

**SOCIAL COHESION:
THE MISSING LINK TO BETTER HEALTH AND NUTRITION
IN A GLOBALIZED WORLD**

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Abstract: This paper argues that health and social sector planners do not take sufficient account of the social determinants of health when aiming for better outcomes. It focuses on social structures rather than individuals and acknowledges the need for a multidisciplinary approach. Based on a literature review on social cohesion and health development planning, the paper presents a conceptual framework for assessing health and nutrition outcomes and then employs this framework by drawing on fieldwork from Kenya. The study examines the link between the use of a social educational process to promote social cohesion and a change in the nutrition and health status of children under five years of age. It then identifies factors at the community level that helped or hindered health outcomes. Finally, the paper draws out the lessons learned for further development of social sector policies and asks whether health and social planners are being adequately exposed and trained to effectively respond to social issues. It calls for a wholesale re-tooling of the public health work-force to balance the individualistic biomedical and economic view of the world with a collective, social science focus on community and social structures and considers how to move from research to policy development.

Keywords: *social cohesion, health and social policy, nutrition, Kenya*

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1.0 Introduction

"Inclusion and Cohesion are lovely words, more used than exercised." (IAA, 2000, p. 6)

Governments struggling to reduce poverty and to achieve the Millennium Development Goals for Health are actively seeking new strategies to reach out to marginalized communities. In the face of a growing critique of Primary Health Care (PHC) and its three pillars¹, this search has stimulated much debate on new ways of applying public health approaches and challenged policy makers and planners to develop a more nuanced understanding of the social factors operating within communities (Bhatia and Mossialos, 2004). We need to know more about the way in which the three pillars of PHC and especially social educational approaches can help to build collective experience, and about when and at which level the changes take place that can lead to the desired social transformation. There is an urgent need for wider sharing of experiences of the social dimensions of health to guide evidence-informed social policy and practice to improve well-being.

This paper makes a contribution to this debate by examining the role of social cohesion² in the planning process for better health and nutrition outcomes. It focuses on social structures rather than individuals and acknowledges the need for a multidisciplinary approach. It is divided into three main sections. Firstly, it reviews the literature to explore some of the implications of shifting health into the social and political arena and exposes the way in which social and public health planners are still neglecting the social dimension and health. Secondly, it presents the findings from a study in Kenya that explored the role of pre-existing user cohesion in facilitating or inhibiting better health and nutrition outputs and outcomes for children under five years. Thirdly it draws out the lessons learned from this research and considers how to move from research to policy development.

¹ The three pillars of Primary Health Care are community participation, intersectoral collaboration and equity.

² Social Cohesion is defined as a subset of social capital which is "features of social organizations such as networks, norms and trust, that facilitate coordination and cooperation for mutual benefit" Putnam, R. D. (1995), 'Bowling alone. America's declining social capital'. *Journal of Democracy*, 65-78.

2.0 Review of the literature

Shifting health into the social and political arena

Health professionals have long viewed health in terms of the absence of medically defined disease or disability (Osmari, 1997). The World Health Organization (WHO) has challenged this view by recognizing that there is a social dimension to health (WHO, 1978). This dimension acknowledges the way in which people's perceptions of health as a relative rather than static state are shaped by cultural backgrounds and social, political and economic status. The determinants of social health include the social and personal resources, as well as physical capacities, of health providers and users and the capacity of the state and its institutions to reduce structural barriers that increase risk and vulnerability to poor health (Caldwell, 1993; Lucas, 2000). The need to address the social dimension moves health into the broader arena of power structures and political agendas that impact society. This is the arena in which poverty and the development crisis caused by AIDS can be addressed through attention to good governance and the protection of human rights.

In response to the recognition of a social dimension to health, WHO has recently established a Health and Human Rights team that has belatedly brought the parallel streams of nutrition and human rights together. The work of this team assumes new importance as public health planners prepare to manage the epidemics of AIDS, TB and lifestyle disorders that have followed in the wake of the massive social and economic changes caused by global economic restructuring. The social impacts of this restructuring are most clearly evident in areas that have experienced the greatest magnitude of socio-demographic expansion or contraction and we urgently need to identify social interventions that can help to restore well-being and better health outcomes in such areas.

Given the increased importance now being given to promoting social health it is disappointing to find that health systems have been slow to respond. In the haste to privatize, rationalize, marketize and individualize health systems, planners are now spending more time calculating how to apply medical innovations to address individual health needs than evaluating or applying the discoveries of social science to health and well-being of communities. Millions of dollars have been committed to interventions that focus on improving the health of the individual, but investment in research to increase understanding of the social forces impacting family and community health has been neglected. Such research is now needed to guide

evidence-informed policy that can lead to the transformation of outdated social systems for better health and nutrition outcomes (Lomas, 1998).

Social cohesion and interaction within and between health service users, providers and the state

As long ago as 1985, Willot (1985) recognized the importance of user cohesion in the health sector. He developed a framework for planning health outputs that identified interaction between user cohesion, provider cohesion and state cohesion as an important pre-requisite of health inputs fuelling the activities to deliver outcomes. He argued that these determinants operate in an institutional and regulatory environment that can be favorable or unfavorable to the creation and support of positive health output.

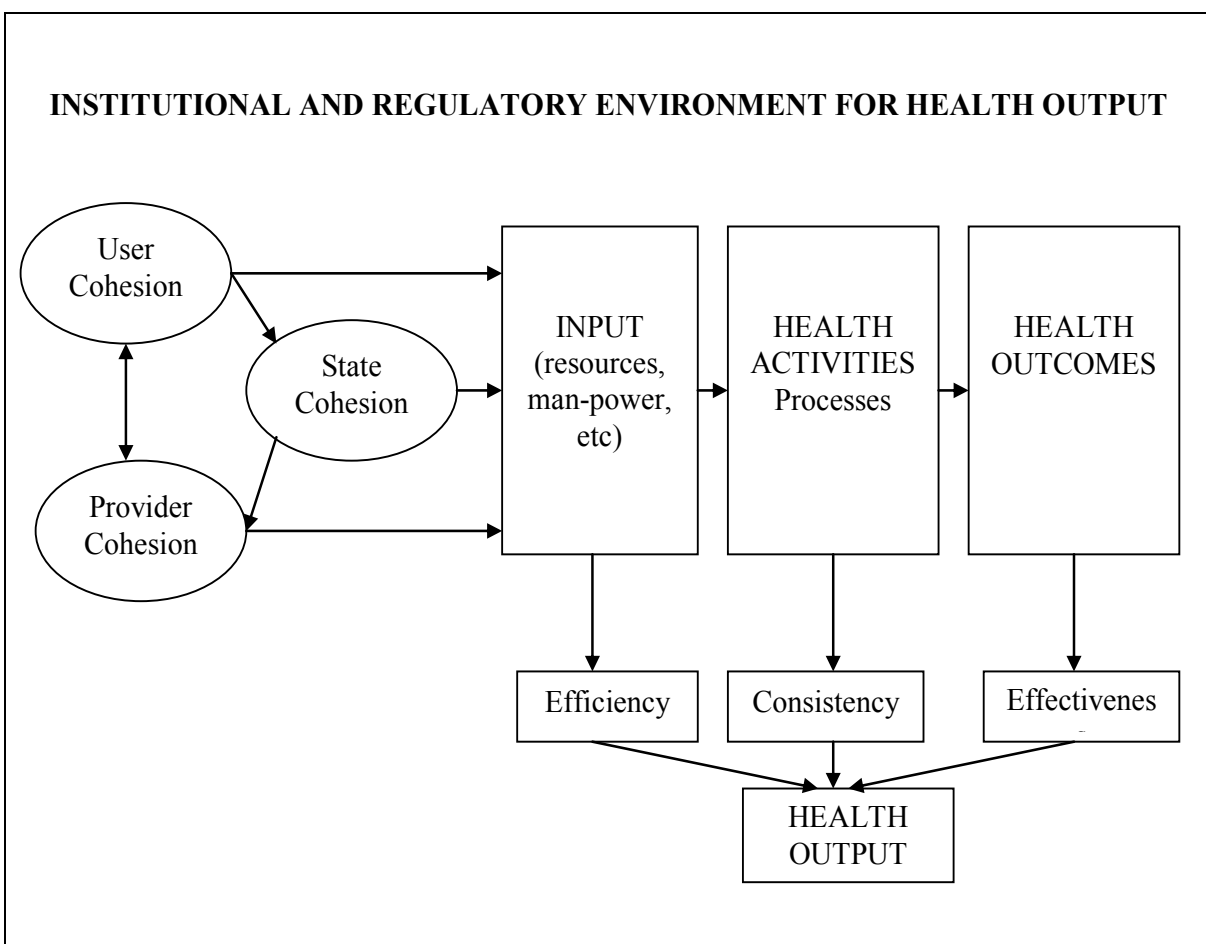


Figure 1: Health output/outcome framework (Adapted from Willot, 1985)

More recently Franco *et al* (2004) have endorsed the notion that health users, providers and the state influence the process that delivers health outcomes, but argued that they do it in different ways. Health providers affect the process through technical advice and health users affect the process through pre-existing community factors including cohesion, which affects the inclusiveness of primary stakeholders. Both users and providers can affect the process through the state and the state can affect the process through allocation of resources and determining the governance structures that affect leadership. Franco *et al* (2004) have suggested that the different approaches to achieving health outcomes taken by the users, providers and state are important because they reflect different values, political views and goals. These approaches also seek different ends that have important implications for inclusion and cohesion (or “collective efficacy”) of excluded groups and health outcomes. This line of reasoning would suggest that interventions to rebuild social connections can help to combat negative health changes caused by global economic upheaval and population displacement.

