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# The Interrelations of Social Capital with Health and Mental Health

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**DISCUSSION PAPER**

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Harvey Whiteford

June 2001

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strategy**

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## I. INTRODUCTION

Extensive research has been conducted within the last decade on the links between social capital and social and economic growth and development. The resulting evidence has shown that social capital matters in, among others, economic development, the effectiveness of political systems, and community development. Stemming from these endeavors, research on the interrelations between social capital and health has also been conducted, revealing correlations between social capital and health outcomes. Still, many questions remain unanswered on the interrelations of social capital with health. Definitive definitions and means to measure social capital are still somewhat elusive, and there is still the need to identify which collective, ecological characteristics of communities and societies affect population health status. It is also unclear if the relations between these two variables are multidirectional, and of causality or correlation (Lochner, Kawachi, and Kennedy 1999). In terms of mental health, little work has been done to specifically explore how it may interface independently with social capital, although this body of work is growing.

Findings from extant research will have important ramifications on the content and structure of further research, on policy formation (macro social policies and their consequent effects on health determinants), and on the implementation of health and mental health services (improving the means, efficacy, and targeting of service delivery). In an attempt to synthesize existing work examining the interrelations of social capital with health and mental health, this paper discusses extant research and pulls together consequent primary hypotheses, methodologies and indicators for measurement, and limitations for study.

## II. SOCIAL CAPITAL: DEFINITIONS AND FRAMEWORK

As the concept of social capital has developed, academics and development practitioners have attempted to clearly define the concept, what forms it may take, and how it may influence and improve the development process in terms of both social and economic growth. Based on these initial findings, efforts have been made to develop measurable social capital indicators and recommendations on how to encourage and support this dynamic. One key benefit from the increased attention that social capital has received over the past decade is that the concept “is allowing scholars, policy makers, and practitioners from different disciplines to enjoy an unprecedented level of cooperation and dialogue. In reviving and revitalizing mainstream sociological insights, there has been a corresponding appreciation that different disciplines have a vital, distinctive and frequently complementary contribution to offer to inherently complex problems” (Woolcock 2001: 15).

Although there are still varying definitions of the term and what it encompasses,<sup>1</sup> most social capital conceptualizations refer to it as networks of people deriving benefit from common interaction with each other (World Bank 2001). More specifically defined, social capital can be seen as “the features of social organization, such as civic participation, norms of reciprocity, and trust in others, that facilitate cooperation for mutual benefit” (Kawachi, Kennedy, Lochner, and Prothrow-Stith 1997: 1491). These institutions, relationships, and norms “shape the quality and quantity of a society’s social interactions... Social capital is not just the sum of the institutions which underpin a society – it is the glue that holds them together” (World Bank Social Capital Website).

<sup>1</sup> The concept of social capital can be traced back to the work of Alexis de Tocqueville (1835), Emile Durkheim (1893 and 1897), and Max Weber; while the first coining of the word began with Hanifan (1916) while referring to education and local communities. Others who have contributed to this body of work include Bourdieu (1979) and Bourdieu and Passeron (1970) (OECD 2001).

Some argue however that this definition is too broad, leading way to ambiguity and measurement difficulties. Woolcock (2001) for instance stresses that social capital is only the structure of networks and social relations that lead way to mutual benefit through cooperation, but not the adjoining behavioral dispositions that often accompany these, such as “trust, reciprocity, honesty, and institutional quality measures” (Woolcock 2001: 12). When referring to social capital, Woolcock notes that it is important to separate what social capital *is* from what it *does*. By narrowing the concept of social capital in this manner, the focus falls on its sources rather than its consequences. “This approach eliminates an entity such as ‘trust’ from the definition of social capital. Trust is doubtless vitally important in its own right,” but is more accurately understood as an outcome (ibid). Yet, even if trust is not considered part of the definition of social capital, “it is certainly a close consequence, and therefore could be easily thought of as a proxy” (Putnam 2001: 45).

Social capital critics say that the concept still has various shortcomings. Baum (1999) feels that the current concepts of social capital are “vague, slippery, and poorly specified, and in danger of ‘meaning all things to all people’ on both right and left of the political spectrum” (Campbell 2000: 183). Gillies (1997) states that social capital “is a descriptive construct rather than an explanatory theory” (in Campbell 2000: 183). Despite contention over definitional parameters, such as the specific interactions and types of organizations that constitute social capital and the inclusion or exclusion of behavioral aspects, there is little disagreement over the fact that it can facilitate collective action, economic growth, and development by complementing other forms of capital (Grootaert 1998).

## ■ Differing Views

In terms of operationalization for projects and interventions, there are four views of social capital (World Bank 2001 referencing Serageldin and Grootaert 2000). The narrowest conceptualization of social capital looks at local community associations and the underlying norms (trust, reciprocity) that facilitate coordination and cooperation for mutual benefit (Uphoff 2000). This view primarily focuses on the positive aspects of social capital, and does not necessarily include the detriments of social capital (like exclusion and excessive demand on members).

A broader application of social capital, such as that employed by Coleman (1988), enables the examination of a wider spectrum of social dynamics. A definition based on function, this view extends its scope to include vertical associations, characterized by both hierarchy and an unequal power distribution among members within a society. Thus this viewpoint encompasses both positive and negative aspects of social capital, revealing that while social capital can be beneficial to some, it can be useless and harmful to others (Putnam 2001).

A macro view of social capital (Grootaert 1998) focuses on the social and political environment that shapes social structures and enables norms to develop. This social and political environment includes formalized institutional relationships and structures, such as government, the political regime, the rule of law, the court system, and civil and political liberties.

An integrative view of social capital recognizes that micro, meso, and macro institutions co-exist and can potentially complement each other. “This view accounts for the virtues and vices of social capital and the importance of forging ties within and across communities, but recognizes that the capacity of various social groups to act in their interest depends crucially on the support or lack thereof that they receive from the state as well as the private sector. Similarly, the state depends on social stability and widespread popular support” (World Bank Social Capital Website).

When considering this range of social capital views, the strongest analytical results have been delivered from those studies done at the micro-level (examining interactions among and between individuals, households, community organizations, and firms). Overly inclusive approaches to measuring social capital may weaken results and lead to conceptual overreach. Yet, the macro environment cannot be ignored, as it does have direct and indirect effects on the environment within which community-level social capital must operate. This translates into examining not only the nature and extent of relationships within and between communities, but also between communities and formal institutions (World Bank 2001).

It should also be noted that differences might exist in the mapping of social capital constellations depending on gender and setting. There are differences in the way that men and women utilize social resources (Shrader 1999). In addition, access and utilization of social capital tends to differ among urban and rural settings. Grant (2000) found that, in general, urban settings might have more vertical links and formal linkages to institutions, while rural areas might have higher levels of mutual trust and better intra-community relations.

### ■ Aspects of being 'Social' and 'Capital'

"Social capital almost always arises as a by-product of social relationships, and not as the result of conscious investment on the part of members within a social structure" (Berkman and Kawachi 2000: 177). Social capital emerges from interactions and shared norms that are social, external to the individual, not lodged within individuals (as is human capital). It inheres in the structure of social relationships, and therefore is an ecological characteristic (Social Capital and Mental Health Workshop, Lochner, July 2000). Additionally, the phenomenon of social capital as a whole is greater than the sum of the individual contributions to it. As a consequence of its collective nature, social capital is a public good, one that enables the supply of other critical public goods. And due to this, and the fact that the actors who generate a public good typically capture only a small part of its benefits, there is the threat of under-investment, which can be compounded by delayed investment returns that sometimes do not emerge until the long-run (Berkman and Kawachi 2000; Uphoff 2000).

Although there is consensus over social capital being 'social' and collective, debate still lies around whether social capital is a form of 'capital.' Conceptually, capital theory is one of the most controversial areas in economics. There is no universally accepted definition of 'capital.' It is conceived of in two fundamentally different ways (Eatwell et al. 1987). It may be thought of as a fund of resources, which can be switched from one use to another. This has been called the 'financial' concept of capital. It may also be conceived of as a set of productive factors that are embodied in the production process, the so-called 'technical' concept of capital.

Using the technical concept, traditional capital theory arbitrarily divided productive factors (inputs) into three groups - natural resources, human labor and man made goods (financial and physical capital). The latter was called capital goods (or often just 'capital') and was defined as produced goods that could be used as inputs for further production (Samuelson and Scott 1975: 50; Dow and Hendon 1991). Over time the other inputs, natural resources and human labor, began to be referred to as capital as well. Specifically, in the early 1960's economists such as Schultz and Becker reintroduced Adam Smith's term, human capital, to refer to how educated and healthy workers productively utilized other 'capital' inputs (Schultz 1963; Becker 1962). Thus the literature now routinely recognizes natural capital (soil, atmosphere, forests and water), human capital (human productivity), and physical or financial capital ('man made,' e.g.

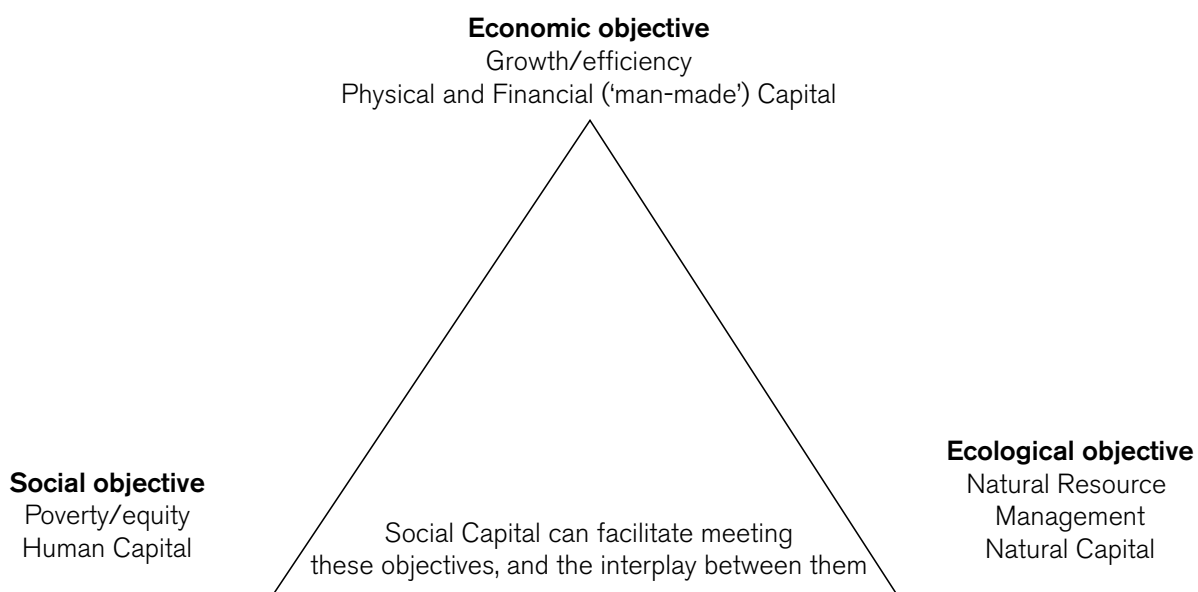
buildings, roads, and technology). In the last decade there has been a resurgence of interest in another form of capital – social capital, referred to as the missing link in economic development (Grootaert 1998). It has grown out of the belief that cohesive and productive groups of individuals are more than just the sum of their human capital. Unlike some other forms of capital (such as physical), social capital is “a resource whose supply increases rather than decreases through use,” and depletes if not used (Putnam 1993: 37-38). Similar to human capital, social capital offers both private and public returns (OECD 2001).

To achieve economic productivity, combinations of capital used as inputs to produce goods and services for which there is a demand. Strictly speaking the yield of capital is the interest rate per annum, in percentage terms not dollar or other value units, produced by these inputs in the production process (Samuelson and Scott 1975: 545). The most common aggregate of this is the gross domestic product (GDP), and economic growth is measured by the change in GDP. While there is considerable debate about the extent and rate at which rises in GDP will improve human welfare, a countries aggregate economic growth does appear to benefit the poor as well as the better off (Gallup et al. 1998; Roemer and Gugerty 1999). Attempts to supplement the GDP measure by capturing more human development measures have been made, most notably by the United Nations Development Program’s Human Development Index (HDI) that combines life expectancy, education and income per head (United Nations 1999).

### Interactions with Other Forms of Capital

The presence of social capital can help improve usage of human, natural, physical, and financial capital, as social capital stocks can lead to more efficient management of these resources. As such, social capital can be a mediating agent between other forms of capital, amplifying and enhancing their effects (see Figure 1). On the other hand, lower levels of social capital tend to lead to fewer benefits from these forms of capital for the society as a whole. To a lesser extent, some research has shown that levels of other forms of capital may affect social capital stocks.

**Figure 1: Interactions between Forms of Capital** (Adapted from Serageldin 1996: 3)



Not enough research has been done to clearly state the relationship between levels of natural, physical, and financial capital and how this affects social capital stocks. Yet some differences between social capital and the other forms of capital can be noted. In this sense, social capital is: a) “relational rather than being the exclusive property of any one individual; b) mainly a public good in that it is shared by a group; and c) produced by societal investments of time and effort, but in a less direct fashion than is human, financial, or physical capital” (OECD 2001: 39).

The relationship between human and social capital however has been examined, revealing that “social capital directs attention to the relationships that shape the realization of human capital’s potential for the individual and collective” (Schuller 2001: 19). While “human capital can be understood to encompass social as well as technical skills, social capital brings to the fore the social networks and values through which skill portfolios generally are built, deployed and rewarded” (ibid: 21).

	<b>Human Capital</b>	<b>Social Capital</b>
<b>Focus</b>	Individual agent	Relationships
<b>Measures</b>	Duration of schooling Qualifications	Attitudes / values Membership / participation Trust levels
<b>Outcomes</b>	Direct: income, productivity Indirect: health, civic activity	Social cohesion Economic achievement More social capital
<b>Model</b>	Linear	Interactive / circular

(Schuller 2001: 20.)

While, it has been posited that higher levels of human capital may improve social capital stocks, the opposite may also be possible. Level of education is a strong predictor of group participation and trust (Brehm and Rahn 1997), both being aspects of social capital. This bi-directional association suggests that there may be certain feedback and amplification effects of social capital on collective outcomes. In communities with eroding social capital stocks, the associated under-investment in human capital may lead to a further deterioration in civic activity (see for example Wilson 1987; Wacquant and Wilson 1989). These potential feedback and amplification effects may perpetuate the disadvantage of afflicted communities (Berkman and Kawachi 2000).

