

## EDITORIAL

# Psychosocial determinants of health in social epidemiology

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The current issue of the *International Journal of Epidemiology (IJE)* has several papers with a psychosocial theme. As its popularity has increased over the past decade, the use of the term 'psychosocial' has been very varied within health research including social epidemiology. A quick glance at Medline shows that it has been used in connection with at least the following: causes and risk factors ('psychosocial causation', 'psychosocial influences', 'psychosocial risk factors'), mediating factors and contexts ('psychosocial mechanisms', 'psychosocial environment', 'psychosocial context', 'psychosocial resources', 'psychosocial support'), and outcomes ('psychosocial (di)stress', 'psychosocial well-being' and 'psychosocial health').

The ideas underlying many of the articles in this themed issue of *IJE* reflect this broader and more general use of the term 'psychosocial'. The articles derive from diverse sociological, psychological and social epidemiological paradigms, and they do not share common roots, nor do they arrive at common theoretical frameworks or a set of common testable research questions. Rather, 'psychosocial' is used as an umbrella term under which diverse research inquiries are carried out, without any specific consideration for how 'psychosocial' might further our understanding of the pathways leading to ill-health.

In part the definition of 'psychosocial' and the collection of articles in this issue reflect choices made by the *IJE's* editors, and it is possible that some of the articles' authors are surprised to find that their work has been branded as using a psychosocial approach to epidemiology. In particular, one or two papers in the collection do not even refer to or use the term 'psychosocial'.

Unspecified use of 'psychosocial'—something of which we are equally guilty—is likely to degrade the usefulness of the term. It refers to everything and nothing in particular. As none of the articles in this issue, or the literature on psychosocial effects more generally, elaborate the meaning of psychosocial, we have taken this task as the main focus of this editorial. Although we do not feel particularly qualified to undertake this task, a brief examination of the term may be helpful in disentangling some of the possible social and psychological pathways underlying health and illness.

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## What might psychosocial epidemiology be?

A fruitful starting point might be the *Oxford English Dictionary's* first brief definition of 'psychosocial' as 'pertaining to the influence of social factors on an individual's mind or behaviour, and to the interrelation of behavioural and social factors'.<sup>1</sup> This definition is likely to have important implications for social epidemiologists and other health researchers, because it implies that psychosocial factors, at least in the context of health research, can be seen as: (1) mediating the effects of social structural factors on individual health outcomes, or (2) conditioned and modified by the social structures and contexts in which they exist. The definition thus raises the question of what the relevant broader social structural forces are, and how such forces might influence health through their effects on individual characteristics. To our mind this is a useful working definition of 'psychosocial determinants of health'. In fact, it would imply that psychosocial explanations of health might be more accurately referred to as 'social-psychological' explanations of health.

A direct corollary of this is that psychosocial factors can be best seen as and operationalized in terms of influences acting primarily between the fully social and the fully individual level—that is being neither one nor the other. We think psychosocial factors should not be equated with structural characteristics of societies or psychological characteristics of individuals. Hence, it is important to recognize the independence of both of these concepts from the 'psychosocial context' and the 'psychosocial environment'.

The term 'psychosocial' is also quite widely used in the literature in connection with health outcome. The roots of 'psychosocial health' lie in the World Health Organization's (WHO) definition of health as 'a state of complete physical mental and social well-being, and not merely the absence of disease and infirmity'. This WHO definition of health has been criticized on several grounds, but for us its main danger is one of confusing cause and effect. From an explanatory point of view the concept of 'psychosocial health', in some cases, may combine traditional medical definitions of disease and infirmity with measures that reflect individual responses to disease and even in some cases indicators of the social context itself. Such measures have merit in recognizing individuals' experiences and quality of life, a dimension that is becoming increasingly recognized for example, in clinical trials. But researchers using health outcomes based on such definitions need to guard carefully against circular arguments.

## What are psychosocial processes and how do they influence health?

To further elucidate the role of psychosocial factors in health research we suggest a distinction between macro-, meso- and micro-levels<sup>2,3</sup> as a useful sociological framework (Figure 1). We regard psychosocial as a meso-level concept, just as religious institutions, the family, the firm, and the club are meso-level social formations. These exist at a level below and are modified by macro-social structures that relate to ownership and control of land and businesses, legal and welfare structures, as well as distribution of income and other resources between groups and individuals.

In the context of health research meso-level psychosocial concepts, such as social networks and supports, work control, effort/reward balance, security and autonomy, home control, and work-family conflict are all produced within meso-level social formations. All these are manifested in interpersonal relationships. Thus, psychosocial explanations of health are essentially viewed here as processes that cannot be fully captured by single measures at one level, but require due attention to macro and micro (individual) level factors as well. However, not all processes from macro through meso to the individual micro level are psychosocial.