Experience has shown that the way we organize our society, the extent to which we encourage interaction among the citizens, and the degree to which we trust, care and associate with each other in caring communities are important determinants of health (Fullilove, 1998). This experience has fueled the growing literature on social capital as a precursor of improved health and nutrition outcomes (Waterstone, G. and Brown, 2003). Social capital, defined as the “social cohesion of a community, the sense of belonging and the level of involvement in community affairs” (Elliman and Hall, 2003, p. 5), recognizes the ability of society to reconcile the interests of its constituent elements, govern itself peacefully and manage change. Social capital is seen to be developed by enabling children, women and men to work together to address common needs and demands, overcome constraints, consider diverse interests and resolve differences in a civil, non-confrontational way through the promotion of peace and security. Social cohesion, a subset of social capital, is in itself and as part of other social conditions, now recognized to be essential for maintaining healthy populations (Fullilove, 1998). This means that we need to learn more about how communities are constructed, the networks that surround them and the livelihoods and families that support them. It also means that we must understand how

socio-economic, cultural and political systems influence the social policies³, priorities and outcomes of the health system. Research has shown that physical and social structures present in a community can either encourage or discourage mutual support, self-esteem, a sense of belonging and strong social relationships. Together with the cultural or social homogeneity of a community these structures can be targeted to improve health outcomes (Macintyre and Ellaway, 2000; Krishna and Shrader, 2002).

In this era of evidence-informed decision-making, resource allocations should draw on the existing knowledge base to decide which interventions (medical, social or otherwise) are most effective. An analysis of existing data by Lomas (1998) suggests that interventions to increase social support and/or social cohesion in a community can be as effective as improved access to routine medical care. These findings have important implications for addressing emerging and re-emerging diseases such as HIV/AIDS, TB and opportunistic infections. Our own experiences of public health planning suggest that the relationships between health users and providers, and between provider, user and the state are strongly influenced by characteristics that are peculiar to the health sector. Planning for health has traditionally been a 'top down' process often biased in favor of the elite. The process has been used to perpetuate hierarchical, curative medical systems that support clinical autonomy in decision-making, keeping patients dependent on expert advice. Even today, when the world is increasingly challenged by the social and political complexity of problems such as AIDS, few health professionals are given any training in social development and social sector specialists seldom collaborate effectively with health planners and specialists. Furthermore, health planning continues to be conducted largely within the strictly ordered world of logical planning and logical framework analysis even though logframes do not allow for the complex, highly politicized and extremely fluid user aspect of health services (Evans *et al.*, 2001; Dale, 2003).

Social Development for improved nutrition and health outcomes

Maintaining good nutrition and combating malnutrition has traditionally been viewed as the responsibility of the Ministry of Health (MoH) even though it is an issue that cuts across ministerial boundaries. For example, in many African countries the Ministry of Agriculture has

³ Social policy is a term used to describe any policy that regulates the organization and delivery of services or resource allocation in the society in which it has been developed Lovell, T. and Cordeaux, C. (1999), *Social Policy*

an important role to play in food security and early warning systems, the Ministry of Social Welfare in relation to social security schemes, destitution, vulnerable groups and coping strategies, and the Ministry of Planning and Finance in relation to policy/strategy formulation and financing. Nutrition can therefore be a useful entry point for intersectoral planning and social educational work. However, this work is difficult to plan and implement effectively and efficiently and ministries of health, agriculture and finance have not had the expertise to do it. This situation is changing, however, as line ministries seek to respond more effectively to the HIV/AIDS epidemic and see the need to develop the capacity to promote stakeholder participation and work intersectorally (Havemann, 2001). Although intersectoral approaches are already being used within early warning systems to predict and prevent the outcomes of famine, data on malnutrition collected in these systems is viewed as an *outcome* of famine, rather than a predictor. This is despite evidence that show how people in crisis choose to go hungry to preserve resources in the hope of preventing destitution (Young and Jaspars, 1995). Nutrition is also being viewed as an outcome indicator despite its potential to improve and monitor health. Although the Human Development Report included stunting (height for age or chronic malnutrition) as a development indicator in the early 1990's and the Millennium Development Goals included underweight (low weight for age) as an indicator, nutrition has generally been sidelined in poverty agendas (Gillespie *et al*, 2003).

Malnutrition and the social determinants of health

UNICEF (1990) has developed a model to explain the causes of malnutrition that includes community, district/region, national and international level structures and systems. This model can be adapted to the local context and has been widely used to guide planning for improved nutritional outcomes. In this model the causes of malnutrition are identified at three levels of society: immediate, underlying and basic. This model is presented in figure 2 with an extra column added on the left hand side to show how the three levels of causation can be related to the three levels of the social sector planning process, the operational level, the system level and the political level.

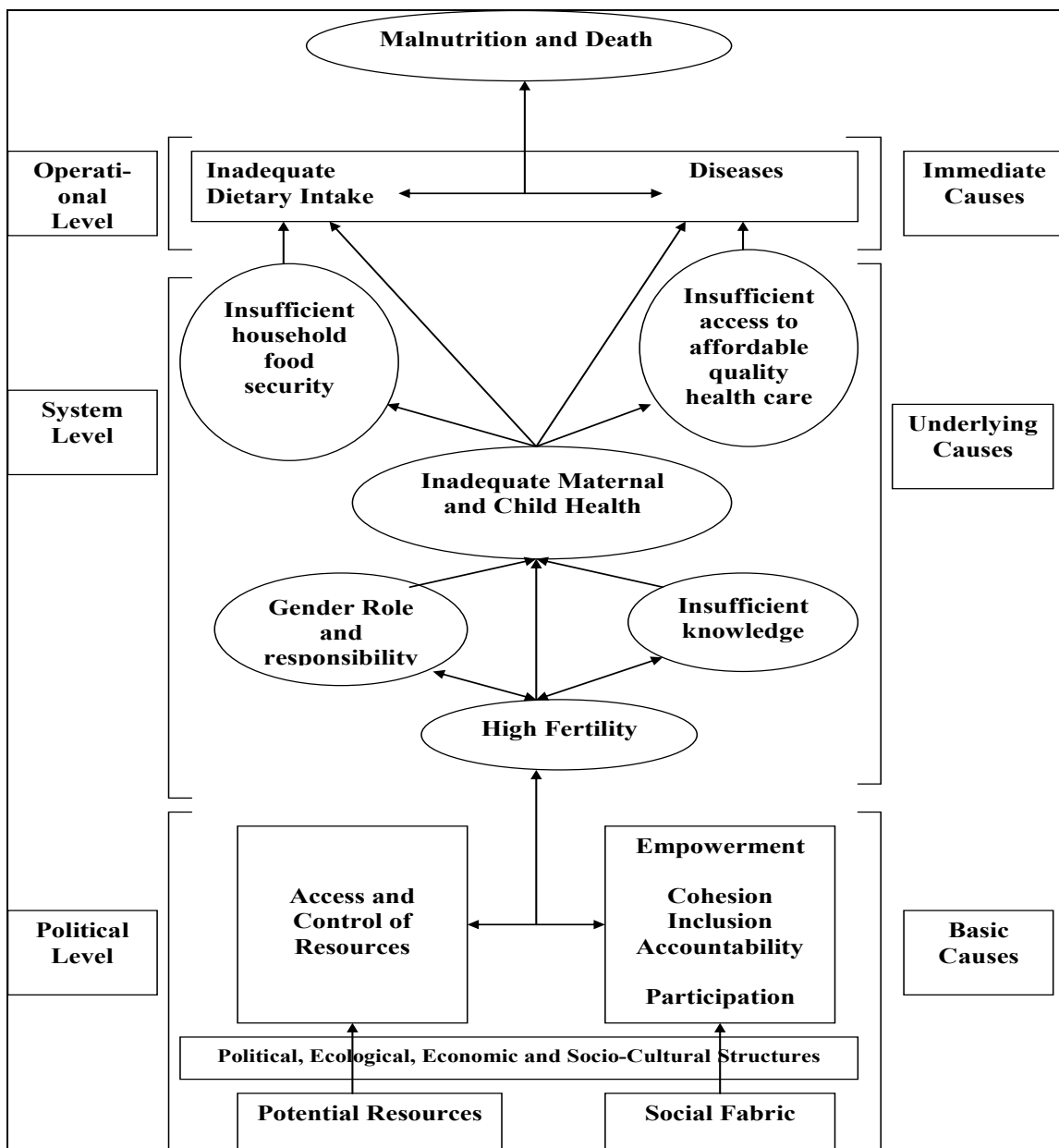


Figure 2: UNICEF's conceptual framework showing the causes of malnutrition (UNICEF (1990)).

In this model the causes of malnutrition are identified at three levels of society: immediate, underlying and basic. This model is presented in figure 2 with an additional column on the left hand side, which has been added to show how the three levels of causation can be

related to the three levels of the social sector planning process, the operational level, the system level and the political level.

