REVIEW AND EVALUATION
OF HEALTH PROMOTION

Fourth International Conference on Health Promotion,
Jakarta, 21-25 July 1997
Contents

Foreword 7

Information on the Division of Health Promotion, Education and Communication 8

Information on the Unit of Health Education and Health Promotion 8

Evaluating Health Promotion: Progress, Problems and Solutions 9
   Don Nutbeam (1997), WHO, Geneva, ref. HPR/HEP/4ICHP/RET/97.1

Research for Health Promotion: A Challenge for the 21st Century 53

The Effectiveness of Alliances or Partnerships for Health Promotion. 93
   A global review of progress and potential consideration of the relationship to building social capital for health.
   Pamela Gillies (1997), WHO, Geneva, ref. HPR/HEP/4ICHP/RET/97.6

International Comparisons of the Key Factors Affecting Health: An analysis of international databases on health. 155

Towards an Evaluation of Healthy Cities Programmes 197

An Examination of Two Large-Scale Approaches for Promoting Health Through Schools 215
   M. van den Cruijsem, J.T. Jones, V. Barnekow Rasmussen,

Acknowledgements 243
Review and Evaluation of Health Promotion

Foreword

The Health Education and Health Promotion Unit (HEP) presents you this book on Review and Evaluation of Health Promotion, which includes a selection of papers prepared around the Fourth International Conference on Health Promotion, Jakarta, Indonesia, July 1997, on the theme “New Players for a New Era - leading health promotion into the twenty-first century”.

The Conference, which acted as a catalyst for health promotion action, was held against the background of the major global changes that have taken place since the Ottawa Conference in 1986. It had three objectives: 1) to review and evaluate the impact of health promotion; 2) to identify innovative strategies to achieve success in health promotion; 3) to facilitate the development of “partnership” in health promotion to meet the global health challenges.

The conference confirmed that health promotion is a practical approach to achieve greater equity in health and that the five strategies set out in the Ottawa Charter are essential for success. The findings presented in the papers review and evaluate the effectiveness of health promotion, showing clear evidence that comprehensive approaches to health development are the most effective, and that settings for health (such as “healthy cities”, “healthy islands”, “health promoting schools”, “health promoting workplaces”, “healthy communities”) offer practical opportunities for the implementation of comprehensive strategies.

The Jakarta Declaration, which was unanimously endorsed by its participants, reflects the firm commitment of the conference participants to build partnerships, and describes the wide range of resources needed to tackle global health problems in the twenty-first century. It calls for increased investments in health, “empowerment” of individuals and the public, increased social responsibility for health and consolidation of infrastructure for health promotion.

Many people from around the world have contributed to the working documents of the Jakarta Conference. Great efforts have been made to provide the Jakarta Conference with the best working documents possible, of which you find a selection within this book.

Dr Desmond O’Byrne  Dr Ilona Kickbusch
Chief HEP, WHO  Director HPR, WHO

Division of Health Promotion, Education and Communication (HPR)
The special focus of the Division is to design and promote policies and programmes that:
> maximise the health outcomes of community settings such as schools, workplaces and cities;
> ensure the appropriate community health response to population ageing and increasing chronicity and disability;
> encourage healthy lifestyles and self-care throughout the lifespan; and
> secure advocacy for health through media relations and communications support.

Health Education and Health Promotion Unit (HEP)
The overall goal is to provide assistance to WHO Member States which will enhance their capacities and develop infrastructures for health education and health promotion. HEP acts within the framework of the Alma-Ata Declaration on Primary Health Care (1978), the Ottawa Charter for Health Promotion (1986) and the Jakarta Declaration on Health Promotion (1997), to achieve health for all. 
Within the Five-Year Plan of Action, HEP sets the following interrelated objectives:
1. support for the development of policies for health education and health promotion;
2. support for the implementation of health promotion strategies in certain settings;
3. advancing methodology for health education and health promotion;
4. promote health through schools;
5. review and evaluation of health education and health promotion.

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NEW PLAYERS FOR A NEW ERA: LEADING HEALTH PROMOTION INTO 21ST CENTURY
FOURTH INTERNATIONAL CONFERENCE ON HEALTH PROMOTION
JAKARTA, INDONESIA, 21-25 JULY 1997

REVIEW AND EVALUATION OF HEALTH PROMOTION

EVALUATING HEALTH PROMOTION: PROGRESS, PROBLEMS AND SOLUTIONS
- conference working paper -

provided by:
Don Nutbeam
Evaluating health promotion - progress, problems and solutions

Summary:
Evaluation of health promotion activities is a complex enterprise. Many of the problems faced by practitioners attempting to evaluate health promotion activity stem from unreasonable expectations of both the activity and the evaluation design which is used. This paper examines several issues of current debate in health promotion evaluation. These include the definition and measurement of relevant outcomes to health promotion, and the use of evaluation methodologies which assess both the outcome achieved and the process by which it is achieved, and are appropriate to the activity being examined.

In the past twenty years there has been an enormous growth in the volume of research which is of relevance to health promotion. This rapidly expanding research base has advanced knowledge and improved understanding of the determinants of health in populations, and how to change those determinants to improve health. This paper draws upon this expanding research base to indicate how considerable progress is being made in understanding the complexity of health promotion activity and the corresponding need for sophisticated evaluation research designs which are appropriate to the task. The dilemma emerging from this analysis is that the more powerful forms of health promotion action are those which appear to be long-term, and least easily predicted, controlled and measured by conventional means. Against this, important and valued advances in knowledge and credibility have come from more tightly defined and controlled interventions, for example those occurring in well defined settings such as schools and worksites, which have been evaluated through the application of more traditional experimental designs.

Four key conclusions emerge from the analysis in the paper:

Using research evidence more systematically in the planning of activities: The volume of research to support health promotion action has grown remarkably in the past twenty years and needs to be applied to current health promotion practice. In particular, this research evidence should be used more creatively to improve understanding of the complexity of relationships between health promotion actions and the different types of outcome to these activities, to provide greater insight to the definition of problems to be addressed, and to more overtly guide the interventions required to address them. A wide range of research evidence needs to be systematically incorporated into activity planning.

Improving the definition and measurement of outcomes from health promotion activities: Poor definition of program objectives - whether these are expressed in terms of valued outcomes and/or valued processes - often leads to inappropriate expectations concerning evaluation and accountability. For the future it is essential that program objectives are more clearly defined, and that relevant and sensitive measures are used to assess progress in achieving these objectives. This will require more systematic development and use of valid and reliable indicators of health promotion outcomes. Indicators which

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Paper prepared by Professor Don Nutbeam for the 4th International Conference on Health Promotion, Jakarta, Indonesia, 20-25th July 1997.
can be used in assessing the achievement of health promotion outcomes include those for health literacy, social mobilisation, and public policy and organisational practice.

**Adopting appropriate evaluation intensity:** Not all programs need to be evaluated to the same level of intensity or using the same evaluation designs. The evaluation question and task changes with the evolution of a program. Those programs which are truly innovative, testing for the first time a potentially costly, controversial, or otherwise risky forms of intervention, need close scrutiny and the most structured and comprehensive approaches to evaluation. Those which have previously been shown to work in a variety of circumstances, that are low-cost and low risk, will require more modest monitoring for the purposes of accountability and quality control.

**Adopting appropriate evaluation design:** There has been an unrealistic expectation to adopt experimental research designs which have been developed for medical research. This is inappropriate for several reasons. Firstly, the constraints on the intervention strategy imposed by such experimental designs make it virtually impossible to use the community-based approaches which are considered to be the most valuable and effective. Secondly, experimental designs have been shown to be deficient as an evaluation tool for complex and multi-dimensional activities. Thirdly, because they are such a powerful and persuasive scientific tool, randomised controlled trials for outcome evaluation have tended to eclipse the value and relevance of other research methods for outcome evaluation - especially qualitative methods - and of evaluating the process of change. **Evaluations have to be tailored to suit the activity and circumstances of individual programs - no single method can be "right" for all programs.** This tension between, on the one hand, the constraints placed on the method and content of programs in order to meet demands for "scientific rigour", and on the other, the perceived advantages (in long-term effectiveness and maintenance) that comes from the less well defined content and methods of community controlled programs continues to pose technical problems in evaluation for researchers and practitioners alike.

The paper concludes that **it is important to foster and develop evaluation designs which combine the advantages of different research methodologies, quantitative with qualitative, in ways which are relevant to the stage of development of a program.** It is argued that the generation and use of a diverse range of data and information sources will generally provide more illuminating, relevant and sensitive evidence of effects than a single "definitive" study. Process evaluation not only provides valuable information on how a program is implemented, but also ensures that much more is learned and understood about success or failure in achieving defined outcomes. Through this understanding it is possible to identify the conditions which need to be created to achieve successful outcomes.
Evaluating health promotion - progress, problems and solutions

1. Introduction

In the past twenty years there has been an enormous growth in the volume of research which is of relevance to health promotion. This rapidly expanding research base has advanced knowledge and improved understanding of the determinants of health in populations, and how to bring about change in those determinants to improve health.

The evolution of the concept of health promotion, especially in the decade since publication of the Ottawa Charter\(^1\), has added sophistication to this analysis, greatly expanded the range of strategies and actions to promote health, and in doing so, greatly complicated the challenges of evaluating health promotion.

There are many different interpretations of what represents "value" from a health promotion program. Several perspectives are reflected in the literature including that of the population who are to benefit from health promotion action who may place great value on the ways in which a program is conducted, particularly whether or not the program is participatory, and addresses priorities which the community itself has identified. Health promotion practitioners need to be able to judge with reasonable confidence the success of a program in relation to its defined objectives, as a form of feedback on performance. Managers need to be able to judge the success (or likely success) of programs in order to make decisions about how to allocate resources, and be accountable for those decisions to funders, including the community and elected representatives. Academics need to be able to judge success in order to improve knowledge and understanding of cause and effect in interventions\(^2\)\(^3\)\(^4\)\(^5\).

Correspondingly, there are currently a vast spectrum of approaches to evaluation which are used in health promotion. These range from highly structured, methodology-driven evaluations, exemplified by randomised controlled trials, through to much less rigidly structured, highly participative
forms of research and evaluation. Making sense of this diversity has been a challenge, and several structured models for planning and evaluation of health promotion programs have been developed as a part of the response to this challenge

This emphasis on structure and sequence in health promotion planning has been important in establishing the credibility of health promotion as a form of public health action, and as a distinct discipline in the health sciences. Such developments are reflected in the substantial growth in textbooks on health education and health promotion, including those specifically directed towards evaluation. This "development" may also have had unintended consequences by narrowing the definition of what constitutes health promotion and the criteria for its evaluation - a dilemma referred to below.

Debate continues about what represents "good practice" in research and evaluation in health promotion. This paper provides an overview of progress in evaluation, and identifies some contemporary dilemmas before concluding with discussion of how further progress may be made.

2. Defining "success" in health promotion:

2.1 Valued outcomes and valued processes in health promotion

At its core, evaluation concerns assessment of the extent to which an action achieves a valued outcome. In most cases there is also value placed on the process by which these outcomes are achieved. The Ottawa Charter identifies both valued outcomes and valued processes in health promotion. According to the Charter:

health promotion is the process of enabling people to exert control over the determinants of health and thereby improve their health.

Health promotion is described as a process, indicating that it is a means to an end, and not an outcome in its own right. Health promotion is an activity directed towards enabling people to take action. Thus, health promotion is not something that is done on or to people, it is done with people either as individuals or as groups. Participation and partnership are valued processes in
health promotion.

The purpose of this activity is to strengthen the skills and capabilities of individuals to take action, and the capacity of groups or communities to act collectively to exert control over the determinants of health. Thus, empowerment of individuals and communities are valued outcomes.

In tackling the determinants of health, health promotion will include both actions directed towards changing determinants within the more immediate control of individuals (including individual health behaviours), and those largely outside the control of individuals (including social, economic and environmental conditions). Thus, actions which support healthy lifestyles and create supportive environments for health are also valued outcomes to health promotion.

Poor definition and measurement of anticipated outcomes to health promotion activities has long been considered a stumbling block to progress\textsuperscript{11}. Better definition of anticipated outcomes precedes more relevant and convincing evaluations of health promotion programs and activities, and better communication of what constitutes "success" in health promotion.

2.2 Health outcomes and definitions of "success" in health promotion

In many countries at the current time, considerable attention is being given to health outcomes\textsuperscript{12}. A health outcome in such cases can be defined as a change in the health of an individual or group which is attributable to an intervention or series of interventions.

The driving force behind the attention to health outcomes is the perceived need to improve the effectiveness and efficiency of investments made by people and their governments in health, particularly in health services - so that the spotlight falls less on what is done and more on what is achieved\textsuperscript{13}. It is argued that concentrating on outcomes (rather than on inputs in the form of medical procedures/hospital beds and so on) provides a more rational way of deciding on what interventions will achieve greatest health gain for a given investment.

At face value, health promotion would do well in such an environment, offering
the potential of substantial health gains for relatively modest investment relative to other forms of health service. However, the rather complex and distant relationship between typical health promotion activities, and health outcomes expressed in terms of change in physical function or disease state, combined with the paucity of evidence relative to mainstream health system activities has made it difficult to achieve the progress which might be justified. Additionally, health outcomes which are defined mainly in terms of physical function or disease state, are not necessarily the same as the valued outcomes from health promotion referred to above.

2.3 Health outcomes and health promotion outcomes

Given this context, it is important to distinguish between the different types of outcome associated with health promotion activity, and to articulate the relationship between health promotion outcomes and the type of health outcomes commonly referred to in the definition given above. In an effort to do this, different forms of health outcomes hierarchies and models have been developed to explain the relationship between health promotion action and health outcomes.\textsuperscript{14} 15 16.
Figure 1 - An outcome model for health promotion

Health and Social Outcomes
- Quality of life, functional independence, equity
- Mortality, morbidity disability

Intermediate Health Outcomes
- Healthy lifestyles
- Effective health services
- Healthy environments

Health Promotion Outcomes
- Health literacy
- Social influence and action
- Healthy public policy and organisational practice

Health Promotion Actions
- Education
- Facilitation
- Advocacy
Figure 1 describes a model which illustrates these relationships. Three different levels of outcome are identified:

(i) **health and social outcomes**

In the Ottawa Charter, health is defined as *a resource for life, not the object of living*. The social outcomes reflect this functional definition of health and in the model represent the top of the hierarchy - the end point of health and medical interventions. Thus, outcomes such as quality of life, functional independence and equity have the highest value in this model. Related to this, though not the only influential factor, are health outcomes which are more narrowly defined in terms of disease experience, physical and mental health status.

(ii) **Intermediate health outcomes**

Intermediate health outcomes represent the *determinants* of health and social outcomes. Health promotion is directed towards increasing people’s control over such determinants. Personal behaviours which provide protection from disease or injury (such as physical activity), or increase risk of ill-health (such as tobacco use) are represented through the goal of *healthy lifestyles*. The physical environment can limit access to facilities, or represent a direct hazard to the physical safety of people; and economic and social conditions can limit people’s participation in society. These determinants are represented as *healthy environments*. These environments can both have an impact directly on health and social outcomes, and indirectly influence healthy lifestyles by making individual behaviours more or less attractive (for example by limiting or enhancing access to facilities to physical activity). Access to and appropriate use of health services are acknowledged as an important determinant of health status and are represented as *effective health services*.

(iii) **Health promotion outcomes**

Health promotion outcomes reflect modification to those personal, social and environmental factors which are a means to improving people’s control and thereby changing the determinants of health (intermediate health outcomes). They also represent the more immediate results of planned health promotion activities.
The cognitive and social skills which determine the motivation and ability of individuals to gain access to, understand and use information in ways which promote and maintain good health, are summarised as health literacy in the model. Examples of health promotion outcomes would include improved health knowledge and motivation concerning healthy lifestyles, and knowledge of where to go and what to do to gain access to health and other support services. Furthermore, like literacy itself, health literacy means more than being able to read pamphlets and make appointments. In the same way that literacy can be empowering by giving people the necessary skills and confidence (self-efficacy) to participate in everyday activities, including the political process, so too is health literacy intended to reflect this larger concept.

Social mobilisation includes organised efforts to promote or enhance the actions and control of social groups over the determinants of health. This includes mobilisation of human and material resources in social action to overcome structural barriers to health, to enhance social support, and to reinforce social norms conducive to health. Examples of outcomes would range from improved social “connectedness” and social support, through to improved community competency and community empowerment.

Healthy environments are largely determined by healthy public policy and organisational practices. Policy-determined legislation, funding, regulations and incentives significantly influence organisational practice. Thus examples of outcomes here would be changes to health and social policies directed towards improving access to services, social benefits and appropriate housing, and changes to organisational practices intended to create environments which supportive to health.

iv) Health promotion actions

Figure 1 also indicates three health promotion actions - what to do, as distinct from what outcomes are achieved. Education consists primarily of the creation of opportunities for learning which are intended to improve personal health literacy, and thereby capacity of individuals and communities to act to improve and protect their health. Facilitation is action taken in partnership with individuals or social groups to mobilise social and material resources for health.
Advocacy is action taken on behalf of individuals and/or communities to overcome structural barriers to the achievement of health.

