

Social capital and mental health

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Evidence for inequalities in morbidity and mortality by occupational social class and material standard of living has become irrefutable (Acheson, 1998). Attention has now turned to the effects of social context (MacIntyre *et al*, 1993; MacIntyre, 1997; Ecob & MacIntyre, 2000; Pickett & Pearl, 2001). Despite the political imperative to build 'healthy communities' (Department of Health, 1999; National Strategy for Neighbourhood Renewal, 2000), it is unclear which aspects of the social, economic and physical environment have the greatest effects on health (Sloggett & Joshi, 1994; Lynch *et al*, 2000) or how these effects might be mediated (Yen & Syme, 1999). Durkheim in the 1890s was among the first to posit that the structure of society had a strong bearing on psychological health (Simpson, 1995). There has since been a strong tradition of research and innovation in psychiatry concerning the effects of social context on health (Faris & Dunham, 1965; Leighton, 1982; Freeman, 1984) and the conceptual development of appropriate epidemiological approaches to its investigation (Susser & Susser, 1996). More recently, 'social capital' has been embraced as a possible explanation for differences in health that are found between places or between groups of people (Amick *et al*, 1995; Putnam, 1996; Wilkinson, 1996; Kawachi *et al*, 1997; Baum, 1999). Social capital may play a role in the incidence and prevalence of mental illness.

Social capital has been vaunted as the next big idea in social policy and health since its recent incorporation into public health discourse. There have been a number of methodological advances with regard to research on social capital and health, notably the application of multi-level modelling statistical techniques, yet there is a lack of published evidence for causal associations with specific health outcomes.

WHAT IS SOCIAL CAPITAL?

The theory of social capital attempts to describe the forces that shape the quality and quantity of social interactions and social institutions. Social capital has been characterised as the glue that holds societies together. The American political scientist Robert Putnam describes social capital thus:

'By "social capital", I mean features of social life – networks, norms, and trust – that enable participants to act together more effectively to pursue shared objectives' (Putnam, 1996).

An important feature of social capital is that it is a property of groups rather than of individuals. The ecological nature of social capital distinguishes it from social networks and social support, which are properties of individuals.

The literature suggests four main theoretical strands, all of which overlap to some extent. Broadly, these are collective efficacy, social trust/reciprocity, participation in voluntary organisations and social integration for mutual benefit (Lochner *et al*, 1999). The concept also can be broken down into 'structural' and 'cognitive' social capital. Structural components refer to roles, rules, precedents, behaviours, networks and institutions. These may bond individuals in groups to each other, bridge divides between societal groups or vertically integrate groups with different levels of power and influence in a society, leading to social inclusion. 'Cognitive social capital' describes the values, attitudes and beliefs that produce cooperative behaviour (Colletta & Cullen, 2000).

The links between cognitive and structural social capital are complex and multi-directional. As with many descriptors of communities, the theories supporting these constructs depend on the prevailing philosophy and conceptualisation of societies, politics and theory of mind.

APPLYING THE THEORY

Much of the empirical research to date has been opportunistic in the choice of measure of social capital (a notable exception is McCulloch, 2001). Most studies have been secondary data analyses of survey data. This has led to a lack of depth of investigation of social capital. Exposure and outcome variables generally have been non-specific and lack subtlety, with very few studies relying on theory-driven, *a priori* hypothesis testing. The distinction between the constituents and products of social capital often has been unclear. For instance, trust may be a constituent of social capital and collective efficacy an outcome, or vice versa. However, they are mutually dependent. This leads to difficulties in measuring and ascribing the cause and effect.

Although collective efficacy may be the *sine qua non* of social capital (Sampson *et al*, 1997; Lochner *et al*, 1999), studies have employed (at best) indirect measures of this. The most commonly studied aspects of social capital, at least in studies of health outcomes, have been perceptions of the trustworthiness of others and (to a lesser degree) participation in voluntary associations. Other components of social capital that have been featured are the psychological sense of community, neighbourhood cohesion and community competence. Each of these headings can be broken down further into a number of dimensions (Lochner *et al*, 1999).

A fundamental difficulty is that most research on the geographies of health has been based on studies of the aggregated characteristics of people living in particular areas (measures of 'social composition'), rather than the 'contextual' characteristics of the places where people live (Sooman & MacIntyre, 1995; MacIntyre, 1997; Ecob & MacIntyre, 2000; Pickett & Pearl, 2001). It is uncertain how accurately the aggregated responses to survey questions across administratively determined geographical boundaries measure the social environment (Kawachi *et al*, 1997; Sampson *et al*, 1997). There are very few current measures of social capital that are genuinely contextual in nature (Lochner *et al*, 1999) and that cannot be measured at the individual level. There is an imperative to develop measures of social capital that do not rely exclusively on individual perceptions.