The *operational level*, where the activities are implemented, seeks to combat the immediate causes of malnutrition and put in place an accountability mechanism at the interface between users and providers of health services. The *system level*, which consists of both users and providers of health care, seeks to combat the underlying causes of malnutrition and put in place an accountability mechanism at the interface between users and their political system (i.e. the state) and between providers and their planners in the Ministry of Health, or their professional associations. The *political level*, where budgets and health priority areas are decided upon, seeks to combat the basic causes of malnutrition and put in place an accountability mechanism between the health planners in the Ministry of Health representing the system and the state represented by the politicians. Grootaert and Van Bastelaer (2002a; 2002b) have referred to these three levels in the social development planning process as micro-level (operational), meso-level (system) and macro-level (political). They point out that whilst micro level planning is largely concerned with developing horizontal relations, meso-level is concerned with both horizontal and vertical relations and macro level is concerned with vertical relations.

Let us now look more closely at the model in figure 2 to see how malnutrition is linked to the social determinants of health at all levels. The *immediate causes* of malnutrition operate at the household/family level and are inadequate dietary intake and diseases. An inadequate diet can be linked to lack of food security and inadequate livelihoods. Lack of food security can be assessed objectively in terms of the condition of deprivation, and subjectively in terms of feelings of deprivation. The inclusion of people as subjects has seen as important and related to concepts of rural development, participation and empowerment since the mid-1980s (De Waal, 1989; Maxwell, 2001). Disease is another well-known factor causing malnutrition and death. There is a well-known cyclical relationship between malnutrition and the infections that cause disease in that infection precipitates malnutrition and malnutrition aggravates the outcomes of many infections. Severe malnutrition is also known to increase the incidence, duration and severity of infection (Young and Jaspars, 1995). However, it has long been recognized that the relationship between malnutrition and infection is complicated. In some communities the association between anthropometric indices such as weight or height for age and the risk of infection and death is linear, in others there is a threshold beyond which malnutrition sharply

increases when the risk of infection increases, and in some communities there is only very weak link between malnutrition and infection (Tomkins, 1986; Tomkins and Watson, 1989; Tomkins, 2000).

The *underlying causes* of malnutrition operate at the system level. At the core is inadequate maternal and child health caused by high fertility, unequal gender role and responsibilities and access to relevant and timely technical and basic knowledge. The way in which health and social systems can be the main channel of communication between the policy makers and implementers and between implementers and users of services has led to them being viewed as 'gate-keepers'. However, we need to remember that the capacity to shape and enforce policies into effective, efficient systems is only as good as the people working within these systems.

The *basic causes* of poor nutrition and mortality are the structures in society⁴ that can increase vulnerability and risk by reducing the resource envelope⁵ for health and damaging the social fabric that holds a community together. The structures and links between and within social groups, known as the social fabric, can be strengthened by wide and deep participation of the different stakeholder groups, equitable power relations between and within these groups and shared norms. Shared norms build social cohesion and inclusion in the community and increase agency⁶. Shared norms also strengthen the opportunity structures in the institutional context in which choices are made. The importance of social accountability⁷ in addressing the basic causes of health and malnutrition was recognized in the 2002 (Claeson *et al.*, 2002), where it was viewed as an important source of empowerment⁸. Social accountability involves providing critical information on rights and entitlements by introducing mechanisms that embrace citizen voice and influence in relation to the government.

Social cohesion and health development outputs

⁴ political, economic, environmental and socio-cultural.

⁵ The term resource envelope refers to the amount of resources available and the way they are redistributed to ensure that each person receives health-care according to his/her needs while contributing according to his/her ability.

⁶ Agency refers to the capacity of individuals and groups to make purposive decisions.

⁷ Social Accountability is an approach to building accountability that relies on civic engagement, i.e. in which it is the ordinary citizens and/or civil society organizations who participate directly or indirectly in exacting accountability (Malena *et al* 2004).

⁸ Empowerment is the capacity to transform choices into desired actions and outcomes (Alsop and Heinsohn, 2005). p. 5))

Social cohesion is concerned with the level of social engagement and trust that exists between community members which is a product of the distribution of wealth and social connections within the community. Social engagement is known to be an essential part of a healthy society but the quality of the engagement rather than scope seems to be more important for positive health outcomes (Speer, Jackson and Peterson, 2001). It has long been known that well-integrated communities are characterized by strong family ties and high levels of participation in the group's social, political and religious life. Already in 1977 Granovetter argued that both strong and weak ties are necessary for group existence. Strong ties link closed groups such as families and weak ties link more informal relationships such as those between neighbors and colleagues (Granovetter, 1977). But neither well-integrated nor disintegrated communities are stable because the strength of intrapersonal and interactional connections depends on environmental factors, such as adequate economic resources, to meet basic needs and stability of the population (Speer, Jackson and Peterson, 2001). The shift in economic capital around the globe, therefore, has important implications for the integration and stability of community life and for the health and nutritional status of local populations.

Another essential part of a healthy society is the ability to take collective action for health. Such action depends on individuals, who live in the same environment and share a common culture or conditions of life, becoming aware of their common experiences and developing the collective experience that can strengthen group solidarity for action. In this way collective experience can be a key element in the qualitative transition from individual to collective action that facilitates empowerment, builds community competence and brings about change (Jensen, 1994; Rowland, 1997). However, the extent to which this awareness, cohesiveness and conceptualization of common experiences can be developed will depend on the cohesiveness and homogeneity of the group or community. One way to build collective experiences is through the use of social educational approaches in communities and between communities at all levels. Such approaches can be used to develop collective experiences between users and providers of health services and between users and the state. They can also be used between providers, their professional organizations, systems and the state and between different tiers of the government systems. Although social educational approaches to health and nutritional development have been widely used over the last decade, we do not yet know enough

about the way in which these approaches can build collective experience including when and at which level the desired changes take place.

Distribution of income is known to be a key determinant of the health status of a given population with a large gap between rich and poor people resulting in higher mortality (Kawachi *et al.*, 1997; Kawachi and Kennedy, 1997). It has long been noted that a widening gap between rich and poor can damage the social fabric because socially isolated people, who have reduced access to sources of emotional support, instrumental support (such as financial aid) and other forms of support, die at two to three times the rate of well connected people (Kawachi *et al.*, 1997). Social reproduction of material and cultural advantages is clearly at work here. By retreating to affluent residential areas and thereby investing in their own social capital, the rich contribute to the segregation of communities that can undermine social cohesion within society at large. Wide income disparities tend to go hand in hand with under investment in human capital. Societies with wide income disparities have lower nutritional status of children under five years, higher school drop out rates, lower literacy rates and reduced public spending on health and education (Waterstone *et al.*, 2003). Poor nutritional status of children can in time lead to the rise of an 'underclass' of poorly educated and under skilled citizens leading to low productivity and low economic growth in society and the breakdown of democracy leading to civil unrest. As the social fabric of society is eroded, lack of trust and civic engagement increasingly disempowers the poor and marginalized in society so that public health policy no longer reflects collective deliberation on the public interest but rather that of those most influential in society and their campaign strategies.

Measurement of social interventions

During the 1990s the link between nutritional status and household food security was established. This led to nutritional status being taken up as a proxy indicator for poverty and incorporated into the Human Development Index (UNDP, 1996). Efforts to reduce malnutrition have now been taken up within the international agenda on poverty reduction (Schroeder, 2001; Horton, 2002; Pelletier and Frongillo, 2003). Nutritional goals are encapsulated within the Millennium Development Goals for Health (UN, 2001) and they were thematic in the United Nations Special Session on Children in 2002 (UNICEF, 2002). The work of Sen (2001) on famine and entitlements has contributed to recognition amongst several larger civil society

groups, NGOs and donors that malnutrition needs to be addressed within a human rights perspective. This perspective highlights the need to do more than take anthropometric measurements of individuals to quantify malnutrition and use qualitative and social educational approaches to understand how children become malnourished and respond appropriately. It needs an understanding of the pre-existing social fabric. So far development planners have been slow to understand and respond to this change in thinking partly because there is a paucity of tools for measuring impact at community level and national level (Patrick and Wickizer, 1995).

If we accept that collective as well as individual characteristics influence health and well-being then we need to know how to measure such collective characteristics. This is a much neglected area of study. We have very few, well validated ways to measure such things as community competence, community cohesion or a sense of worth at the level of the community and even fewer measurement tools, interpretation and explanation of the importance of these social issues at state level and for society at large. This is a serious gap in the knowledge base.

It is encouraging to see that the importance of community in health and social development now features in the rhetoric of both policy makers and practitioners but this rhetoric has yet to be translated into appropriate policies and practices. There is, however, some hope. Several teams around the world are now actively assessing measures of community participation, empowerment and social cohesion, such as the Kalahi project in the Philippines, Kecemata Development Project in Indonesia and Thailand (Grootaert and Van Bastelaer, 2002a). Putnam (1993) developed an empirical measure of social capital and used it to assess the effectiveness of governance in eighteen Italian regions. His study demonstrated a close association between levels of citizen satisfaction and levels of social capital. Other researchers have replicated and extending these findings (Veenestra and Lomas, 1998; Wassenich and Whiteside, 2004). The case study presented in the next section of this paper makes a contribution to this field of study but aims to measure the outcomes of interventions focused on social cohesion rather than the level of social cohesion itself and seeks to increase understanding of contextual factors that can influence outcomes. Understanding of social systems is becoming increasingly important in a globalized world facing a rising HIV/AIDS pandemic that needs to develop appropriate evidence-informed social policy to improve health.

