Twenty years of social capital and health research: a glossary

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Received 1 September 2016
Revised 14 December 2016
Accepted 29 December 2016
Published Online First 13 January 2017

ABSTRACT

Research on social capital in public health is approaching its 20th anniversary. Over this period, there have been rich and productive debates on the definition, measurement and importance of social capital for public health research and practice. As a result, the concepts and measures characterising social capital and health research have also evolved, often drawing from research in the social, political and behavioural sciences. The multidisciplinary adaptation of social capital-related concepts to study health has made it challenging for researchers to reach consensus on a common theoretical approach. This glossary thus aims to provide a general overview without recommending any particular approach. Based on our knowledge and research on social capital and health, we have selected key concepts and terms that have gained prominence over the last decade and complement an earlier glossary on social capital and health.

INTRODUCTION

Social capital refers to the resources to which individuals and groups have access through their social networks.[1] Social capital has been a key concept in public health and social epidemiology for 20 years. Figure 1 illustrates the number of articles with 'social capital' in their titles published since 1997 and found in the PubMed database. Research on social capital and health has given rise to important debates on the conceptualisation, measurement and ultimately the value of social capital for health promotion. There have been a number of reviews and commentaries on the meaning and utility of social capital in health research.[2–7] Yet, few studies have offered a conceptual glossary of the key approaches, concepts and measures characterising the field. Baum and Ziersch's[8] glossary on social capital is an important exception. While many concepts and debates identified by Baum and Ziersch remain relevant (eg, levels of analysis), there have been important developments in social capital and health research in the intervening years.

Social capital and health is multidisciplinary with studies often drawing from theories and concepts in the social, political and behavioural sciences. This has made for a rich body of empirical evidence, but it has also made it challenging to foster a common approach. Two main approaches have characterised public health research: cohesion and network approaches.[6–10] Cohesion approaches tend to emphasise the cognitive or structural side of social capital through questions about trust in others, perceptions of social belonging and integration, and levels of civic or social participation. Network approaches tend to rely on formal social network analysis (SNA) methods to measure social resources and networks, while highlighting inequalities in access to social resources. In both approaches, social capital is seen as an ecological-level property (eg, interpersonal, organisational, neighbourhood and policy) with individual-level health consequences.[10] While these approaches differ, they are not mutually exclusive with some researchers seeking to bridge the two approaches.[10] The following glossary does not recommend one approach over another, but does aim to provide researchers with a set of key terms and concepts prominent in recent research on social capital and health.

BONDING, BRIDGING AND LINKING SOCIAL CAPITAL

The three related concepts of bonding, bridging and linking social capital refer to the group contexts in which social capital flows.[4] *Bonding social capital* refers to resources that are accessed within networks or groups having generally similar characteristics (eg, class, race/ethnicity, age), thus possibly reinforcing exclusive social identities.[5 6 11] *Bridging social capital*, on the other hand, refers to those social resources that may be accessed across groups of different socioeconomic or sociodemographic characteristics.[5 6 11] *Linking social capital* is the norms of respect and networks of trust connecting individuals and groups across formal or institutionalised structures of authority and power.[5 6 11] All three forms may lead to improved health through different means, but they may also lead to negative health consequences, particularly bonding social capital. For example, having bonding social capital within a setting of few or limited resources may provide certain benefits (eg, sense of belonging), but it can also act as a liability, particularly if social obligations become excessive and down levelling norms are prevalent.[12]

COGNITIVE SOCIAL CAPITAL

Cognitive social capital refers to those measures that assess people's perceptions of trust, reciprocity and support.[4] Among these cognitive measures, *trust* has been central to research on social capital and health.[13] Trust, which might be defined as the belief or confidence that someone or something is reliable, truthful and honest, is often distinguished between its general and particular form. Generalised trust, or what Putnam[9] calls 'thin trust', is often measured by asking respondents the question: 'Generally speaking, would you say that most people can be trusted, or that you can't be too careful in dealing with people?'[13 14] Such questions are less about individual trustfulness as much

To cite: Moore S, Kawachi I. *J Epidemiol Community Health* 2017;**71**:513–517.