The figure can be used not only to illustrate the linkages between the different levels of outcomes, but also within levels. For example among the intermediate outcomes, action to create healthy environments may be both a direct determinant of social and health outcomes (for example by producing a safe working and living environment, or improving equity in access to resources) and separately influence healthy lifestyles, for example by improving access to healthy food, or restricting access to tobacco products.

Implicit in the figure is the notion that change in the different levels of outcome will occur according to different timescales, depending on the nature of the intervention and the type of social or health problem being addressed.

There is a dynamic relationship between these different outcomes and the three health promotion actions, rather than the static, linear relationship which might be indicated by the model in figure 1. Health promotion action can be directed to achieve different health promotion outcomes by shifting the focus or emphasis to an intervention. Deciding on what represents the best starting point and how to combine the different actions to achieve valued health promotion outcomes through valued processes are at the core of "best practice" in health promotion.

2.4 Measurement of outcomes in health promotion

The definition and measurement of outcome indicators which are relevant to the intervention, and sufficiently sensitive to reflect intervention effects has been a long standing challenge in health promotion. The health promotion outcomes indicated in figure 1 are closest to the health promotion action, and thereby the most sensitive "object of interest" - the most likely to be heard beyond the background noise of everyday community activities. These health promotion outcomes, in turn will be directed towards intermediate health outcomes (health behaviours, healthy environments, and effective health services), these may be the most relevant "objects of interest", as they represent more widely
understood and accepted outcomes to health promotion activity. Measurement of change in these intermediate health outcomes using appropriate indicators may also be necessary, depending on the size, comprehensiveness and duration of the intervention.

In the past, greatest attention has been given to the development of valid and reliable methods for the measurement of health behaviours, and to a lesser extent, measurement of indicators of the physical environment, and changes in patterns of health service provision and utilisation. Greater attention needs to be given to the development of measures which are more sensitive to the immediate impact of health promotion actions.

The range of strategies employed in health promotion and different outcomes from those strategies has meant that a wide range of potential indicators need to be considered. Whilst it is not possible to provide an exhaustive list here, examples of indicators which can be used in assessing the achievement of health promotion outcomes include:

**health literacy:**

- knowledge relevant to the problem of interest,
- self confidence in relation to defined tasks (self-efficacy),
- self empowerment
- attitudes and behavioural intentions,
- future orientation
- participation in health promotion programs

**social mobilisation:**

- community competency
- community empowerment
- social connectedness
- peer and community norms
- public opinion and public mandate for policy action,
- community ownership of health promotion programs
public policy and organisational practice:

- policy statements
- legislation and regulations,
- organisational procedures, rules and administrative structures
- management practices,
- funding and resource allocation.
- institutionalisation of health promotion programs

Acknowledgement and adoption of such a range of measures of success fits more comfortably with modern concepts of health promotion. It would do much to move evaluation on from a reductionist, psycho-social and behavioural paradigm in the assessment of success, to a more "expansionist" approach to thinking about health promotion and the meaning of "success" in health promotion.

One important block to this move is a paucity of reliable and valid measures of many of the indicators of success identified above. The definition and measurement of intermediate health outcomes such as health behaviours and healthy environments, and the health promotion outcomes which may influence them, has taxed the skills of researchers for decades. The task may be relatively straightforward in the case of defining and measuring smoking behaviour using information provided by individuals, but more complex in other areas such as assessing dietary behaviour or patterns of physical activity. Measuring knowledge, attitudes or values, personal and social skills as indicators of health literacy, community ownership of programs and community empowerment as measures of social mobilisation, and organisational practice and public policy are potentially even more problematical.

The solution to many of these problems has rested in the construction of questionnaires, tests, scales, and interview protocols. Such research tools are not only used to obtain information from individuals on personal knowledge, attitudes and behaviours, but can also be used to obtain information from relevant respondents on organisational policy and practice, and on community
capacity and competence. Although there are no comprehensive "tool kits" for outcome measurement in health promotion, much has been learned through careful experimentation in the past decades.

Currently, greater attention is being given to the development of indicators and instruments which measure changes in the health promotion outcomes listed above. Progress in this arena has been supported through a number of WHO publications 18-19, as well as specialist journals 20-21. Much work remains to be done to develop sensitive, reliable and valid indicators for health promotion and intermediate health outcomes outside of the established comfort zones of the measurement of health behaviour and its psycho-social determinants, but progress is being made through experimentation in some of these more difficult areas 22-23. More specific efforts include those directed at assessing individual and community empowerment 24, community action for health 25, policy advocacy 26, and organisational change 27. Where available, more consistent use of established indicators and measurement techniques, would not only do much to improve confidence in standards, but have the additional benefit of increasing comparability between studies.

3. How best to evaluate "success"? Stages of research and evaluation

3.1 A hierarchy of evaluation stages

Research to support the development of different health promotion interventions takes many forms. The model provided in figure 2 is developed from an earlier version by the author and indicates six stages of research which go together to develop and evaluate a health promotion intervention 28. These include:

Stage 1: Problem definition:

This stage draws upon basic epidemiological research to investigate the causal basis and scope for an intervention, and community needs assessment to identify community concerns and priorities, identify access points to reach and
work with key individuals and populations, and enable more direct community participation in problem definition and solution generation. This information defines the major health problems experienced within a defined population, the determinants of those problems, and the scope for change in those determinants.

**Stage 2: Solution generation:**

This stage draws upon social and behavioural research to improve understanding of target populations, and the range of personal, social and environmental and organisational characteristics which may be modifiable to form the basis for intervention, and intervention theory development can help to explain and predict change in individuals, social groups, organisations and the political process. Such theories and models are particularly useful in identifying plausible methods for achieving change in the personal, social and environmental characteristics referred to above, and the potential for general application in different settings and with different population groups. This information clarifies the potential content and methods for intervention, and further defines the different needs of populations.
Figure 2: Six-stage development model for the evaluation of health promotion programs

Stages of Research and Evaluation

<table>
<thead>
<tr>
<th>Problem definition</th>
<th>Solution Generation</th>
<th>Innovation Testing</th>
<th>Intervention Demonstration</th>
<th>Intervention Dissemination</th>
<th>Program Management</th>
</tr>
</thead>
<tbody>
<tr>
<td>Epidemiology and demography</td>
<td>Social behavioural and organisational research</td>
<td>Intervention theory development</td>
<td>Understanding of Process</td>
<td>Assessment of outcome</td>
<td>Assessment of cost and benefits (financial, social, political)</td>
</tr>
<tr>
<td>What is the problem?</td>
<td>How might it be solved</td>
<td>Did the solution work</td>
<td>Can the program be repeated/refined?</td>
<td>Can the program be widely reproduced?</td>
<td>Can the program be sustained?</td>
</tr>
</tbody>
</table>

Key Research Questions
Together stages 1 and 2 describe the cause, content, population and method which form the basic building blocks for planning health promotion interventions. Such information will describe a problem, can identify determinants of that problem, can indicate individuals, groups, institutions and policies in a defined community which are most in need of attention, and through this analysis, propose likely solutions. These possibilities can be narrowed and defined in terms of program objectives which state the expected health promotion outcomes from a planned action. Once such program objectives have been defined, evaluation of a program becomes more feasible. These program objectives are the immediate, short-term focus for evaluation. Related intermediate health outcomes, and health and social outcomes may also be described at this time.

Finding a successful and sustainable solution to a defined health problem requires the systematic development and testing of an intervention. A staged approach to the development and testing of innovations has been recommended by several different authors. Figure 2 describes a staged approach to evaluation research, indicating how the two fundamental tasks in evaluation research of assessing outcomes in order to determine the extent to which the intervention achieved what it was established to achieve, and understanding the process in order to identify the basic conditions for successful implementation of an intervention, whether the valued processes in health promotion were achieved, and thereby allow for reproduction of the intervention and subsequent repetition of successful outcomes.

Stage 3: Testing innovation:

Ideally, in order to establish evidence of success, evaluation of a new program will go through these different stages. The relative importance of the two evaluation tasks will vary as an intervention goes through different stages of development. The figure indicates a hierarchy of study beginning with experimental studies which concentrate primarily on the question of whether or not an intervention achieves its desired outcomes. The function of such studies is to assess the extent to which defined objectives can be achieved operating in the best possible conditions for success.
Because such studies need to be developed in such a way as to meet tightly defined standards, they tend to be of greatest interest to academic researchers. However, for the same reasons, such studies are often developed using resources and methods which are not easily reproduced, nor do such studies invite active participation in decision-making by the individuals and communities they are intended to benefit - a valued process in health promotion.

Stage 4: Intervention demonstration:

The forth stage, demonstration studies, shows a shift in the relative emphasis given to assessing outcomes and understanding process. If an intervention achieves the desired outcomes under ideal circumstances, the emphasis of the evaluation changes to consider more closely identification of the conditions for success. Here the task is to reproduce a program in circumstances which are closer to "real-life" and which better reflect the valued processes in health promotion, including control in decision-making, and the development of capacity for sustaining effects. This stage helps to clarify whether or not the desired outcomes can be achieved in a less artificial environment, and represent a reasonable investment of resources.

Such studies are of greater relevance and interest to communities and their leaders, as well as health promotion practitioners and activists as they indicate that desired outcomes may be achievable in circumstances closer to real-life. Specifically, they take account of the contextual variables of health promotion practice, indicate the essential conditions which need to be established. Because of the balanced emphasis on both process and outcome, this type of study often produces more practical guidance, for example by indicating the importance of building community competency and working across sectors, as well as clarifying the resources which need to be committed for success. This stage in the process offers the opportunity for assessment of costs and benefits more related to "real-life" conditions.

Many programs operating at community level would fall into this category. Practitioners and activists identify new ideas and program strategies through the literature and/or word of mouth and seek to modify them to local circumstances. Although there are a growing number of studies of this type
appearing in the research literature, such evaluation research appears to be less attractive to academic researchers who may be less comfortable with the uncertainties and lack of control over methodology and intervention in such studies, as well as the attendant reduction in the chances of demonstrating an intervention effect.

**Stage 5: Intervention dissemination:**

The fifth stage, *dissemination studies*, indicates a shift in emphasis still further. Here, attention is given to identifying the ways in which successful programs can be widely disseminated. Such studies include those directed at improving understanding of the ways in which communities can be supported to adopt and maintain innovations\(^{34}^{35}\) and build capacity\(^{36}\), as well as studies of communities and organisations to determine how best to create the necessary conditions for success in different settings\(^{37}^{38}^{39}^{40}\).

This type of evaluation research also provides information of great interest to communities managers and practitioners because it helps to define what needs to be done, by whom, to what standard, and at what cost. This type of research is least common in the health promotion research literature, partly reflecting a lack of interest (and reward) on the part of academic researchers, and partly as a natural consequence of decline in the number of interventions which reach this stage of development (ie of proven efficacy)\(^{41}\).

**Stage 6: Program management:**

Beyond this stage, the basic evaluation tasks are directed towards supporting programme management. These tasks include monitoring the quality of programme delivery relative to the optimal conditions for success, and assessing value for money. The assessment of “quality” in health promotion has been given considerable attention in the recent past, and a number of guides and manuals have been produced to assist with this task\(^{42}^{43}^{44}\). The long-term management of programs is not considered in detail in this paper.

The relative importance of the two major dimensions to evaluation research
(outcome and process) will vary with a project's stage of development and the target audience for the evaluation. Figure 2 indicates a hierarchical model, setting out the principal evaluation question at different key stages of development, and illustrating how the balance of importance between outcome and process evaluation changes at each of the three central stages.

4. Evaluation of outcome: Assessing cause and effect

By linking figure 1 and figure 2 it should be obvious that it is hard to identify a simple causal chain which links a health promotion action to changes in health status. Such a simplistic "reductionist" model for health promotion and disease prevention has long been discredited. The link between health promotion action and eventual health outcomes is usually complex and difficult to trace - a fact which poses real dilemmas in evaluations which seek to use social and health outcomes as primary measures of "success".

For example, smoking is a major cause of illness and disability which threatens the quality of life of many people. Quitting smoking or never starting will greatly reduce the future incidence and prevalence of several major causes of premature death, disease and disability. But even here, where the link between a behaviour and health outcome is clearly established, the relationship between different forms of health promotion intervention - education, behavioural counselling, changing social attitudes, environmental restrictions and price increases - and subsequent decisions by an individual to quit or not to start, are very complex. Where the relationship is less well established or acknowledged - for example the relationship between income distribution or employment status and health - defining a causal chain between actions designed to alleviate the health impact of these determinants, and subsequent health outcomes becomes even more problematic. Currently, far more attention is being given to the complexities of these relationships, and the implications for public health action to respond to them.

Given this situation, great attention needs to be given to clarity in the definition of health promotion outcomes, and to the evidence which indicates their relation to intermediate health outcomes, and subsequent health and social outcomes. Drawing upon this model, evaluation of health promotion action
should, in the short-term, be based on measurement of change in the three types of health promotion outcome - achievement of improved personal health literacy, changes to public policies and organisational practices, and changes to social norms and community actions which individually or in combination, increase people’s control over the determinants of health.

In assessing outcome to an intervention, two basic questions have to be addressed, namely:

i) can change be observed in the object of interest, and

ii) can this observed change be attributed to the intervention?

In this paper it is not possible to discuss in detail the full range of methodological issues that can arise in developing and executing an evaluation design in answering these questions. Some of these issues, such as sample size and selection, data collection techniques, and response rates are common to all forms of evaluation research - particularly among the behavioural and social sciences. Such issues are addressed fully in the many specialist publications. However, the basic principles of study design are considered here, along with a small number of issues which are of greatest relevance to the evaluation of health promotion programs.
4.1 Attribution of cause and effect: Experimental designs and their problems

Source of many dilemmas and complexities faced by evaluators, is the desire to establish a clear relationship between an intervention and a health outcome through a single "definitive" study. The model in figure 1 represents an attempt to present this complexity in a tangible form. The first level of success is in the achievement of health promotion outcomes, which may be defined as health promotion objectives. Once a reasonable measure of a health promotion objective has been identified (some examples are given above), the next major task is to develop a research design which will allow you to use this measure effectively to determine whether or not your intervention had the intended effects.

There are several essential elements to establishing a relationship between an intervention and an observed outcome. These are thoroughly discussed in existing texts, but can be summarised as consisting of five essential elements: 49

- a representative sample of the target population or program recipients
- one or more pre-tests assessing the objects of intervention
- unexposed group for comparison
- random assignment of the sample to experimental or control groups
- one or more post-tests to measure effects on the objects of intervention

Such a design allows for assessment of change by comparing the situation existing before and after intervention. Because individuals have been randomly assigned to intervention and control groups, such a design means that observed change in the study population compared to the control population can be more reliably attributed to the effects of the intervention.

Unfortunately, meeting these basic criteria for the randomised design has proved difficult and often runs counter to the valued processes in health promotion concerning participation in decision-making 50. Though some studies have successfully employed this design, most have been narrowly defined, typically restricted to single issues (eg smoking), single health promotion objectives (eg improving health literacy, changing health behaviour), and interventions undertaken in highly manageable, "closed" systems such as schools, health clinics, and workplaces. In some cases the volume of studies
conforming to these study design criteria have allowed for meta-analysis of results from multiple studies\textsuperscript{61} \textsuperscript{52} \textsuperscript{53} \textsuperscript{54}. Such meta-analysis is particularly helpful in improving understanding of this type of intervention, can improve confidence in the validity of findings from individual studies, and assess the potential for reproduction.

These studies are important in advancing knowledge and building credibility for health promotion but, for community-based and community-wide programs, they may be too restrictive, and may ultimately be self-defeating by reducing the effectiveness of the intervention or rendering it impossible to reproduce\textsuperscript{55}. Alternative approaches have to be identified.

4.2 Alternatives to experimental design

In circumstances where, for practical reasons (often financial) there are no opportunities to establish a reference population, additional strategies to strengthen inference about programme effects have been developed. These monitoring changes over time in the object of interest, referred to as a time series design. This is the simplest and least obtrusive form of evaluation. It can often involve use of existing methods of record-keeping. For example, monitoring change in the use of a screening service before, during and after a program to promote improved uptake. Phasing the introduction of interventions into different communities, and observing a change in the intervention population in equivalent phases related to the introduction of the intervention. Such a design, temporarily creates a "non-intervention" population. This is a useful design to overcome the ethical dilemma of deliberately withholding an intervention to a study population. It does not so easily allow for detection of longer term effects of interventions as a traditional experimental or quasi-experimental design. Differing intervention intensity in different populations is particularly feasible when an intervention consists of different elements (e.g. organisational change, personal education, mass media education). The program can be offered as a whole to one population, while by contrast, only the individual component parts are offered to other populations. Green and Lewis have described a hierarchy of experimental designs including those above which provides guidance on the best combinations of the elements of experimental design for varying circumstances\textsuperscript{56}. 
4.3 Strategic issues in evaluating community/population interventions:

Beyond these technical solutions, there is a more fundamental and strategic problem in the use of experimental designs in the evaluation of health promotion programs. In interventions which are designed to influence human behaviour and social interactions, the artificial assignment of individuals in communities to intervention and control groups is not only often impractical but frequently impossible as it places quite unrealistic constraints on the intervention design. For example, it is virtually impossible to use the mass media in such a way that it only reaches a randomly selected population group. Further, many health promotion programs actively draw upon political systems and community networks as part of the intervention. In such circumstances the "random" allocation of individuals would place impossible constraints on the possibility of actively using community networks.