2. A case study of participation and social cohesion in Kenya

Introduction

The aim of this case study is to examine the link between the Community Based Nutrition Program's (CBNP) intervention, which implemented a social educational process, and change in social cohesion to improve the nutritional status of children aged 12 to 60 months of age. The case study was guided by the following research questions: (i) To what extent can the use of a social educational process influence change in health outcomes, as measured by nutritional status of children 12-60 month old (ii) What factors influence any change measured? This case study has been informed by data collected in Kenya between 1995-2003 as part of the data collection for a larger study to evaluate aspects of the CBNP, housed within the Department of Social Services of the Kenyan Government⁹, which started in 1995.

Government programs are implemented in Kenya through the administrative structures and line of command shown in figure 3. The technical ministries follow the same line of command to provide support and channel funds from central to the periphery of the government systems. Following decentralization through the District Focus for Rural Development in 1984 the District Commissioner became the chairman of the district development committee, which includes all the technical ministries and the technical officers now report to both the administrative and technical arms of the government (GoK, 1984).

⁹ This nutrition programme initially sought to improve the standard of living for women, men and children through enabling focused social educational nutrition interventions, but later changed the approach to focus on capacity building as an end in itself. To reflect this change the name of the program was changed to Community Capacity Support Program (CCSP).

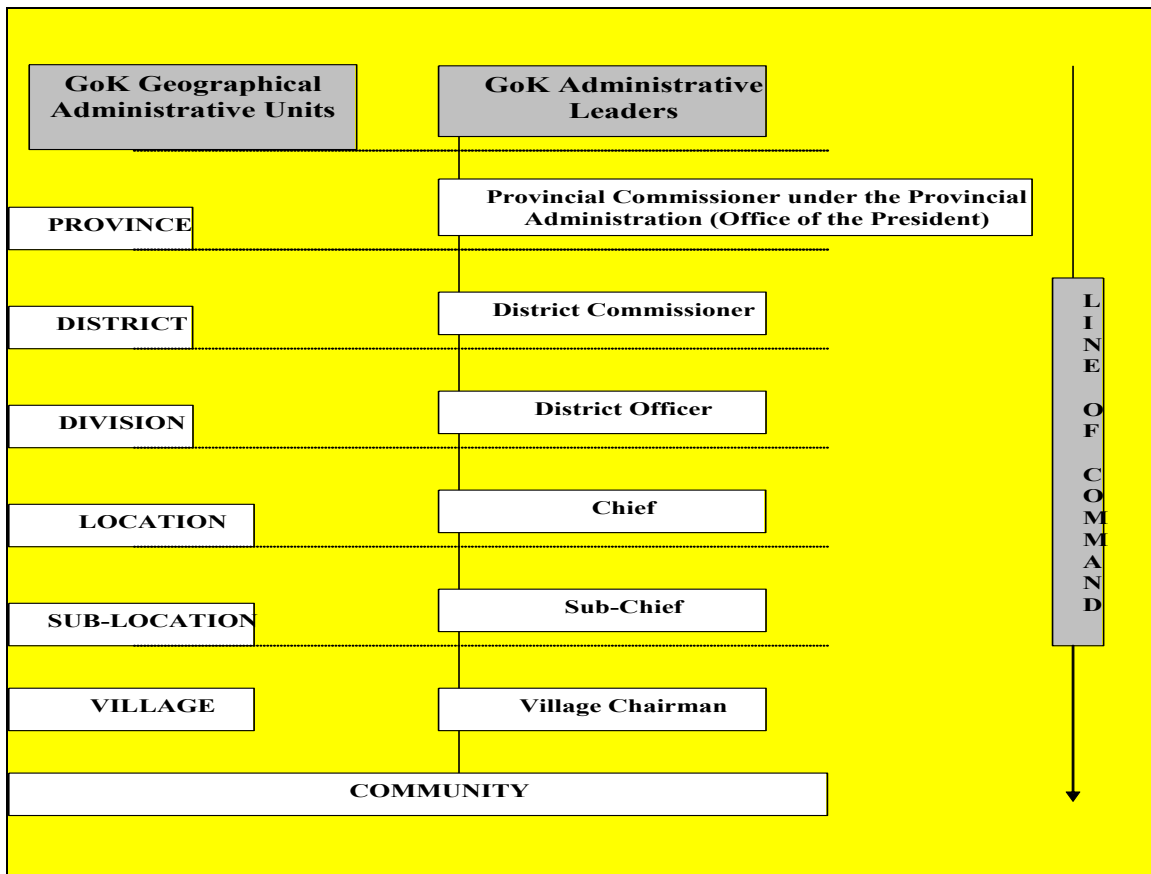


Figure 3: The Kenyan Government administrative structure and line of command.

The intervention implemented by the CBNP comprised of a social educational process using participatory learning and action (PLA) techniques at community level (see figure 4).

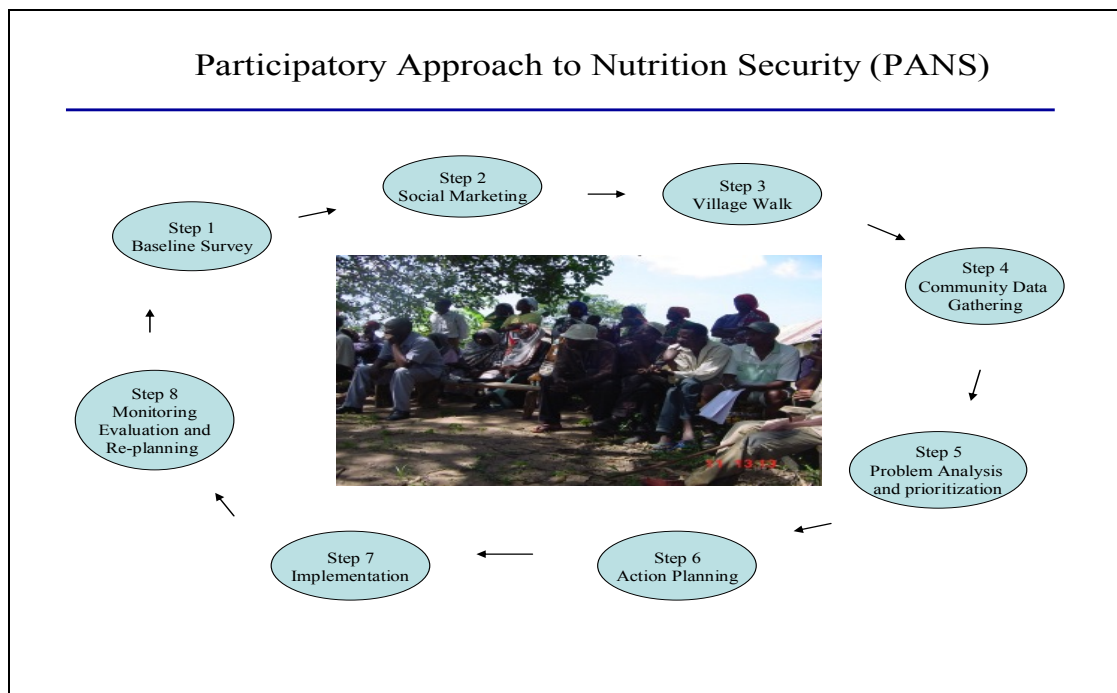


Figure 4: The 8-steps in the Participatory Approach to Nutrition Security Process used by the CBNP.

This process was designed to build community capacity and enable the community to gain better access to the government services delivered to the community (health, education, agriculture, water and sanitation etc.). The social educational process that the program developed and implemented was known as the Participatory Approach to Nutrition Security, or PANS process. This process is similar to the process described by Pretty *et al* (1995) for participatory learning and action. The PANS process followed the eight steps shown in figure 4 starting with the baseline survey. (This process will be further examined on page 13-14.)

Methods of sampling, data collection and analysis

Data to inform the research questions guiding the case study were collected through 1) anthropometric measurement¹⁰ of nutritional status in children aged 12-60 months as an outcome measure of the participatory process; 2) semi-structured interviews with key informants; 3) participatory techniques used as a process to measure the PANS process; and 4) analysis of secondary data from Government documents and from regular nutrition and household surveys conducted by UNICEF.

¹⁰ Baseline and follow up surveys.

Anthropometry: Two districts were selected for anthropometric data collection (Makueni District in Eastern Province and Kwale District in Coast Province, see figure 5 below).

These districts were different from each other in relation to ethnicity, ecological zones, population density and access to services and public goods but similar in having some of the worst health, nutrition and poverty indicators of Kenya. Within each of these districts one intervention community was selected and matched to a control community¹¹.