A further problem is the fact that most of the existing literature assumes that social capital is based on geographically defined

areas. However, a community may be of family, friends or people from the same ethnic, lifestyle or religious group. There are an infinite number of grouping levels, from the family/household to country. An individual may be influenced by a number of different groupings, all of which have different levels of social capital and only some of which can be represented geographically. The start of one community and the end of another are not always clear and communities influence each other. Moreover, improved transport and communications allow communities based on culture (in the widest sense) to be geographically dispersed. Mapping spatial and other types of communities requires a sophisticated approach to the geographies of health and will almost certainly require investment in primary research. Elucidation of the relationship between social capital and health will be enhanced further through strong interdisciplinary research involving epidemiologists, geographers, sociologists, anthropologists and psychiatrists.

Research to date on social capital and health has been predominantly concerned with 'horizontal' links that occur within a community. However, the degree to which individuals are able to interact in a purposeful and collective fashion is likely to be determined, at least in part, by the policies and interventions of local and national governments and the impact of power relations, group integration and opportunities within a society. Studies should not neglect measurement of these vertical aspects of social capital.

SOCIAL CAPITAL AND HEALTH – A MIXED BLESSING?

The advent of multi-level modelling techniques means that it is now possible to study the effects of potential risk factors for a given outcome at more than one level simultaneously, and to quantify (and therefore compare) the variance in a given outcome at different spatial levels (Jones & Duncan, 1995; Rice & Leyland, 1996). Studies employing multi-level techniques have found that self-reported health, mortality and crime are all associated with social capital (based on aggregated perceptions of social trust), after adjusting for individual income level (Kawachi *et al*, 1997; Sampson *et al*, 1997).

Although high levels of social capital may be beneficial to community members, the impact may be felt differently by minorities. Generally, homogenous societies that often score highly on existing measures of social capital are sometimes characterised by an intolerance of 'deviant' behaviour, lack of autonomy and an unwritten demand for obedience to norms. Minorities, whether defined by ethnicity, religious beliefs, sexuality or (mental) ill health, may experience marginalisation, exclusion or persecution unless they conform. Criminal gangs such as the Mafia and place-based paramilitary groupings often rely on high levels of social capital to maintain their authority.

Close-knit communities are therefore not necessarily 'healthy', particularly for outsiders (Baum, 1999). A dominance of high-bonding horizontal social capital at the expense of vertical integration may be pathological in consequence.

SOCIAL CAPITAL AND MENTAL HEALTH

There has been a lack of research and theoretical development into social capital and mental health. Kawachi & Berkman (2001) have attempted to develop the concept by linking it to the social support and social networks literature. Studies of the geographies of mental health may also provide guidance for theoretical development. The effects of social capital on mental illness are likely to be complex, and it is probably mistaken to assume that different types of psychiatric disorder share a common pattern of association with this exposure. Different processes may affect the geographical distribution of schizophrenia and non-psychotic disorders, particularly anxiety and depression (Dohrenwend *et al*, 1992). Notwithstanding the excess morbidity in urban compared with rural and semi-rural areas (Lewis & Booth, 1994), evidence is accumulating to suggest that the geographical variation in rates of schizophrenia are greater than those observed for the common mental disorders (Duncan *et al*, 1995; van Os *et al*, 2000). Certainly, the association between regional income inequality and the prevalence of the common mental disorders was found to be weak (Weich *et al*, 2001). There may be a synergy between social capital, social drift and environmental effects that has an impact on mental health. The puzzle is

to unravel the interaction and mediating processes.