As well as these practical constraints, interventions have been strategically designed to influence populations rather than individuals. This "population" approach to intervention has been impressively articulated by Rose\textsuperscript{57}, and advanced scientifically and given profile by several large cardiovascular disease prevention programmes operating in the 1980's\textsuperscript{58}. It has become the favoured way of organising comprehensive health promotion programs to benefit whole populations, through multiple interventions directed towards different health promotion outcomes. In these studies the strategy was designed to achieve mass shifts in risk factor prevalence and change in policy and organisational practice, rather than simply focussing on improving personal health literacy and behaviour modification among defined individuals.

The cardiovascular health promotion programs provide a good example of efforts to overcome many of the practical problems for evaluation design in programs directed at whole populations as opposed to individuals. The cardiovascular programs sought to modify traditional experimental designs in ways which suited the practicalities of the interventions being organised. Whole populations were the "unit" of intervention, and were matched with equivalent comparison "units", geographically isolated from the intervention. Thus, the community was the unit of assignment, but the individual remained the unit of observation.
This quasi-experimental design has become the norm for such programs and has been widely promoted as the best approach to evaluation of community-based programs. An enhanced version of this quasi-experimental design, the community intervention trial, advocates identification of a large number of separate community “units” and random allocation of these to intervention and control groups. This evaluation design has been adopted in several well known studies in the past decade\textsuperscript{59, 60, 61} and is considered by some to be the “only design appropriate for the evaluation of lifestyle interventions that cannot be allocated to individuals”\textsuperscript{62}.

4.4 Community interventions and social movements:

Despite this technical progress in developing suitable evaluation designs for well-defined population interventions, the results from the cardiovascular programs and from the COMMIT smoking cessation trial - the largest experiment with a community intervention trial design - have generally been considered disappointing in terms of their observable net impact on targeted risks. In most cases, positive results have been seen in both intervention and comparison communities. Explanations of these results not only consider the possibility that the interventions may have been insufficiently intense, too brief, or failed to penetrate a sufficient proportion of the population to have had an impact over and above prevailing “secular trends”, but also that the study designs may not have been as useful or sensitive as required for such complex interventions\textsuperscript{63, 64, 65}. In addition, some commentators have pointed to poor understanding of the broad research base for interventions (highlighted above), and emphasised the need for “creative, dedicated, and rigorous social research” to bring about this understanding\textsuperscript{66}.

One explanation for observed positive results in both intervention and comparison populations is that there has been a high level of “contamination” between the artificially separated populations. There is good evidence to suggest that this has occurred in some cases\textsuperscript{67}. But the truth may be more subtle and complex than this. The major changes in smoking behaviour, leisure time physical activity and food choices which can be observed in both intervention and comparison communities in these and other studies are not “chance secular trends”, but have been achieved through diverse, sustained
public health activism over the past three decades. The results of this activism can be observed through simple, regular observational studies, and has been manifest through changing values and behaviour supported by community organisation and, ultimately, law and regulation. These social movements are powerful, and are likely to have overwhelmed the effects of relatively short term, localised interventions such as those in the cardiovascular and the COMMIT trials.

The WHO sponsored programs, such as the Healthy Cities Project and health promoting schools project, are more often depicted as a social movement than a tangible "intervention" of the type described in the cardiovascular programs. Social movements take longer to develop, are less tangible and predictable (and therefore less easily measured and controlled by conventional means) than organised interventions. This is because they draw upon multiple forms of intervention (education, advocacy, facilitation of social mobilisation), often engage the population affected far more directly in decision making, and rely to a certain extent on opportunism to guide the direction and emphasis of activities. Such an approach to health promotion appears more capable of addressing some of the underlying social and economic determinants of health which require sustained activism, and to offer greater opportunity for community control and empowerment - some of the more important and valued processes and outcomes in health promotion - but is impractical to evaluate using the tightly defined criteria of experimental design.

The dilemma emerging from this analysis is that the more powerful forms of health promotion action are those which appear to be long-term, and least easily predicted, controlled and measured by conventional means. Against this, important and valued advances in knowledge and credibility have come from more tightly defined and controlled interventions, which have been evaluated through the application of experimental designs. This tension between the demands for "scientific rigour" on the one hand, and the advantages in terms of effectiveness and maintenance that comes from less well defined and community controlled "movements" has been regularly discussed in the literature.

Advancing knowledge, improving understanding and credibility are extremely important for the relatively new discipline of health promotion. But, an approach
to the advancement of knowledge based only on findings from controlled research design also has real dangers - especially when it excludes other forms of evaluation which do not meet experimental design criteria.

Clearly it is nonsense to believe that all other forms of evaluation and experience cannot add to the base of knowledge and understanding in health promotion. The use of experimental designs to assess the success of the less well defined forms of social activism indicated above is at best impractical, and more likely is impossible to manage in ways that do not compromise the activity. Other methods have to be used to evaluate the effectiveness of health promotion.

4.5 Building evidence using multiple methods and multiple sources of data

Qualitative public health research can provide depth and insight into people’s experiences, and the social contexts that strengthen, support or diminish health. This knowledge and insight are important in explaining observed success or failure in any given program, and essential for the successful replication and dissemination of new ideas.

Despite this, qualitative research is generally undervalued and under used. Part of the reason for this stems from a value system which has evolved among public health researchers (especially those with substantial training in epidemiology and biostatistics) which gives quantitative, experimental research high status, and tends to devalue the importance of research to determine the process of change which may often be qualitative - frequently referred to as "soft" research. This may be because the methods involved in qualitative research may be less well defined and in many cases simply unfamiliar to researchers used to experimental designs. As a consequence such methods may either be inappropriately applied or when properly applied, inappropriately assessed through academic peer review.

Although the methods may be different, qualitative research can be planned and executed with scientific rigour at least equal to that of quantitative research. Identification of aims, selection and sampling of subjects, method of investigation, and analysis of results can be as well defined and described in qualitative research as in quantitative research?2.
Rather than imposing impractical and irrelevant evaluation designs, evidence of success in health promotion may best be built on data which is derived from several different sources - some of which may be experimental studies, but many of which will be observational studies, making use of qualitative as well as quantitative information. The search for the "single definitive study" is illusory and inevitably leads to overly simplistic solutions.

Instead of arguing the relative strengths and weaknesses of quantitative/qualitative research, experimental/observational research, most researchers involved in the evaluation of health promotion interventions recognise the synergistic effects of combining different methods to answer different research and evaluation questions.¹³ ¹⁴ ¹⁵

One promising approach to the use of multiple methods is the concept of research "triangulation" to improve confidence in research findings. This approach is now well established among qualitative researchers, and involves accumulating evidence from a variety of sources. The logic of this approach is that the more consistent the direction of the evidence produced from different sources, the more reasonable it is to assume that the program has produced the observed effects. Triangulation simply means using more than one approach to answer the same question. Different types of triangulation can be used,³⁶, for example:

- **Data source triangulation**, which involves using different kinds of information to investigate a given research question, such as client records, minutes of meetings, published documents, and interviews with key informants.

- **Researcher triangulation**, which involves more than one researcher in data collection and analysis. This approach can be particularly useful if the researchers hold different theoretical and/or methodological perspectives.

- **Methods triangulation**, which involves using a number of different methods to investigate a nominated issue, such as focus group discussions, individual interviews, observation of meetings and other interactions.
The use of “triangulation” has much merit in the evaluation of health promotion, especially where experimental research design may be inappropriate, impractical, or provide only part of the picture in a multi-level intervention. Combining information from different quantitative and qualitative sources to assess for consistency in results can provide powerful evidence of success, as well as providing insight to the processes of change in populations and organisations.

5. Creating conditions for success: evaluation of process

By recognising the benefits of combining different research methods to answer different research questions, the distinction between “outcome” and “process” evaluation indicated in figure 2 becomes somewhat blurred. Understanding the process of an intervention (or social movement) is of great importance in its own right, but is also essential to build the evidence on which “success” is determined. Investigation of how a programme is implemented, what activities occurred under what conditions, by whom, and with what level of effort, will ensure that much more is learned and understood about success or failure in achieving defined outcomes. Through this understanding it is possible to identify the conditions which need to be created to achieve successful outcomes.

A number of basic, and inter-related process evaluation aims can be identified in published work. These are considered below.

5.1 Program reach: did the program reach all of the target population?

In any health programme, a key element of success has to be in achieving optimal contact with the defined target population - whether this is an “at risk” group, a whole community, managers in an organisation, or community leaders/politicians. To evaluate the effects of a program, it is essential to be able to determine the extent and level of exposure to it.

This is relatively simple where the intervention can be clearly defined -for example attending a smoking cessation group, receiving a pamphlet or media communication? - but far more difficult in community programs where the
intervention is less easy to define, and determining exposure a far more complex task. Methods which have been used to measure programme exposure from simple audit and record keeping, to sophisticated monitoring among defined groups.

The heart health programs in the US referred to above all developed sophisticated systems for monitoring population exposure. In these programmes, exposure was monitored through a variety of methods including the use of specially designed contact cards which were completed by everyone who participated in the intervention. The data were used to determine the demographic profile of participants, document each participant's total number of exposures to the intervention, refine and target intervention programmes, assess the immediate and long term impact of the interventions through follow up surveys, and provide a historical record of the entire intervention effort.

Other studies of programme reach have explored awareness of interventions among target populations in communities, program gatekeepers for example teachers, general practitioners) and within organisations such as schools, and worksites.

5.2 Program acceptability: is the program acceptable to the target population?

Although a programme may reach its intended audience, the response of this population to the program is critical. Studies which assess the acceptability of programmes and their subsequent "ownership" by the target population, and or the program "gatekeeper" (teacher, health worker, manager, politician) form an essential part of process evaluation. There are different dimensions to this question which examine the extent to which people feel involved in a program, able to influence its direction and outcome; perceptions of the relevance of the program to peoples' needs and priorities; and perceptions of the feasibility of actions which are advocated through a program.

Studies of "gatekeepers" have looked at their experiences of implementing programs, the acceptability of different programme activities, the perceived effects of projects, and suggestions for modifications. Examples of such studies
can be found with professional groups, particularly teachers and doctors. Less common in published reports are evaluations which have taken the views and experiences of communities into account.

5.3 Program integrity: was the program implemented as planned?

Finally, in order to fully understand observed change in health promotion outcomes it is essential to record the extent to which a program was implemented as planned. Failure to achieve defined program objectives could be a result of a poor intervention, or a poorly executed intervention. Interventions which have been evaluated and determined as effective by a group of highly motivated researchers working with equally motivated volunteers, are not automatically well received, executed and sustained when translated into "real life" settings.

Observing and recording activities is the simplest method of doing this. More sophisticated forms of analysis of program integrity may involve tracing the "chain of events" within a discreet community, determining such issues as dilution or distortion of programme inputs. This approach has been used in community based programs to understand the dynamics of intervention implementation within defined social or professional networks, or in specific settings such as schools.

One of the most sophisticated examples of comprehensive process evaluation was that employed by the Child and Adolescent Trial for Cardiovascular Health (CATCH). The purpose of this effort was to "describe the implementation of the program, quality control and monitoring, and explaining program effects." These aims summarise the purpose of good process evaluation as a complementary task to evaluation research primarily directed towards measuring outcomes. At one level, process evaluation can support and enhance causal inference in studies. At another level, it opens the door through which basic experimental studies can be repeated, refined and widely disseminated by defining the conditions which need to be created for success in achieving program objectives. In this way, process evaluation has particular
relevance to policy makers and practitioners.

6. Concluding remarks: Evaluation in a complex environment:

Evaluation of health promotion is a complex enterprise which is often done poorly. Many of the problems faced by practitioners attempting to evaluate health promotion activity stem from unreasonable expectations of both the activity and the evaluation. Health promotion is a complex field. Tracing the causal path from a community intervention to subsequent long term changes in health and social outcomes is fraught with difficulty, and it is inappropriate and unrealistic in most cases for programs to be expected to do this. Far more relevant is for health promotion interventions to be judged on their ability to achieve the health promotion outcomes defined above, using evaluation methods which best fit the activity. Such a position does not always fit comfortably with prevailing views in the health and medical community on what constitutes “rigorous” method and “hard” evidence.

Four key challenges emerge from this analysis:

i) Using research evidence more systematically in the planning of activities: The volume of research to support health promotion action has grown remarkably in the past twenty years and needs to be applied to current health promotion practice. In particular, this research evidence should be used more creatively to improve understanding of the complexity of relationships between the different levels of outcome illustrated in figure 1, and to provide greater insight to the definition of problems to be addressed and the interventions required to address them. A wide range of research evidence needs to be systematically incorporated into activity planning.

ii) Improving the definition and measurement of outcome: Poor definition of program objectives - whether these are expressed in terms of valued outcomes and/or valued processes - often leads to inappropriate expectations concerning evaluation and accountability. For the future it is essential that program objectives are more clearly defined, and that relevant and sensitive measures are used to assess progress in achieving these objectives. This will require more systematic development and use of valid and reliable indicators of health
promotion outcomes, particularly measures of social mobilisation, public policy and organisational practice.

iii) Adopting appropriate evaluation intensity: Not all programs need to be evaluated to the same level of intensity or using the same evaluation designs. The hierarchy in figure two indicates how the evaluation question changes with the evolution of a program. It suggests that those programs which are truly innovative, testing for the first time a potentially costly, controversial, or otherwise risky form of intervention, need close scrutiny and the most structured and comprehensive approaches to evaluation. Those which have previously been shown to work in a variety of circumstances, that are low-cost and low risk, will require more modest monitoring for the purposes of accountability and quality control.

iv) Adopting appropriate evaluation design: There has been an unrealistic expectation to adopt experimental research designs which have been developed for medical research. This is inappropriate for several reasons. Firstly, the constraints on the intervention strategy imposed by such experimental designs make it virtually impossible to use the community-based approaches which are considered to be the most valuable and effective. Secondly, experimental designs have been shown to be deficient as an evaluation tool for complex and multi-dimensional activities. Thirdly, because they are such a powerful and persuasive scientific tool, randomised controlled trials for outcome evaluation have tended to eclipse the value and relevance of other research methods for outcome evaluation - especially qualitative methods - and of evaluating the process of change.

For the future, it is important to foster and develop feasible evaluation designs which combine different research methodologies, quantitative with qualitative. The generation and use of a diverse range of data and information sources will generally provide more illuminating, relevant and sensitive evidence of effects than a single "definitive" study. Process evaluation not only provides valuable information on how a program is implemented, what activities occur under what conditions, by whom, and with what level of effort, but will also ensure that much more is learned and understood about success or failure in achieving defined outcomes. Through this understanding it is possible to identify the conditions which need to be created to achieve successful outcomes.
Evaluations have to be tailored to suit the activity and circumstances of individual programs - no single method can be "right" for all programs.
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REVIEW AND EVALUATION OF HEALTH PROMOTION

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RESEARCH FOR HEALTH PROMOTION - A CHALLENGE FOR THE 21st CENTURY

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Table of Contents

1. Introduction
2. WHO's approach to health promotion
3. Health, health determinants and salutogenesis in populations
   3.1 Meanings, concepts and measurement of health
   3.2 Determinants of health within populations
   3.3 Determinants of the health of populations
   3.4 Knowledge gaps
4. Conditions and dynamics of successful health promotion
   4.1 Evaluation of health promotion interventions
   4.2 Knowledge gaps
5. How to close the knowledge and the application gaps in health promotion
6. The role of the World Health Organisation

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The health problems of the future are awesome. Yet much can be done to tackle them with what we know already. In order to succeed the world has to care more, try harder, but the situation is not hopeless. (The World Health Report 1995, WHO 1995, p. 14)

Increased longevity without quality of life is an empty prize. Health expectancy is more important than life expectancy. (The World Health Report 1997, WHO 1997, p. v)

1. INTRODUCTION

Health promotion has evolved as a potentially powerful strategy to improve the health of populations or population groups through organized efforts at regional, community and institutional levels. Successful health promotion requires a solid scientific knowledge base related to two fundamental questions:

- Where and how is health created?

- Which investments create the largest health gain and the largest reduction in inequity?

Two kinds of knowledge are needed: knowledge about the determinants of health (causal knowledge) and knowledge about the conditions and dynamics of effective health promotion actions (action or intervention knowledge).

The global pattern of health, disease and suffering is characterized by extreme diversity and inequity, large differences in life expectancy between and within countries and a growing "double burden" of communicable and noncommunicable disease. Life expectancy at birth for women and men has reached a value of 65 years globally. In about a third of the WHO Member States for which estimates are available it was still under 60 years. Infectious and parasitic diseases account for one third of the death worldwide, chronic diseases for almost one half. Populations are continuously growing and are ageing at an accelerated rate. Between 1990 and 1995 the population aged 65 and above increased by 14%, until 2020 it is projected to increase by 82% (WHO 1997).