### ■ Deconstructing Social Capital

Social capital can be broken down into cognitive and structural components, linked in a multi-directional relationship. Cognitive components of social capital help shape its structural framework, while paradigms of structural social capital can form or transform cognitive social capital. In other words, cognitive social capital serves as the underlying base and foundation for structural social capital components, while the presence of structural components may serve to reinforce cognitive aspects.

## Cognitive Components

Cognitive social capital is the “driving force” behind the visible structural forms of social capital, and is derived from “mental processes and resulting ideas, reinforced by culture and ideology, specifically norms, values, attitudes, and beliefs that contribute to cooperative behavior” (Uphoff 2000: 218). In relation to health and mental health, cognitive social capital (predominantly socialized at the micro level) impacts behavioral norms, including control of risk behavior, mutual aid and support, and informal means of informational exchange.

## Structural Components

Structural components of social capital are the “roles, rules, precedents and procedures as well as a wide variety of networks that contribute to cooperation” (Uphoff 2000: 218). In relation to health, structural social capital at the macro level is shaped by the overarching health policies, mechanisms for its implementation, and the institutional implementing actors. At the meso level, impacting factors include the effectiveness and efficacy of various networks in service delivery and diffusion mechanisms for health-related information.

Within the framework of structural social capital, there are two dimensions – *horizontal*, reflecting ties that exist among individuals or groups of equals or near-equals, and *vertical*, stemming from hierarchical or unequal relations due to differences in power or resource bases. Horizontal aspects of social capital can either *bond* or *bridge* groups, while vertical aspects *link* groups with power, access, and resource differentials.<sup>2</sup>

### *Bonding Like Groups*

The strong ties<sup>3</sup> that connect family members (nuclear and extended), neighbors, and close friends and colleagues comprise “bonding” social relations, which exist among people who share demographic characteristics. These relations are typically inwardly-focused and serve as social protection mechanisms during times of need. Bonding relationships act as the primary vehicles for the transmission of behavioral norms to children (socialization) and influence human capital development. The family’s ability to meet children’s physical and emotional needs strongly influences their perceptions of the trustworthiness of others outside the family. Family dynamics also encourage reciprocity and exchange, two other important factors in social capital generation. The material and emotional support shared freely between family members generates an implicit willingness to return such support (World Bank Social Capital Website).

Bonding social capital can be important for the diffusion of information, establishing health norms, controlling deviancy, generating mutual aid, and protecting the vulnerable. This type of social capital also may serve as a main source of economic and social welfare for its members. However, dense bonding ties may also limit economic growth by imposing barriers to external links. Likewise, high levels of internal trust may generate distrust of non-family members and networks, preventing potentially productive relationships (World Bank 2001; World Bank Social Capital Website).

<sup>2</sup> In a recent discussion paper examining social capital, the Australian Bureau of Statistics (ABS) looked at social capital as comprised of three types of communities, which parallel the idea of bonding, bridging, and linking relations. According to the ABS, these three communities are as follows: a) the core community, including immediate and extended family and friends; b) the informal community, such as associations, clubs, organizations, networks, the church, and the local neighborhood; and c) the formal community, comprised of government agencies, the market place, the legal framework, the welfare system, political processes, and the labor market (Australian Bureau of Statistics 2000: 8).

<sup>3</sup> The notions of both “strong” and “weak” ties, discussed in the sections on bonding and bridging, are attributed to Granovetter (1973).

### *Bridging Differences*

The weak ties that link those of different ethnic and occupational backgrounds form “bridging” social capital. This type of social capital is crucial to the success of civil society because it provides opportunities for participation, increased networks for exchange, and channels to voice concern to those who may be locked out of more formal avenues to affect change. These bridges are the most beneficial in terms of social and economic development of the society as a whole (World Bank 2001). Communities with positive economic development and effective governments are those comprised of a citizenry linked by solidarity, integrity, and participation (‘networks of civic engagement’). These civic networks, or linkages, foster norms of reciprocity which reinforce sentiments of trust within a society and also serve to improve the effectiveness of communication and social organization (Putnam 1993).

In terms of relevance to health and mental health, bridging social capital can be important to the diffusion of information, service delivery and implementation, the control of deviancy, and reinforcing extant health norms. In addition, these links may help improve collective action (for such things as immunization coverage).

### *Vertical Linkages*

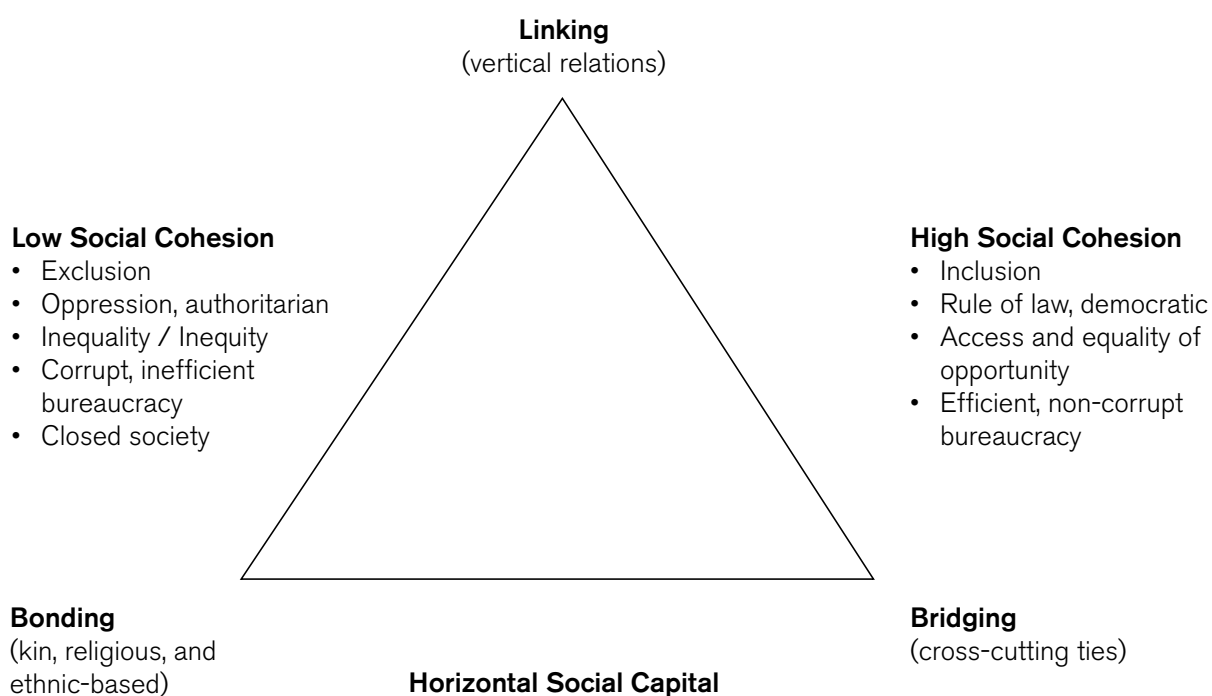
“Linking” social capital refers to the nature and extent of vertical ties between groups of people who have open channels to access, resources, and power with those who do not. Relations between government and communities are encompassed within linking social capital. The public sector (i.e., the state and its institutions) is central to the functioning and welfare of society. And, government laws and regulations dictate the amount of space available for civil society, and either allow it to become diverse and flourish or wither away.

At the level of state capacity and function, and its relations with civil society, various aspects become relevant to health and mental health status. Vertical linkages allow essential responses to health crises and managing risks. Policy formation obviously has effects on numerous health determinants. The state also has direct influence on the structure of service provision and delivery, although it may be assisted in implementation by civil society. Feedback from civil society and communities is crucial to keep the targeting of health policy and services on track.

### **Within the Matrix of Social Cohesion**

The presence of social capital does not necessarily mean inclusive relations within a society. Income and wealth inequality (poor linking), racial and ethnic tensions (poor bridging), and disparities in political participation and weak civic engagement (poor bonding), all are associated with a lack of social cohesion, stemming from weak community links with the government, or polarization among people within and between communities. Social cohesion can be indicated by strong levels of trust and norms of reciprocity that bond groups, the abundance of bridging that transgresses social divisions, and mechanisms of conflict management (responsive democracy, an independent judiciary, etc.) that enable just links to exist between unequal groups, including government and communities (Maxwell 1996; Jensen 1998). Thus, social cohesion reflects the presence of well-integrated horizontal (bonding and bridging) and vertical (linking) social capital (Figure 2).

**Figure 2: Social Cohesion: The Integration of Bonding, Bridging, and Linking Social Capital**



(Adapted from Colletta and Cullen 2000.)

Durkheim first noted relations between a socially (un)cohesive society and its consequent health. Since, social scientists have recognized that “society is not simply the sum of individuals – that the factors which determine population well-being cannot be reduced to individual risk factors” (Berkman and Kawachi 2000: 174). A society’s health status then, can be more completely understood by examining its social environment (Marmot 1998). Numerous societal characteristics have been accounted as reasons for variations in group-level outcomes (like degree of income disparities), yet, social integration or cohesion, Durkheim’s original focus, remains relevant. By examining social cohesion, one is also able to examine the interconnections between economic restructuring, social change, and political action.

## ■ Outcomes and Consequences

Social capital exists not in any single form, but in many dimensions. Consequently, it is far from homogenous. Studies have revealed both the benefits and detriments social capital may have on society.

### Benefits

Social capital and its links to economic development have been widely researched by The World Bank, especially in terms of how it may help decrease transactions costs, improving productivity and efficiency. Other social scientists have investigated how higher social capital stocks may: a) lead to protection from social isolation; b) create social safety nets that can be tapped during crisis; c) improve or ameliorate political aspects of society, such as the functioning of democracy, more efficient governments, and decreased corruption; d) lead to lower levels of inequality within a society; e) lower crime levels; f) lead to improved well-being and a higher quality of life; and g) improve cooperation and mutual aid.

## **Detriments**

The downside of social capital is that the same strong ties that are needed for people to act together can also exclude non-members, such as the poor or minority groups (Portes and Landolt 1997; Colletta and Cullen 2000). Strong ties within the group may lead to less trust and reciprocity to those outside of the group. For instance, the mafia, drug cartels, and terrorist groups may have high levels of social capital amongst group members, with obvious detrimental effects for those outside of the group. Within the 'in' group, social capital can put excessive claims on other group members, straining resources while also restricting individual freedom (OECD 2001).

Social interactions can have negative as well as positive effects – as good behavior spreads, so does bad (as shown by studies on education, illegitimacy, and crime). Networks can just as easily influence and reinforce bad choices as they can good. In addition, diseases may be able to spread quickly through networks and communities with higher levels of social interaction (Grant 2000).

## **■ Applications**

The effects of varying social capital levels have been examined in numerous fields of inquiry, including among others: families and youth behavior problems, schooling and education; community life; work and organizations; democracy and governance; economic development; criminology; and public health (Woolcock 1998). In terms of relevance to public health, contributions from criminology, political science, and epidemiology are particularly relevant (Berkman and Kawachi 2000).

## **The World Bank's Social Capital Initiative**

The World Bank initiated a Social Capital Initiative (SCI), funded by the Government of Denmark, which aimed to advance the definition of social capital and tools for its measurement, while investigating how its stocks may be monitored and how it may add to economic and social development. The SCI sought to test two hypotheses: i) whether the presence of social capital improves the effectiveness of development projects; and ii) if through select donor-supported interventions, it is possible to stimulate the accumulation of social capital (World Bank Social Capital Initiative 1998: 9-10). The studies spanned the globe and covered a broad range of issues such as:

- Local level alternatives to the inadequate provision of goods and services
- The reconstruction or revitalization of social capital after conflicts or political transition (see Colletta and Cullen 2000)
- The mobilization of social capital for the development of new income-generating activities
- The development or reinforcement of the role of trust in work-related relationships
- Local adjustments to increased decentralization of government functions.

In all, the 12 projects within these areas provided strong evidence that the impact of social capital is a pervasive element of progress in many types of development projects, and an important tool for poverty reduction. These studies also showed, using various yet rigorous analytical approaches, that social capital can have a major impact on the income and welfare of the poor by improving the outcome of activities that affect them most directly. In particular, social capital improves the efficiency of rural development programs by increasing agricultural productivity, improving the management of common resources, making rural trading more profitable, and energizing farmer federations. It also enhances access of poor households to water, sanitation, credit, and education in rural and urban areas. It is a key factor in preventing, channeling, and recovering from ethnic conflict and political transition. Finally, it reduces poverty through micro and macro channels by affecting the movement of the information useful to the poor, and by improving growth and income redistribution at the national level (World Bank Social Capital Initiative 1998).<sup>4</sup>

### **Building Social Capital**

Studies examining and projects incorporating social capital have revealed more about what destroys this phenomenon than what builds it. For instance, merely creating civil society groups does not automatically lead to the concurrent creation of social capital within and among these new civil society groups.<sup>5</sup> Instead, efforts to build social capital must consider the various sources of social capital and stem from these: “family, schools, local communities, firms, civil society, public sector, gender and ethnicity” (OECD 2001: 45). From this, social capital can be built “at the ‘level’ of families, communities, firms, and national or sub-national administrative units and other institutions” (ibid). Regardless of the level of intervention, the process of developing social capital takes a long time. Consequently, investing in social capital should be seen from a life-course approach, for investments now may not only benefit this generation, but also the next. Similarly, current dis-investment may have parallel long-term effects. It has been posited that interventions that target various dimensions of social capital simultaneously may be more effective. This would entail intervening across multiple levels, including macro-social policy reform while also increasing community access to external resources and power (Grant 2000).

Interventions to build social capital at the community level may include (Social Capital and Mental Health Workshop; Lochner, July 2000):

- *Strengthening Social Networks*: e.g. a community health worker who mobilizes resources within social networks as well as brings resources into communities
- *Building Social Organizations*: e.g. non-government organizations (NGO's)
- *Strengthening Community Ties*: i.e., bridging groups normally divided along class, caste, race/ethnicity, or religious grounds
- *Strengthening Civil Society*: e.g., informing decision-makers about the social consequences of macro-economic policies.

4 Information regarding the final reports, conferences and books that emerged from these studies may be found on the Bank's social capital website - <http://www.worldbank.org/poverty/scapital/>.

