related to birth weight, with the gradient seen even in babies born at term. Birth weight is related to socioeconomic circumstances, with poverty consistently associated with low birth weight. This suggests that birth weight itself may explain at least some of the association between disadvantage and infant mortality. There is also evidence that shows that the risks associated with low birth weight vary between population subgroups, e.g. babies born to mothers who smoked during pregnancy are usually 100-200g lighter at birth than babies of non-smoking mothers yet, for a given low birth weight, those exposed to maternal smoking are at lower risk of infant mortality than those unexposed. This apparent effect modification is seen for other disadvantaged groups. This paradox however could be a consequence of incorrect assumptions when modelling the data, including the assumption that there are no unmeasured confounders, as well as the adoption of an incorrect parametric model.

In this project we are studying whether we can explain this "birth weight paradox" by adopting different modelling assumptions and approaches, using data from the Office from National Statistics Longitudinal Study (ONS LS) which includes more than 150,000 births.

Causal inference Courses

Our courses are aimed at researchers working in the social or medical sciences. We address `simple' and `complex' causal questions. By `simple' causal questions, we mean questions of the type "what is the causal effect of a single exposure A, such as educational achievement, on a single outcome Y, such as blood pressure?". By `complex' we mean causal questions concerning the effect of time-changing exposures and also pathways, such as "how much of the causal effect of A on Y is mediated by a third variable M?"

More Pathways node publications

George Ploubidis' podcast on Biosocial pathways to health: http://www.ncrm.ac.uk/TandE/video/podcasts.php
Angelica Ronald's Measuring Heritability and the Classic Twin Design
Frank Dudbridge's Genetics: History and Context
Dorothea Nitsch's Introduction to DNA

NCRM National Centre for Research Methods

LSE

LONDON SCHOOL of HYGIENE &TROPICAL MEDICINE

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