Global economic activity in 1996 was considered encouraging, despite the disappointing performance in Europe. There is hope that the poverty in the world can be reduced during the next decade. This will have a positive impact on health. There are growing potentials within international organisations and of new technologies. People and experts become increasingly aware of the determinants of health. To respond to the health problems and health trends in a most effective way the World Bank Report (1993) Investing in Health proposes three strategies to improve health:

- foster an environment that enables people and organisations to improve health,

- improve government spending on health,

- promote diversity and competition.

To utilise its full potential health promotion needs a strong basis of interdisciplinary health research. The most recent WHO Report on Health Research (WHO 1996) suggests that epidemiology, demography
and the behavioural sciences and the health policy sciences together with the biomedical sciences jointly address the major health problems: malnutrition, childhood infections and evolving microbiological trends, poor reproductive health, chronic degenerative diseases, injuries as well as inequity and inefficiency.

The purpose of this paper is first to review the knowledge base on the determinants and the creation of health in populations; second to review published knowledge on the conditions and dynamics of successful health promotion; third to identify major gaps in population health research and health promotion research; and fourth to draw conclusions and formulate recommendations as to how these gaps can be closed.

2. WHO's APPROACH TO HEALTH PROMOTION

WHO's understanding of health promotion is expressed in the Ottawa Charter for Health Promotion adopted by the First International Conference on Health Promotion (WHO 1986). It has since been remarkably well accepted in most countries of the world.

Health promotion is the process of enabling people to increase control over, and to improve their health. To reach a state of complete physical, mental and social well-being, an individual or group must be able to identify and to realize aspirations, to satisfy needs, and to change or cope with the environment. (Ottawa Charter)

The Ottawa Charter identifies the essential determinants of health:

The fundamental conditions for health are peace, shelter, education, food, income, a stable ecosystem, sustainable resources, social justice and equity.

Health is created and lived by people within the settings of their everyday life; where they learn, work, play and love.

Health promotion aims to invest into those areas where the largest health gain in the population and the largest decline in health gaps can be expected.

Health promotion shares its orientation towards improving the health of the population with the new concept of public health. The new public health represents a comprehensive understanding of the ways in which living conditions and lifestyles determine health, and of the need to invest in policies, programmes and services which produce, maintain and protect health (Nutbeam 1997). In fact the Ottawa Charter was in part a response to growing expectations for a new public health movement around the world. The principles and strategies of health promotion outlined in the Ottawa Charter serve as guidelines for a renewal of public health practice, research and training in many countries.

Since the adoption of the Ottawa Charter health promotion has grown into a movement in many countries. Health promotion activities, projects or programmes are conducted in regional and social settings like cities, villages and islands as well as schools, workplaces, hospitals and prisons. The WHO Healthy Cities Project involves networks of over 500 cities in Europe and another 300 cities in other parts of the world.
(Touros 1995). International and national networks of Health Promoting Schools, Health Promoting Worksites and Health Promoting Hospitals are growing. Groups of elderly and young people, women, migrants, disabled and chronically ill people engage in organised health promotion activities.

The health promotion movement indicates both growing health needs and growing health potentials in regional and local communities, social institutions and organisations. Significant changes have occurred and progress has been made. But it must be recognized that most, if not nearly all, of public and private resources are spent on the cure of disease and the care of the sick and on biomedical and clinical research. There can be little doubt that if the potential of health promotion is to be exploited to an adequate degree, a far better scientific base both of causal knowledge and of action knowledge it needed. In the following two Parts some of the major knowledge gaps in these fields will be identified. To accomplish this relevant literature on the determinants of health and on the process of salutogenesis as well as on the conditions and the process of health promotion will be reviewed. Following the late Aaron Antonovsky (1979, 1987) the term "salutogenesis" will be used throughout this paper to designate processes of health development and health creation. This term is frequently being used in health promotion, public health and psychosocial medicine.

3. HEALTH, HEALTH DETERMINANTS AND SALUTOGENESIS IN POPULATIONS

This section summarises current conceptual and empirical work on the meaning, the definition and on measurement of health. Its main purpose is to review published knowledge on the determinants and the creation of health in population groups and populations and to draw conclusions for health promotion interventions.

3.1 Meanings, concepts and measurement of health

Health is a socially and culturally defined concept. This is illustrated by a comparative study of associations people have with the concept of health. Samples of people were interviewed in the Philippines and in West Germany (Schaefer 1992). The most frequently recorded associations with the concept of health given by the respondents in the Philippine sample were body, well-being, feeling good, environment and feeling strong. The most frequent associations of German respondents were disease, hospital, medical doctor, drugs and nutrition (Figure 1). As this example shows, the concepts of health which social groups share depend on the frames of reference provided by the social and cultural contexts. It is well known in medical anthropology and sociology that people in Western countries tend to hold a medicalised concept of health.

(Insert Figure 1 about here)

In the health field two frames of reference are relevant: the sociocultural frames of everyday live and the scientific/professional frames of the health sciences. Health (and disease) may be assessed and described by common language categories of everyday life, by scientific or professional categories, or by special instruments or scales designed to measure it. Table 1 summarises some of the more common everyday life concepts and the scientific concepts of health that are more frequently applied by the health sciences.
It also presents categories and indicators used to assess health. The biomedical, the clinical and the population health sciences study three different levels of health: the sub-individual level, the individual level and the supra-individual or population level (Frenk 1992). This paper focuses on the population level. Because frequently lower-level, reductionist concepts are applied it is important to consider everyday health concepts, clinical concepts, social science concepts and biomedical concepts as well.

- **Concepts of population health**
  Most health concepts and health indicators for populations are aggregates of individual-level constructs or indicators. However, a population or population group is more than an "aggregate of individual people" at a given point in time. A central conceptual framework for the study of population health is the life span approach. Life expectancy at birth and at progressing age levels are frequently applied indicators of population health (Table 1). At present a new generation of indicators of healthy life span or "health expectancy" is being developed. They combine information from life tables and health surveys of populations. Examples are indicators of *Quality Adjusted Life Years (QALYs)*, *Disability Adjusted Life Years (DALYs)* and *Health Adjusted Life Years (HEALYs)*. To describe the health of a population two measures are important: the population average of health expectancy describing the level of health, and the population distribution describing the equality/inequality of the population's health on this indicator.

- **Everyday-life concepts of health**
  As shown by a large number of anthropological, ethnographic, sociological and psychological studies four broad health concepts are frequently found in everyday-life discourse: not being ill/sick/disabled; feeling well/good/energetic; being able to function well in personal and social life; and the circumstances or "causal web" of feeling and functioning well (Table 1). This latter concept is a holistic notion representing what is being called an everyday-life (or lay) theory of health. It explains what people think why one feels healthy or ill. Everyday-life concepts and theories are not simply individual perceptions but shared social and cultural meanings about health and its "causal web". Everyday life concepts tend to be assessed both by qualitative interviews, focus groups and other qualitative methods. Whether they can be assessed by carefully constructed standardised instruments needs to be studied.
<table>
<thead>
<tr>
<th>Frame of reference</th>
<th>Concept, Meaning</th>
<th>Indicator/Category (Examples)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Population health sciences/</td>
<td>Health expectancy</td>
<td>Disability adjusted life years (DALYs)</td>
</tr>
<tr>
<td>Epidemiology</td>
<td>o Disability free life span</td>
<td>Quality adjusted life years (QALYs) Health adjusted life-years (HEALYs)</td>
</tr>
<tr>
<td></td>
<td>o High quality life span</td>
<td></td>
</tr>
<tr>
<td></td>
<td>o Healthy life span</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Life expectancy</td>
<td></td>
</tr>
<tr>
<td></td>
<td>Healthy populations (aggregated individuals being healthy/ perceived as healthy)</td>
<td></td>
</tr>
<tr>
<td>Everyday life</td>
<td>Not being ill, sick, disabled</td>
<td>Common language categories of feeling well, staying well</td>
</tr>
<tr>
<td></td>
<td>Feeling good, energetic, strong</td>
<td>Common language categories of functioning well</td>
</tr>
<tr>
<td></td>
<td>Being able to do what one likes</td>
<td>Common language accounts of &quot;causes&quot; of health</td>
</tr>
<tr>
<td></td>
<td>Holistic health, &quot;web of causation&quot; of being well</td>
<td></td>
</tr>
<tr>
<td>Clinical health sciences</td>
<td>Disease</td>
<td>Morbidity/absence of disease</td>
</tr>
<tr>
<td></td>
<td>Impairment, Handicap, Disability Death</td>
<td>Disability/absence of disability</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Mortality</td>
</tr>
<tr>
<td>Social health sciences</td>
<td>Overall well-being</td>
<td>Proportion of people feeling well</td>
</tr>
<tr>
<td></td>
<td>Physical, psychological, social well-being</td>
<td>Proportion of people functioning well at work, in personal life</td>
</tr>
<tr>
<td></td>
<td>Functioning in social roles (occupation, family)</td>
<td>Proportion of people judging QoL high</td>
</tr>
<tr>
<td></td>
<td>Health-related Quality of Life (QoL)</td>
<td></td>
</tr>
<tr>
<td>Biological/</td>
<td>Health-related neurotransmitters</td>
<td>Endorphine secretion</td>
</tr>
<tr>
<td>biomedical health sciences</td>
<td>Endocrine regulation of coping with stress</td>
<td>Secretion of stress hormones</td>
</tr>
<tr>
<td></td>
<td>Immunological competence</td>
<td>Immunological measures of resistance against disease</td>
</tr>
<tr>
<td></td>
<td>Cardiovascular health and functioning</td>
<td>Blood pressure, heart rate, &quot;fitness&quot;</td>
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</tbody>
</table>

- Clinical-medical concepts of individual health

Mainstream clinical medicine studies and treats diseases and risk factors of diseases. Disability is defined as a consequence of disease or injury. Risk of disease, morbidity, premature mortality and
disability in populations and population groups are measured as aggregated individual cases of risk, disease, disability and death. Health is defined as absence of risk, disease or disability (*negative risk*, *negative morbidity* etc., Table 1).

- **Social science concepts of individual health**
  Psychosomatics, psychiatry and other psychosocially oriented medical fields apply health concepts defined by psychology and sociology. The so-called psychosocial health sciences have developed theoretical frameworks and categories of health and disease. The most frequently applied categories or indicators are perceived (subjective) well-being, functioning adequately in social roles, and health-related quality of life. Quality of life indicates the satisfaction with several important aspects of personal and social life. For example, the new WHO Quality of Life instrument (WHO QOL) which is currently being tested in many countries includes 6 health-related domains: physical domain, psychological domain, level of independence, social relationships, environment, spiritual/relegion/personal beliefs (The WHO QOL Group 1995).

- **Biological and biomedical concepts of health**
  Studying disease the biomedical sciences tend to view health as "the normal" not worth of further research. This attitude towards health seems to be changing. Modern theoretical biology postulates autopoiesis and self-organisation to be fundamental principles of life and health. Molecular biology, the neurosciences and neuroimmunology have started to map some of the biological processes of healthy life. For example, molecular biologists showed that the organism continuously repairs DNA defects at very large scale to protect the identity of the human genome against constant noxious influences (Kaina 1997). Psychoimmunologists and neuroscientists analyse some of the immunological processes associated with psychosocial coping with stress. This may contribute to our understanding of how the immune system learns to build up competence. Neuroendocrinologists decipher the endocrine responses to physical and social activities associated with positive emotions and well-being. The new knowledge produced by the biomedical health sciences may help to understand the links between health supporting and health promoting social and behavioral activities and biological functioning. In the future biomedical markers of human health potential and health may be used to describe aspects of population health in a similar way as risk indicators are applied today.

The concepts and indicators of individual health status described so far are relatively "static". To capture the dynamic aspects of health several authors proposed constructs that define health as an ability or as a potential (Noack 1987, 1991). Examples are Banduras concept of Self-efficacy and Antonovsky's Sense of Coherence (SOC). This is in line with work in the philosophy of health. For example, Nordenfelt (1995, p.145) defines health as "a person's ability, in standard circumstances, to reach his vital goals." A person's vital goals are related to minimal welfare, and welfare is equated with happiness.

A large number of standardised instruments and scales are available to measure indicators of perceived health in individuals and populations. Population measures of perceived well-being, functioning and health-related quality of life are aggregated measures of individuals. There are still widely shared doubts as to the validity and utility of "soft" measures such as perceived well-being and health-related quality of life, especially when compared to clinical diagnoses. A growing body of research indicates that these doubts are largely unjustified. For example in a recent meta-analysis (Idler and Benyamini 1997) of 27 carefully selected studies from several countries self-rated health was found to be an independent predictor of life expectancy in nearly all of them. The authors concluded that self-rated health status is an inclusive
and accurate measure of health status furnishing a very valuable and irreplacable information on health.

The vast majority of social science research on health is quantitative. Medical anthropologists and other qualitatively oriented health researchers warn us that the quantitative measures of health may suffer from lack of validity when their social and cultural meanings are not studied. Meaning-centered studies are especially important in fields such as population health research (Corin 1995, Heggenhougen and Pederson 1997).

Discussion

To describe and analyse the health in whole populations, sub-populations or larger population groups such as women and men, children, working people and the aged, two different kinds of categories and measures or indicators can be used: indicators of health status at a given point in time and indicators of health expectancy during lifetime.

- **Health status indicators** are aggregated measures of well-being and functioning in social roles, or of not being ill or disabled, as well as of quality of personal and social life.

- **Health expectancy indicators** are measures of the proportion of expected life time estimated to be healthful and fulfilling, or free of illness, disease and disability according to social and professional standards.

So far most of the health records used in social life and work and in health research are based on measures of health status. In the comparative international study *Investing in Health* (World Bank 1993) indicators of health expectancy were applied. They make full use of the information available and are far more sensitive to the broad determinants and dynamics of health. To measure changes in population health and to evaluate the impact of health policies and of health promotion, indicators of social health determinants are urgently needed, in additions to measures of health status and health expectancy.

To further advance the scientific concepts of health and to develop indicators for population health and health promotion a salutogenetic framework is needed. The salutogenetic model invented by Antonovsky (1979, 1987) is a useful basis. It allows to focus attention to the processes producing health gain by raising the level of health in the population and by narrowing the inequality gap in health (Figure 2).

(Figure 2)

A salutogenetic framework can accomodate the health promotion process postulated by the Ottawa Charter and be used to define different levels of health promotion outcomes. It is important to specify both intermediate outcomes in the social systems and in the population groups involved, as well as health and disease outcomes (Figure 3).

(Figure 3)
3.2 Determinants of health within populations

Health and disease are produced by a myriad of social, economic, cultural, ecological and individual factors and processes. Different time frames may be relevant. If we consider the health of individuals or small social groups lifetime will be the relevant perspective. If we consider the health of populations or large population groups a historical perspective may be necessary.

To unravel the "mystery" of salutogenesis in populations Zola's (1970, cit. Dean and McQueen 1996) river metaphor illustrates a fundamental point. Human life is seen as the challenge to stay well and survive in a somewhat dangerous river. The traditional approach has been to look downstream, asking how people could be saved. Looking upstream may, however, be a far better approach, asking how the river could be made less dangerous.

The debate on the determinants of health in modern society has been influenced very much by the so-called health fields model developed some 20 years ago by health planners and politicians in Canada. This model postulates that the health of a country's population depends on four broad factors: lifestyle, the physical environment, biological predispositions and health care. Several efforts to estimate the weight of these factors led to the conclusion that by far the largest proportion of ill health, measured as premature mortality, is explained by lifestyle factors. Health care accounts only for a relatively small proportion in the order of 10 per cent (e.g. CDC 1984). Starting from the health fields model Evans and Stoddard (1994) developed a theoretical framework of human well-being and economic cost (Figure 4). Three levels of complex health determinants are distinguished: the (external) social and physical environments and the genetic endowment of people; individual behavioural and biologic response; health care and its disease and health outcomes. These determinants have an impact on the well-being of the people and on economic prosperity. Operating through complex feedback loops well-being and prosperity may change individual behaviour and the external environment.

(Figure 4)

Health promotion is an intervention into or an action within complex social systems. Sufficient causal knowledge is essential to identify those health determinants whose change will make a significant health gain possible. Health determinant is a common term used in health policy and public health. It needs qualification because it does not imply a simple linear relationship between causal factors and outcome, but instead a non-linear interactive process involving complex pathways of factors and feedback loops. Many determinants would be very weak indeed if they were independent of other factors. Their health impact derives however from complex interactions with many other factors within the "causal web" of health. Health is made possible, it is never determined in the sense of classical physics. In the following we will describe briefly those health determinants that seem to be relevant to health promotion. Their ordering derives from the model of health determinants presented in Figure 4.

- Socio-economic resources
  Within countries or populations remarkably consistent socio-economic gradients of life expectancy, health status, well-being, mortality and morbidity were found. The higher the average income and other indicators of socio-economic status, the more likely it is that individuals live longer, live healthier and feel better. The highest socioeconomic group may live up to at least 7 years longer than the
lowest socioeconomic group. Information on the association between socio-economic status (SES) and health is far from complete. However, the available evidence from developed countries shows a remarkably stable association between indicators of SES and health. Indicators of SES are occupational category (Marmot 1995, 1996, Blaxter 1990), unemployment (Bartley et al. 1996), educational status (Mackenbach 1992, Blane et al. 1996, Valkonen et al. 1997), income (Wilkinson 1994), asset-based measures such as housing tenure and ownership of a car as well as multi-dimensional indicators combining several of these. It is clear by now that this association is neither an artefact nor the result of social selection, but an expression of widespread social inequality in health (Macintyre 1997). As shown in several studies changes in economic factors are associated with changes in health. In the so-called business cycle during recession the level of health tends be lower than during economic recovery and boom (Brenner 1995). A number of interacting social, work-related and lifestyle factors may explain this association.