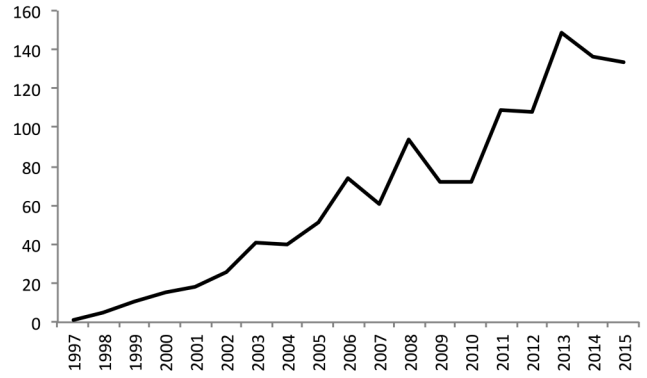

Figure 1 Number of articles published in PubMed with 'social capital' in the title from 1997 to 2015.

as a person's perceptions of the *trustworthiness* of the social environment.[12 13] Particularised trust, or 'thick trust', is the trust that comes from specific interpersonal relations.[9] Particularised trust questions often appear in the form of questions about a person's trust in their neighbours or people in their neighbourhood.[13] Extensive research has documented positive associations between generalised and particularised trust and health.[15 16] Researchers have argued that trust represents an important 'moral resource' that inheres within networks and makes possible collective action and social solidarity.[12] Others have suggested however that generalised trust may be an inadequate proxy for 'network-accessed resources' since cognitive and network measures have been shown to be uncorrelated and have independent associations with health.[14 17 18] Further research is needed to discern the importance of trust and other cognitive measures, including whether they reflect access to psychosocial, moral or social resources.

COHESION

Kawachi and Berkman[12] define *social cohesion* as a broader concept than social capital, encompassing two inter-related features of society: (1) *the absence of latent social conflict*—whether in the form of economic inequality, racial/ethnic tensions or other forms of polarisation; and (2) *the presence of strong social bonds*—measured by levels of trust, norms of reciprocity and the abundance of civic ties that bridge divisions in society. Social capital is a critical ingredient of social cohesion, but a community can possess strong social capital through its individual members without those resources contributing to overall social cohesion (or in the case of some groups, such as the Ku Klux Klan, they can actually be destructive of social cohesion at large). The types of social resources emphasised by the social cohesion approach include: (1) the ability of a community to engage in collective action (collective efficacy); (2) the ability of the group to enforce social norms (informal social control) and (3) the ability of the community to express solidarity.[12]

NEGATIVE SOCIAL CAPITAL

While most empirical research has documented the benefits of social capital, researchers have also recognised that social capital can have downsides.[15 19 20] Negative social capital refers to the damaging effects that social capital may have for health. Negative consequences might arise within particular contexts due to 'restricted opportunities', 'excessive demands', 'limited freedoms' and 'down-levelling pressures'.[21] Researchers have also suggested that the negative consequences are more likely to arise within closed networks, which limit their members access to broader, more diverse sets of resources and may enforce negative norms and behaviours more strongly on their members.[10]

NETWORK SOCIAL CAPITAL

'Network social capital' refers to measures of social capital that come from the use of formal social network measurement instruments and methods. From an ego network approach, three main instruments have been used to measure network social capital: name, position and resource generators. *Name generators* ask respondents (ie, egos) to name others (ie, alters) with whom they are connected along a certain relational dimension (eg, discuss important matters). Once the alters' names or pseudonyms have been provided, respondents may be asked a series of questions about each alter (eg, gender, age, health-related behaviours) so as to gather information about the composition of respondents' networks. Finally, respondents may be asked whether their alters know or interact with each other. This final set of questions provides information on ego network density (ie, number of ties present in ego's network as a proportion of number of possible ties present).[22–24] Using name generator data, network social capital might be measured in terms of the compositional heterogeneity or the average or maximum level of social resources accessible[24 25] or the structure of the ego network (eg, structural holes).[26] Name generators, particularly those asking about discussant networks, tend to capture a person's stronger ties.[27] *Position generators* ask respondents to identify whether they have a social tie to another person who holds some type of position or occupation in society.[28 29] A position generator often consists a list of occupations sampled from a larger set of occupations in society, with these occupations having different levels of prestige or social value assigned to them. Three measures may be calculated using the position generator: (1) diversity or extensity of social ties (ie, the number of different positions accessed), (2) upper reachability (ie, the highest ranked position accessed) and (3) range (ie, the difference between the highest and lowest rank positions accessed).[28] Position generators were originally used in the study of job attainment and social mobility, but have been increasingly used in population health research.[14 20] The position generator may better capture a person's weaker social ties.[25 28] *Resource generators* provide respondents with a fixed list of specific resources and ask them to identify whether they have access to a specific resource, and the tie strength (as indicated by social role—kin, friend or acquaintance) by which they access the resource.[25] The list of resources may be grouped into different domains (eg, prestige and education-related resources), and examined separately to assess their importance for health outcomes. With important exceptions,[30 31] resource generators have yet to be fully integrated into health research.