To our mind a central constituent of a psychosocial explanation of health is that macro- and meso-level social processes lead to perceptions and psychological processes at the individual level. These psychological changes can influence health through direct psychobiological processes or through modified behaviours and lifestyles (Figure 1). However, many psychosocial exposures such as unemployment (so called 'stressful life-event') and social networks/supports need not necessarily invoke psychosocial processes or require psychosocial explanations. Thus, unemployment that leads to loss of income and an inability to buy material necessities of life does not constitute a psychosocial explanation of health. However, a psychosocial process is operating when unemployment leads to loss of self-esteem and feelings of worthlessness that affect health via direct psychobiological processes or through modified behaviours and lifestyles.<sup>4</sup> Similarly, social networks may provide instrumental and material benefits and opportunities as well as close person-to-person social contacts

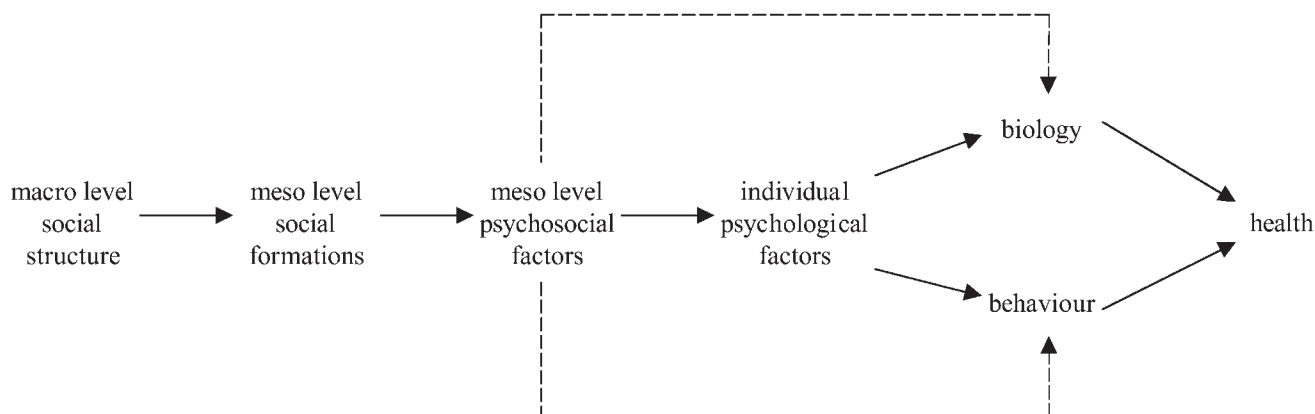
and emotional support; yet only the latter path seems to qualify as a psychosocial process.

We are not entirely certain whether psychosocial processes can be evoked in the absence of conscious individual level changes, such as perceptions of stress or social isolation (dashed lines in Figure 1). Research into the effects of working conditions on health, where control at work has been measured using self-reports and independent assessments, provides an interesting illustration of this issue. Both measures of control have been associated with health outcomes, although these associations are independent of one another and differ in magnitude somewhat.<sup>5</sup> While this might be interpreted as evidence that including both measures provides a more accurate assessment of control at work, it also suggests that these measures influence health through different pathways.

## Challenges and accomplishments

Methodological problems of observational epidemiology particularly as they relate to confounding, contamination of cause and effect, measurement error, and challenges of longitudinal data analyses are formidable obstacles in psychosocial epidemiology. Because of these challenges it is still unclear what the exact contribution of psychosocial processes are in explaining incidence of disease. However, many of these difficulties also apply to social epidemiological inquiry more generally, and therefore to non-psychosocial approaches that provide alternative explanations for the effects of social factors on health.

Together with other approaches to disease epidemiology such as life course, materialist, and multi-level approaches—that overlap and cross-fertilize each other—the psychosocial approach has directed more research emphasis on the causal pathways and mechanisms mediating the influences of the social determinants on health. Specifying theoretical causal relationships and testable hypotheses between explanatory variables will become all the more important as the number of longitudinal studies with longer-term follow-up grow.<sup>5</sup> Analysis of data generated by complex long-term processes is fruitless in the absence of clear conceptual models. Psychosocial variables will have to take their place within such models, with clearly



**Figure 1** A tentative schematic representation of psychosocial pathways

theorized links to both their hypothesized precursors and outcomes. If we wish to contribute to the development of policy to improve health, the complex combinations of social, psychological and biological processes that contribute to ill-health need to be clarified.

Once adequate conceptual models are in place, it will be clear that both the distributions and the effects of psychosocial factors are subject to change. Large differences (e.g. between welfare regimes) and rapid change (e.g. at a time of economic or technological upheaval) in macro-level social structures imply that old wisdom from a particular study cohort, society or time point will not provide universal explanations for the distribution of health in all populations. Specific explanations and constant re-evaluating and updating of evidence is needed. Explanations that are based on one underlying factor are difficult to reconcile with the wide variability in research results on social determinants of ill-health.

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### References

- <sup>1</sup> *Oxford English Dictionary*. [Http://dictionary.oed.com](http://dictionary.oed.com).
- <sup>2</sup> Coleman JS. *Foundations of Social Theory*. Cambridge, MA: The Belknap Press of Harvard University Press, 1990.
- <sup>3</sup> Hertzman C, Power C, Matthews S, Manor O. Using an interactive framework of society and lifecourse to explain self-rated health in early adulthood. *Soc Sci Med* 2001;**53**:1575–85.
- <sup>4</sup> Martikainen P, Valkonen T. Excess mortality of unemployed men and women during a period of rapidly increasing unemployment. *Lancet* 1996;**348**:909–12.
- <sup>5</sup> Bosma H, Marmot MG, Hemingway H, Nicholson AC, Brunner E, Stansfeld SA. Low job control and risk of coronary heart disease in Whitehall II (prospective cohort) study. *BMJ* 1997;**314**:558–65.
- <sup>6</sup> Ben-Shlomo Y, Kuh D. A life course approach to chronic disease epidemiology: conceptual models, empirical challenges and interdisciplinary perspectives. *Int J Epidemiol* 2002;**31**:285–93.