- Physical-environmental resources
A vast number of physical, chemical, microbiological as well as psychosocial factors associated with the natural and constructed environments may affect health. Obviously basic prerequisites of health are low levels of pollution of air, water and soil, low levels of noise, crowding and traffic congestion. The socio-economic factor may have a strong buffering potential. For example one of the most polluted cities in the world, Tokyo, has one of the lowest infant mortality rates and one of the highest life expectancies (Patrick and Witicker 1995). In the rapidly growing, highly polluted, overcrowded and very poor mega-cities in Latin America, Asia and Africa life ecology may, however, have a strong negative impact on health.

- Social and cultural resources
In his famous work on suicide the French sociologist Durkheim concluded already a century ago that social support can be a very powerful social health resource. In the landmark Alameda County Study in the U.S. (Berkman and Syme 1979) it was found that people living in a tightly knit social network have less than half the risk of dying within the next 9 years than people with a loose social network. Many studies have confirmed the strong salutogenic effect of social networks and social support (House 1988). Social integration and cohesion can indeed contribute to promote health and prolong life (Kawachi et al. 1998). Socio-emotional bonds can be assumed to be crucial factors in family functioning and child development (Schor and Menghan 1995), in sociobiological programming, in fostering a sense of community (Patrick and Wickizer) and in developing "social capital" (Wadsworth 1996). Social capital has been postulated to operate as a broad and strong social factor integrating positive cultural values and social norms; mutual trust and solidarity; horizontal networks for social support; practical help and communication. Social capital is seen to be associated with good government performance, civic participation and high levels of population health (Putnam 1993).

- Psychological predispositions
Human health is produced in a process of continuous person-environment interaction. Psychological dispositions and motivation are known to play an important role in this process. Several psychological factors were postulated to affect salutogenesis and health (Geyer 1997). Examples are constructs such as Self-efficacy, Hardiness and Sense of Coherence (SOC). In his Salutogenetic Model Antonovsky (1987) postulated SOC to explain, given comparable conditions, why many people stay healthy and some not.
- Biological predispositions
There is consensus that biological predispositions and biological resources play an important role in person-environment interaction. To what extent human development and health is determined by genetic programmes is a matter of debate. A careful review of the research findings (Baird 1996) comes to the conclusion that not more than about 5% of human ailments may be genetically programmed and that in the remaining 95% health may be genetically predisposed but not predetermined. It is assumed that the GENOM project will not drastically change this situation and that the danger of wasting resources is real.

- Gender
The consistent patterns of an association between gender and health have been taken as evidence of how potent the social structure can be (Walsh et al. 1995). A very large number of studies were conducted to explain the well-known gender differences in health. In a series of studies Verbrugge and her colleagues have advanced our knowledge in this field. The results indicate that men have higher morbidity because of higher biological and acquired risks. Women are more attentive to health problems and seek more medical care than men. Men and women differ little in their ability and motivation to report health problems (Walsh et al 1995).

- Race and ethnicity
In the U.S. the majority groups dominating the country are found to enjoy better health than the minority and indigenous groups (King and Williams 1995). This is shown by many indicators of mortality, morbidity and life expectancy. There is some indication that similar patterns of disease and health can be expected in other countries as well.

- Stress and coping
Psychosocial stress and social as well as psychological coping are known to be powerful determinants of health. The imbalance of high demands and coping capabilities and resources perceived as stress is unequally distributed in society. People in lower SES groups tend to experience more stress than people in higher SES groups (Pearlin and Schoefer 1978). In a large number of studies the association between work stress and levels of morbidity and mortality was investigated. High levels of psychosocial demands such as hectic or boring work in combination with insufficient opportunities to use one’s own knowledge and skills and to decide on the organisation of work, tend to be associated with high prevalence and incidence of risk factors, morbidity and mortality (Karasek and Theorell 1990, Marmot and Feeney 1996). On the other hand, work may be an important resource of health and health may be an important prerequisite for work. This suggests a virtuous circle of health and work (Marmot and Feeney 1996).

- Lifestyle
Due to the predominance of the risk factor model in epidemiological and medical research the association between risk behavior and chronic disease, especially cardiovascular disease, appears to be an over-researched area. But lifestyle is a more complex theoretical construct. It refers to patterns of values, attitudes and social behaviour, and to the structuring and management of everyday life (Anderson et al. 1988). This broader concept of lifestyle needs to be conceptualised and studied more systematically. Recently behaviour patterns were studied in large epidemiological projects. One consistent finding was a strong protective effect of regular consumption of vegetables on developing cancer, coronary heart disease and other chronic diseases (Hirayama 1990). Regular physical activity was found to
be another protective or salutogenic factor, but there seems to be no consensus as to how much exercise is needed to have a long-term health effect (Erikssen 1990, Emmons et al. 1994, Mensink et al. 1996).

Discussion

As this knowledge review has shown health is sustained and created by very complex patterns of environmental factors, person-environment-interactions and personal factors. Health promotion needs a theoretical framework and specific working models to guide actions. The disease-oriented approach to health is based on the premise that disease prevention and health care will reduce health problems and health care need. As Evans and Stoddard (1994) argue quite the opposite has been observed. The health promotion approach rests on the premise that more health is created and more disease prevented and cared for by organized efforts at health promotion. Integrating the "health promotion cycle" (Figure 5) into the social, cultural, economic and ecological environments will support sustainable salutogenic person-environment interaction, better health and functioning, more well-being and quality of life.

(Figure 5)

Figure 6 integrates the health promotion cycle into the model proposed by Evans and Stoddard (1994) (Figure 4). The resulting theoretical framework shows some of the more important pathways of health determinants as well as the two main entry points into the system for health promotion: the social, economic and physical environments and the systems of person-environment interaction: stress and coping, lifestyles, psychological and biological learning. Health promotion is postulated to improve health and personal/social functioning and further along the pathway to enhance prosperity, welfare and the socio-cultural, economic and physical environments. Effective health care adds to health and functioning by reducing disease.

(Figure 6)

3.3 Determinants of the health of populations

The previous Section focussed on the health of population groups and individuals within populations. Still more can be learned about the factors and processes determining health when we compare the determinants of health in populations and analyse the development of population health in historical context. Turning to the river metaphor again we now consider different populations in different rivers. The question is, how can we explain that people in some rivers survive longer, stay healthier and feel better?

Countries differ remarkably in the health of their people. In 1996 average life expectancy at birth globally was 65 years, it has increased about 10 years during the last decade. Worldwide inequality in life expectancy is very big, ranging at birth from 38 years in Sierra Leone to 80 years in Japan (WHO 1997). How can the large health inequalities between countries or populations be explained? From the evidence accumulated over the last decades there can be little doubt that the answer lies in the different economic, social and cultural environments.

As shown in the World Development Report (World Bank 1993) life expectancy of populations rises sharply up to a GNP per capita of approximately US$ 5,000. After this level the impact of income on life expectancy declines steadily until it virtually disappears (Figure 7). Wilkinson (1994, 1996) explains
the disappearance of this relationship by the so-called "epidemiological transition". It marks the period in time when the main causes of premature death shift from the infectious diseases to the chronic degenerative diseases. Before this period average income per person is the basic prerequisite for life and a significant determinant of health, and there is some indication that life expectancy grows fastest in those segments of the population where life expectancy is highest. After this period of transition the majority of the population has gained access to the basic necessities of life and the so-called "diseases of affluence" become the major causes of death. The asymptotic shape of the life expectancy curve seems to explain why in developed countries increases in income are not associated with significant increases in life expectancy.

(Figure 7)

Throughout the twentieth century life expectancy has steadily risen in nearly all countries (World Bank 1993). It seems that the higher the standard of living was the more impact it had on the further increase of life expectancy. Life expectancy continues to rise at an average pace of about 2 to 2.5 years per decade. On the basis of cross-national studies (Preston 1975, cit. Wilkinson 1996) it has been concluded that no more than 10 per cent of the rise in life expectancy is associated with increase in GNP per capita. The crucial question is, how can the remaining 90 per cent be explained?

Different mechanisms must be assumed to explain salutogenesis in those countries having not yet passed through the epidemiological transition and those having passed through it. In the developing world countries with a lower absolute poverty rate seem to achieve a better health status. Many poor countries suffer from a vicious circle of illness and poverty, a spiralling process of poverty causing ill health and ill health causing poverty. The level of life expectancy may not only depend on economic performance, but on how governments allocate resources. Land reform as well as investing in education, nutrition, family planning and basic primary health care may improve the health status of the population (World Bank 1993, Carrin and Politi 1997).

In the developed world, health care cannot be considered as a major factor in the rise of life expectancy, despite small improvements in the treatment of chronic degenerative disease (World Bank 1993, Bunker et al. 1995, Wilkinson 1996). Nor does the decline in smoking and other risk factors provide a sufficient explanation. As Wilkinson (1994, 1996) has shown in a series of studies, not the countries with the highest GNP per capita are the healthiest but those with the smallest income gap and the smallest proportion of poor people. Income distribution and not the absolute level of income predicts a nation's level of health. Life expectancy has grown fastest in those OECD countries where relative poverty decreased fastest. This relationship is very strong and is independent of GNP and expenditures for medical care. In Japan, for example, income distribution narrowed most and life expectancy grew most, and variation in death rates decreased most (Wilkinson 1994).

If these findings are correct a strong determinant of population health must be assumed which is relatively independent of national income. During an ongoing process of modernisation societies seem to accumulate a powerful resource "X" determining life expectancy to rise in their populations in spite of the fact that GNP per capita does not. Putnam (1993) has postulated a social macro-factor called "social capital". Social capital reflects how societies or social systems are organized and what potential they have to approach social and public health issues. In a study conducted in Italy social capital was operationalised in two ways: as a measure of "civic community" assessing value solidarity, civic participation and integration, and as a measure of "institutional performance" assessing achievements of local government to conduct
public business. In an analysis including all Italian regions a significant association was found between both measures of social capital and infant mortality (Putnam 1993).
A number of community studies were conducted since the 1960s to show that coherent patterns of socio-cultural factors may account for good health and favourable health trends. This phenomenon was found in several studies and was labelled "the Roseto Effect" after a widely cited study in the Italien-American town Roseto in Pennsylvania (Patrick and Wickizer 1995).

As was discussed already in the previous Part social capital is postulated to be a rich and complex concept integrating health-promoting social and cultural norms, values and knowledge shared by the people in the community; positive social orientations towards community life and public issues; networks of communication, mutual support and practical help (Putnam 1993, Patrnick and Wickizer 1995, Hertzman 1996).

Discussion

In the light of our current knowledge three broad determinants of the life expectancy and, because of a postulated association, of the health of populations, sub-populations and individuals can be identified (Kawachi et al. 1994):

- the absolute level of income,
- the distribution of income, and
- a comprehensive social factor referred to as "social capital".

The absolute level of income is a strong determinant of health in poor countries. In these countries income is crucial for providing the basic prerequisites for health, in particular housing, food, clean water and sanitation, as well as education and primary health care. The income distribution was shown to be a strong determinant of health in rich countries. Relative income reflects socio-economic inequality, inequity as well as how people relate to each other socially.

Social capital has been postulated to integrate structural conditions, positive values and norms, a sense of community and solidarity, networks for communication, social support and mutual help, civic participation and good government performance to handle public issues such as health and welfare. Together with income level and income distribution social capital is postulated to generate health potential which in turn creates health (Figure 8). Health potential is defined as a basic salutogenic capacity of social institutions and organisations to maintain and strengthen the health of the people and to reduce disease.

(Figure 8)

If this model is a reasonable one one can expect to promote the health of a population, a sub-population or a group of individuals, by increasing their level of income, by reducing the income gap and by developing social capital. Of course, further conceptual clarification and empirical studies are needed to improve
and to test our knowledge in this field.

3.4 Knowledge gaps

This review has shown that a considerable amount of knowledge exists already that can inform and guide health promotion. As most of this knowledge was developed in the context of disease-oriented research, several serious knowledge gaps still exist. They will be summarised under four headings: description and analysis gap, theory gap, conceptual gap and methodological gap.

- Description and analysis gap
  There is rather limited descriptive information and analysis on what salutogenesis in fact means in different social and cultural contexts. Within the expected lifespan, what is a "healthful life", and what is the meaning of ill-health in such a life. What is "healthy ageing"? Are there different social patterns of healthy ageing, for example specific gender patterns? How do socio-economic and socio-cultural factors affect salutogenesis and ageing?

- Theory gap
  There is urgent need for a theoretical framework of salutogenesis integrating current knowledge on the major economic, social, behavioural and psychological health determinants. Are there coherent patterns of economic, social, coping and lifestyle factors in healthy life? Are there specific causal pathways of health determinants in healthy ageing?

- Conceptual gap
  There is a particular need to clarify and define some of the key determinants of health. One is the concept of social capital, a postulated complex social factor determining health potential. Another one is the concept of health potential, a salutogenic resource and capacity of a social system, a social group or an individual to maintain and create health.

- Methodological gap
  There are a number of methodological problems to be tackled. To describe "healthy life", to develop useful theoretical frameworks and to clarify and define complex factors requires the imaginative application of qualitative approaches and methods. Qualitative research will be necessary to develop and test new indicators of health determinants, of intermediate health promotion outcomes and of health and disease outcomes. To quantitatively test theoretical frameworks and indicators new statistical modelling techniques are to be applied, for example graphical models.

4. Conditions and dynamics of successful health promotion

As outlined in the Ottawa Charta health promotion means to act within or to intervene into a social system in order to strengthen its health potential and to improve the health of the people. At the macro level health promotion implies first to advocate, to enable and to mediate within and between several societal sectors, for example, the economic sector, the education sector, the science and the health care sectors, and second to reorient policies as well as legal and fiscal measures towards health and to coordinate
their health-related efforts. At the meso and micro levels health promotion means advocacy and coordinated action to develop social capital and health potential by building networks of communication, by facilitating community and organisation development, by educating and training professionals and active social groups (Figure 8).

4.1 Evaluation of health promotion interventions and actions

Under what conditions can health promotion be expected to be successful in producing health gains and in closing the health gap within a population or a larger population group? To provide a preliminary answer studies were selected from the health promotion literature meeting two criteria: they must have been planned to modify important health determinants and to evaluate changes in health potential or health outcome. Three different kinds of studies will be reviewed: interventions or activities conducted to strengthen social and individual health potential, community-level interventions and organisation-level interventions.

Interventions to strengthen social and individual health potential

In a recent study Gepkens and Gunning-Scherpes (1996) analysed 98 published studies on health promotion interventions selected from nearly 300 studies, and 31 further studies reported in the grey literature. Over half of the 98 published intervention studies were conducted in the US, 40% in the UK and the Netherlands and the rest in several other developed countries. Sixty-eight of the interventions were categorised as health education, most of them providing information and personal support; 16 were structural measures aiming at major health determinants such as unemployment and accessibility of health care; 11 were interventions within existing health care such as cancer screening programmes.

Fifty-eight of the 98 interventions were reported to be effective, 27 with dubious effect and 13 ineffective. Most of the health education interventions providing personal support were judged effective, health information without personal support or structural measures was seldom found to be effective. Long-term effects were however not evaluated. It was concluded that the published intervention studies provide valuable information on how to reduce inequality in health and that there is much room for improvement in existing health policies.

Community-level disease prevention and health promotion

In the last two decades a number of large community-based intervention projects were conducted in the US, Europe and Australia to prevent coronary heart disease and to improve health and well-being. The North Karelia project (Puska et al. 1985) is a good example to illustrate several relevant points. The study was a 10-year community intervention programme in a region of about 180,000 people. A comprehensive intervention strategy was applied combining strategies of community and organisation development, training of health personnel and community leaders, as well as risk factor screening and medical prevention.

In North Karelia risk factor levels, cardio-vascular mortality and total mortality declined faster than in the reference area. In the intervention region a rise in average perceived well-being was found. However,
at 20-year follow-up cardio-vascular mortality and total mortality had substantially and equally much declined in North Karelia and in the rest of Finland, but a significantly greater decline in mortality from cancer was found in North Karelia (Puska et al. 1993). The community-based prevention trials conducted in the US, West Germany and Australia differed in design, intervention strategies and evaluation methods from the North Karelia Project so that an exact comparison of their health impact is not possible. They do however shed some light on the conditions under which successful health interventions at community-level are possible (Noack 1996). In order to achieve health gains in terms of cardiovascular risk reduction and, as in the North Karelia Project in terms of reduction of total mortality, cardiovascular and cancer mortality and improvement of perceived health, certain conditions seem to be necessary. The government and the major societal sectors and institutions must be committed to this goal; an adequate organisational and professional infrastructure must exist; communities, organisations and the people must actively participate; the intervention must be carefully planned, professionally conducted and evaluated, and there must be sufficient time.