RESOURCES

Lin[28] defines resources as material or symbolic goods that contribute to basic human sustenance or have been ascribed with sociocultural meaning. *Personal resources* refer to those resources that individual actors have in their own possession and control. Personal resources may come into an actor's possession through ascription (eg, inheritance), acquisition (eg, earning an educational degree) or exchange.[28] Social capital research focuses on those resources embedded and accessed within social networks. *Social resources* may be classified into those resources that are accessible through (1) an actors' direct

and indirect social ties (ie, social capital) or (2) the social identity and recognition that may come from belonging to the same social class or group (ie, cultural capital).[28] Social resources may be accessible to individuals or the *collective* as a result of strong social connections. For example, the stock of trust within a collective (eg, a community) is a type of 'moral' resource which lubricates collective action, mutual assistance, reciprocity exchanges and the ability to enforce norms. Absent trust, it is difficult for actors to engage in reciprocity exchanges or collective action. Individual A does a favour for B (eg, lend money) because A trusts that B will return the favour in the future. Similarly, A will volunteer to perform a service for the collective because he/she trusts that others in the group will also do their part, and that free riders will be sanctioned.

Psychosocial resources represent a range of individual emotional or cognitive states and capacities emerging from the interaction of social, behavioural and psychological factors. Psychosocial resources may be seen as (1) being shaped by social structures and contexts and (2) mediating the effects of social structures on health.[32] These include optimism, perceived control, coping style and social support.[33]

SOCIAL CAPITAL INEQUALITIES

Social capital inequalities in health refer to systematic variations in health arising from the differential accessibility that persons or groups have to social resources.[34] Lin[28] suggests that inequalities in social capital arise from capital and return deficits. Capital deficit refers to the relative inaccessibility of social resources for one group compared with another. For example, persons with low income tend to have a lower quantity and quality of resources accessible to them through their networks than those with high income. Assuming similar levels of capital, return deficit focuses on the processes by which certain groups gain greater benefit from their social capital compared with others. Such processes may involve differences in the capacity of certain groups to mobilise capital or the responses that environments or institutions may have to the capital so mobilised.[28]

SOCIAL CAPITAL INTERVENTIONS

Social capital interventions in health represent singular or multiple activities undertaken within or across different levels or sectors of a system, with the aim of improving health through changes in a person's or group's access or capacity to mobilise social capital.[35] Social capital might serve as the target, channel or mediator, or the segmenting variable of an intervention, depending on the intervention aims.[15 35 36] For example, as the segmenting variable, the intervention might be delivered differently to those groups having low versus high social capital. This may be seen in the differential capacity of communities with low and high social capital to respond to or recover from a disaster and the need to have in place different disaster management programmes and policies for such groups.[12] In terms of policy interventions, public policies may be evaluated according to whether they (1) are designed to build or support social capital directly, (2) incorporate social capital considerations into other policy assessments, and (3) redesign and improve policies by leveraging current social capital.[37]

SOCIAL CAPITAL SETTINGS

Three main settings have caught the attention of researchers on social capital: family or household, neighbourhood, and workplace settings. Coleman[38 39] defined *familial social capital* primarily as the relations between children and parents (and other family members if present). Coleman, whose focus was on the nuclear family and the importance of family social capital in rearing children, viewed family social capital as consisting of three structural elements: (1) the strength of the relationship between the adult(s) (ie, parent or guardian) and child, (2) the strength of the relationship between the adults who act as parents, and (3) the continuity of these relationships over time.[38 39] *Neighbourhood social capital* has been defined as social resources inherent within community networks, consisting of four main forms: (1) social support, (2) social leverage, (3) informal social control, and (4) neighbourhood organisation and participation.[40] *Workplace social capital* refers to the social resources accessible within work or occupational environments, a setting in which social capital may be particularly salient for the health of working-age adults.[41 42] Of particular interest within the workplace setting has been the difference between horizontal (employee-to-employee) and vertical (employee-to-employer/supervisor) ties, suggesting that the form that one's social capital takes in the workplace can have differential health impacts.[43]