5 Rwanda before the genocide is an excellent case in point. Many new NGOs and community-based organizations emerged during the 1980s, seemingly reflecting a new and flourishing civil society. However, the rapid spread of genocide within Rwanda revealed that high levels of social capital were not created by these organizations. Bonding social capital did exist among the Hutus, and to some degree facilitated the implementation of the killings, but there was a dearth of bridging social capital that united different groups, as well as the absence of strong vertical links between the government and its people (Colletta and Cullen 2000; Uvin 1998).

The state may also play a vital role in helping to build social capital by providing a healthy climate within which civil society organizations can operate. Facilitating the creation of NGOs is not just a matter of freeing the space necessary for their existence, but instead, encouraging the new groups to go beyond the boundaries of family, ethnic group, and location as the basis for group cohesion. The state needs to support tolerance, pluralism and democratic principles along with social capital initiatives (Uvin 1998). By investing in human capital (education and health services), the state can also create an environment more conducive to higher levels of social capital (Mechanic 2000). Importantly, maintaining social capital requires a stable social structure – thus the state should support and enforce security for the rise of social capital.

Some would argue however that social capital has been used to justify contradictory policy prescriptions (Woolcock 1998). Conservatives regard state-society relations as zero-sum – i.e. “as the state waxes, other institutions wane” (George F. Will, quoted in Woolcock 1998). Similar arguments follow that paternalistic, large governments with a wide range of social services tend to suffocate civic activity (Fukuyama 1995). Liberals on the other hand, consider state-society relations as positive-sum – that they can nurture and support civil society. Skocpol (1996) argues that many of the existing key civic associations in America came about as a result of deliberate government intervention and support. Thus, voluntary associations have historically operated in close symbiosis with the welfare state. “Social capital is not a substitute for effective public policy but rather a prerequisite for it and, in part, a consequence of it” (Putnam 1993: 42, quoted in Berkman and Kawachi 2000: 187).

Considering this, policies to enhance economic growth and development through the nurturing of social capital are successful when they bridge unlike groups within communities through the development of cross-cutting ties or civic engagement, while at the same time serve to improve the efficiency and capability of the state. This relation between the state and civil society can be illuminated when examined in terms of complementarity and substitution (Narayan 1999). A strong civil society founded on cross-cutting ties that operates in a weak state environment “substitutes” for the state’s inadequacies, while it supplies those services normally provided by the state. These conditions most likely stunt state growth. However, a high level of civic engagement combined with a well-functioning state, “complements” state ability and produces the fertile soil necessary for social and economic development.

### III. SOCIAL CAPITAL, HEALTH, AND MENTAL HEALTH

#### ■ Social Capital and Health

Health has been found to affect both human and economic productivity. Health is a key input to human productivity, consequently, as would follow, additional inputs would be health care and policies toward health. Investing in health allows participation in activities important for social and economic growth. Many aspects of social development policy are not directly related to the health sector, yet as these policies help shape the ecological environment that directly or indirectly affects health, it is important that these aspects be considered when analyzing health status. For instance, health, nutrition, and population outcomes can be affected by education, water, sanitation, transport policy, and gun control – agricultural and food policies affect nutrition, and multiple social and cultural dimensions affect population growth. These outcomes may be addressed through policy that helps: a) expand opportunities through broad-based sustainable economic growth (especially to raise productivity and employment); b) improve access to health and education services; and c) create appropriate social safety net programs to protect vulnerable groups (World Bank 1998).

Economic productivity is determined, in part, by the level of human capital, which as mentioned above is influenced by health status (World Bank 1993; Bhargava et al. 2001). The higher the GDP, the increased likelihood of improved adult survival rates (ASR – the probability of reaching the 60th birthday after reaching the age 15 years). “Adult survival rates in poor countries reflects the levels of nutrition, smoking prevalence rates, infectious diseases, health infrastructure, and factors such as accidents leading to premature deaths. By contrast differences in ASR in middle and high income countries may be influence by genetic factors and by access to and costs of preventative and curative health care. Because investments in skill acquisition in poor countries depend on the ASR, the years for which skilled labor remains productive is likely to be important for explaining economic productivity” (Bhargava 2001: 438).

Thus, health status is critical to both human and economic productivity. Stemming from this, investments have been made to improve health. “On the one hand, millions of dollars are committed to alleviating ill-health through individual intervention. Meanwhile we ignore what our everyday experience tells us, i.e. the way we organize our society, the extent to which we encourage interaction among the citizenry and the degree to which we trust and associate with each other in caring communities is probably the most important determinant of our health” (Lomas 1998 in Campbell 2000: 182).

When considering the relationships between social capital and health, it is important to distinguish between the compositional effects of social capital and its contextual effects. On the one hand, an ecologic-level correlation between social capital and poor health can be explained by the fact that more socially isolated individuals reside in areas lacking in social capital (a compositional effect). Individuals who are socially isolated are more likely to be concentrated in communities that have lower social capital stocks, for such areas offer fewer opportunities to make local ties (Sampson 1988; Wacquant and Wilson 1989). There are well-established and biologically plausible links between social isolation (measured at the individual level) and poor health outcomes (Berkman and Syme 1979; Kawachi et al. 1996). To date, no study of social capital has simultaneously accounted for individual-level indicators of social isolation (not having contacts with friends or relatives, not attending church or belonging to groups). Hence, one cannot rule out a compositional effect of social capital on self-rated health.

Even more challenging, is the task of identifying the mechanisms by which social capital could exert a contextual effect on individual health. Social capital may affect health through different pathways depending on whether it is measured at the community or state level. Many things determine the health status of communities and societies and there is an extensive literature on health and social factors that come under the rubric of social capital. Indeed some commentators feel that the notion of introducing social capital to health effects is merely putting old wine into new bottles (Labonte 1999 in Campbell 2000). The socioeconomic determinants of health have been well studied and this paper does not attempt to summarize this literature. There is good evidence that more socially isolated individuals have poorer health (House, Landis, and Umberson 1988) and more socially cohesive societies are healthier with lower mortality (Kawachi and Kennedy 1997).

Population health, whether studying morbidity or risk factors, is usually considered as the aggregate of the individual characteristics in the population. When considering the environmental contribution to, or protection against, disease, the conceptualization again is usually one of binary associations between one (or more) environmental factors and individual health (Marmot 1998). The power of social capital lies in its potential ability to understand the environment in another way, the interaction between environmental (including social) factors and connected groups of individuals. The smallest of these groups is usually the family, with the size increasing up to entire nations. This perspective of networks of individuals interacting with environments has the power to explain an array of collective outcomes beyond that explained by aggregated individual health outcomes. Many studies have shown the powerful health effects of social connectedness (Putnam 2001: 50). The mechanisms by which this social capital is beneficial to health are not clearly delineated, but social networks are believed to promote better health education, better access to health services, informal caring, and enforcing or changing societal norms that impact on public health (e.g. smoking, sanitation and sexual practices) (Baum 1999; Kawachi, Kennedy and Glass 1999). Much work remains to be done in accounting for the mechanisms underlying the alleged health-community link (Gillies 1998 in Campbell 2000) Six examples of relationships between health and social capital are briefly discussed below.

### **Socialization and Isolation**

The norms that govern interpersonal behavior are transmitted through socialization primarily instilled by social capital networks, mainly groups such as the family, community, and church. With this process comes the transmission of cultural norms and acceptable behavior within society.<sup>6</sup> Individual functioning and well-being is affected by diverse social experience and conditions, which includes an individual's social capital environment. Psychological strength (self-esteem, individual identity) and vulnerability, which factor into functioning and well-being, are also affected by the social context of an individual (National Institute for Mental Health 1995; OECD 2001).

A society's health status can be more completely understood by examining its social environment. Durkheim was among the first to note that a lack of cohesion within a society had negative consequences on health. Social isolation is linked to unhappiness, illness, and shortened life (OECD 2001). Veenstra's (2000) work on social capital, socio-economic status (SES), and health shows that socializing with colleagues from work, attending religious services, and participation in clubs is related to positive health status. In fact, frequency of socializing with work-mates and attendance at religious services had the strongest (and positive) relationships with health of his social engagement questions, even after controlling for human capital (personal communication, McKenzie, May 2000). Putnam (2001) found that joining a group halved one's chances of dying within the next year.

<sup>6</sup> Higher levels of social capital have also shown to improve child welfare and lower rates of child abuse (OECD 2001).

## **Protection During Crisis**

During crisis, various strategies to ensure basic health needs (food, water, shelter) rely on extant webs of social capital. These coping mechanisms include nuclear and extended families (basic social units), as well as local religious institutions, political organizations, or economic systems. During extreme strife, families first help themselves, then relatives, and then neighbors. During recovery, it is this basic social units that are most looked to for emotional recovery, and thus influence mental health status. During crisis, religious institutions often provide leadership, comfort, and emotional support; and are an excellent entry point for external actors by allowing direct access into the community through pre-established knowledge, relations, and communication channels (Cuny 1994).

Crisis does not eradicate indigenous coping mechanisms although it may strain them severely. Often, disaster only serves to reinforce local coping mechanisms and force local organizations to improve their abilities over those present in normal periods. One major concern is that external interventions tend to forget that local initiative to cope emerges spontaneously, and consequently ignore local coping mechanisms, disrupting the internal groups' abilities to function, and in some cases, damage the local coping fabric undermining credibility within the community of local efforts (Cuny 1994).

## **Participation and Civic Engagement**

Civil society, or the space between the individual and the state that is occupied by a crisscrossing network of voluntary associations, when thriving is thought to contribute to the maintenance of social cohesion (Tocqueville 1835). Civic associations can unite society members, act as mechanisms for conflict management and resolution, and provide members with a sense of identify and enhanced social status (Smith and Freedman 1972). The weak social ties created by voluntary associations socially cohere communities by preventing individuals from becoming isolated, encouraging active engagement with the community, helping to preserve freedom of choice, protecting individuals from the state, and meeting needs that the government cannot fulfill (Berkman and Kawachi 2000). The skills acquired by being involved in civil society can be transferred to politics (Verba et al. 1995). The embeddedness of political activity in nonpolitical civil society institutions impacts the community's ability to garner resources for themselves and to improve their level of well-being. An obvious example is the community that is able to organize and apply pressure to government to obtain resources (Berkman and Kawachi 2000).

High social capital levels among citizens translate into higher levels of trust, solidarity, and equality (Putnam 1993), and in other words, lead to higher social cohesion. States that are more cohesive appear to create more egalitarian participation in politics, which then leads to passed policies that are more likely to ensure the security of all its members (Kawachi and Kennedy 1997; Kawachi et al. 1997). Higher social capital stocks also tend to lead to responsive and efficacious civic institutions (Putnam 1993). The connection between civil society institutions to levels of political participation can also be considered as a crucial link in the path between social capital and health, since it offers increased access to power. At the individual level, socially integrated people may show more immunological resistance to certain diseases (Grant 2000).

Kawachi et al. (1999) examined the relationship between state-level social capital and individual self-rated health. The same social capital indicators were employed as in the Kawachi and Kennedy 1997 study, but were then aggregated to the state level. Information on individual-level confounds were also available to enrich analysis, including health insurance coverage, smoking status, overweight, household income, educational attainment, and living arrangements (alone versus not alone). Unsurprisingly, poor self-rated

health was strongly associated with individual risk factors (low income, low education, smoking, obesity, lack of access to health care). Yet, after adjusting for these proximal variables, individuals living in low social capital states were at increased risk of poor self-rated health. These findings were consistent with an apparent contextual effect of state-level social capital on individual well-being, independent of more proximal predictors of self-rated health (Berkman and Kawachi 2000). Findings according to Veenstra (2000) however, contradict the seeming positive relationship between high levels of civic engagement / participation and positive health status, by finding that civic participation was unrelated to health.

### **Income Disparities**

According to Putnam (1993), a thriving civic community is more typically characterized by strong horizontal relationships than those that are vertical, such as patron-client relations. This has various ramifications on the relationship between social capital and inequality. According to Putnam, "equality is an essential feature of the civic community" (ibid: 105). Putnam's more recent work continues to reinforce findings that "economic inequality and civic inequality are less in states with higher values of" social capital (Putnam 2001: 50).

"Any observant person understands that one's position in life and the adversities associated with poverty, ignorance, and powerlessness erode health and shorten life" (Mechanic 2000: 269). However as Murray and colleagues (1999: 540-541) have stated "both health inequalities and social group health differences are important aspects of measuring population health. In the face of enormous variation in health within populations, we cannot simply focus on average levels of health. There are convincing reasons to measure social group health differences: they are normatively important; they provide insights into causal pathways linking distal socioeconomic determinants and health; and they are relatively easy to measure".

In a 1990 study, Kaplan et al. found that income disparity is associated with a decline in health status. His findings revealed that inequality state by state in 1980 was a strong predictor of mortality rates in 1990. Social capital also factors into this equation. According to Kawachi et al. (1994), income inequality may be linked to ill-health through the frustration that results from increasing inequality, which may be catalyzed or perpetuated by under-investment in human capital. This under-investment can occur in areas with low social capital, which concurrently may be those more prone to allow large disparities to emerge (personal communication, Wilkinson, May 2000). Putnam also found that in states with low social capital and high levels of perceived inequality, self-assessments of well-being and happiness were low (Putnam 2001).

Wilkinson (1996, 1997) has theorized on the relationship between income inequality and a less cohesive social environment, and suggested that there is a "culture of inequality" that is more aggressive and violent, and less cohesive or affiliative. By examining the relationships between income inequality, social capital and health, Wilkinson has emphasized the importance of psychosocial pathways in physical health. His work has shown that the social environment is more cohesive in more egalitarian places (less violence, less homicide, less hostility, and more trust – both internationally and in the US). These are closely correlated with obvious ramifications on public health status. From Wilkinson's work, and the findings of others such as Putnam and Kawachi, a likely way to build social capital would be through improving income equality.

## Trust

Studies have shown that there is a correlation between poor health and lower levels of social capital, as evidenced by levels of interpersonal trust and norms of reciprocity (both which can serve as indicators for social capital, see Putnam 1993, 1995). In addition, levels of community spirit, respect, tolerance and community cohesion are also linked to health status (House et al. 1988; Kawachi et al. 1996; Kawachi et al. 1997; Kennedy et al. 1998).