In reviewing a large number of community intervention studies in the US and in other developed and some developing countries Patrick and Wickizer (1995) concluded that community-based intervention trials and broader community interventions can produce positive results. In many studies it was, however, difficult to derive intervention objectives that can be assessed with measurable indicators. Little was learned about whether and how different intervention strategies affect outcomes and ultimate success, for example, when and how community organisation provides well-being.

Most of the intervention studies reviewed so far included elements of health promotion. They were, however, conducted within the general framework of disease prevention or preventive medicine. The WHO Healthy Cities Project launched in 1985 was the first major initiative following the Ottawa Charter and the "settings approach" of health promotion. This approach works on the premise that the city is a socio-ecological environment that plays a crucial role in determining the health of those living in it (Ashton et al. 1986). One of the key principles which distinguishes the Healthy Cities approach from many of the community prevention approaches is that the intervention should not be externally administered. Instead communities should be empowered to define health for themselves and decide how best to achieve this aim. Three implementation strategies are central: fostering public participation, strengthening community health services and coordinating healthy public policy.

The Healthy Cities Project has grown into an international movement involving many national and regional networks in Europe and other parts of the world (Tsouros 1995). First results of case studies on the implementation and practical experience from the UK, Canada and the US have been published (Davies and Kelly 1993). Evaluation studies of Healthy Cities Projects in the US, Australia and Finland (Flynn et al. 1991, Holman et al. 1996, Kumpusalo et al. 1996) show that health promotion programmes in these settings facilitate attitude and behaviour changes and organisational changes.

Organisation-level health promotion and disease prevention

The worksite has become a preferred place to conduct health education and health promotion activities. Up until recently the vast majority of workplace health programmes were prevention activities aiming at the reduction of cardiovascual risk. Reviewing the published workplace health promotion studies in the US, Kasl and Sexner (1992) concluded that such efforts can be effective to control hypertension or to
involve larger groups of employees in exercise and fitness activities, but that they had otherwise failed to meet criteria of success. An overwhelming majority of these projects were atheoretical demonstration studies adding little to existing knowledge. Many workplace health promotion activities reportedly had some effect, but due to serious methodological problems it is difficult to say why. The authors concluded that workplace health promotion programmes in the US largely failed to improve health by modifying the work environment. Similar conclusions can be drawn about many workplace prevention programmes conducted in Europe. An example is a large WHO Collaborative Trial in 33 pairs of factories in four European countries (Komitzer and Rose 1985).

More recently the focus of workplace health promotion strategies seems to be shifting to the work environment. For example, Karasek (1992) analysed 19 case studies of interventions to reduce work stress in North America, Mexico, Europe and India. He concluded that effective stress reduction requires both restructuring of the organisation of work and the structure of tasks as well as the participation of workers. A comparative study in the car industry found sickness absence rates in Japanese-owned firms in Japan as well as in the US and Europe to be less than half of the sickness absence rates in firms owned by US and European manufacturers. When compared with their US and European colleagues, most workers in Japanese-owned firms tended to work in teams, receive more training, participate in decision making, suggest more innovations and have more job rotation (Marmot and Feeney 1996).

It has been known for long that work is one of the most effective determinants of health in adult life and that health is an essential resource of work (Marmot and Feeney 1996). This underlines the importance of workplace health promotion from the economic as well as from the public health perspective. Health promotion has become a virtual necessity in those parts of the service sector where the organisation of work affects the health of the workers and the health of clients. This may explain why an increasing number of countries networks of Health Promoting Schools and Health Promoting Hospitals have developed.

Discussion

Health promotion has become a rapidly growing and highly dynamic field spreading over diverse regional and social environments and involving different professional and nonprofessional actors as well as client populations. Despite considerable diversity and heterogeneity the conditions and dynamic elements of successful health promotion actions show many commonalities.

Health promotion activities can produce positive health outcomes. A positive health outcome may be a gain either in level of health or in health equality or both. In most of the published studies on health promotion and/or disease prevention health gain was assessed as reduction of disease risk or disease.

On the basis of the knowledge reviewed in this Part it can be concluded that health promotion can be successful to the extent several essential conditions are met. Successful health promotion requires

- sufficient political, economic, professional and sociocultural support;
- an effective organisational structure as well as adequate professional and material resources;
- a strong orientation towards health needs in the population, social and cultural values as well as strong community support and participation;

- a full and carefully conducted intervention or action cycle including assessment and analysis of needs and problems, planning and implementation of intervention, evaluation and quality management - and sufficient time.

In the programmes and activities reviewed in this Part a number of weaknesses were found. Frequently the underlying theoretical frameworks were not sufficiently clear, and an adequate description of the intended changes and of the actions taken was missing. In many programmes the research approaches and methods that are at our disposal today were used uncritically or selectively. For example, where health indicators could have been used to evaluate outcomes only risk factor measures or disease indicators were applied. Health interventions deal with complex social factors many of which cannot be quantified. Often qualitative approaches are called for. This has not yet been recognized sufficiently.

4.2 Knowledge gaps

As in the research on health determinants and salutogenesis, four broad knowledge gaps can be identified in health promotion research: a description and analysis gap, a theory gap, a conceptual gap, and a methodological gap.

- Description and analysis gap
  Much of prevention and health promotion research lacks sufficient description and analysis of the intervention or action goals, of the interventions and actions implemented, of what was experienced during the intervention process, of the social changes observed, and of the expected and unexpected health outcomes. Without descriptive information on what was intended and what was done it is almost impossible to learn from health promotion research.

- Theory gap
  In many health intervention studies the underlying theoretical model and the rationale for the health promotion and prevention actions is not clear. There is a definite need to spell out the postulated links between, for example, the model of organisational change and lifestyle modification, the strategies applied to stimulate and support these processes, and the expected or observed outcomes.

- Conceptual gap
  A large proportion of evaluation studies lack a full account both of intermediate or "proximal" outcomes and of "distant" outcomes. There is need to describe or - if possible - measure proximal outcomes such as changes in social networks and support, life skills and psychological factors - outcomes that can be summarised under the concept of gain in health potential. And there is need to assess all relevant distant health outcomes, not only changes in risk factors and disease categories but as far as possible in health categories and by using health indicators. Only a full account of the important changes allows to judge whether and how far health promotion was successful or unsuccessfull.

- Methodological gap
  In health promotion and prevention research there is a clear methodological gap. Only some of the
available methodological tools are applied. Evaluation studies would benefit significantly from applying a wider range of designs, for example quasi-experimental and participatory research designs; from relying more on descriptive data and observations of participants; from exploiting the full potential of qualitative methods; and from combining both qualitative and quantitative methods.

There can be no doubt that health promotion research has made considerable progress over the last decade (Badura and Kickbusch 1991). It is worth noting that the conclusions that can be drawn from the research results reviewed in this Part seem to support the key principles of health promotion formulated in the Ottawa Charter: Successful health promotion requires a supportive environment. Successful health promotion means enabling groups and individuals to realize aspirations, to satisfy needs, and to change or cope with the environment in order to increase control over, and to improve their health. However, there are still significant knowledge gaps and application gaps. In many areas essential knowledge does not exist and in most practical fields the existing knowledge is not being applied.

5. How to close the knowledge and the application gaps in health promotion?

The existing knowledge and application gaps provide considerable challenges for population health research and health promotion research.

The challenges for population health research

The scientific community in the epidemiological and in the social health sciences has become increasingly concerned about growing knowledge and application gaps in public health. Epidemiological research on the determinants of health has been dominated by the clinical risk factor model. The rapid increase of risk-related studies is seen to reflect a potentially harmful "risk epidemic" in the health sciences and in health technology (Skolkekken 1995). It is argued that clinical epidemiology is largely methods-driven and based on a "black box paradigm" of chronic disease which is loosing utility (Susser and Susser 1996). Because of its reductionist clinical approach epidemiology uses "more and more advanced technology (...) to study more and more trivial issues while the major causes of disease are ignored. It focuses on the individual, blames the victim and introduces interventions that can be harmful" (Pearce 1996).

There is growing consensus that epidemiology needs to be integrated into public health again. The academic settings of the Schools of Public Health should become the potential leaders in this process (Winkelstein 1996). A new public health epidemiology has to move away from the risk factor model. Starting from a health perspective it has to integrate theory and methods and contribute to the development of an interdisciplinary science of population health (Badura and Kickbusch 1991, Noack et al. 1993, Dean 1993 and 1994). New statistical models and specifically graphical models are seen to be promising to analyse the causal pathways of environmental, behavioural and individual health determinants (Dean et al. 1995, Freidl 1997).

Health promotion research and the wider field of public health research study dynamic processes in complex
social systems. The quantitative research designs and methods developed to study individuals are quite inappropiate for many questions in population health and health promotion. Qualitative approaches and methods like case studies, ethnographic interviewing, focus group activities as well as participatory research designs are seen as particularly valuable tools. They allow to describe and understand the salutogenic processes in populations and social systems, the "causal web" of health and the dynamics and outcomes of health promotion (McKinlay 1993).

The challenges for health promotion research

In principle health actions in populations and social organisations may follow two distinct strategies. They may facilitate and support salutogenesis by a participatory developmental process within regional or social settings, or they may intervene from the outside to plan and organize social changes in a given regional or social setting.

In the last two decades many large intervention programmes or projects were conducted to reduce the risk of coronary heart disease and other chronic conditions. Most of them followed the principles of experimental epidemiology as closely as possible under the circumstances given. Only some of them showed significant and sustainable health gains as, for example, the North Karelia Project. In many of these efforts declining disease risk were observed. Frequently, the differences in risk decline between intervention and comparison region were, however, small or negligible and they tended to vanish within a relatively short period of time. The strengths and the weaknesses of this first generation of community intervention studies were widely discussed. The theoretical frameworks guiding the intervention were judged to be a particularly weak point (Fincham 1992). Summarising the overall results it was concluded that the interventions may not have been effective enough or the "natural trends" existing in the population may have been as "effective" as the interventions (Susser 1995). This would seem to be a strong argument for a developmental and participatory approach to health promotion as proposed by the Ottawa Charter.

The challenge for health promotion research is to produce knowledge and insight that will help to improve theoretical frameworks and methodological tools for health promotion action in populations and social systems (Badura and Kickbusch 1991). Levin and Ziglio (1996) argue that health promotion action is informed by multiple theories and that an overarching theory still needs to be developed. They suggest to build a "creative knowledge base" as a theoretical rationale for such an undertaking. This has to specify health promotion interventions that can be expected to improve the level of health and to reduce the socioeconomic gap in the population. To develop health promotion theory and to integrate theory and practice, lay theory may be helpful as it makes use of the culture and the experience of the people (Milburn 1996).

The development of appropriate theory and methods for the evaluation of health promotion is another challenging research task. It is essential to analyse and define the concept of health potential which has been proposed to represent an important intermediate health promotion outcome. Population health research suggests to include a pattern of coherent salutogenic dimensions like established health promotion policy; communication and socio-emotional support; coping and life skills; health orientation and lifestyle and health information. Enduring changes in health potential are postulated to be a prerequisite for sustainable health gains.
It has been recognized widely that health promotion suffers from a serious evaluation gap. Without a strong effort in this field the further development of health promotion may be impeded seriously. Evaluation of the health promotion process may serve as an important element of organisational learning and of quality management. Evaluation of the health promotion outcomes may help to legitimise further investment in this field. Recently it has been suggested to plan health promotion on the basis of empirical evaluation studies (Ziglio 1996). It is assumed that evidence-based health promotion may help to set up "robust programmes" that have an impact on the acceptability, equity, empowerment, accountability and sustainability of outcomes (Ziglio 1996).

Most of health promotion actions and research have been developed in rich Western countries. However, as Makara (1997) warns us, the old health education and health promotion designs are often useless reaching the poor, ethnic minorities, the unemployed and immigrants. The equity dimension remains to be a critical issue, for health promotion actions as well as for the evaluation of health promotion outcomes.

Building an infrastructure for health promotion research

To close the knowledge gaps in health promotion requires a solid infrastructure for health promotion research. Four fields of activities need to be developed to reach this goal: funding, training, organisation development and networking.

- Funding
  Lack of appropriate funding has been one of the most serious obstacles of research for health promotion. As success tends to breed success, the crucial first step will be the initial funding of a "critical mass" of high quality research. During this initial phase in many countries public funds may be essentiell. At later stages public as well as private funds will have to be secured.

- Training
  Most researchers in the fields of population health research and health promotion research are educated and trained on the basis of the disease and risk factor models and in quantitative methodologies. Health promotion research and training for health promotion must be based on a health model and include both qualitative and quantitative approaches. This will require new education and training programmes as well as related research projects.

- Organisation development
  A productive research field for health promotion needs an appropriate organisational structure, sufficient personnel, technical resources, professional leadership and management as well as an autonomous status. Autonomy from research fields working on another paradigm seems to be essential.

- Networking
  National and international networks of communication and cooperation in health promotion exist already. But they need to be expanded and strengthened. Modern communication technology will be an important asset. At a later stage research for health promotion will need the support of professional organisations and of international scientific journals.
6. The role of the World Health Organisation

The World Health Organisation has an important role to play in the development, coordination and evaluation of research for health promotion. Because of its leadership and competence in the field, WHO should contribute as a catalyst, as an organisation setting goals for research policies and standards of excellence, and as a coordinating institution.

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Figure 1: Philippine - German Comparison Concepts of Health

Philippine Sample

German Sample

Source: Tropan, Stumm, 1992

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Figure 2: Salutogenesis and Pathogenesis

Salutogenesis

Illness → Disease → Disability

Well-being → Health → Functioning → Health expectancy

Pathogenesis

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Figure 3: Outcomes of health promotion

HEALTHY PUBLIC POLICY

- Health oriented Community action
- Supportive Environments
- Personal Skills & Attitudes

INTERMEDIATE OUTCOMES

HEALTH AND DISEASE OUTCOMES

WELL-BEING +
HEALTH POTENTIAL +
QUALITY OF LIFE +
HEALTH EXPECTANCY +

DISEASE -
DISABILITY -

health promotion action

+ increase, - decline
Figure 4: Feedback loop for human well-being and economic costs

Social Environment

Physical Environment

Genetic Endowment

Individual Response
- Behavior
- Biology

Health & Function

Disease

Health Care

Well-being

Prosperity

Source: Evans/Barer, 1994
Figure 5: Feedback loop of health promotion and health
Figure 6: A conceptual model for health determinants and health promotion

- Social Environment
- Economic Environment
- Physical Environment
- Psychological Dispositions
- Biological Dispositions

- Person-Environment Interaction
  - Coping
  - Lifestyle
  - Learning

- Health Promotion
- Health & Function
- Disease

- Health Care Cycle
- Seeking Care
- Outcome of Care

- Well-being & Quality of Life
- Prosperity & Welfare

- Health Care
Figure 7: The changing gearing of GNP per capita to life expectancy

Source: World Bank 1993
Figure 8: Health determinants and health promotion

HEALTH PROMOTION

Income Level

SOCIAL CAPITAL

HEALTH POTENTIAL

Income Distribution

HEALTH+

DISEASE−
New Players for a New Era: Leading Health Promotion into 21st Century
Fourth International Conference on Health Promotion
Jakarta, Indonesia, 21-25 July 1997

REVIEW AND EVALUATION OF HEALTH PROMOTION

THE EFFECTIVENESS OF ALLIANCES OR PARTNERSHIPS FOR HEALTH PROMOTION
A global review of progress and potential consideration of the relationship to building social capital for health
- conference working paper -

provided by:
Pamela Gillies
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Summary

This paper assesses the impact of alliances or partnerships for health promotion in northern and southern nations, as described in published papers and through contemporary accounts of best practice.

The review of the published material privileges accounts from industrialised nations. The linguistic and cultural barriers to publication of accounts of health promotion should be noted. Thus any analysis of such data is inevitably biased and this underscores the need for additional means of identifying and reviewing successful health promotion from around the world. In this review, case study reporting though necessarily selective and incomplete, provided a means for presenting a more balanced overview. Whilst reports in the published accounted tended to focus upon change at an individual level, reports from case studies to tackle the broader determinants and context of health. They focussed on the process of change through social action and the development and maintenance of networks, partnerships and connections for the promotion of health across agencies, groups and among people.

The balance of evidence from published literature and case study accounts is clear. Alliance or partnership initiatives to promote health across sectors, across professional and lay boundaries and between public, private and non-government agencies, do work. They work in tackling the broader determinants of health and well-being in populations in a sustainable manner, as well as in promoting individual health-related behaviour change. The greater the level of local community involvement in setting agendas for action and in the practice of health promotion, the larger the impact. Volunteer activities, peer programmes and civic activities ensure the maximum benefit from community approaches. In addition, durable structures which facilitate planning and decision-making such as local committees and councils are key factors in successful alliances or partnerships for health promotion. Such mechanisms also support the sharing of power, responsibility and authority for change, the maintenance of order and of programmatic relevance and allow local people one means of reflection and for dissent. At a national, regional, district, village and local community or neighbourhood level, this review found that the existence and implementation of policies for health promotion activities were also crucial to sustainability.