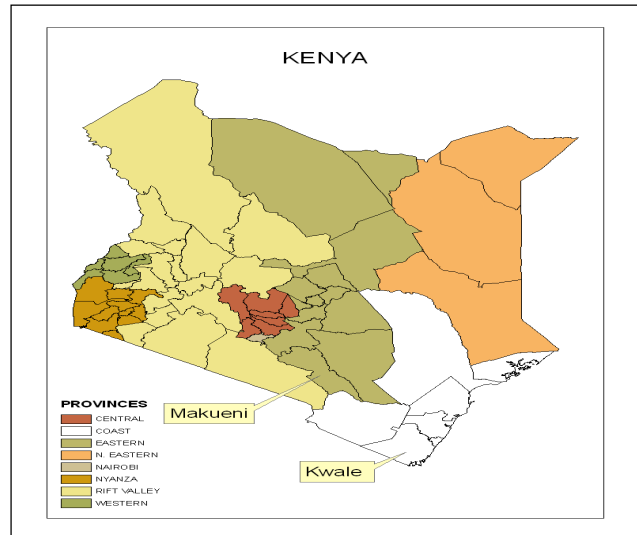


Figure 5: Map of Kenya showing Makueni and Kwale

Districts

In both the intervention and control groups households with children aged from 12 to 60 months were registered and randomly sampled to provide a sample that was big enough for statistical analysis of the data.

The number of children in each of the samples is given in table 1. Households were then visited and anthropometric measurements were taken using standardized techniques. Weight was measured to the nearest 100g and length (up to 24 months) and height to the nearest 0.1 cm. In Makueni District the baseline anthropometric surveys were performed between January and March 1995 and the CBNP activities started April-May 1995. The follow up survey was performed four years later between January and March 1999.

¹¹ In Makueni District the study was carried among the Kamba ethnic group in one CBNP intervention community and one non-intervention community. In Kwale District the study was carried out among the Digo and Duruma ethnic groups in one CBNP intervention community and one non-intervention community.

Province	District	Intervention	No. of Sub-locations surveyed	No of children included in the baseline survey	No. of children included in the follow-up survey
Eastern	Makueni	+	4	125	134
		-	11	233	242
Coast	Kwale	+	1	186	187
		-	1		257
Total			17	544	820

Table 1: The number of children aged 12-60 months who were measured in the two Districts and in each of the study communities, intervention and non-intervention.

In Kwale District the baseline was performed in 1998 and the follow-up survey five years later in 2003. Unfortunately the administrative boundaries had changed in Kwale between the intervention and control survey so the baseline data could not be disaggregated to show the intervention and non-intervention sub location.

The data were then cleaned and checked and children with z scores¹² above or below 6.0 were rejected as they were considered outliers. This amounted to 6% of the children measured in Makueni District and 32% of children measured in Kwale¹³. Data were entered into EPI-INFO and checked for errors and consistency before analysis, against National Center for Health Statistics (HCHS) standards, using SPSS. Differences in mean z scores were analyzed by ANOVA. Differences in proportions of children below a cut off of 2 z scores were examined by chi squared analysis (χ^2) analyses.

Semi-structured interviews: Fifteen key informants were purposively selected for semi-structured interviews to include a balance of male and female informants and a range of stakeholder. These informants included international experts in social development, social policymakers and operational staff at all levels of the Department of Social Services, and members of different community groups. A short interview guide was developed and questions were asked relating to social factors viewed as important for better health and nutrition outcomes as well as factors seen as important for building or hindering social cohesions.

¹² A Z-score is the deviation of the value of the individual child from the mean (mean) value of the reference population divided by the standard deviation for the reference population (<http://cdc.gov.nchs/about/major/growthchart>, accessed the 17th of May, 2004).

¹³ The 32% of children excluded in Kwale includes children between 0-12 months of age as they were breastfed.

Data collection and analysis through the PANS process: In the intervention communities, the PANS process was used as the main data collection tool. The process was facilitated in each community by a team of trained government officers from the relevant line ministries with one or two community representatives, known as the PANS team. At each step of this process data were collected and analyzed to inform the next step (see figure 4).

The first step – baseline survey – was done collaboratively by a research team, GoK officers and the community after extensive training and later supervision.

At the second step - social marketing - the facilitation team comprising members of relevant line ministries presented the nutrition survey data. To explain the findings they used local story telling and idioms. If consensus was obtained on nutrition being a problem, the process moved on to the next step. This process ensured ownership and clear division of role and responsibilities between providers and users of services.

At the third step, the community worked in peer groups to identify the causes of malnutrition. Data were generated and analyzed using a range of participatory learning methods and visualization techniques. These methods and techniques included a resource map and a social map, a seasonal calendar, trend line, time line, transect walk, gender analysis and Venn Diagram. These visualizations were displayed and discussed in a community meeting attended by children, women and men. Discussion of the maps and diagrams led to identification of the perceived causal linkages of malnutrition and morbidity in children.

Data developed and linkages identified by the different communities are summarized in the form of a malnutrition problem tree in figure 6. The major causal linkage identified in both of the intervention groups was what the community named 'social disunity' which was perceived to have gradually emerged as the social support systems that used to be in place gradually had disappeared and the social bonds had weakened. The traditional barter economy had changed to cash economy leading to reduced purchasing power. Men were migrating to the towns to look for work and coming back with new diseases and lifestyle patterns which further eroded the social fabric and led to a breaking down of the traditional family pattern and support for child care. Families used to be better able to assist each other but because the number of single, female-headed households had risen, this was no more the case. The amount and quality of childcare that could be provided had therefore decreased in line with increased gender inequality.

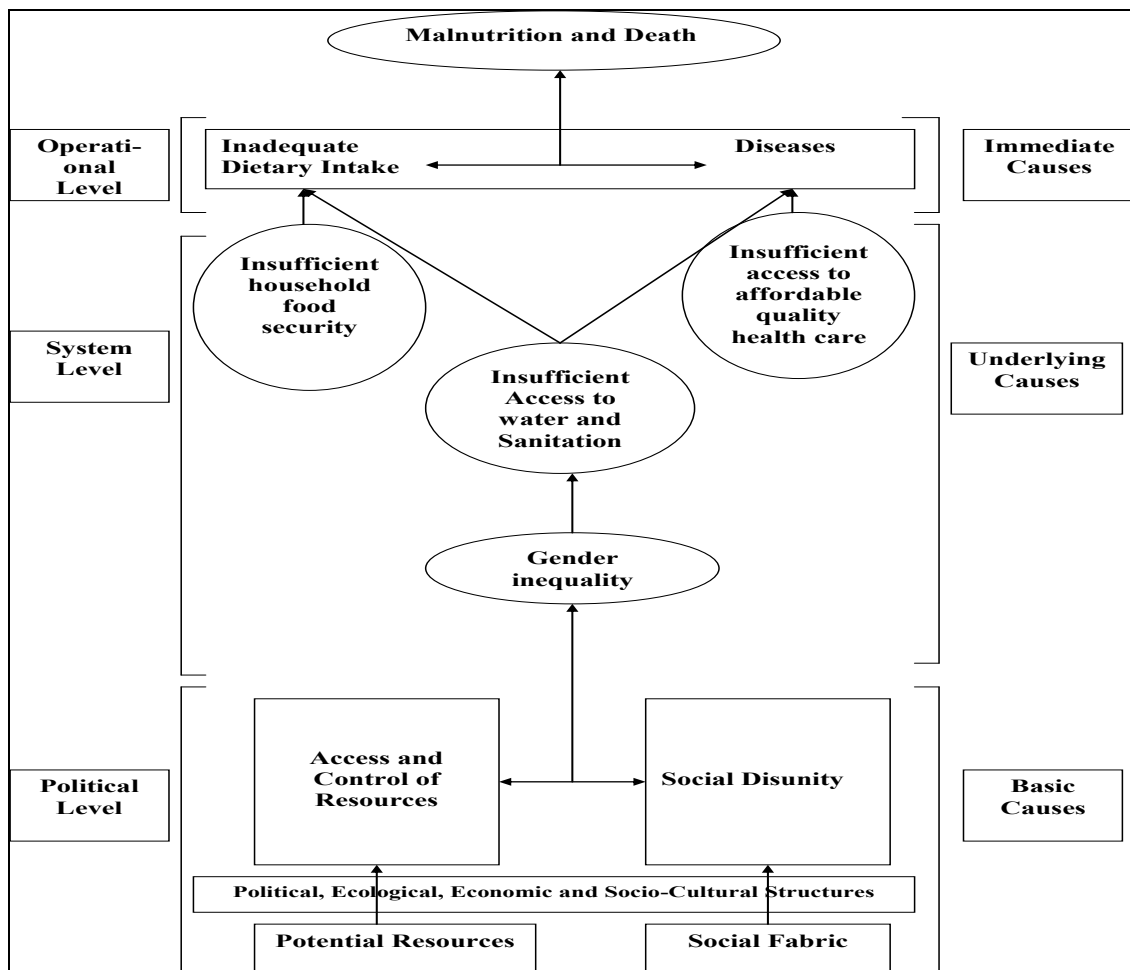


Figure 6: The problem tree developed by the two Districts.