Kawachi et al. (1997) studied this relation between health and social capital using the indicators of interpersonal trust, reciprocity norms, and density of associational membership, which included a wide array of voluntary associations such as church groups, fraternal organizations, and labor unions. The results pointed to a breakdown in social trust that seemingly linked to higher mortality rates in states. They found that “per capita group membership in each state was strongly inversely correlated with age-adjusted all-cause mortality. While, density of civic associational membership was similarly a predictor of deaths from coronary heart disease, malignant neoplasms, and infant mortality.” Associational membership and civic trust were highly correlated. Conversely, levels of distrust were significantly correlated with age-adjusted mortality rates. In regression models, variations in the level of trust explained 58% of the variance in total mortality across states. Lower levels of social trust were associated with higher rates of most major causes of death, including coronary heart disease, malignant neoplasms, cerebrovascular disease, unintentional injury, and infant mortality (Berkman and Kawachi 2000). Findings by Veenstra (2000) however show that trust is not significantly related to health once effects from human capital (socioeconomic status measured by income and education) are controlled.

Low levels of interpersonal trust correlate with low levels of trust and confidence in public institutions (Brehm and Rahn 1997). Similarly, low interpersonal trust levels correlate with low levels of political participation (Kawachi and Kennedy 1997; Putnam 1993; Verba et al. 1995); and reduced efficacy of government institutions. Within the U.S., collected data has show that the states with lower levels of interpersonal trust are less likely to invest in human security and social safety nets. Consequently, vulnerable groups are less likely to be provided for in these less generous states (Berkman and Kawachi 2000).

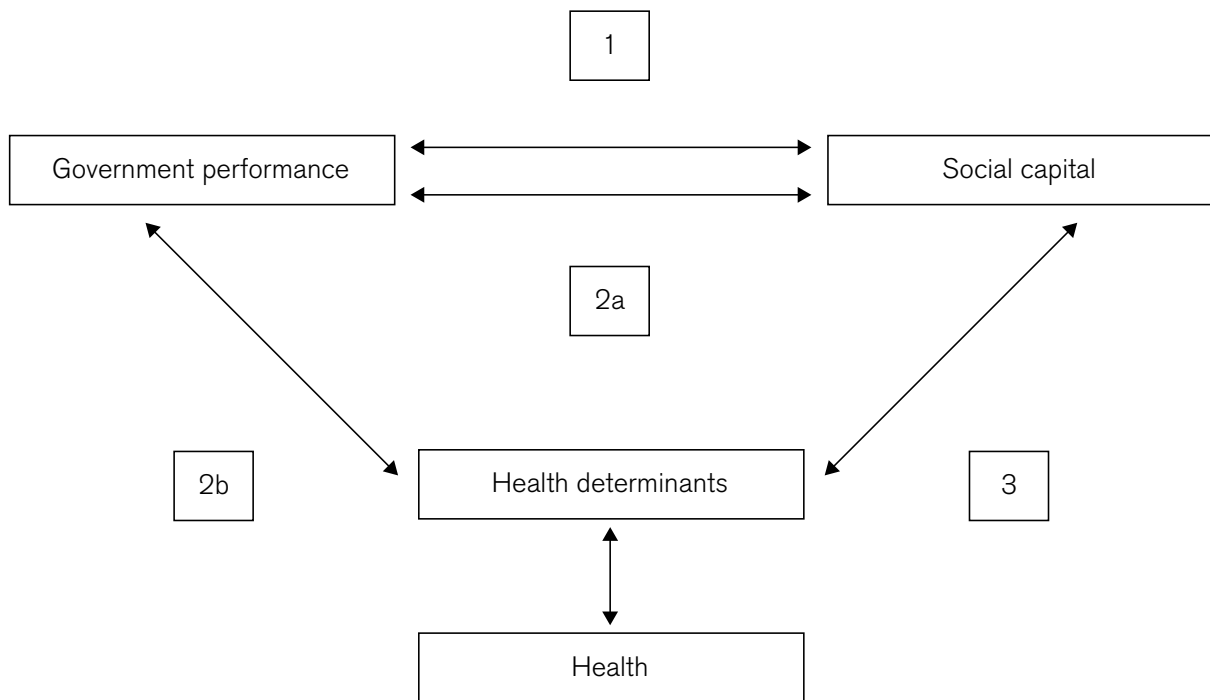
Kawachi et al. (1997) have also shown very close correlation between trust and income inequality in the United States, while income distribution in states was linked to variations in mortality and indeed, death from certain causes such as heart disease, cancer and homicide.

## Government Performance

According to a study conducted by Lavis and Stoddart (1999), government performance and social capital<sup>7</sup> can reciprocally affect one another. In addition, government performance can affect health determinants. Based on this hypothesis, Lavis and Stoddart posit that social capital and health are thus correlated but not causally related (see Figure 3). The relationships between government performance, social capital, and health are complicated by other external influences, including large-scale economic dislocations or natural disasters (Lavis and Stoddart 1999: 14, 36).

<sup>7</sup> In their study, Lavis and Stoddart used the term social cohesion, yet used two typical indicators of social capital: trust and number of memberships in voluntary associations. Thus not to confuse terminology and definitions employed, I will refer to their concept of social cohesion as social capital, since it coincides with more mainstream social capital definitions more so than definitions of social cohesion.

**Figure 3: Relationships between social capital and health** (Lavis and Stoddart 1999: 36)



Social capital may influence government performance, such as the government's capacity to develop and implement policy. "Social capital could affect this capacity by, for example, affecting support for redistributive policies or for universal health-care insurance, both of which could represent core government objectives. A government operating in a jurisdiction with a low level of social capital may lack electoral support for such interventions and so could not proceed with them (at least not without significant political risk)" (Lavis and Stoddart 1999:14). Though this may be democratic, it does illustrate the potential of feedback and amplification effects, leading into a cycle of less social capital resulting in poorer government performance that then decreases stocks of social capital further. Likewise, low social capital stocks may be reflected in poorer government performance in terms of analysis and implementation. Areas lower in social capital would be less likely to identify the potential for vicious cycles involving redistribution and health-care systems. "The reasons why health-care systems can have important implications for health are more self-evident, even if they are potentially overstated when dealing with populations rather than individuals" (Lavis and Stoddart 1999: 14-15).

According to Putnam's (1993) results, low stocks of social capital (civic engagement) predicted poorer government performance, plagued by problems such as corruption and inefficiency. On the other hand, areas with higher social capital (civic engagement) tended to have a local government that performed efficiently and effectively.

## ■ Social Capital and Mental Health

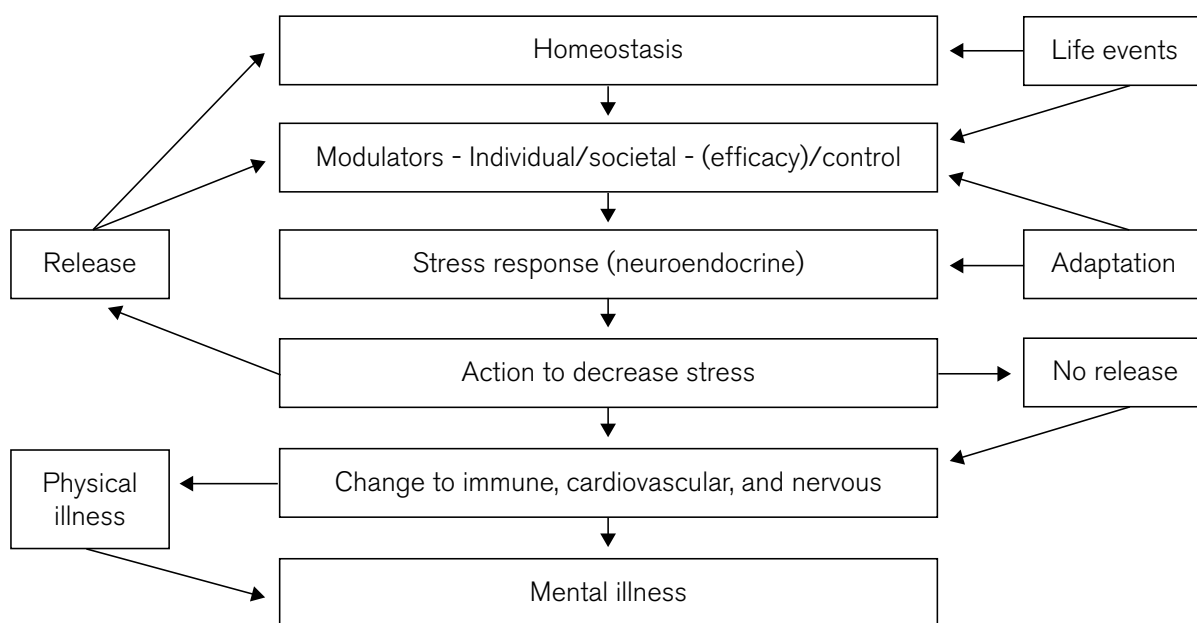
The relationship between mental health and social capital elements has also been examined to some extent. Mental disorders, as with most other health conditions, arise from an interplay of biological, psychological and social factors (Engel 1977, 1980). The classic studies of Faris and Dunham (1939), Hollingshead and Redlick (1958), Leighton (1959) and Brown and Harris (1978) demonstrated relationships between mental health and social structure, social isolation, poverty, life events and psychological stress.

Traditionally, two explanations have been put forward to explain the association between mental disorders and poor social circumstances. One explanation is that mental disorder impairs psychological and social functioning and this leads to downward “social drift” (Goldberg and Morris 1963; Jones et al. 1993). Thus individuals with mental disorder and psychiatric disability end up in more socially disadvantaged groupings. Some mental disorders, such as schizophrenia, can result in dramatic social decline as a result of impaired psychological and social functioning. The positive and negative symptoms of the disorder interfere with the person’s capacity to cope with the usual demands of interpersonal interaction and the decoding of social communication (Murphy 1972). Adverse effects on socialization can also arise from the more common mental disorders, such as depression and anxiety. These mental disorders have adverse consequences that include a breakdown in marital stability (Kessler et al. 1998), increased teenage parenthood (Kessler et al. 1997), more distant social relationships (Mickelson et al. 1997) and other factors associated with social deterioration.

Early identification of, and intervention to remove, target symptoms associated with the social and vocational decline in mental disorders is now possible (Hafner et al. 1999). The outcomes of these interventions have traditionally been measured in terms of clinical outcomes and/or “social reintegration”. However, the implications of such outcomes include the enhancement of cognitive social capital with benefits accruing to the wider social group.

The second explanation for the association between mental disorders and poor social circumstances is that individuals in socially disadvantaged situations are exposed to more psychosocial stressors (adverse life events) than those in more advantaged environments. These stressors act as triggers for the onset of symptoms and the loss of the individual psychological abilities necessary for social functioning (Bebbington et al. 1993). The psychosocial pathways to the development of mental disorders (Figure 4) include higher levels of life events, anomie, learned helplessness, thwarted aspirations, low self-esteem, and less security (Social Capital and Mental Health Workshop, McKenzie, July 2000).

**Figure 4: Stress pathways and mental illness** (Social Capital and Mental Health Workshop, McKenzie, July 2000)

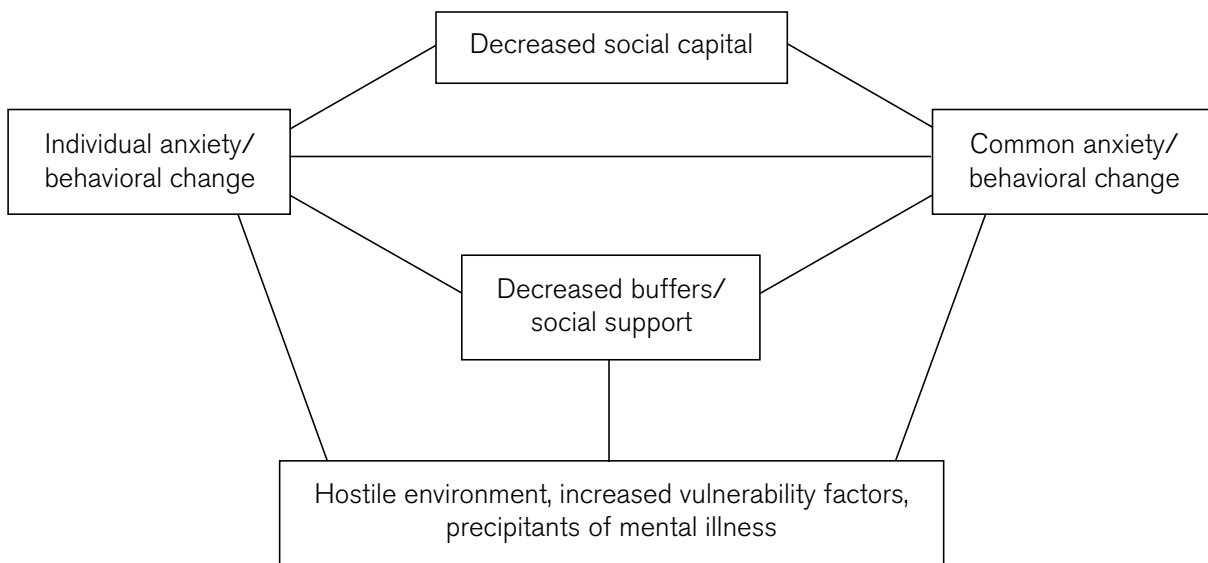


There is good evidence that the impact of these stressors and progressing down this pathway is mediated by the psychological, social and physical resources available in a person's environment (Figure 5). Interventions which augment these resources can protect against the adverse effects of psychosocial stressors (Marsella 1995; Muntaner and Eaton 1998). For example, vulnerability for depression includes the lack of confiding relationships. Unemployment, financial difficulties, and low social status also contribute to depression (Perry 1996). All of these factors are directly or indirectly impacted by social cohesion (personal communication, McKenzie, May 2000). Lower levels of social capital may lead to the increased incidence of depression, or at the very least, not do much to reverse the illness. Even in conditions where psychosocial factors are generally not considered to be pathological this relationship has been reported. For example, socially isolated elderly people have a relatively greater risk of developing Alzheimer's disease, controlling for other risk factors (Fratiglioni et al. 2000). At a macroeconomic level, Rose (1999) in his survey of how social capital networks in Russia contribute to basic welfare such as income security, health and food consumption, concluded that measures of social integration explained almost 10% of the variance in 'emotional health.'