The evidence from the review suggests the need for a new package of indicators to measure the effects of health promotion. Indicators for success which focus upon benefits for individuals cannot capture adequately the extent of the impact of the many and varied collective, collaborative health promotion initiatives, alliances or partnerships currently underway around the world. These have been shown to affect families, communities, institutions and aspects of the organisation of social and civic life. This paper posits the notion of social capital as one important new framework for organising our thinking about the broader determinants of health and how to influence them.
This paper argues that the construct of social capital advances our understanding of the social influences on health. It also allows us to re-examine community participation, alliance and partnership approaches to health promotion and focuses attention on the mechanisms for connecting people with public institutions and with power at a local level. It may allow us to conceive of approaches to deal with asymmetries in power and could provide one means for its redistribution, thereby contributing to efforts to reduce inequalities in health and well-being. The idea of social capital may therefore have much to offer to health promotion research in the future, particularly those studies which aim to understand and evaluate the impact of alliances or partnerships for health promotion.
1. Introduction

1.1 Recognising the broader determinants of health

Since the Ottawa charter was launched in 1986 there has been growing interest in developing approaches to health promotion which tackle the broader social, economic and environmental determinants of health.

These developments have, in part, been in response to a recognition that individually focused behavioural interventions for health promotion and disease prevention have had a relatively small but nonetheless significant impact. Such approaches, grounded in psychological behaviour change theories, have an impact, at best, on an average of one in four of those who participate (Gillies, 1996). These individuals tend to be the better off, better motivated and better educated. New and compelling evidence has however drawn our attention to the need to understand and address those factors which affect health, but which are beyond the control of individual influence on behaviours or experience.

The social and environmental determinants of health, their causes and consequences for populations, have been subjected to scrutiny in both developed and developing country contexts. From Brazil to Britain, the evidence is clear: wealth, occupation, social support; housing and education are significantly related to wide differences in life expectancy, infant mortality and psychosocial well-being (Blane et al 1996; Marmot et al 1991; Brunner et al 1993; Evans et al 1994). They are also strongly associated with the quality and level of infrastructure in the neighbourhoods in which people live and with preventive health behaviours (Macintyre and Ellaway, 1996).

Additional analyses by Wilkinson (1996) demonstrate the adverse effects upon health and well-being of relative inequalities in income within societies and point to the benefits of equitable societies with strong social support and cohesion.

1.2 Social capital as a resource for the promotion of health

Social support and civic engagement in activities as diverse as taking part in community group meetings, exchanging childcare with neighbours, being involved in neighbourhood watch schemes and voting, build trust in neighbourhoods and in society at large producing a resource called "social capital" (Putnam, 1993). The production of this resource is related to the health, wealth and well-being of populations (Putnam, 1993).

Generally, social capital is produced by features of the organisation of our societies and communities which facilitate coordination, cooperation and reciprocity. Therefore high
levels of trust, positive social norms and many overlapping and diverse horizontal networks for communication and exchange of information, ideas and practical help, will exist where stocks of social capital are high. The relationships and friendships among adults which form the bedrock of social networks provide an informal structure upon which formal citizenship and civic engagement is built (Coleman, 1988; Cox, 1995). Importantly then, social capital does not just describe a resource. It can be defined as a specific process embracing clear but culturally nuanced mechanisms for enabling people and organisations to work together in trust for mutual social benefit. Individuals gain through building social capital and so too do societies. The relevance of social capital in this review of alliances or partnerships for health promotion lies in the fact that one important aspect of the foundation for building social capital is the existence of networks for communication - such networks are fundamental to alliance and partnership building.

Social capital has been related to good governance, economic prosperity and some measures of the health status of populations such as infant mortality and life expectancy in regions in Italy (Putnam, 1993). There is now good evidence of a relationship between the existence of aspects of this kind of social trust and deaths from stroke, accidents and suicides and to survival from heart disease in the US. (Kawachi et al, 1996). Social capital has also been found to exist in the most disadvantaged settings and to be related to preventive health-related activities among disenfranchised groups (Higgins et al 1996). Thus, connections, networks and associations within societies are important mechanisms for the promotion of social cohesion and health and for the prevention of disease (Wallace 1993; Higgins et al 1996; Wilkinson, 1996).

1.3 The global context of local health promotion

In turning our attention to the structural provenance of health-related problems, health promotion in the last decade has however had to consider the impact of global economic forces engendered by: the deregulation of markets; initiatives in relation to human rights; democracy; environmental degradation, military expansion and information technologies (Held, 1996). And yet it has also had to maintain the benefits accrued from best efforts to promote the health of individuals and groups at local and national levels.

This is set against a background of growing gaps in health status and health care around the world; gaps by socio-economic status, between geographical groups, by gender, race and ethnicity and age groups (WHO, 1996).

This paper reviews the extent to which health promotion has faced these major challenges and how far it has succeeded in promoting the health of populations and individuals through approaches based upon alliances or partnerships. An alliance for health promotion can be defined as a collaboration between two or more parties that pursue a set of agreed goals for health promotion. Partnerships for health promotion focus on health outcomes rather than specific health promotion goals. Thus a partnership for health
promotion is defined as a voluntary agreement between two or more partners to work cooperatively toward a set of shared health outcomes.

This paper will explore current understanding of what counts as "best practice" in health promotion and how to measure effectiveness. It will conclude by arguing that the cultural construct of social capital provides a coherent way for organising our thinking about the social context of health and for research, practice and policy in health promotion.

1.4 Reviewing the Evidence

This study adopted two approaches to compiling the evidence of the effectiveness of partnerships for health promotion past and present.

The first of these consisted in a review of the published literature since 1986, using the search strategy of the Cochrane Collaboration. This was commissioned by the Health Education Authority for England and provided the original source of data which was abstracted for the analysis presented here (see Roe et al 1997).

The second approach involved a global network of health promotion experts identifying current best practice around the world. The process was outlined and initiated by WHO, Geneva and required the support and assistance of the six Regional Offices of the World Health Organisation who identified regional focal points for the development and collection of case studies. Each region was invited to contribute up to five current examples of best practice in alliances or partnerships for health promotion. The Health Education Authority's task was to coordinate and support this initiative and analyse case studies collected. The full results of the analysis of the 46 case studies collected are presented elsewhere (Gillies, 1997).

2. Published Evaluations of the Effectiveness of Alliances or Partnerships for Health Promotion.

2.1 Defining and selecting content

The review by Roe et al (1997) of 19 international databases revealed a total of 185 published references to the evaluation of alliances or partnerships for health promotion since 1986. Of these studies, only 43 are included in the analysis presented here.

Those selected comprised studies which reported process or outcome data from evaluations and were not merely descriptions of projects. They also reflect the following broad definitions of alliances or partnerships adopted for this study, namely:
a) at the micro level:

- alliances or partnerships which involve one or more collaborators among individuals or groups or organisations in the public, private or non-governmental sectors in the promotion of health but which do not seek to affect the underlying systems or structures or architecture for health promotion.

b) at the macro level:

- alliances or partnerships which involve one or more collaborators among institutions, organisations or groups in the public, private or non-governmental sector which seek to affect the structural determinants of health.

This therefore represents a highly selective and interpretative review with all the limitations that therefore pertain with regard to generalisation of the findings.

The discussion in this section will focus on two principal questions. Firstly, which kinds of alliances or partnerships for health promotion appear to work effectively and why? Secondly, what is the nature and extent of their impact?

2.2 Which kind of alliances or partnerships work best and why?

2.2.1 More is better

Taken together, the findings presented in Tables 1-3 comprising randomised controlled trials (N=16); studies with control or comparison groups (N=15) and studies with pre and post testing of impact(N=12), clearly demonstrate that however one defines the outcome and whoever the partners in the process are, the stronger the representation of the community and the greater the community involvement in the practical activities of health promotion, the greater the impact and the more sustainable the gains.

2.2.2 Local voices in action

It appears to be important that lay representation in the setting of local and national agendas is taken seriously and is not mere tokenism. It must connote a sharing of power and control between the public and key protagonists whether they be professionals, business employers, health service providers, organisations or policy makers. This observation has been borne out in a detailed qualitative investigation of community representation in community action for AIDS prevention in the USA described elsewhere (Schietinger et al 1995). Thus, durable structures which facilitate a sharing of decision-making such as: committees of employees and employers (Windsor et al 1988; Fisher et al 1994; Glasgow et al 1994), health cooperatives or groups (Shoenbach et al 1992; Burns
1990); school and community coordinating councils (Wotowicz et al. 1992; Heath et al. 1995; Kumulaso et al. 1996); volunteer networks (Johnson et al. 1993; Sellers et al. 1994) are key factors in successful alliances or partnerships for the promotion of health and are, in this review, demonstrably effective at local level.

Mechanisms for involving local people in planning, maintaining order and relevance and in providing an opportunity for dissent are important. So too is the involvement of local individuals in the practical activities of health promotion. Reviews of the effectiveness of peer involvement, social support and community mobilisation in the prevention of HIV provide the most compelling evidence for this (see for example Choi and Coates, 1994; Gillies, 1996). The review reported here confirms this view, not only in respect of HIV prevention and sexual and drug-related health promotion (Rietmeijer et al. 1996) but in relation to smoking (Johnson et al. 1990; Shoenbach et al. 1992; Kuiz et al. 1993); environmental health promotion (Kleven et al. 1992); alcohol and drug use (Johnson et al. 1990) and parenting (Johnson et al. 1993).

2.2.3 Policy and praxis

An inability to engage local citizens in productive decision making about health and social welfare and in policy development has been identified as one of the shortcomings of the Healthy Cities initiatives in Australia and Canada (Baume and Cooke, 1992; Ovellet et al. 1994). Indeed several of the successful community based initiatives identified in this review had a policy development element as one of the main activities and identified outcomes of success. Local policy development around single issues may however be easier to deliver with citizen involvement than city-wide healthy public policies in general, because of the immediate relevance and emotional connection of the focus. Workplace policies as part of an integrated package of health promotion approaches may be a good example of this. Kronenfeld et al. (1987) found such policies to be associated with a significant reduction in heavy smoking and drinking in one in five employees.

But there is little doubt that the bold attempts of the Healthy Cities projects are in the right direction since healthy public policies are most certainly likely to sustain local community health promotion activities (Kickbusch, 1993). For example, Kleven et al. (1992) in a project to create healthy environments described how a local community became mobilised around a long-standing grievance about the dirt and untidiness in their neighbourhood as a result of a health needs assessment. "Street" leaders emerged in a street cleaning initiative with 20% of the population engaged in the activity at any one time. Pride and competition for cleanliness centred upon streets where trust was high. However, without the development of reinforcement mechanisms such as the implementation of local authority policies to support the residents effort, interest in the initiative could not be sustained in the longer term. Reciprocity must work and be seen to work across levels in society and across informal and formal networks.
2.3 The nature and extent of the impact of alliance or partnership health promotion projects

In this review of published literature the outcome focus was predominantly on the impact of intervention upon the health related behaviours of individuals. This was the case in 15 of the 16 randomised controlled trials; 13 of the 15 comparison studies and 6 of the 12 pre-post test evaluations. Behaviour change effects reported ranged from 3% to 20% of the populations involved in interventions. This level of impact is the expected range from the application of interventions designed according to popular psychological theories of health-related behaviour change.

Behaviour and behaviour change, does not occur in a vacuum nor is it necessarily a rational process and just as health and well-being are influenced by social and environmental factors so too are behaviours. Alliances or partnerships for health promotion have an opportunity to attempt to influence the wider context of behavioural change and of health, but rarely was this recognised in the published studies of alliances or partnerships identified and presented here.

It could be argued that this may have arisen, in part, from the individualistic focus of the interventions which predetermined the goals set for the intervention and the outcomes measured. This in turn could be the consequence of the lack of sociologically and politically sophisticated theories of behaviour which can cope with the complexity and diversity of the cross-cultural contexts of change.

However even in those studies specifically designed with a community based component, the ‘gaze’ of the evaluator was firmly fixed on behavioural outcomes alone.

Interestingly, there was some evidence of lateral thinking. An understanding of the pressures of the supply and demand characteristics of localities in relation to alcohol and a report of employees "organising for change" as an outcome were noted in two randomised controlled trials (Perky et al 1993; Glasgow et al 1994). One comparative study reported on the positive educational benefits for young women of an innovative school-based crèche and parenting service (Warwick et al 1993).

Evaluations which sought to answer questions about the impact of interventions on relationships and skills-building (Burns, 1990); the development of community trust (Kelvins et al 1992); and the fact of collaborative activities (Beneath et al 1994) could not capture such outcomes readily in studies other than in simple before and after designs. But the findings on behavioural change in the pre-post designs were of the order of those observed in the randomised studies. In this review it could therefore reasonably be argued that there is some cause to believe that the interventions described and not some other effect, did have an impact on the everyday background in which life was lived and experienced even those evaluated with pre-post designs. There is clearly scope however
for re-thinking the kinds of community outcome indicators from process or outcome evaluations that would more reasonably and helpfully measure the impact of alliances or partnerships for health promotion.

Only two studies dealt with "macro" level effects and determinedly set out to affect the underlying structural influences upon health. Both were evaluations of Healthy Cities initiatives and both had appropriately broadly focused indicators of success. Policy development and cross-agency working are examples of the outcomes reported (Baum and Cooke, 1992; Oveljet, et al 1994). The thoughtful qualitative analyses of the impact of these studies made visible the difficulties they had in shifting the balance of power and control in cities, in promoting equity and in gaining adequate citizen representation. Perhaps again it was the lack of an appropriate conceptual framework to guide the process of change which led to the partial success of the initiatives. Indeed, it could be argued that to succeed in promoting increased community participation for control over the wider organisational and systemic influences on health as well as individual factors, there must already be measurable cooperative civic engagement, or social capital, in communities. Or, at least there must perhaps be a minimum level of infrastructure (Mulgan, 1997) and economic conditions without too much hardship (Moser, 1996) to allow the possibility for the development of social trust, exchange and cooperation for mutual benefit to happen.

In summary, the review of published literature on alliances or partnerships privileged initiatives in industrialised nations. This inevitably means that the review of published reports is significantly biased in favour of nations with certain linguistic capacities and also in respect of Western cultural and philosophical traditions. The majority of studies reported an impact upon behaviour and several observed effects upon the organisation of activities and upon the wider social and physical environments in which people live. There were only rare examples of private sector involvement in alliances and these were principally in workplace settings. There were few examples of attempts at "macro" level alliances or partnerships to influence the structural determinants of health. Community based involvement and representation in the practice of health promotion was, however, related to wider reaching benefits to the volunteers themselves, to service provision, working environments and to the social and economic life and well-being of local populations. Although necessarily selective, the additional review of best practice from case studies collected by the Regional Offices of WHO and reported here seeks to redress the balance in accounts of effectiveness, hitherto available only in published sources. The conference in Jakarta will also provide an opportunity for the continuation of this important process.

3. **Best Practice in Alliances or Partnerships for Health Promotion Around the World**

This section will consider the types of alliances or partnerships offered up by health promoters from around the world as examples of best practice and then look at the impact of such initiatives. This will be followed by a brief section on measuring the outcomes.
from partnership approaches to health promotion.

The proforma for submission of health promotion alliance initiatives is presented in the appendix to this document. All of the 44 case studies forwarded by the regional focal points were included in the analysis. In addition, two further case studies highlighting corporate involvement in alliances were included after being forwarded to the HEA through WHO, Geneva. A summary of the key findings of case studies which were presented in English is given in table 4.

3.1 Which kind of alliances or partnerships constitute best practice?

The data presented in table 4 demonstrate an overwhelming commitment to alliances or partnerships which traverse the sectors of health, education, social welfare, environment, transport, tourism and employment and which span public, private and non-government agencies. They show a clear commitment to lay representation in agenda setting, policy making and implementation at national, regional, district, village and local community or neighbourhood level. Emphasis is upon the sharing of power, responsibility and authority for change. There is also an understanding that it is important to maximise the level of community involvement in the practice of health promotion through volunteer networks, peer programmes and civic activities to ensure maximum benefits from the investment.

Thus the findings from case study reports show that around the world there is a great deal of health promotion activity concerned with generating sophisticated and wide-ranging alliances or partnerships for health. Collective and diverse approaches to health promotion, the privileging of equity and lay or local representation at all levels were recurrent themes. The majority of these initiatives were organised at national, district or local level with an eye to the need for sustainability in the longer term. At least one third of the case studies reported, recognised the need for tangible and practicable means of maintaining initiatives and building in flexibility to allow for changes in direction made necessary by structural changes in the wider national or even global environment.

Six studies in addition to the two separate examples provided, spontaneously highlighted the need to work with the corporate sector. This is clearly important, not only for the implementation of workplace health promotion initiatives or efforts which recognise the need to tackle systems of labour and production which provide barriers to preventive health behaviours (Gillies et al, 1996). Corporate support will be crucial in implementing lifestyle health promotion programmes, in setting an appropriate ethos for health promotion, in shaping the wider discourse for debate and discussion and in helping to raise the new resources that will be needed in the future if we are to fulfil a commitment to promoting the health of individuals, families, communities, organisations and societies.
From this review, the foundation elements of good partnership or alliance development today would appear to be: relevant needs assessment combined with the setting up of committees crossing professional and lay boundaries to steer, guide and account for the activities and programmes implemented.