In the next step of the PANS process the communities identified solutions to the problem of childhood malnutrition. These solutions are shown in figure 7 below. This led to the development of community action plans, which were to be implemented primarily by the community themselves starting with activities to address the immediate cause of malnutrition which was social disunity. After lengthy discussions the communities reached a consensus on the use of behavior change communication strategies such as Participatory Educational Theatre which draws on the development theories of Augusto Boal (1992) and was adapted for use in Kenya by Lenin Ogolla (1997). The community also decided that children should be included in the activities to reduce malnutrition. This led to children and youth both in and out of school participating in an approach to health development and empowerment known as Child-to-Child

(Pridmore and Stephens, 2000). What the communities were unable to do themselves was referred to service providers from the GoK systems, such as health, education, water and sanitation and social services. The total implementation phase was on average 3-5 years and during this phase no cash hand-outs were given or hand-oust 'in kind', such as food supplements.

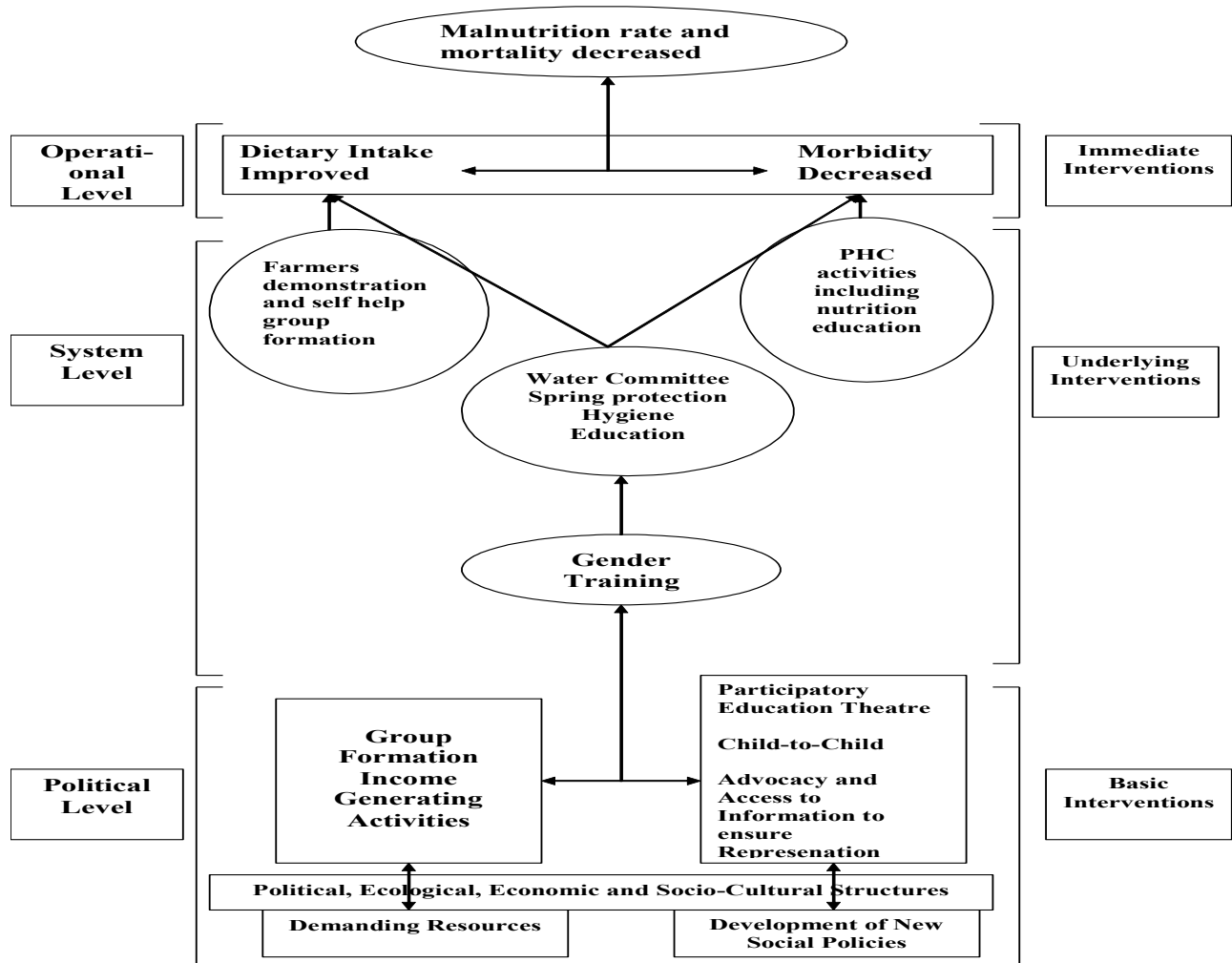


Figure 7: Suggested solutions from the communities in the two Districts.

4. Results

Health outcome measure: Change in nutritional status of under five year olds

Change in nutritional status of children aged 12-60 months was assessed from the quantitative, anthropometric data collected during the baseline and follow up surveys in the intervention and control groups. The nutritional indices measured were height for age (H/A) as an index of chronic malnutrition, weight for height (W/H) as an index of acute malnutrition, and weight for age (W/A) as an index of underweight referring to both chronic and acute malnutrition. These indices were calculated and any child that was < 2 z scores on the NCHS scale was judged to be undernourished.

Comparing baseline data with intervention (see table 2): In Makueni the data from the baseline survey showed that the proportion of undernourished children were similar in both intervention and control groups. The data from the follow up survey showed that fewer children in the intervention group were undernourished compared to the control group using the W/A and H/A indices. (The difference in the scores for H/A was not significant but the scores for W/A were significant ($p < 0.009$)). However, the W/H indicator showed no change in nutritional status before and after the intervention. Detailed analysis of the intervention and control groups in Kwale District showed that these were not well matched and no further statistical analyses could be done to compare the nutritional status in the intervention and control groups.

		Indicator	Control	Intervention	Significance
Makueni	Baseline numbers		125	134	
	Baseline	H/A	44.3%	52.7%	NS
		W/A	36.6%	42.9%	NS
		W/H	11.4%	9.1%	NS
	Follow up number		233	242	
	Follow up	H/A	47.4%	39.7%	NS
		W/A	34.5%	31.4%	S ($p < 0.009$)
		W/H	7.8%	6.6%	NS

Table 2: Percentage of children aged 12 to 60 months who were stunted (H/A), wasted (W/H) and underweight (W/A) in the intervention and control groups in the baseline and follow up surveys in Makueni District.

Comparing the change in nutritional status over time (see table 3): The data from the baseline and follow up surveys in the control group in each of the two Districts was compared. While no change was noted in Kwale District, the nutritional status of children had significantly improved as measured by the H/A and W/A indices in Makueni.

	Makueni District		Kwale District	
	Control group (p value)	Intervention group (p value)	Control group (p value)	Intervention group (p value)
H/A	NS (0.65)	S (p< 0.02)	NS	NS (0.27)
W/A	NS (0.78)	S (p< 0.035)	NS	NS (0.08)
W/H	NS (0.35)	NS (0.51)	NS	NS (0.15)

Table 3: shows the χ^2 analysis (p value) for difference in proportions of children below the z-score for H/A, W/A and W/H at Baseline and Follow up for Makueni District.

To summarize: The data from the anthropometric surveys showed that the social educational process in Makueni District had significantly contributed to a change in nutritional status of children between 12 and 60 months of age, both over time and compared to a control area. This was not the case in Kwale District.

Process measure: Factors that influence any change measured

The qualitative data collected throughout the PANS process was used to identify factors that influenced health outcomes as measured by change in nutritional status. The importance of village cohesion emerged early during the problem analysis and prioritization stage of the PANS process. At this stage the community members in the intervention group were analyzing their data from the seasonal calendar, trend line, time line, gender analysis and Venn Diagram. At a later stage in the process, informal discussion and observation during the development and implementation of the community action plan showed that the communities that had stronger pre-existing social fabric were more able to develop and implement their plans. Moreover, this social fabric was linked to ethnicity and culture. Figure 8 shows the four main factors identified by the intervention groups, both in Kwale and Makueni, that led to the better health and nutrition outcomes measured.