Alternatively programs which build social capital are likely to contribute to the augmentation, both in quality and quantity, of social resources available to vulnerable individuals. Of course, societies rich in social capital are likely to have lower levels of some social stressors in the first place.

In the context of mental health, adding the dimension of social capital integrates the biopsychosocial determinants of mental disorder (genetics, neurobiology, psychological factors, social environment, etc.) in a way which brings an understanding of population mental health beyond the aggregation of individual health characteristics or risk factors. One might postulate that the best ways to address mental health with social capital interventions would be to target those aspects closest to the psychosocial determinants of health, i.e. those closest to the cognitive aspects of social capital (personal communication, Trudy Harpham, June 2000). For example following Durkheim, a lack of social norms (cognitive social capital) produces social disintegration which results in "anomie," suicide and antisocial behavior. A social capital intervention which addressed social norms could therefore have positive mental health outcomes.

**Figure 5: Social Capital and Psychosocial Processes** (Social Capital and Mental Health Workshop, McKenzie, July 2000)



Certain issues related to the interrelations of social capital and mental illness should be noted:

- The mechanisms that forge interaction are not unidirectional
- Causality and reverse causality need further examination
- There are immediate effects – especially for the young
- Studies examining these interrelations should consider the long-term socio-economic and socio-cultural effects, and thus be longitudinal
- The effects of vulnerability can be long term
- Precipitants / perpetrators can be short term

(Social Capital and Mental Health Workshop, McKenzie, July 2000).

### **Suicide and Anti-social Behavior**

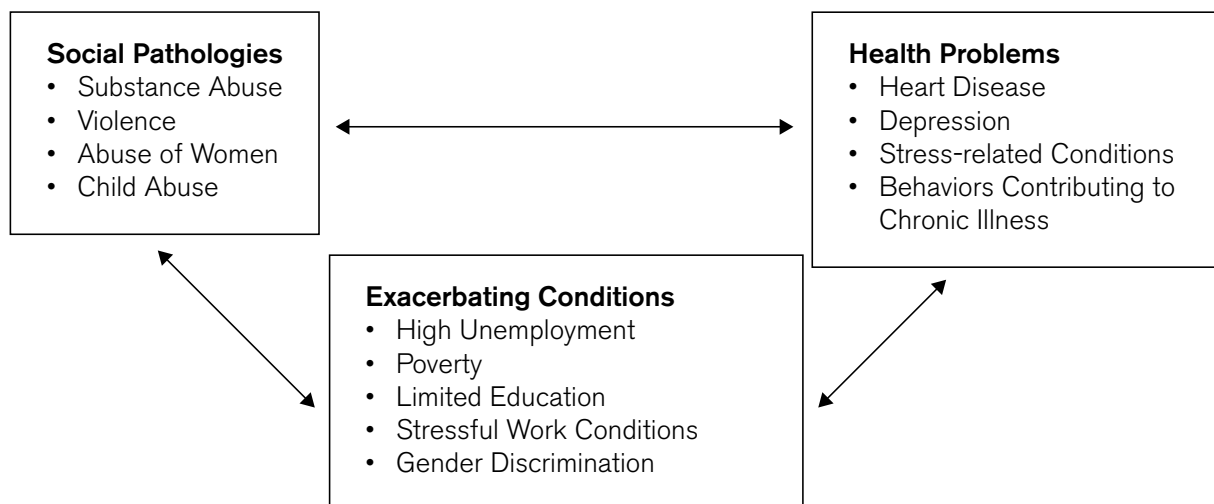
Variations in anti-social and suicidal behavior have been traced to strengths or absences of social cohesion (OECD 2001). Weak social controls and the disruption of local community organization have been hypothesized to be the underlying factor producing increased rates of suicide (Durkheim 1897) and crime (Shaw and McKay 1942). Social disorganization, defined as the “inability of a community structure to realize the common values of its residents and maintain effective social controls,” correlates to rates of suicide and crime (Sampson and Groves 1989). The social organizational approach views local communities and neighborhoods as complex systems of friendship, kinship, and acquaintanceship networks, as well as formal and informal associational ties rooted in family life and ongoing socialization processes (Sampson 1996). From the perspective of crime control, a major dimension of social disorganization is the ability of a community to supervise and control teenage peer groups, especially gangs. Shaw and McKay argued that residents of cohesive communities were better able to control the youth behaviors that set the context for gang violence (Berkman and Kawachi 2000).

This theory of social disorganization has recently been linked to the concept of social capital. In a 1995 Chicago study, Sampson et al. (1997) surveyed neighborhood residents on their perceptions of social cohesion and trust. Respondents were asked how strongly they agreed with helping, trusting, and sharing common values with each other (5 point Likert scale). This was combined with questions on informal means of social control to create a summary index that registered “collective efficacy,” or a compilation of organizational participation and neighborhood services. A high rating of collective efficacy was significantly inversely related to neighborhood violence, violent victimization, and homicide rates. The link between social capital and violent crime / homicide has been further replicated at the state level (Kennedy et al. 1998; Kawachi et al. 1999). In analysis looking at ecological factors, low trust level states exhibited higher rates of violent and property crime, such as homicide, assault, robbery, and burglary (Berkman and Kawachi 2000).

### Clustering of Problems in Communities

Communities under stress are more likely to experience certain conditions that are symptoms of, or catalysts to, lower levels of social capital. These low levels of social capital may then amplify and reinforce these conditions, further eroding levels of social capital. Conditions experienced by communities in stress include disorganization, unpredictability, low trust, high anxiety, high vigilance, low efficacy, low social control (e.g. work and social environment), and high migration (impacts familiarity / identity / threat) (Social Capital and Mental Health Workshop, McKenzie, July 2000). Desjarlais et al. (1995) identify three clusters of problems – social pathologies, exacerbating social and economic circumstances and poor health – which are found in communities under stress (Figure 6).

**Figure 6: Model of Overlapping Clusters of Problems** (Desjarlais et al. 1995: 7).



“In general, mental, social and behavioral health problems represent overlapping clusters of problems that, connected to the recent wave of global changes and new morbidities, interact so as to intensify each other’s effects on behavior and well-being” (Desjarlais et al. 1995: 6-7). The social pathologies and health problem clusters are more difficult to cope with when the surrounding social environment is bad – such as being plagued by high unemployment, low income, limited education, stressful work conditions, gender discrimination, unhealthy lifestyle, and human rights violations (Figure 6).

Examining the factors that produce differences in health or social capital between communities, or fundamental social causes, may be useful in fleshing out their interrelations. A lack of attention to these fundamental causes will ensure that differentials persist. Fundamental causes are linked to resources like money, power, prestige and social connections (or exacerbating conditions on the above chart) that strongly influence a community’s ability to avoid risks and to minimize the consequences of any emerging disease. Fundamental causes are particularly important in periods of change. New diseases, new environmental hazards, new knowledge of risks, and new treatments are all the currency of fundamental causes. In a dynamic system, fundamental causes are always important. Those who have more access and power will be less afflicted by disease (Desjarlais et al. 1995; Link 1996).

The relationships between social capital and health and social capital and mental health are clear in terms of the presence of social capital (or lack thereof) having effects on both health and mental health. However, few if any studies have tried to investigate the reverse, the impact health and mental health status may have on social capital, or the interrelations of the three variables. For example, psychological health is an outcome but could also be a conduit through which social capital has its effects on physical illness (e.g., there is significantly increased risk of death from a cardiovascular illness in those with common mental disorders).

Some still feel however that the links between social capital, mental health, and health are unclear. The notion of social capital supports the ideals of cohesive and thriving communities, yet it is still difficult to trace how this then relates to better health actions and status, including well-being and quality of life. A well-knit community is not one that is necessarily healthy. To further elucidate these links, public health and social science researchers need to focus on building better epidemiological and theoretical understandings of the relationship between social capital, health, and mental health (personal communication, Wood, March 2000 referencing Baum 1999; Leeder 1996 and 1998; Lomas 1998).

## ■ Social Capital Mechanisms for Health and Mental Health Improvement

For the betterment of health and mental health, suggestions have been made to build social capital in various ways, at both the state and community level. At the national level, inequalities in political participation can lead to a lack of political commitment towards improving services for vulnerable groups. This has been shown in Kawachi’s work revealing the correlation between social trust and welfare expenditure, and the erosion of social services (Grant 2000). At the community level, pathways between health and social capital include effects on behavior, effects on provision services, and psychological effects. While many mechanisms can be postulated, three are mentioned below for consideration.

## **Health-related Behaviors**

Social capital may influence community members' health behavior by promoting a more rapid diffusion of health information or increasing the likelihood that healthy behavior norms are adopted (like physical activity) and by exerting social control over deviant health-related behavior (such as smoking). The theory of the diffusion of innovations suggests that the innovative behaviors (e.g. use of preventive services) diffuse much more rapidly in communities that are cohesive and that have higher levels of trust (Rogers 1983). Criminology studies (Sampson et al. 1997) have suggested that the higher the degree of "collective efficacy," or degree that community members are willing to exert to socially control deviant behavior, the more likely the community is to prevent delinquency and crime. This process may be applied similarly to prevent deviant behavior, such as adolescent smoking, drinking, and drug abuse (Berkman and Kawachi 2000).

## **Access to Services and Amenities**

Community social capital may affect health also in terms of access to services and amenities. Criminology studies have found that socially cohesive communities are more successful at bonding together to fight potential budget cuts of local services (Sampson et al. 1997). Cohesive communities are more able to unite to form appropriable social organizations, which could be formed to ensure access to services that are directly related to health such as transportation, community health clinics, and recreational facilities. The differences in access to amenities and resources between poor and affluent communities have been documented (Macintyre et al. 1993). "Given such geographically based inequalities, the existence of local pressure groups to lobby for the provision of services could make all the difference" (Berkman and Kawachi 2000: 185).

Decreased access to services and amenities is often a result of poverty or crisis. Social capital links in this case become even more important, for they can serve as a coping mechanism that helps for day-to-day survival. This can be critical for short-term survival, providing needs such as food, security, or basic infrastructure maintenance (Cuny 1994). Long-term solutions to the problems of inadequate resources and social exclusion require connecting the marginalized to mainstream resources and services through mechanisms of bridging social capital, which unites these excluded groups with the majority (Putnam 1995). Bridging social capital is most likely to help improve the standard of living for these excluded and marginalized groups. Social capital for impoverished groups stems from family and neighbors helps ensure their daily survival; while social capital for wealthier groups helps them further their interests (World Bank Social Capital Website).

## **Psychosocial Processes**

High levels of social capital are conducive for the development of an individual's psychosocial processes that are needed to cope with life's stressors and protective against ill-health. These psychosocial processes relate to an individual's cognitive social capital but arise from social interaction within an individual's community. Interaction with others is enhanced if it is based on trust and reciprocity, which provide protective factors against the initiation of any psychosocial processes that are known to be pre-determinants of ill-health.

Social environments with higher levels of trust create trustworthy citizens. The developmental processes by which the moral values of trust and reciprocity become instilled in children occur more quickly in communities with higher social capital. Community members have some sense of public responsibility for each other, even if they have no related ties. This lesson is gained by experience by having strangers show degrees of public responsibility to you. These norms of reciprocity or mutual respect can translate into easier child rearing, improved self-government, and the maintenance of the public life civility (Berkman and Kawachi 2000).

In addition, "social capital could influence health of individuals via psychosocial processes by providing effective support and acting as the source of self-esteem and mutual respect" (Wilkinson 1996). Variations in the availability of psychosocial resources at the community level may help to explain the anomalous finding that socially isolated individuals residing in more cohesive communities do not appear to suffer the same ill health consequences as those living in less cohesive communities" (Berkman and Kawachi 2000: 185).

### **■ Health and Mental Health Mechanisms for Building Social Capital**

It is accepted that improved health status contributes to enhancing human capital (World Bank 1993; Bhargava et al. 2001). Can the argument be made that improvements in health and mental can build social capital? For those with mental illness, action to remove psychosocial stressors, provide social and psychological support, and provide clinical treatments to reduce symptoms and disability, can all lead to an enhancement of the individual attributes necessary for constructive social interaction and assuming a productive social role. Following this line of argument these actions should have a payoff in terms of building social capital as good mental as well as physical health enhances the resilience and competencies necessary for more constructive participation in civil society. In this context mental health, while clearly part of health, it may have specific importance in contributing to the cognitive and psychological attributes necessary for the interactions which underpin social capital. Studies carried out by the World Bank in Rwanda and Cambodia demonstrated that individual attributes such as resilience contributed to the rebuilding of social capital in the post-conflict periods in both countries (Colletta and Cullen 2000).

Mental health promotion activities (Jenkins and Ustun 1998) targeting 'well' populations have similar aims of enhancing resilience and social competencies. However further research is necessary to delineate the mechanisms by which these activities may contribute to the strengthening of social capital in communities.

## IV. MEASUREMENT

Measuring social capital may be challenging, but not impossible. Both the definition and approaches to measuring social capital are still evolving. Various commentators have highlighted the ambiguities in the definition of the concept (Australian Bureau of Statistics 2000). Likewise, difficulties surround attempts to measure levels of health and mental health at the community level.

### ■ Assessing Social Capital

There are numerous useful proxies for social capital, using different types and combinations of qualitative, comparative, and quantitative research methodologies. Yet, it is probably not possible to obtain a single “true” measure of social capital. There are many comprehensive definitions of social capital that are multidimensional, which incorporate different levels and units of analysis. And, any attempt to measure the properties of inherently ambiguous concepts such as “community,” “network,” and “organization” is correspondingly problematic. Few longstanding surveys were designed to measure “social capital,” leaving contemporary researchers to compile indexes from a range of approximate items, such as measures of trust in government, voting trends, memberships in civic organizations, hours spent volunteering (World Bank Social Capital Website).

Robert Putnam (2001) has designed a Social Capital Index, which aggregates results from various social capital indicators to predict an overall community level of social capital. This index includes:

- Community organizational life
  - Civic associations per 1,000 population
  - Mean number of group memberships per capita
- Engagement in public affairs
  - Voter turnout in national elections
  - Attendance at town/school public meetings
- Community volunteerism
  - Number of nonprofit organizations per 1,000
  - Mean number of times did volunteer work last year
- Informal sociability
- Social trust

However, other factors can also be included to assess various levels of social capital – by component and dimension. The following factors are possible items to be considered and should be measured in terms of presence, intensity, and rigidity of factors.<sup>8</sup> (See Appendix B for a more detailed example of a social capital survey.<sup>9</sup>)

<sup>8</sup> Indicators compiled from work of the PCU; “Social Inclusion and Poverty Reduction – A Technical Consultation on Albania and Armenia,” SDV/LLC workshop held April 27, 1998; and “Social Capital: The Missing Link?” by Christiaan Grootaert, The World Bank, April 1998.

