ENERGY, LIMITS TO GROWTH AND PUBLIC HEALTH: WHAT IS THE ROLE OF ENVIRONMENTAL EPIDEMIOLOGY?

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Background and Aims: The literature concerning impending energy insecurity, food prices and climate change is growing rapidly. These problems reflect manifestations of "limits to growth", including climate change, though what is "limited" in this case is not carbon emissions, but the capacity of Earth to absorb waste gases without great harm to the climate, ecology and, ultimately, civilisation (hence health). Limits to growth interact. For example rising energy prices lift fertiliser costs and divert agricultural capacity from food to fuel. Climate change impairs crop yields and harms nutrition synergistically in other ways such as by reducing water quality. Collectively, the diverse phenomena of "limits to growth" will place increasing and eventually immense strain on the capacity of global public health services to maintain global life expectancy, especially given the background of rising population size.
Methods: A limited literature search was conducted in health journals (using PubMed, Google Scholar and specific journals) searching for the following terms: "peak oil", "energy scarcity", "limits to growth", "ecological footprint", "global environmental change", "peak health", "peak phosphorus" and "civilisation collapse". The term "climate change" was excluded because the research question studied here is broader.
Results: Within the broader medical and public health literature there is a limited awareness of peak oil, however papers are mainly restricted to or in response to one research group. In the epidemiological literature, including environmental epidemiology, these topics are scarcely mentioned, apart from several articles in the mid 1990s.
Conclusions: Rising energy prices and other manifestations of limits to growth are important environmental determinants of health. Environmental epidemiologists need to urgently consider these dimensions, and to embrace interdisciplinary approaches to consider how to prevent what Homer-Dixon calls "synchronous failure".
References:

McMichael AJ, Butler CD. Promoting global population health while constraining the environmental footprint. Annual Review of Public Health (in press)