While empowerment (capacity building) refers to agency and choice, both management and access/distribution of resources refer to opportunity structures. But underlying both the

agency and opportunity structures was what the community called congruence building (social cohesion). This congruence building resulted from participation in the PANS process and the activities implemented through the action plan (Participatory Education Theatre and the Child-to-Child approach), which developed and sustained social cohesion. One community member commented that *‘when the PANS project came here, then other projects later found it so easy to work in these villages because the community was already ready and sensitized.’*

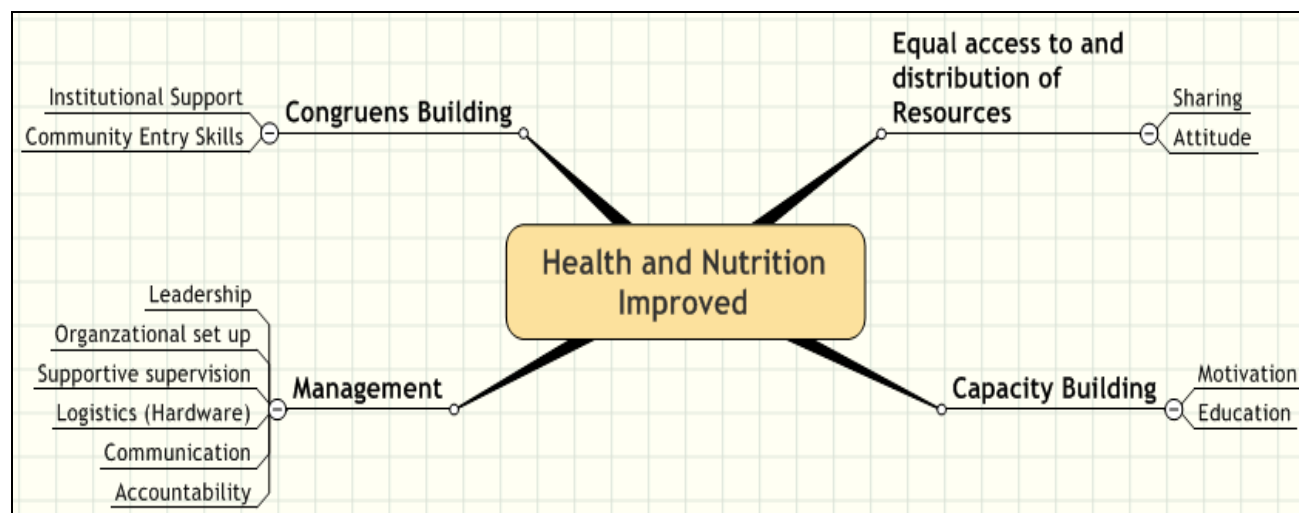


Figure 8: The community’s perception of factors contributing to better health and nutrition.

A major difference between the communities selected in each of the two Districts was that of community cohesiveness (also known as congruence). In Makueni District the villages showed a high level of social cohesion whereas those in Kwale District were divided by factions and less able to meet the community’s need and demand. This was evident from interviews with the government officers from Kwale District at the divisional level. One officer said:

In some instances you find that the community believes that the implementation part is only for the Village Development Committee (VDC) and they say it is the VDC’s project. This is when it comes to doing work, you see? The ones you say are overburdened by the activities are the ones coming to the meetings, because the rest of the community members are not showing any interest. So maybe ten to fifteen people come. A small group of people will find the sincerity in what we are trying to do. The same few are the ones that are overburdened, and especially when it comes to contribution.

Participation in the PANS process was low in the Kwale community (1.2%) compared to the Makueni community (30%). The low scope of participation was followed through by low depth of participation in Kwale. This was evidenced by failed attempts to construct building and dams reported during an interview with a sub-location committee. One member said, *'We just go and see what the community has done, like the digging of the well. But they don't have the knowledge of what to do after digging and neither do we, and then the work is abandoned.'*

Further analysis of the process and interview data identified key factors that reduced community cohesiveness. As shown in figure 9, the immediate factors were illiteracy, conflict, poor leadership and lack of access to and control of resources. Again we can relate these issues to agency and opportunity structures. While education and resources are directly related to choice, the gatekeepers are related to the political systems governing the citizens. But underlying both the choice and opportunities are the conflict sparked by ethnic, social, cultural and religious differences.

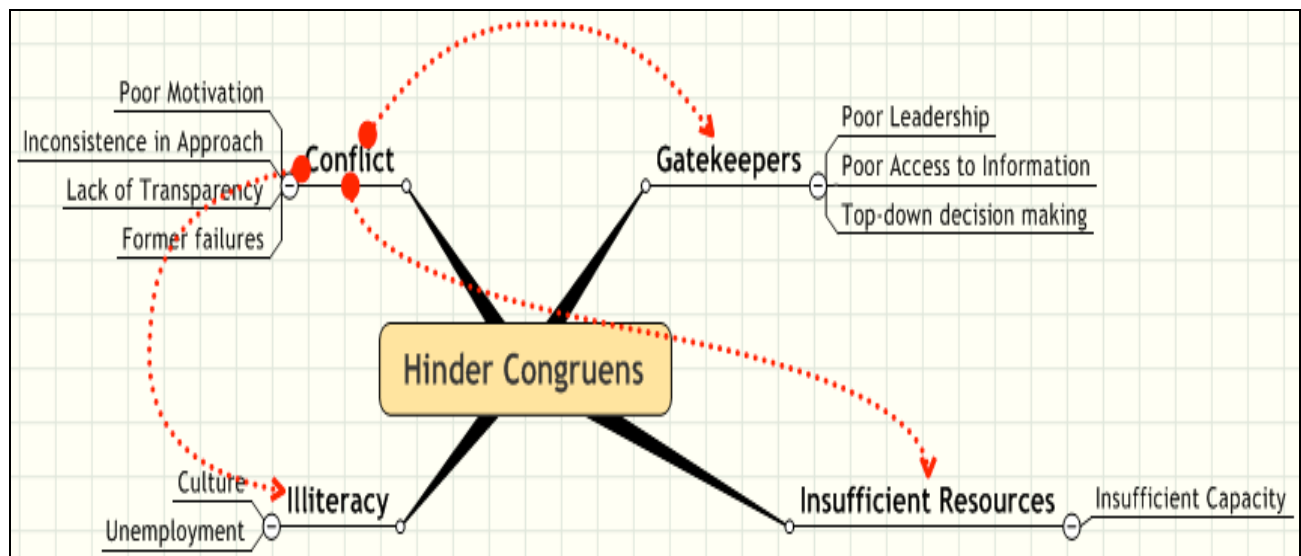


Figure 9: Important factors hindering social cohesiveness

Further discussion with the community and interviews with key informants revealed that each barrier was rooted in the lack of social cohesion within the Kwale community. Open conflict or subtle aggression and jealousy among different ethnic groups in Kwale often centered around resources. This factor is reflected in the following comments from male community members:

In most cases it (gate keeping) is caused by greediness.... They (the community) think that whoever was there first gained more from the project. They see no reason to go to the project as others have taken everything. Or the chairman of that project can be greedy, keeping things to himself. In such cases, no matter how hard you call for a meeting, nobody will attend as they think the project is benefiting another person.

I think most of the time people's failure is brought about by jealousy because maybe you can say you are rich, but back in the village people are not happy for you. It's worse when you become their leader. Then they will not cooperate, maybe until they see its fruit, then they blame themselves.

The intervention villages in Kwale District were very different from those in Makueni District. In the latter, infrastructure projects, access to services and representation were visible proofs of the village's ability to work together. Although the level of social cohesion in a community cannot predict any one individual's ability and interest to collaborate for better health and nutrition, it may be a useful predictor of the ability of a community to benefit from technical interventions. Communities with better social cohesion may be expected to mobilize themselves more quickly and efficiently for dissemination of information and for understanding and demanding voice in the political economy of the systems that surrounds them. In this way social cohesion can become an essential element in the preparation, planning and supervision of any health and nutrition development program.

A note on intervention costs

Recurrent expenditure for 3 years implementation in the first 26 communities (about 6,000 people) involved in the CBNP in Makueni District was calculated. A total of US\$ 158,000 was spent on the program covering effectively around 6,000 people over a 3 year period¹⁴ as shown in Table 4.

¹⁴ This did not cover the capital costs of vehicles (30 bicycles, 6 motor cycles and one 4 wheel drive vehicle) or the cost of honoraria for local research groups who implemented the baseline and follow up surveys.

Cost item	Calculated cost (US \$)
Training (material, food and reimbursable travel cost)	60,000
Allowances to GoK officers	20,000
Transport, fuel and maintenance	28,000
Local supervision, administration and communication	50,000
Total cost	158,000
Cost per implementation year	52,667

Table 4: Recurrent cost of 26 villages in Makueni District.

The overall running expenses of the “core” program were therefore around US \$9 per person per year for the three years of the project. If we add the start-up expenses and local consultancy fees the figure amounts to US \$ 27 per person per year. However, a participatory process evaluation done in 1997 showed that a variety of forms of diffusion had occurred (both geographical and technical) within the neighborhood of the PANS implementation areas contributing to lowering the replication cost (Cornwall and Sellers, 1997). A further calculation of cost in the replication phase has shown that the implementation figure can be reduced to US \$0.6 per person per year.

5. Discussion

This section of the paper will draw out the major social implications of these findings for developing social sector policy and it will map out environmental factors that are of importance. The case study findings clearly indicate that social cohesion can be a key factor influencing the health outcomes of technical interventions. Social cohesion can work through generating both the conditions necessary for mutual support and care and the mechanisms required for communities and groups to exert effective pressure to influence policy. In line with the social sector planning process this discussion is organized into three sections. It will firstly address issues at the operational level, then the strategy level and finally the policy level.

The operational level: At the level of the community, social cohesion is important to rebuild local organizations though mobilizing local efforts driven by the insights of local collaborators (including children) who live and work in the community. Of course we cannot assume that such collaborators, often referred to as ‘insiders’, will act in an interest free manner and carefully selection and monitoring is needed to make sure they have the interests of the

whole community at heart. These people have the greatest awareness of local issues and are interested in preserving and improving what works for them. They base their actions on a detailed inventory of the assets and challenges in the local situation and on a democratic decision-making process that invite the participation of all those concerned.