SOCIAL NETWORK ANALYSIS

Social networks refer to the patterns of social ties existing among a set of actors. Actors may consist of individuals, organisations, groups or other salient social units. Social ties are the links connecting different actors; they may be informal or formal, and can involve a range of types, including the exchange of expressive or instrumental resources, behavioural interactions, or biological ties.[44] SNA examines the pattern or structure that emerges from these social ties, and the influence that this structure may have on the outcomes of individual actors as well as the network as whole. Three main approaches are used in SNA: ego, chain (eg, snowball sampling) and sociometric approaches. *Ego network approaches* examine the social connections of individual actors, often focusing on the compositional features (eg, percentage of kin) of an actor's network. *Sociometric approaches* examine the network structure characterising the interactions of a delimited, bounded group of actors, asking each actor within that group to report on their ties to every other group member. *Chain approaches* (eg, snowball or respondent-driven sampling) begin with an initial set of actors who are asked to nominate or report on others with whom they have ties of a specific kind (ie, their first-order zone); these actors are in turn asked to nominate others (ie, second-order zone), continuing on until a certain number of waves have been sampled or a point of saturation has been reached.[44 45] Chain methods have often been applied to the study of hard-to-reach populations. Further information about SNA methods can be found in a related glossary.[22]

STRUCTURAL SOCIAL CAPITAL

The word 'structural' in structural social capital refers to the presence or absence of formal opportunity structures or activities in which individual actors might develop social ties and build social networks. Measures of structural social capital at the macrolevel aim to capture the number or density of civic or neighbourhood associations, clubs, or other associational activities available to individual actors, whereas measures at the microlevel aim to capture whether and, if so, the degree to which individuals participate in social networks,[46] associations and civic events. *Social participation*, a commonly used measure in this regard, has been shown associated with a range of health outcomes and conditions, although these associations are sometimes inconsistent across studies. In addition, although social participation may be considered a more distal, upstream factor

influencing health through network or cognitive capital, most studies have treated participation as a dimension of social capital rather than an upstream cause of social capital. Further research could seek to broaden measures of social participation to include more informal forms and assess the relationship between structural social capital and the other forms of social capital.

TIE STRENGTH

Tie strength can be defined in terms of the emotional intensity, intimacy, reciprocity and temporal duration characterising the relationship between actors.[47] Tie strength is an important concept in social capital research since it may reflect (1) the types of resources that may be accessed as well as (2) the likelihood that the resources accessed may, in fact, be mobilised. *Strong ties* may be more easily mobilised than weak ties, but they often reflect homogeneous, insular social relationships that can limit access to social and economic prospects, information, and resources that lie beyond one's close social circle.[48] *Weak ties*, in contrast, are often indispensable for bridging diverse social groups and transmitting information, and facilitating transactions across greater social distances, ultimately providing the basis for social integration.[47] Direct measures of tie strength, such as 'closeness', are preferable but not always available. In such cases, the social role (eg, kin, friend or acquaintance) characterising the tie might act as a general proxy for tie strength. Research has suggested that the assumption that non-kin ties are weaker than kin ties is accurate, although their predictive ability may be limited due to variations in tie strength within kin and non-kin groups.[49]

CONCLUSION

Due in part to the rich disciplinary diversity and conceptual debates characterising research on social capital and health, the field remains vibrant, attracting new researchers interested in the link between social capital and population health and health inequalities. The rise in intervention research and longitudinal studies promises to provide a more complete understanding of the social, psychological and behavioural mechanisms linking social capital to health. It has also made possible the investigation of the importance and effect of social capital on health across the life course and the transmission of social capital benefits between generations. Future research on social capital and health might also seek to integrate qualitative and mixed methods to understand better the various strategies and contexts in which individuals and groups access and mobilise social capital for health benefits.

Contributors SM and IK both contributed to the conceptualisation, writing and editing of the manuscript.

Competing interests None declared.

Provenance and peer review Not commissioned; externally peer reviewed.

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