<sup>9</sup> According to the Australian Bureau of Statistics, additional social capital surveys which may be of use include: a) “Social capital: family support services and neighbourhood and community centres in NSW – Questionnaire.” Bullen and Onynx 1998; b) “Trust in Rural Communities Survey Questionnaire.” Centre for Research and Learning in Regional Australia (CRLRA) 1999; c) “Global Social Capital Survey.” The World Bank 1998; d) “World Values Survey, 1981-1984 and 1990-1993.” Inter-University Consortium for Political and Social Research (ICPSR) 1999; e) “1997 National Survey of Giving, Volunteering and Participating.” Statistics Canada 1998; f) “UK Social Capital Questionnaire” and the “UK Millennium Poverty and Social Exclusion Survey;” and g) “Survey of Civic Involvement.” American Association of Retired Persons (AARP) 1997.

## 1) Community-government relations, role of government (organizational integrity and synergy)

- Voter turnout (and demographic breakdown of those who voted)
- Extent of trust in government
- Perceptions of government (in)efficiency
- Extent of participatory decision-making
- Gini Coefficient
- Robin Hood Index

## 2) Intra and Inter-community relations (integration and linkages)

### *Membership / Participation*

- Number and type of associations or local institutions, participation in organizations, level of activity in named organizations
- Access to services (perception of exclusion)
- Extent of trust in community organizations
- Perception of extent of community organization
- Perceived potential impact on community
- Family precariousness (one-parent families, female headed households, family separations, divorce rate)
- Tolerance of diversity
- Trust (general and specific)

### *Collective Action*

- Frequency of collective action, existence of /resources for collective action
- Community events
- Social protection and welfare / collective responsibility, altruism and philanthropy (general and specific), volunteer work
- Support (emotional, instrumental support, informational support)
- Reliance on networks of support
- Reciprocity

### *Exchange*

- Type, nature, and organization of exchange
- Channels and mechanisms for informational exchange

While considering these indicators, there is also the need to capture the dynamics of social capital, including at least two main dimensions. The first dimension should include longitudinal analysis so that changes over time can be analyzed. Secondly there is the issue of more qualitative analysis, as the “accumulation of social capital is not something that can be evaluated in simple linear terms, that is, the more the better. Networks may become denser (with higher social capital), and in doing so undergo qualitative change with negative consequences where they lose openness and so become dysfunctional. High levels of social capital may be accompanied by stasis. Capturing the trajectories of social capital is a major task” (Schuller 2001: 22-23).

On a practical level, work remains to be carried out in selecting different indicators of social capital. Two types of approaches are possible: using aggregate variables – aggregating individual responses to social surveys; and using integral variables – direct social observations of neighborhoods. The latter approach has been scarcely tested. An observable indicator of reciprocity might be the number of instances in a city in which commuters block opposing traffic at busy intersections during rush hour compared to the number of instances when they do not (Alvin Tarlov). An indicator of trust might be the proportion of gas stations in a community that require customers to pay up before letting them pump versus those that do not (Berkman and Kawachi 2000).

Although there is virtually universal agreement that social capital is a collective characteristic and ought to be measured at the aggregate level, little or no work has been carried out to distinguish the concept from an array of existing neighborhood-level constructs in the field of community psychology. Constructs such as community psychology (McMillan and Chavis 1986), community competence (Eng and Parker 1994), and neighboring (Buckner 1988) all involve the assessment of community characteristics such as levels of trust, norms of reciprocity, and civic engagement (Lochner et al., in press). Thus some of these tools may be applicable, or possibly overlap, those employed for assessing social capital.

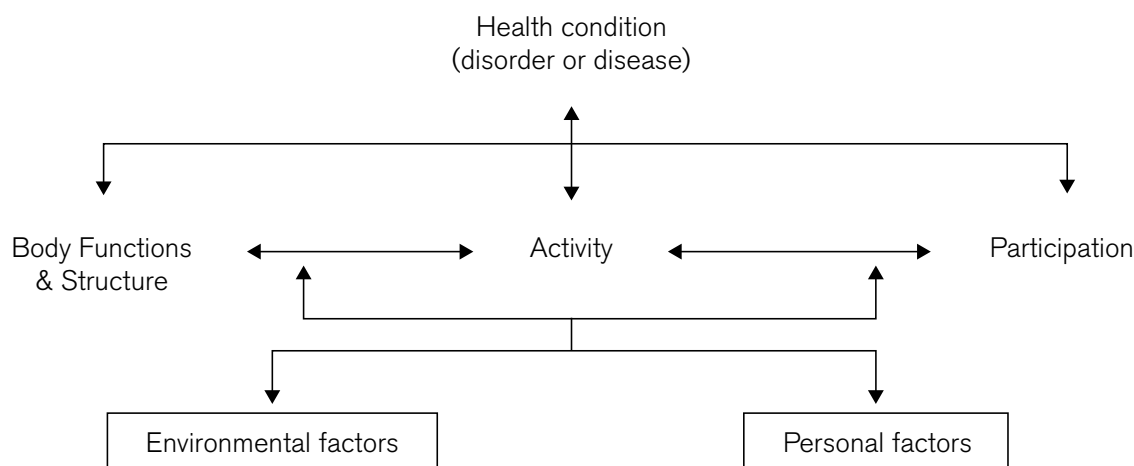
When measuring social capital, it is useful to make distinctions between social capital and social networks. “Social networks are a characteristic that can (and most often have been) measured at the individual level, whereas social capital should be properly considered a feature of the collective (neighborhood, community, society) to which the individual belongs. It makes no sense to measure an individual's social capital. In theory, a well-connected individual could experience different life chances and health outcomes depending on whether he or she resides in an environment that is rich or poor in social capital” (Berkman and Kawachi 2000: 176-177). Yet debate still exists around where “social capital should be seen as an attribute of individuals or of communities” (Australian Bureau of Statistics 2000: 5).

## ■ Health and Mental Health Assessment

It is beyond the scope of this paper to review the vast literature on the measurement of health and mental health. However, an example of a measure of health functioning and disability, the International Classification of Functioning and Disability (ICIDH-2), and measures of social capital are described. This is to illustrate the ways in which the concepts are related and can compliment each other.

The ICIDH-2 systematically groups functional states associated with health conditions (i.e. disease, disorder, injury or trauma or other health-related state). The ICIDH-2 classification covers any disturbance in terms of functional states associated with health conditions at body, individual and society levels. Functioning and disability are umbrella terms covering three dimensions; a) body functions and structure; b) activities at the individual level; and c) participation in society (Figure 7).

**Figure 7: Model of Functioning and Disability** (WHO 1999)



An interactive understanding of disability utilizes the affected person and their surrounding environment to define or understand disability. Disability encompasses physiological differences, how these differences play out at personal level in activities of daily living (ADLs). Health comprises these first two, but with rehabilitation, another factor comes in – participation, or how the disability affects the persons role in society and community activities, this is entirely socially determined (non-health), but part of what disability means. Health is absence of disease and function, but does not include participation.

Health status as reported by the individual usually encompasses mental and physical health and functioning. As an indicator, self-rated health has good predictive capacity in terms of being correlated with future health care use (Fylkesnes 1993; Hulka & Wheat 1985; Krakau 1991) and with subsequent mortality (see Idler & Benyamini 1997 for a review of 27 studies). Self-ratings have been found to reflect serious, chronic conditions and not be affected by acute, transitory illnesses. This type of measure has also been shown to be correlated with more complex health indices and to have good test-reliability (Lundgerg and Manderbacka 1996).

The ICDH-2 classifies ability to function and may be used as a reference for the dimensions or domains of health that might be considered as factors related to social capital, especially those that fall under participation. It also sheds light on the environmental factors that facilitate social capital. However, the most useful measure for the purposes of evaluating the interrelations of social capital with health and mental health would be the World Health Organization Disability Assessment Schedule version two<sup>10</sup> (WHODAS/II). Both of these surveys, the WHODAS and ICDH-2, contain questions that would overlap with those set out to ascertain levels of social capital. These overlapping areas are highlighted below. (See Appendix C for a complete version of WHODAS 12 and 36).

<sup>10</sup> See <http://www.who.int/icidh/whodas/> for the entire survey and background information.

### **WHODAS 12/36 overlap with social capital surveys:**

- 1) *Understanding and communicating* – understanding people, starting and maintaining a conversation
- 2) *Getting along with people* – dealing with strangers, maintaining friendships, getting along with those close to you, making new friends
- 3) *Participation in society* – joining community activities, barriers or hindrances to the world around you, living with dignity because of attitudes and actions of others, time spent on health condition or its consequences, how much have you been emotionally affected by your health condition, how much has your health been a drain on the financial resources of your family, how much of a problem did your family have because of your health problems

### **ICIDH-2 overlap with social capital surveys:**

- 1) *Activities*: assisting others; interpersonal activities (general, particular); performing in major life situations
  - General Interpersonal Activities
    - basic interpersonal - showing respect and warmth, appreciation, tolerance in relationships, responding to criticism and social cues
    - complex interpersonal - maintaining social space, regulating emotions and impulses for interactions, regulating verbal and physical aggression, acting independently in social interactions, interacting according to social rules and conventions, interacting appropriately to own social position
  - Particular Interpersonal Activities
    - Activities of initiating, maintaining and terminating short and long term interaction
  - Performing tasks (and multiple tasks) in a group
  - Handling stress and other psychological demands (including responsibilities, stress, and crisis)
  - Performing in major life situations – work, work in groups, school, religious and spiritual pursuits, and unusual situations (natural or human-made events, such as extreme weather and crises).
- 2) *Participation* in: personal maintenance; mobility; exchange of information; social relationships; home life and assistance to others; education; work and employment; economic life; community, social, and civic life.
  - Exchange of information (spoken, written, and non-verbal)
  - Social relationships (family, informal social – friends, neighbors, acquaintances, peers, strangers, formal social – employee, business, education)
  - Housing, caring for others
  - Education
  - Work and employment
  - Economic life (economic transactions)

- Community, social and civic life
  - Community (informal, formal, ceremonies)
  - Recreation and leisure (play, sport, arts and culture, hobbies, socializing)
  - Religion and spirituality
  - Human rights
  - Citizenship.

3) *Environment*: Support and relationships; attitudes, values, and beliefs; systems and policies

- Support and relationships (immediate and extended family, friends, peers, neighbors, community members, people in authority, people in subordinate positions, strangers)
- Attitudes, values and beliefs (individual and societal attitudes, values and beliefs)
- Social norms, conventions and ideologies
- Systems and policies (civil protection, communication, legal, associations and organizational, media, economic, social security, political, health, education).

As there may be some problems affiliated with measuring health at the individual level while social capital relates to aggregate levels, it may be beneficial to use the Hierarchical Linear Modeling (HLM) for evaluating nested effects. (See "Social Capital Declining in the U.S." by Pamela Paxton, *AJS* 105 (1), July 1999.) Yet some feel that it is not necessary to measure mental health / health in an aggregate fashion. Social capital is an aggregate characteristic, but health outcomes associated with it need not be measured at the aggregate level as well. In fact, it would be expected that social capital would have effects on individual mental health and health (personal communication, Kawachi, April 2000).

While analyzing the relations between social capital and health / mental health, the relevancy of social networks and social support emerges. While social capital is a property of groups and communities, networks are property of individuals (yet according to the social networks literature, groups are a collection of resources that are accessed by individuals). The implications of examining social relations collectively, rather than individually would also be reflected at an intervention level. For example, in public health, it is well accepted that individual health is affected by social integration, therefore intervention has happened at the individual level, while the social capital concept would merit a collective level intervention, such as focusing on community access to power, services or information. Overall, network analysis can be a useful tool within social capital measurement, keeping in mind that social networks constitute the framework itself, and social capital encompasses both the framework and what goes on within the frameworks. Overall, there is sufficiently large overlap between social networks and social capital, yet the need to separate the two is not crucial. Social capital analysis can be used to complement social network analysis, or vice versa (Grant 2000).

## V. CONCLUSION

Adding the dimension of social capital to health and mental health goes beyond the integration of biopsychosocial determinants (genetics, biology, psychological factors, social environment, etc.). It goes beyond an understanding of population health where this is seen as an aggregation of individual health characteristics or risk factors. Further it goes beyond an understanding of environment where this is also described in terms of an aggregation of individual health characteristics or risk factors. It brings at least two specific things. A potential ability to understand the environment is a way which explains an array of collective health outcomes beyond that explained by aggregated individual health outcomes. And a concept of social health from an economic perspective which complements the usual human capital perspective. This latter area has the potential to provide a stronger base from which to argue health and mental health promotion activities, as well as adding to economic benefits of clinical programs.

An understanding of the processes through which social capital influences the incidence and prevalence of illness could form the basis for preventive strategies and help clinicians and other practitioners to predict the possible effects of government policy on the development and course of illness as well as providing a better evidence base for promoting healthy public policy.

However, there are many unexplained and as yet unexplored dimensions of the relationships. These clearly need considerable attention before we can adequately measure social capital and understand its contribution to causing illness and improving the health of society.

Drawing on the deliberations of the Social Capital and Mental Health Workshop held at the World Bank in July 2000, the following six recommendations are made for further research:

- 1) Examine the interrelations of human capital and social capital, exploring the distinctions, dynamics, and relationships between the two.
- 2) Sharpen the tools for measuring social capital, especially in relation to those social capital variables most pertinent to health and mental health analysis and research.
- 3) Elaborate the links between health, mental health, and social capital by undertaking prospective longitudinal studies in both developed and developing countries.
- 4) Analyze the links between mental health, violent conflict and social capital, by for instance examining the ways in which social capital may be able to enhance mental health interventions and service delivery and mental health status through the networks, support and norms social capital provides.
- 5) Examine how improvements in individual and population health and mental health might build social capital, and quantify the economic benefits of this.
- 6) Examine how social policy, including health policy, can be developed so as to promote the growth of social capital and mitigate against its erosion.



