explanations Antonovsky focuses attention on people's resources for coping with different exposures. He suggests that those in lower socioeconomic groups have less money, knowledge, intelligence, and social contacts to help them cope successfully in adversity.[12]

Social networks are becoming of central importance to the growing published reports on psychosocial factors in health.[13] Cassel's work led several researchers to investigate relations among social networks, social support, isolation, and social integration and mortality. The first study, in Alameda County, "was meant to be thought provoking and to stimulate research in the area of how human relationships might influence physical health."[14] In support of Cassel's arguments evidence has accumulated from prospective community cohort studies[15-18] and studies in Sweden[19] and Hawaii.[20] Further support has come recently from a national population sample and from further analysis of the Alameda County Study.[21]

Important differences

Berkman highlighted differences in findings among studies in magnitude of effect, between men and women, and between age groups and reiterated her call for more research on what is meant by social networks and social support as well as on how they affect health.[14 22] The Alameda County study explored four categories of social network: marital state, friends and relatives, church membership, and group membership. Each was related to mortality after controlling for other relevant factors, and, as the recent extension of the study shows, the importance of each varies with age. "Unfortunately, virtually none of the studies linking either social networks of social support to mortality or morbidity employ sophisticated measures of these variables. If the strength of these studies lies in the rigorous assessment of outcomes, their weakness almost uniformly lies in the assessment of independent variables."[22]

No information was collected on several characteristics of social networks and social support, and so there is doubt about whether the critical dimension has been measured. Different dimensions have been picked up in subsequent studies, but often researchers are restricted in the range of questions asked of people interviewed. For example, the recent Swedish study uses questions asked about social networks in the national survey of living conditions, linking the population interviewed to national mortality files.[1] Responses to 18 questions about social networks were obtained. These included contact with parents, children, other relatives, and friends from childhood and contacts within the neighbourhood and with colleagues from work. Again they covered only two aspects of social networks—the number and type of sources of contact and the degree of contact with each. As with previous studies responses to individual items were summarised in a single index—in this case called the "social network interaction index."

Mediating mechanisms

Though the jargon is unnecessary, such technical indices will be needed to summarise the increasingly complex data collected by these studies. Berkman has suggested an extensive range of characteristics of networks that will need to be investigated if we are to understand how they mediate the effects of environmental stressors.[22 23] These include the number of people in a person's network, how often people are seen, the extent of interaction between different members of a network, the feeling of closeness to members of the network, the length of time the person had been concerned with the network, the geographical proximity of network members, and the extent to which network members help each other.

The indices being developed are, however, only cross sectional describers. To understand the processes at work—for example, the changes that occur when particular ties such as marriage are broken—further studies based on longitudinal measures will be needed. These could illustrate the diverse paths to specific outcomes and the range of consequences of particular changes. Although the questions to be addressed increase in complexity, their importance to a general understanding of differences in health among different sections of the community seems well established.

JOHN FOX

Director and Professor of Social Statistics,
Social Statistics Research Unit,
City University,
London EC1V 0HB

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Correction

Alcohol services: exhortations rather than commitment

In the first sentence of the last paragraph of Dr P Caviston's editorial on alcohol services (23 July, p 241) the interministerial committee on alcohol problems was wrongly called the international committee on alcohol problems. This error arose at the typesetters and was not picked up by our proof readers.