The small number of studies on social capital and mental health are prone to the limitations mentioned earlier, and have produced mixed results. McCulloch investigated social capital using data from the British Household Survey (McCulloch, 2001). Respondents were divided into low, medium, high and very high social capital groups using the summed answers to eight questions about their neighbourhood. Psychiatric morbidity was measured using the 12-item General Health Questionnaire (GHQ; Goldberg & Williams, 1988). Men in the low social capital category were nearly twice as likely to be cases using a cut-off of 3 on the GHQ than men in the highest social capital category (odds ratio=1.96, CI 1.39–2.75). The findings for women were similar (odds ratio=1.8, CI 1.36–2.38). Rose has reported that social capital and measures of social integration explain almost 10% of the variance in 'emotional health' in Russia, using self-defined answers on a Likert scale in a large cross-national survey (Rose, 2000). But attempts to identify social capital at an individual level seem to run counter to the ecological definition of the concept. Weitzman & Kawachi (2000) measured social capital on college campuses using the average time that students said they spent volunteering. High social capital campuses were those with more time spent volunteering. They found that binge drinking was 26% lower on campuses high in social capital. Boydell *et al* (2002), in a pilot study, demonstrated an inverse association between perceived social cohesion and the incidence of psychosis in electoral wards in south London. Social cohesion was measured by aggregate responses from a random community sample to a questionnaire. In the USA, Rosenheck *et al* (2001) found that areas with high social capital, as measured by aggregated responses to surveys and voter participation, offered better housing for homeless people with mental illnesses, but this was not associated with better clinical outcome. McKenzie (2000) used aggregated scores for perceived community safety as a proxy for social capital in an area. He demonstrated that people with psychoses who lived in areas with high perceived community safety had higher hospital readmission rates and postulated that this was due to low community tolerance of deviant behaviour.

The cross-sectional nature of most of these studies makes it difficult to distinguish findings that are due to bias, reverse causality or confounding from those that are truly causal. The geographical concentration of mental illness could be due to a variety of factors; for example, spatial zoning of urban areas is largely a function of inequalities in power, with trends of stability and mobility being self-perpetuating. It cannot be assumed that elevated rates of pathology in neighbourhoods are due to a lack of social capital. For example, areas that scored highly on existing measures of social capital (i.e. high intra-communal bonding and effective vertical integration into society) may have lobbied against the provision of community mental health facilities in their vicinity. Studies over time are therefore needed and a historical/life-course approach may be important in the development of hypotheses about causation.

Assuming that it proves possible to overcome the many methodological challenges, social capital may prove important in explaining some intriguing recent findings. Chief among these is the 'ethnic density' effect, in which the incidence of psychotic disorders, suicide and psychiatric hospital admission rates in the UK is elevated among members of ethnic minority groups living in areas with lower proportions of ethnic minorities (Boydell *et al*, 2001; Neeleman *et al*, 2001). It has been hypothesised that social capital within a given minority group diminishes as it becomes a smaller proportion of the population. Conversely, members of any minority group may feel excluded and stigmatised in areas where there is a high degree of cohesion among the majority group. In testing these and other hypotheses it will be particularly important to exclude confounding by individual-level factors, such as socioeconomic status and social support and the cognitive and social skills required to benefit from community resources.

CONCLUSIONS

Social capital as a concept is still in its infancy. The construct offers a way of thinking about potentially important but difficult-to-quantify aspects of community that may be associated with health. The challenge is to determine whether it is

causally associated with specific health outcomes, including psychiatric disorders. Despite its intuitive appeal, social capital has yet to be defined operationally, which has led to a burgeoning literature with a variety of related constructs. This is a major impediment to the development of a robust, empirical evidence base concerning the putative effects on different health outcomes.

If this promising heuristic is to lead to genuine insights, it is imperative that we address a number of theoretical and methodological difficulties. Existing research has emphasised intra- and intergroup relations – the horizontal aspects of social capital. This has proved fruitful but there is a need to expand attention to social structure, organisation and institutions – the vertical aspects of social capital – to fully understand the health outcomes of groups and individuals.

Better understanding of the impacts of the social world on health will be gained by adopting dimensional models of social capital in which various aspects of the social structure are reported rather than linear models, which lead to a tendency to label communities simply as 'high' or 'low' in social capital. Further research into the effects of social capital on mental health requires more stringent conceptual clarity, operational definitions and validated contextual measures of communities that are not based exclusively on the aggregated characteristics of individual members.

Exploration of social capital in mental health not only has intrinsic value but it may help to address some important, unresolved clinical and epidemiological questions. These include debates over the composition or context in explaining geographical and socioeconomic inequalities in mental health. Better understanding of the nature and determinants of social capital and its associations with physical and mental health might also help to resolve the debate between 'psychosocial' and 'neo-materialist' explanations for health inequalities (Lynch *et al*, 2000). Social capital may yet prove to be an important mediating factor between a community, the collective attributes of its members and individual health.

DECLARATION OF INTEREST

None.

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