## VI. APPENDICES

### ■ A – July 17, 2000 World Bank Workshop Proceedings

The July 17th 2000 workshop began with introductions by Dr. Harvey Whiteford, Mental Health Consultant, Human Development Network, The World Bank; Dr. Grayson Norquist, Director, Division of Services and Intervention Research, National Institute of Mental Health; and Dr. T. Bedirhan Ustun, Group Leader of Assessment, Classification and Epidemiology, World Health Organization. After a brief contextualization of the NIMH, WHO, and Bank collaborative effort on social capital, mental health, and health issues, the speakers also enumerated the aims and desirable products of the meeting.

Michelle Cullen, a Post-Conflict Consultant at The World Bank, then presented some basic background information on social capital, including its definition, how it interrelates with other forms of capital and social cohesion, its possible impacts, and what may or may not be done to build and strengthen this phenomenon.

During the discussion that followed, World Bank Social Scientist Dr. Michael Woolcock stressed the need to narrow the concept of social capital for analysis purposes by applying this concept only to the micro level, yet while still considering its relation to the macro environment. Social capital in this regard includes the ways community's function, while the role of institutions are less applicable. Within this context, social capital is still considered both a process and product, and its bonding, bridging and linking distinctions are still deemed relevant for consideration.

The discussion also entailed a review of the difficulties associated with studies analyzing social capital and mental health and health interrelations. The key issues noted included:

- The need for recognition of the difference in developing countries in terms of the market versus non-market approaches to health interventions
- The fact that most work in this area has examined developed versus developing countries
- Social capital arises as a by product of other initiatives, and interventions should not be geared to build social capital per se
- One can potentially fortify social capital by increasing awareness of it, and protect it by doing impact assessments to see if projects are helping or hurting this phenomenon
- The difficulty of assessing mental health interventions' impact, in addition to the costs involved with not investing in this area
- To produce social capital, it must happen as a by-product from internally-driven trust, reciprocity, and engagement
- The need to rely on communities to stretch government services (what are the variation in these communities)
- With decentralization and devolution in projects, social capital becomes even more important

Dr. Kimberly Lochner, of the Harvard School of Public Health, expounded the social capital discussion by presenting on its operationalization and measurement. Lochner defined social capital as “as the norms and social relations embedded in the social structure of societies that enable people to coordinate action to achieve desired goals.” Due to the shared feature of social capital, it is an ecological characteristic (not individual); and therefore, according to Lochner, should be measured at the community level.

Social capital has been applied to various disciplines and areas, such as families and youth behavior (delinquency, successful development); schooling and education (e.g., Coleman); community life (e.g., labor market attachment –Wilson, Katz); work and organization; democracy and governance (e.g., Putnam and Verba); economic development; criminology (e.g. social disorganization theory – Sampson); and health. Considering these applications, Lochner stressed that various disciplinary traditions can be used to measure social capital, such as criminology (collective efficacy); community psychology (sense of community, neighborhood cohesion); and political science (civil society; civic engagement). Regardless of the discipline, the main indicators of social capital tend to include: interpersonal trust; norms of reciprocity and mutual aid; a sense of solidarity; availability of affective and instrumental support; and density of civic associations.

Lochner elaborated on measurement by describing Robert Putnam's Social Capital Index, which aggregates results from various social capital indicators to predict an overall community level of social capital. This index includes examining:

- Community Organizational Life
  - Civic associations per 1,000 population
  - Mean number of group memberships per capita
- Engagement in Public Affairs
  - Voter turnout in national elections
  - Attendance at town/school public meetings
- Community Volunteerism
  - Number of nonprofit organizations per 1,000
  - Mean number of times did volunteer work last year
- Informal sociability
- Social Trust.

Various state-level mechanisms affect the social capital and health interface. Overall health status may decrease with increasing inequalities in political participation (which may be reflected by decreasing levels of social capital, or may lead to lower social capital itself). A polarization of political interests may also have negative health status effects, with the erosion of support for the provision of social goods, such as education and health care (this may also be a cause and effect for lower social capital levels).

Community-level mechanisms that affect social capital and health interactions include: a) effects on behavior with the diffusion of innovations (information channels); informal social control over deviancy (e.g. teen smoking, drug abuse); and the establishment of healthy norms; b) effects on services and amenities through the local action taken to preserve services; and c) psychological effects through levels of trust and emotional support.

Although there are many benefits that may be obtained by employing social capital to improve health interventions, there are also various downsides to social capital as a health investment strategy, such as the potential of excluding “out” groups; excessive claims made on members within “in” groups - especially women; and potential restrictions on individual freedom.

Lochner concluded her presentation by enumerating the various levels of action that may be taken to enhance social capital. These include:

- Strengthening *Social Networks*: e.g. village health worker - mobilizes resources within social networks as well as brings resources into communities
- Building *Social Organizations*: e.g. trade unions
- Strengthening *Community Ties*: i.e., bridging across groups normally divided along class, caste, race/ethnicity, or religious grounds
- Strengthening *Civil Society*: e.g., informing decision-makers about the social consequences of macroeconomic policies.

Dr. Richard Araya, of the Division of Psychological Medicine, Academic Unit, University of Wales College of Medicine gave the following presentation on mental health and social capital. Araya opened by stressing the (often overlooked) importance of mental health status and its increasing significance in terms of the global burden of disease over the next 20 years. In order to effectively address mental health needs, Araya noted that it was key to include the social environment as an important factor in mental health status. For as an individual and his/her social context interact, an individual's health outcome is affected, in terms of functioning and mental health / health status.

Araya defined mental health as a state of well-being and a person's functioning (ability to work productively and interact with the community). Yet, he stressed that the measurement of mental health is constrained by subjective and complex phenomenon; human judgement (bias); a lack of a universal standard; and the fact that it is based on the individual. He suggest that in order to overcome these constraints, several steps have been taken to progress mental health measurement, such as reaching consensus about abnormalities in absence of biological correlates; operationalizing subjective abnormalities; and developing standardized instruments to measure these abnormalities. Araya outlined the most common measures in mental health to be the score of individual symptom (depressed); the total score several symptoms (severity); and diagnoses (depressive disorder); which can be done through questionnaires, interviews and observational assessments.

To Araya, the main social variables that affect mental health are environmental or social adversity (life events and depression) and social resources (social support and networks). However, it is difficult to measure these effects on health, as studies are limited by such long-term measures. Psychological variables (all of which are inter-linked) also effect mental health status, such as optimism / pessimism; control versus uncertainty; efficacy or coping; self-esteem; and early imprinting. Araya then reviewed various explanatory mechanisms to reveal these correlations. (For example, low income, deprivation, and low socio-economic status leading to learned helplessness, sense of failure frustration, and social isolation, which leads to depression and anxiety that can result in negative health consequences such as cardio-vascular disease). Key questions about the interface between mental health and social capital were then posed:

- What are the most likely components and variables of social capital that affect health?
- Are results adjusted for other social contextual variables?
- Psychometric properties of measures (e.g. trust, reciprocity).

Araya finished by outlining possible areas for future research that involved the integration of variables and levels; developing brief measures; and large prospective studies involving L.D.C. countries too.

Models of interactions between social capital, health and mental health were put forth by Dr. Kwame McKenzie and Dr. Richard Wilkinson, from the Department of Epidemiology of Public Health, University College of London. Wilkinson initiated this discussion by focusing on the social determinants of health and mental health that relate to inequality. He postulated that various psycho-social factors related to inequality impacted health and mental health status. These factors include access to resources, resource holdings, power, perceptions of control, socialization during early childhood development (ECD), and stress (caused by financial problems, a sense of uncertainty, no control, etc). Status also plays a role as a health determinant, with low social status negatively affecting health, compounded by its usually accompanying weak social affiliations, and poor ECD, and chronic anxiety often caused by vulnerability. Wilkinson also postulated that those societies with higher income inequalities are more prone to violence and discrimination. Overall, Wilkinson felt that the more stratified a society in terms of inequality, the more negatively it would affect population health status of those less fortunate – that it is not just a matter of material deprivation, poor education, weak social relations, and poorer access to resources, but the psychological pressures affiliated with holding a low status, such as perceptions of indignity, inferiority, and a lack of control.

Following Wilkinson's presentation, McKenzie discussed the links between mental illness and social capital by putting forth many possible hypotheses on the ways in which these two variables may interact:

- Low levels of social capital lead to individual anxiety and stress.
- Low levels of social capital lead to high levels of anxiety and stress in the community.
- Low levels of social capital lead to behaviors that undermine social buffers to distress.
- Low levels of social capital lead to risky behaviors that increase vulnerability, precipitating and perpetuating factors for mental illness.
- Low levels of social capital decrease the ability of an individual to give support.
- Low levels of social capital undermine self esteem and the perception of self.
- Low levels of social capital at a community level lead to alternative cultures that cause mental illness.
- At a community level low social cohesion produces policies and practices that increase the rates of vulnerability, precipitating or perpetuating factors for mental illness
- At a community level, low levels of social capital decreases the ability of communities to offer psychological and emotional buffers to the mental illness promoting effects stress and social stratification.
- At a community level, low level of social capital decreases the will of communities to spend money on infrastructural buffers to mental illness promoting factors.
- At a community level, low levels of social capital decrease the will of communities to fund good mental health services.
- At an individual and community level low levels of social capital increases stigma and victimization of people with mental illnesses

McKenzie then listed various issues that should be considered while examining the links between social capital and mental illness, such as the fact that mechanisms not unidirectional; causality and reverse causality; the immediate effects - especially for young; longitudinal / long-term for socioeconomic and socio-cultural effects; vulnerability long term effects; and precipitants/ perpetrators can be short term.

The mechanisms through which social capital may affect mental illness, as listed by McKenzie, ran parallel to those listed by Lochner and Cullen. These included psychological effects; information channels; control of deviancy; production of health norms; and amenities and services.

The workshop ended with a general summary of the days events by Ustun, along with a brainstorming session led by Whiteford on future research directions that would continue to examine mental health, health, and social capital interrelations. The primary recommendations for potential research that emerged were:

- Examining the interrelations of human capital and social capital
- Sharpening the tools for measuring social capital
- A prospective longitudinal study, including not only developed but also developing countries
- Analyzing the links between mental health, violent conflict and social capital.
- Examining how improvements in health and mental health might build social capital, and quantify the economic benefits of this.

**■ B – Social Capital Survey**

**I. State and Community Services and Relations**

This section is designed to examine how individuals relate to government and traditional authorities, and what role communities and governments play for individuals. General background statistics will also help inform this section, such as voter turnout, Gini coefficient, and Robin Hood Index.

1) Who provides the following services to your village/community/neighborhood? (*pre-coded*)

	Govt	NGOs	Other (specify)	No one	Don't know	No response
A Education/Schools						
B Health Facilities/Clinics						
C Maintenance of Roads						
D Assistance with Housing						
E Water Distribution						
F Sanitation Services						
G Agriculture Extension						
H Provision of justice						
I Security						

2) In your view, are any members of your neighborhood/village excluded from or do not have equal access to these services? (*pre-coded*)

	Yes	No
A Education/Schools		
B Health Facilities/Clinics		
C Maintenance of Roads		
D Assistance with Housing		
E Water Distribution		
F Sanitation Services		
G Agriculture Extension		
H Provision of justice		
I Security		

3) What do these members of your village do to overcome this lack of access? Are they successful in doing so? (*open-ended*)

If respondent answered yes to any of the responses for questions 2, go to question 4.

Otherwise, go to question 5.

4) Why do you think that not all people benefit from \_\_\_\_\_ services?

(Ask this question for each area cited as being inequitable) (*open-ended with pre-codes*)

Income level

Age

Gender

Family relations

Political affiliation

Lack of education

Lack of information

Distance to facilities

Not everyone needs these services

Some people prefer to go elsewhere to obtain these services

Other \_\_\_\_\_

Don't know

No response

5) Are there any services from which you and members of your family are excluded? (*pre-coded*)

	Yes	No
A Education/Schools		
B Health Facilities/Clinics		
C Maintenance of Roads		
D Assistance with Housing		
E Water Distribution		
F Sanitation Services		
G Agriculture Extension		
H Provision of justice		
I Security		

6) What do you do to overcome this? Is this effective? (*open-ended*)

If respondent answered yes to any possible responses for question 5, go to question 7.

Otherwise, go to question 8.

7) Why do you think you or your family members are excluded from \_\_\_\_\_ services?

(Ask this question for each area cited as being inequitable) (*open-ended with pre-codes*)

Income level

Age

Gender

Family relations

Political affiliation

Lack of education

Lack of information

Distance to facilities

Not everyone needs these services

Some people prefer to go elsewhere for

Other \_\_\_\_\_

Don't know

No response

8) If you had an important complaint or suggestion about any of the following services, who you would approach to share your complaints/ideas/opinions? (*pre-coded*)

	Local admin	Village leader	Religious leader	Govt	Family head	Other (specify)	Don't know	N/A
a. Education/Schools								
b. Health Facilities/Clinics								
c. Maintenance of Roads								
d. Assistance w/ Housing								
e. Water Distribution								
f. Sanitation Services								
g. Agriculture Extension								
h. Provision of justice								
i. Security								

9) I would turn to this person because:

(*open-ended with pre-codes*)

He/she is the person in charge of these services

He/she is the person who wields influence in my community

This person is obligated to help me because I choose him/her to act as my leader (through vote or other)

It is only through this person that I could have any influence

I would not try to make any changes without informing this person of them

I have no one else to turn to

Other

Don't know

No answer

10) If there was something about the following services that you felt was important to change, do you feel you would have the power or influence to initiate the change or persuade others to do so?  
*5 point scale (pre-coded)*

	No power		Some power		Sufficient power
a. Education/Schools					
b. Health Facilities/Clinics					
c. Maintenance of Roads					
d. Assistance w/ Housing					
e. Water Distribution					
f. Sanitation Services					
g. Agriculture Extension					
h. Provision of justice					
i. Security					

11) What means/methods would you use to try to affect this change? *(open-ended)*

12) Are you able to participate in planning regarding these services? Do you feel your input is considered in how and if these services are provided? To whom is your input given? How?

13) Do you trust the government?

14) Do you feel the government is efficient and effective in its operations and ability to provide services?