Currently, many poor countries have large numbers of people who are marginalized, malnourished and discontented. Their children are at risk of significant developmental delay and have increased vulnerability to the risk of infectious diseases including enteric and respiratory infection, HIV, malaria and TB. Despite remarkable developments in technology globally, marginalized communities often have minimal knowledge of what technologies exist or are available. The same is true for food security. Before the CBNP started such communities did not have a problem in identifying what the stressors were that they faced in producing or selling food or supporting the growth and health of their children. But they did have difficulty in developing and implementing plans and accessing opportunities to improve their situation. Our data showed that over a period of three to five years it was possible for the CBNP to improve childhood nutrition using a social educational approach that built social cohesion and facilitated community led actions and improved access to and control of resources. It is planned that these will be evaluated again after the cessation of the CBNP activities in late 2005 to assess how much momentum has been maintained.

The CBNP specifically focused on what the community could achieve by and for themselves with support during the PANS process from the facilitation team. It is important to emphasize here that this dialogue and partnership was built on a social educational process and was not dependent on hand-outs such as food rationing or cash. This was a community-level intervention that attempted to modify the entire community through community organization and activation. Capacity building was viewed both as an end in itself and as a means to undertake program activities. Through ongoing dialogue between community members and the PANS team the community identified a method by which they could build social cohesion. This method was negotiated and chosen in partnership with the different stakeholders (building cohesion). This method and its subcomponents were popular – otherwise the community would not have started and maintained them. They were widely perceived as being likely to improve social cohesion through an iterative and multi-disciplinary approach which could lead to improved health and nutrition outcomes. We would argue that having nutrition as an entry point made the whole

social educational and cohesion building process better focused and easier for the community to understand.

The case study findings of significant improved nutritional status of young children in the Makueni District CBNP intervention communities would suggest that the implementation of the PANS process (which included development and implementation of community action plans) did improve nutrition. In Kwale, however, nutrition did not improve over time span of the study. The main differences between the communities in Kwale and Makueni were ethnic, social and religious. In Kwale District the communities were more ethnically diverse with four to six ethnic groups being represented, the age of marrying was significantly lower as was the education status of women and men. Furthermore, squatters had recently had moved into the District demanding and occupying valuable land leading to conflict over access and control of resources.

The system level

There are several reasons to focus on social cohesion above community level. Firstly, there are political benefits for politicians in supporting programs that emphasize the role of local as opposed to system and political solutions to ill health in poor communities. Secondly, programs seeking to improve social cohesion, such as the *Family First Initiative* (Alperstein and Nossar, 2002), *Schools as Community Programs* in New South Wales, Australia (Wraith and Murphy, 1998) and *Community Access to Child Health* in the USA (Hutchins, 1999), have focused on poor communities and shows that social cohesion needs to be on the agenda of health programs that aim at improving child health, especially in disadvantaged communities. Health workers have an important role to play in the development of social cohesion as part of a broad based multi-agency team. But such a team can only be created with support from health systems planners and politicians as well as planners in other social sectors. In this way planners can participate in developing strategies to improve social cohesion and assist in evaluating their efficacy.

Unfortunately, during the 1990's with the introduction of Sector-Wide Approaches (SWAp) which emphasized but did not clearly define "a sector" the multidisciplinary approach to health development lost momentum. It has only recently been recognized that the SWAp has introduced serious problems because analysis of the local context was neglected in the health and social system reform processes. In addition multisectoral work had to be part of the planning and

budget of one sector (usually health). Few managers responsible for the implementation of the SWAp thought and worked at the systemic level and were therefore not fully able to appreciate and understand the potential or real benefit of SWAps beyond a "one sector approach" (Pavignani, 2000).

Finally, it has to be stressed that social cohesion initiatives are likely to fail if they are presented as an alternative to anti-poverty measures. Social cohesion initiatives need to complement the direct technical programs that they have the potential to benefit. Indeed Richard Wilkinson (1996) has suggested that equity in the distribution of income may go hand in hand with social cohesion (Capital) initiatives.

The policy level

The results show that there are clear nutritional benefits from implementing a program specifically targeted at enhancing the social cohesion of communities using a social educational approach, sharing knowledge and skills and intervening in sectors that are considered relevant for improving the health and nutritional status of children. By acting as a key facilitator of this process the CBNP supported the development of congruence (social cohesion) between the different stakeholders and their environment and created a better fit between building knowledge about needs (the process) and decision making about targets (the impact). We would argue that for such a fit to be achieved, flexibility must be allowed in the knowledge building process and specificity must be achieved in decision making. The CBNP also encouraged and facilitated various government ministries to implement common plans which often remain as aspirations because of problems in accessing and engaging with marginalized communities and bridging the gap between the central and local level. During the implementation phase the control of the process moved from being more central and government-owned to being more local community-owned and community-steered but continued feeding back into central planning.

We have identified five key factors that have contributed to the success of the CBNP in the Makueni District (i) the fact that a good level of social cohesion already existed in Makueni where the people all belonged to the same ethnic group, (ii) the use of appropriate culturally appropriate participatory methods which showed respect and care for local diversity and complexity, (iii) intersectoral collaboration and sharing, (iv) the caring attitudes and supportive behavior and values of the facilitators and leaders, (v) access to some resources including

provision of transport and support of training, and (v) access to vertical and horizontal linkages and networks. We hope that these factors will eventually lead to personal, institutional and professional change and full, equitable control of resources.

From the study presented in this paper it seems likely that the PANS process has considerable possibilities for improving health, care and food production on a larger scale. It is likely – with some revision - to be of assistance to communities in crisis from HIV and/or drought and may have much to contribute to primary health care. Many governments and development agencies are increasingly concerned by the way in which the resources and skills of staff in government ministries often have little impact on poor and marginalized people. Despite increased amounts of financial and technical resources being made available at the central or regional government level in many low income countries (through increased investment in the social sector by national governments and massive funding from agencies such as the Global Fund), it has been extremely difficult to link these resources to the needs and demands of the poor, predominantly rural and marginalized populations. We would argue that the PANS process with its low replication cost now deserves to be tried and tested within a wider sectoral and geographic framework to help reduce poverty and its impact on the national economy, social cohesion and human development. Local forms of social cohesion can be developed from the state level and local groups and networks can be created to respond to weak and dysfunctional state structures. Building micro- and meso- level social cohesion can also help the functioning of the state (Grootaert and Van Bastelaer, 2002a).

In many areas of health and social policy a wide gap has opened up between the possibilities for information gathering, analysis and interpretation and the 'real life' situation because achieving valid, reliable and disaggregated health data prior to starting a program might well imply costs that are well above cumulative cost of all other activities. Whatever claims may be made at the design phase, the reality will usually be that minimal systems are put in place with the aim of ensuring the donors' requirements for financial probity. Health effectiveness will be judged on a range of crude proxy indicators such as facility utilization and simplistic measures of client satisfaction. In this context we would argue that greater use of rapid assessment procedures in a multisectoral manner, combined with visual participatory data generated and analyzed by the users to ensure congruence and cohesion building, could be a cost effective way to improve health and nutrition status.

6. Conclusion

At the heart of this paper is the proposition that social cohesion is the missing link to better health and nutrition in a globalized world. This proposition is an important one derived from observation and empirical data in the many studies that indicate improvement in health outcomes following improvements in social cohesion. In addition, studies of the decline in health that routinely follows civil upheaval and disruption and last but not least by our own study of the CBNP. We would argue that strengthening social cohesion needs to be built into programming and implementation of all social programs including health and nutrition. If the integrity of the social fabric is essential to health, then any damage to that fabric needs to be identified and efforts made to repair it.

Sensitizing the political environment to the importance of social cohesion for better health and well-being resonates strongly with the current debates around values in public health policy that inform the way that we understand the causes of ill health and seek to address them. Research that takes the social structure as the unit of analysis far too often gets pushed to the periphery of science and is at most accepted as a lesser kind of science, a social science. At worst, such research is not considered to be science at all and is rejected as a pseudo-science contaminated with politics (Tesh, 1988). This is where the political meets the methodological. It is no coincidence that the two disciplines that currently dominate the health policy world, economics and biomedical science, have deep within them a core assumption that the individual is the unit of analysis. Social sciences, especially sociology and public health are, by contrast, more concerned with the social structure as the unit of analysis rather than the individual. These sciences are not politically popular disciplines but they are the disciplines in which the influences of community setting and social structure are integral to theories of individual behavior.

If we seek to promote the importance of social cohesion in health development planning then we need to be able to measure, monitor and advocate for it and collectively reallocate fiscal and social resources. This will call for no less than a wholesale re-tooling of the public health work-force. The workforce will need to be rebalanced so that the individualistic biomedical and economic view of the world is complemented with a collective, social science focus on community and social structures. The question is who, where and when to take the first step to move from research to policy change. There is clearly a key role for health workers here, in

documenting health outcomes and disseminating findings to increase recognition of the value of social sector interventions, but resistance from within the health sector itself is to be expected and it will need to be overcome. A conceptual framework for moving from research to policy developed by the Overseas Development Institute in London (see Court *et al*, 2005) offers a way forward. This framework suggests that research is more likely to contribute to evidence-based policy if it fits well with the political context, the evidence is credible and researchers and policy makers share common networks and trust each other (Court *et al* 2005). Of these three overlapping areas the political context is the most difficult for researchers to influence. To maximize the chances of success strong common networks will be needed to identify policy reform champions who can overcome resistance and enable the right proposals to be put to the right people at the right time.

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