## II. Intra and Inter-community relations

### *Membership/Participation, Collective Action*

Social cohesion can be measured by examining the density, levels and types of social organizations, networks, and groups (both formal and informal) that exist within a community. As part of this measurement, individual levels of commitment and responsibility to these social organizations also need to be considered. These groups or organizations can be voluntary and/or service associations; cooperatives; non-governmental organizations; or sport, cultural, and religious groups. In addition, social movements and the capacity to mobilize should be analyzed.

1) Are you a member of any of the following types of organizations, groups or networks? Which group is most important to you? (*pre-coded*)

	Yes	No	N/A
a. Religious group (church, mosque, temple, prayer group)			
b. Cultural association			
c. Neighborhood association			
d. Group concerned with services such as health, education, literacy or other development issues			
e. Sport team or other leisure group (football)			
f. Production association (cooperative, marketing group)			
g. Professional association (teacher)			
h. Business association			
i. Trade or Labor Union			
j. Political party			
k. Other			
l. None			
m. No answer			

2) What does each organization you belong to do? Why did you join? (*open-ended*)

3) What do you do for this organization? (*open-ended*)

4) What are your responsibilities to this group, if any? (*open-ended*)

5) How often does this group meet? (*open-ended*)

6) What in your view is the most important function of the association?

The second most important function? The third? (*Accept three answers*) (*open-ended with pre-codes*)

Rank

Seeing my friends and family

Getting emotional support

Gathering information

Minimizing the risks of my household

Obtaining productive assets

Building useful contacts for work

Setting the agenda of the community

Helping those in need in the local area

Establishing links with other associations outside the local area

Establishing links with the government

Establishing links with the international community

Obtaining money from abroad

Influencing government policy

No response

Don't know

- 7) Does this organization interact with other groups? If so, to what extent and for what purpose?  
(*open-ended*)
- 8) If it does interact with other groups, please identify which groups, and if / how these inter-group relations have changed? (*open-ended*)
- 9) Does your group supply any services to group members? To people outside of the group? If so, under what circumstances? (*open-ended*)
- 10) Of the group you identified as the most important to you, would you say that most of the members in the group are from the same: (*open-ended with pre-codes*)

- Members of your immediate family
- Members of your extended family
- Neighbors
- People with a similar educational background to you
- People with a different educational background to you
- People with a similar income level to you
- People with a different income level to you
- People of the same gender as you
- Don't know
- No response

- 11) Why do you think other members joined? (*open-ended*)

- 12) In a time of serious financial distress or personal misfortune, whom would you turn to for assistance?  
(*pre-coded*)

- Your immediate family
- Your extended family or lineage group
- Neighbors, friends
- People with a similar educational background to you
- People with a *different* educational background to you
- People with a similar income level to you
- People with a *different* income level to you
- People of the same gender as you
- The central government
- Local politicians
- Businesses
- Local societies, organizations
- Traditional authorities
- Religious leaders
- Another patron (Specify \_\_\_\_\_)
- Other
- No one
- Don't know
- No response

- 13) How would you characterize your relationship with this group or individual?  
 Would you say that it is based on: (*pre-coded*)
- Familial relations (consanguine and/or affinal)
  - Trust
  - Mutual dependence
  - Obligation
  - Other (Specify \_\_\_\_\_ )
  - Don't know
  - No response
- 14) If there is a problem in the village, do individuals act together or in groups to solve the problem  
 (For instance - if there is a fire; if someone's home needs to be built or repaired; if waste or  
 garbage needs to be disposed)? (*open-ended*)
- 15) When was the last time most members of the village gathered together?  
 Why did you do so – what was the event's purpose? Would you say it was successful? (*open-ended*)
- 16) Is there a systematic way for community members to settle disputes? If so, how do members of  
 the village do so? Are there both formal and informal mechanisms? Has this changed over time?  
 If so how? (*open-ended*)
- 17) How many people are new to the village within the last three years? Last five years? Last ten years?  
 (*open-ended*)
- 18) How does information get passed around in your village? Are there both formal and informal means  
 (such as radio or word-of-mouth)? (*open-ended*)
- 19) Define social cohesion. (*open-ended*)
- 20) How would you define participation? (*open-ended*)
- 21) What does cooperation mean to you? (*open-ended*)
- 22) Please define trust. (*open-ended*)

### *Exchange*

As a proxy for measuring trust and degrees of confidence within a village, we examine the willingness to cooperate and engage in exchange (exchange being in the form of labor, goods, or cash).

- 1) What are the main economic activities you undertake? (*open-ended*)
- 2) Whose assistance/cooperation would you say is critical to the success of your economic activities?  
 (*pre-coded*)
- Family/extended family
  - Business partners/associations
  - Other types of associations (Specify \_\_\_\_\_ )
  - Employees
  - Suppliers
  - Creditors

Providers of Transport  
Providers of Security  
Local government officials  
Politicians  
NGOs  
Another patron (Specify \_\_\_\_\_)  
Other (Specify \_\_\_\_\_)  
No one  
No response

- 3) Why did you/do you feel you can rely on this group/this person? (ask for each group specified):  
(*open-ended with pre-codes*)

Because they are trustworthy/good people  
Because we are related  
Because I pay them for their work  
Because I provide them with other services or support in return  
Because they are from my village/community  
Because of the help I have received from them in the past  
I don't trust them, but they are the only providers of the services I need  
I don't trust them, but I am forced to use them  
Because I voted for them  
Don't know  
No response

- 4) These people that you depend on for your work are which of the following: (pre-coded)

Members of your immediate family  
Members of your extended family  
Neighbors  
People with a similar educational background as you  
People with a *different* educational background to you  
People with a similar income level to you  
People with a *different* income level to you  
People of the same gender as you  
Don't know  
No response

- 5) What is your most important source of information about the economy, production, selling your goods and other economic affairs? Your second most important source? Third? (*open-ended with pre-codes*)

Rank

Radio  
Printed sources (newspaper, magazines, handbills)  
Business contacts  
Your immediate family  
Your extended family  
People from your village  
People outside your village

People with a similar educational background to you  
 People with a *different* educational background to you  
 People with a similar income level to you  
 People with a *different* income level to you  
 People of the same gender as you  
 Government workers  
 Members of associations or clubs  
 Other (Specify \_\_\_\_\_)  
 Don't know  
 No response

6) Are you able to contribute information into this network? If so, how can you contribute? (*open-ended*)

7) How and when do people usually compensate you for your work/products? (*pre-coded*)

- a) With money, at the time when the exchange takes place
- b) With money, some time after the sale is made/service is rendered
- c) With other goods and services, at the time when the sale is made/service is rendered
- d) With other goods and services, sometime after the sale is made/service is rendered

8) Is there anyone/any group to whom you provide goods or services, yet you receive no payment, either cash or other goods and services? (*pre-coded*)

Members of my family  
 Neighbors, friends  
 Religious figures  
 Local politicians  
 The central government  
 Traditional authorities  
 Other (Specify \_\_\_\_\_)  
 No one  
 Don't know  
 No response

9) Would you say that the people you allow to pay/compensate you after the sale is made/service is rendered are mostly: (*pre-coded*)

Members of your immediate family  
 Members of your extended family or lineage group  
 Neighbors  
 People with a similar educational background to you  
 People with a *different* educational background to you  
 People with a similar income level to you  
 People with a *different* income level to you  
 People of the same gender as you  
 People who belong to the same local associations as you  
 Other  
 Don't know  
 No Response

## ■ C – WHODAS 12 / 36 Questionnaires

### WHODAS 12

The WHODAS 12 questionnaire assesses difficulties due to health conditions. Health conditions include diseases or illnesses, other health problems that may be short or long lasting, injuries, mental or emotional problems, and problems with alcohol or drugs. The survey uses a Likert Scale to assess these difficulties and overall abilities and functions.

- 1) How do you rate your overall health in the past 30 days? (very good, good, moderate, bad, very bad).
- 2) In the last 30 days, how much difficulty did you have in: (the Likert Scale for the following questions ranges from none, mild, moderate, severe, extreme/cannot do):

Standing for long periods such as 30 minutes

Taking care of your household responsibilities

Learning a new task, for example, learning how to get to a new place

How much of a problem did you have joining community activities (for example, festivities, religious or other activities) in the same way as anyone else can

How much have you been emotionally affected by your health problems

Concentrating on doing something form ten minutes

Walking a long distance such as a kilometer (or equivalent)

Washing your whole body

Getting dressed

Dealing with people you do not know

Maintaining a friendship

Your day-to-day work

- 3) Overall, how much did these difficulties interfere with your life? (not at all, mildly, moderately, severely, extremely)
- 4) Overall, in the past 30 days, how many days were these difficulties present? (record number of days)
- 5) In the past 30 days, for how many days were you totally unable to carry out your usual activities or work because of any health condition? (record number of days)
- 6) In the past 30 days, not counting the days that you were totally unable, for how many days did you cut back or reduce your usual activities or work because of any health condition? (record number of days)

### WHODAS 36

Although the WHODAS 12 may touch on some issue pertaining to social capital, the WHODAS 36 may be more helpful for finding overlap and interrelations between social capital and health / mental health. The WHODAS 36 is in similar form as the WHODAS 12, but is more detailed, focusing on 6 key aspects of functioning – understanding and communicating, getting around, self care, getting along with people, life activities, and participation in society.

- 1) How do you rate your overall health in the past 30 days? (very good, good, moderate, bad, very bad).

2) In the last 30 days, how much difficulty did you have in: (the Likert Scale for the following questions ranges from none, mild, moderate, severe, extreme/cannot do):

*Understanding and communicating*

- Concentrating on doing something for 10 minutes
- Remembering to do important things
- Analyzing and finding solutions to problems in day to day life
- Learning a new task, for example, learning how to get to a new place
- Generally understanding what people say
- Starting and maintaining a conversation

*Getting around*

- Standing for long periods such as 30 minutes
- Standing up from sitting down
- Moving around inside your home
- Getting out of your home
- Walking a long distance such as a kilometer (or equivalent)

*Self Care*

- Washing your whole body
- Getting dressed
- Eating
- Staying by yourself for a few days

*Getting along with people*

- Dealing with people you do not know
- Maintaining a friendship
- Getting along with people who are close to you
- Making new friends
- Sexual activities

*Life activities*

- Taking care of your household responsibilities
- Doing most important household tasks well
- Getting all the household work done that you needed to do
- Getting your household work done as quickly as needed

If you work (paid, non-paid, self employed) or go to school, complete the questions below. Otherwise skip to the next section. In the last 30 days, how much difficulty did you have in:

- Your day to day work/school
- Doing your most important work/school tasks well
- Getting all the work done that you need to do
- Getting your work done as quickly as needed

*Participation in society*

- How much of a problem did you have joining community activities (for example, festivities, religious or other activities) in the same way as anyone else can
- How much of a problem did you have because of barriers or hindrances in the world around you

How much of a problem did you have living with dignity because of the attitudes and actions of others

How much time did you spend on your health condition, or its consequences

How much have you been emotionally affected by your health condition

How much has your health been a drain on the financial resources of you or your family

How much of a problem did your family have because of your health problems

How much of a problem did you have in doing things by yourself for relaxation or pleasure

- 3) Overall, how much did these difficulties interfere with your life?  
(not at all, mildly, moderately, severely, extremely)
- 4) Overall, in the past 30 days, how many days were these difficulties present? (record number of days)
- 5) In the past 30 days, for how many days were you totally unable to carry out your usual activities or work because of any health condition? (record number of days)
- 6) In the past 30 days, not counting the days that you were totally unable, for how many days did you cut back or reduce your usual activities or work because of any health condition? (record number of days)

### **General Health and Related Statistics**

Overall health of a community or region may also be important to ascertain, depending on the type of research being conducted. The following basic indicators may help draw a snapshot of an area's current health status, and the overall status of health in the country (and how resources are allocated toward this end).

- life expectancy at birth
- nutritional status (low birth weight, anemia, obesity) and access to public nutrition support programs
- measures of morbidity and mortality (infant, under five, adult)
- child malnutrition
- provision (in-patients beds per 1,000; physicians per 1,000; immunization coverage), access, and utilization of health services
- adolescent fertility rate
- total fertility rate
- unwanted fertility rate
- maternal mortality ratio
- risk taking behavior (smoking, substance abuse, unsafe sex)

#### *Well-being (Human Development)*

- literacy rates
- lack of educational opportunities
- enrollment rates in basic education / drop out rates / secondary school enrollment
- urban population
- access to safe water
- population growth rate
- population under 15 (% of total)
- total health expenditure/GDP
- public health expenditure/GDP
- total health expenditure/cap
- total health expenditure/cap (PPP)

(One could alternatively look at the Human Development Index compiled by UNDP, which examines life expectancy at birth; adult literacy rate; combined first, second and third level gross enrolment ratio; real GDP per capita; life expectancy index; education index; and GDP index.)

#### *Indicators of Poverty and HNP Outcomes*

- Lowest per capita income in the region
- Highest under-5 mortality rate
- Highest child malnutrition prevalence
- Highest total fertility

#### *Selected Indicators of Health Care Coverage*

- Lowest measles immunization rate
- Lowest access to health services

#### *Selected Indicators of Health Expenditures*

- Low public expenditure
- High total expenditure

#### *Individual-level factors associated to health*

- age
- sex
- race
- marital status
- income
- education
- employment status
- employment grade

### **General Means to Assess Community Mental Health**

Since social capital is characteristic of an area, not an individual, researched examining mental health and social capital may want to attempt to measure the mental health of an area. One possible conceptual model that has been employed in New York, NY (Siegel et al. 1997) includes indicators from several different domains – socio-economic, needs, supports, and outcomes. Within these four domains, indicators differed by measure according to either the “well-being” of persons with mental illness or a more general measure of the “social and mental well-being” of people in New York City.

The Mental Health Index indicators included:

- Socio-economic – poverty and employment
- Needs – prevalence of serious, and of severe and persistent mental illness (SMI and SPMI, respectively)
- Supports – availability of mental health and residential services for those with mental illness in general, and the SPMI population in particular
- Outcomes – undesirable conditions specific to persons with mental illness that require careful monitoring including service system problems, substance abuse co-morbidity, criminal justice system involvement, homelessness, and avoidable mortality.

The Social and Mental Well Being Index included:

- Socio-economic – poverty and unemployment
- Needs – the population size of the whole community
- Supports – availability of a broad range of community services that address poverty, homelessness, education, drug and alcohol abuse, and medical treatment
- Outcomes – quality of life, social welfare, substance abuse, public health avoidable mortality and others.

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