Although most of the studies described community or country-wide activities, there were examples of network initiatives which recognised the need for international solidarity in the sharing of key values and understandings of economic, social and cultural transformation and change ...for health.

To summarise, the message from the published literature of the industrialised nations of: more, more intensive and more equitable partnerships for community based health promotion has been assimilated and acted upon long ago by health promoters in the field in non-industrialised countries. It is evident from the case studies described here that the developed nations have much to learn from the practice and experience of their "developing" neighbours. It could readily be argued that expertise in this field needs to be captured, documented and exported from the "non" to the industrialised world to provide useful guidelines for future action.

3.2 The nature and extent of the impact of alliances or partnerships for health promotion.

3.2.1 Behaviours, health status and service use

Contrary to the review of published papers, only 5 case studies reported upon health behaviour change, mainly in respect of changes in smoking and diet. This is not unexpected given the broader goals adopted by the case study initiatives.

Six studies reported upon the positive health status benefits of their interventions for populations, which included reductions in teenage pregnancies and abortions in Finland (see Aaro) to reductions in night blindness in Bangladesh (Aaro) and reduced worm infestation in Tanzania (Nyamwaya)(see table 4).

In addition, six studies recorded how their partnership work had led to better service access in respect of primary care in Bhutan (Osei), among indigenous peoples in Australia (Perkins and Dorman) and New Zealand (Rochford), in rural villages in relation to immunisation in Pakistan (Al Khateeb), across all social groupings but most particularly those in hardship in a range of health services in Costa Rica (Aaro) and in family planning and contraceptive services among the very young in Finland (Aaro)(table 4).

The overwhelming focus of attention in the evaluation of the case studies was however upon the process of change, and the assessment of the extent to which many of the social
action programmes had impacted upon the broader physical, working, economic and social environment.

3.2.2 Process as outcome

Unlike the published studies of alliances or partnerships for health promotion, interest in the outcome of the interventions in case study reports focused upon the process of initiating and maintaining the alliances and upon connections in societies and communities. The key outcomes were therefore: getting agencies to work together; engaging local people; training and supporting volunteers and networks; creating committees; capturing politicians interest and sustaining political visibility; resource allocation; reorienting organisations and services and promoting flexibility in working practices and undertaking needs assessments as a way of identifying priorities and galvanising interest in the venture. There are many successful accounts of how to create connections for health in communities and in society as a whole and how to access these connections. One challenge for the future may be how to ensure that such networks can be sustained in the much longer term and how organisations and systems can be encouraged to build in a measure of flexibility which will allow them to respond to change in the immediate local or national environments or indeed in response to global shifts.

Important outcomes identified were therefore concerned with the practicalities of changing the context within which preventive and health promoting activities take place and in sustaining changes. Not surprisingly then, one quarter of studies reported policy development as a major achievement and success indicator of intervention. Polices ranged from those in settings such as cities, schools and healthcare centres, to those for particular populations such as the disabled or women and children, to tobacco control initiatives.

3.2.3 The wider context of health promotion

In stark contrast to published accounts, almost one third of the partnership studies reported here were "macro" level partnerships involving one or more institution, organisation or group in the public, private or non-governmental sector, which had attempted to influence the structural determinants of health or aspects of these. The published literature on alliances or partnerships for health promotion from primarily developed countries does not therefore reflect the extent to which health promotion in practice is tackling the broader determinants of health. Brief examples of case study efforts in this area are presented below:
(I) Physical environment

Problems of sanitation and clear water were identified as priorities in the environment. The Healthy Village project in Egypt is a good example of a broad approach to health promotion which set out to tackle the pressing local environmental issue of poor sanitation. It developed and applied new low cost sanitation technologies, raising local investment for the programme and mobilising resources for other health-related initiatives at the same time. (Al Khateeb)

In Pakistan, the Healthy Villages programme implemented by the village development committee resulted in a range of environmental improvement schemes including improvements to local schools. School enrolment subsequently increased. (Al Khateeb)

In Fiji, the Kvadavu Rural Health Project (Roberts) also tackled sanitation and other environmental issues and reported significant improvements in sanitation and an increase in awareness of health related problems generally and a consequent increase in the development of policy related to health promotion.

In Mongar, Bhutan (Osei), the pit latrine programme by local health workers was very successful and community members were more sensitised to health issues as a result.

Finally in Sumatra, Indonesia, a water system and latrine repair programme in schools combined with health education not only increased awareness of the knowledge of how to prevent worm infestation but decreased prevalence (Osei).

(iii) Working environment

The Shanghai worksite health promotion project not only developed healthy policies producing behavioural changes among employees, it physically changed the working environment to make it safer and healthier.

(iii) Economic environment

Four case studies emphasised the need for health promotion to engage in identifying ways to develop local economies and one study in Tonga (Engleberger) reported on an unintended economic benefit through tourism, of the international media coverage given to a national weight loss programme which profiled His Majesty King Taufa'ahau Tupou the Fourth.

The study in Costa Rica (Aaro) outlined the way in which government initiatives to develop the economy underpinned and complemented health policy development. In Tehran, micro-enterprise initiatives were part of the healthy village concept and in Pakistan (Al Khateeb), there was a strong focus on local income generating schemes and
loans for small businesses. In Botswana (Nyamwaya) income generating activities focused upon the successful development of crop rotating skills and the increased growth of local vegetables. This resulted in increased food security within households and increased consumption of nutritious inexpensive indigenous foods.

(iv) Social environment

An understanding of the need to develop social trust and social skills, to extend and support social relationships and networks was emphasised in six case reports. At the family level, Bhatti described two projects in which trust and social support was crucial to women helping women to counter family violence and to develop better parenting skills. In Tehran, the proliferation of women's volunteer networks delivered practical health promotion projects (Al Khateeb). The mother and child development projects among the indigenous Aboriginal people of Australia (Perkins and Dorman) described how the development of trust between local people and service providers was the lynchpin of the successful implementation of their project. Makara noted how trust between Hungarian gypsy populations and social workers was facilitated by professional flexibility and the training of gypsy outreach social workers in the community. Finally at the city wide and national level in Costa Rica, the author emphasised the importance of social relationships and values, democracy and good governance as the foundation for and outcome of their health promotion initiative. (see table 4)

These contemporary examples of health promotion in action demonstrate the major impact globally that the WHO Healthy City initiative and offshoots therefrom has had upon the conceptualisation and practice of health promotion. However, the community capacity strengthening, participation, agenda setting, empowerment, political management and network approaches that define the Healthy Cities movement (Hancock, 1993) have yet to be underpinned by a coherent explanatory model and therefore, not surprisingly, a consistent means of measuring success.

Leonardi (1997) has argued that the Healthy Cities movement presupposes the existence of cooperative civic engagement and high social capital within communities. Good social relationships nurturing mutual trust, shared norms and civic activity seem to be fundamental to achieving the outcomes desired.

The weight of evidence therefore points to the importance of developing social capital as part of the theoretical and practical project of health promotion.
4. Measuring Outcomes in Health Promotion

4.1 Study Designs

Study design and method of measurement clearly depend upon the questions posed by an evaluation. If we are interested in testing the efficacy of a rather simplistic intervention to provide information or to change individuals knowledge levels, attitudes or behaviours, then as this review of published papers has shown, a randomised controlled trial (RCT) design can be applied with quantitative methods of data collection. We now have very good evidence indeed of the significant but limited efficacy and cost effectiveness of such approaches. Qualitative and quantitative methods of data collection can be used in RCT and comparison study designs, they are not mutually exclusive. But the object and focus of study was typically narrow as observed in tables 1 and 2.

However, as the published and case study reviews both demonstrated (tables 3 & 4), community or societal level initiatives seeking to influence the context in which individual behaviour occurs or in which health is created and experienced, do not lend themselves to such constraining designs. The RCT and comparison designs combined with quantitative and rather limited qualitative methods of data collection, simply cannot capture the richness of the process nor give a detailed enough understanding of the meanings of activities and actions nor of the process of change. They simply are not sufficiently sophisticated to deal with the complexity and diversity of the process and outcome of health promotion at community level. It is evident from the case study evaluations and from a smaller number of evaluations of projects with pre and post testing in the published accounts, that naturalistic designs and qualitative techniques are more appropriate for exploring community based approaches.

4.2 Indicators of Outcome in Health Promotion

Interestingly, in most of the published accounts, but in a minority of the case studies, the outcome measures for assessing the effectiveness of community based alliances or partnerships for health promotion were often measures of individual level changes.

From the perspective of the economic analysis of health promotion, Shiell and Hawe (1996) have argued cogently that programmes which have the community or community processes for health promotion as their focus need some indicators which are completely different to those that can be measured by summing individual outcomes. Indeed, they go further to stress that if programmes are seeking to strengthen community competence for health through peer network action, local representation and the like, then these activities should be considered as "functionings" and outputs. They invoke health economists to develop new constructs to deal with these new approaches in health promotion lest the application of existing techniques to community or partnership approaches mislead health decision makers about their value and potential by
underestimating their effectiveness.

It is now largely accepted by those engaged in health promotion that we need a new package of indicators to measure the effects of community based health promotion. In the USA, the Centers for disease control and prevention (CDC) are developing a package of community indicators for health promotion for HIV prevention (CDC, 1997). In addition, the CDC in collaboration with the WHO Working Group on Evaluating Health Promotion Approaches of the Regional Office for Europe are looking at how indicators of social capital may be used to measure community level interventions in health promotion at a national level (Kreuter et al 1996). The challenge for both of these new initiatives is to devise indicators from the perspectives of local government, organisations and systems as well as from the individuals view. Thus measurements of the extent to which individuals, for example, trust or share information about childcare and engage in reciprocal schemes could be enriched by measures of the supporting infrastructure: availability, accessibility, mechanisms for exchanging information, flexibility of childcare organisation, policies, physical safety of neighbourhoods and so on. The findings from the case study review presented here suggest that measures of this type may be helpful in evaluating the health promotion process of building alliances or partnerships.

Useful though indicators of aspects of social capital such as trust, reciprocity, shared norms and civic engagement may be in measuring the effects of community health promotion based upon current models of community participation, it could be argued that Kreuter et al (1996) have perhaps left unexplored the dynamic potential for social capital to be a construct for the promotion of health. Even though the notion of social capital is as yet undeveloped theoretically, as a construct it can provide an explanation of the process for promoting health in communities and societies and provide a new way of organising and planning our thinking and actions to create opportunities for health, particularly in respect of the promotion of alliances or partnerships for health.

All points of the compass appear to be pointing towards social capital, a potential source of new direction. Could it be the construct that the economists need to help them measure the cost benefit and effectiveness of community health promotion? Health promotion desperately needs models that are more sociologically and politically sophisticated and have greater explanatory power. Could the construct of social capital lead to the development of new theories and to new indicators for measuring the diverse benefits from alliance or partnership approaches to health promotion identified in this review? Could the development of our understanding of how to build social capital through nurturing social relationships, networks and patterns of reciprocal activities reinforce the alliance or partnership building process for health promotion and even offer new insights or approaches? And will these new process or mechanisms bring new insecurities and challenges in an increasingly fluid and insecure world thereby requiring the health promoters of the future, be they lay or professional, to be working within and
outside communities with new skills: leading, communicating, organisation, managing, marketing...connecting?

5. **Promoting health and reinforcing alliance and partnership approaches to health promotion by building social capital**

This paper argues that the notion of social capital provides a coherent and compelling way of conceptualising the "best practice" in health promotion alliance or partnership approaches that exists in abundance in industrialised and non-industrialised nations alike. It advances our thinking about capacity building for health and for the promotion of alliances or partnerships for health in four ways.

Firstly, it demands that the unit of analysis is the community rather than the individual. This is because social capital is produced through interactions between individuals and social agencies and systems. It does not reside within individuals or within organisations but provides benefits for both and is a resource which grows the more it is used. This allows us to look in a fresh way at indicators for assessing the effectiveness of health promotion and particularly those approaches which seek to build alliances or partnerships for health promotion.

Secondly, it brings the social, economic, political and environmental determinants of health firmly into view and reinforces the need for health promotion approaches, such as alliance or partnership building, across all sectors of societies and across lay and professional boundaries, which can work to influence these broader determinants of health and well-being.

Thirdly, it focuses our attention on the *mechanisms* for "networking" or connecting people, particularly with public institutions and with power at a local level, rather than merely describing the relationships. Development of an understanding of how these mechanisms work will be crucial if we are to consider building social capital as a resource for the poorest in societies in an effort to reduce inequalities in health. Therefore, unlike the assumptions underpinning much of the empowerment and community participation literature, that power for change is infinite and all we have to do is build it up in those who don't have it, the construct of social capital will allow us to attend to asymmetries in power and could provide one means for its redistribution.

In the context of this review however, such mechanisms may also help us to consider how to enhance health through alliance or partnership building health promotion approaches.

Finally, as a construct which emerged from the political science literature yet which has been applied to the conceptualisation of health-related issues and behaviours (Putnam, 1993, Moser, 1996, Higgins et al, 1996) social capital crosses disciplinary boundaries and may underpin the development of new theoretical frameworks for understanding health
and health behaviour in individuals and societies and the broader social determinants of health, particularly in respect of alliance or partnership building.

5.1 Infrastructure for change: Tackling the broader determinants of health and social development

Building social capital could be seen as a relatively inexpensive means of appearing to tackle the structural determinants of health and disease and off-setting the most abrasive effects of health inequalities in societies. However, we must not forget that the provenance of many of the inequalities in health in terms of experience; the prevention of ill health and the promotion of positive health and well-being, lie in structural issues such as poverty, relative poverty, homelessness, unemployment and the like. Healthy public policy to address such issues must clearly continue to be pursued vigorously.

It is the case that the social trust at the core of social capital cannot be simply produced by the injection of investment into poor areas through enterprise initiatives alone. Indeed, Lehmann (1994) points out that enterprise masquerading as community development in the USA and employed as a solution to some of the worst health and social problems in disadvantaged areas has failed, principally because of the poor welfare safety net available. In the UK, Marsh of the Policy Studies Institute has argued that there is considerable flux among those living in poverty, with the provision of employment at reasonable levels of pay and good welfare support being the key to helping people move out and stay out of the so-called poverty trap. Hutton (1997) notes that the promotion of social citizenship as one of the principle responses to inequalities and difficulties in society (and thereby reliance upon the building of social capital) is unsustainable without adequate social welfare safety nets. This point may be particularly important in non-industrialised country contexts. The work of Moser(1996) for the World Bank has shown that whilst aspects of social capital can be found in impoverished communities where it is generated through volunteer networks of women in the main, a point of economic crisis or hardship is reached beyond which reciprocity between households ceases. Thus the extent of hardship in societies may be the stumbling block to the promotion of health through social capital initiatives which are founded upon alliance or partnership networks. In this context, the role of voluntary agencies in providing social welfare bridges between individuals, families, communities and the state, is of considerable import (Sassoon, 1996). The project of building social capital as a resource for health promotion is quite clearly an ambitious one. It is a resource, which will enhance the effect of our many and varied health promotion and health education efforts.
5.2 Mechanisms for building social capital and promoting alliances and partnerships for health promotion.

5.2.1 Information technology: a mechanism for connecting for health.

The process of building social capital in industrialised countries is likely to be assisted by the global phenomenon of the development of information technologies. Mulgan (1997) has argued that new technologies could open the door to multiple ways for individuals to make flexible social connections. He also points out that both the techniques and connections will be responsive to changes in the environment and to needs and therefore sustainable. Mitchell (1997) has described the way in which the connections made on the internet can cut through stifling boundaries and categories defining status. In this way then, interactions through new technologies contribute to the horizontal connections or networks that Putnam (1993) identified as a conduit through which social capital flows and which could provide the ‘glue’ for alliances and partnerships for health promotion. And, in an exciting new development, such connections can now be made to work with and for communities as well as for individuals (SHM Productions Ltd, 1997). The potential for such city-wide internet systems to deliver health and social benefits by providing access to information and services in civic spaces and also to build social capital is considerable, particularly in the light of the forthcoming home-based digital television services. These technical developments could also be used to underpin alliances and partnerships for health promotion. Such important benefits should not however accrue solely to those in the northern nations, difficulties in distributing and maintaining IT infrastructure notwithstanding.

Infrastructure development in information technology will certainly be important in building social capital, but so too might the provision of safe “spaces” in which connections and transactions can be made. Putnam (1993) has conceived of these civic spaces as physical ones...in parks, libraries, post offices and so on, but virtual spaces in the imagination of communities may be something to ponder and the extent to which education may or may not evolve to support such possibilities.

As this review shows, there are no simple solutions or single approaches to the promotion of health through alliance and partnership initiatives. Nor to the evaluation of impact in our diverse and complex world and there are several issues around social capital for health promotion that must be given careful consideration.

5.2.2 Crucibles of capital

Many writers in this area, including Fukuyama (1996) and Etzioni (1995) have proposed the "family" in society as the key cornerstone, network ‘node’ and even progenitor for the production of social capital and for community and social regeneration. There are perhaps two notes of caution to strike in this regard.
Firstly, in thinking about social capital for the promotion of health and as part of the process of building and reinforcing alliances and partnerships for health promotion in a global sense, we must ensure that the notion of family is not too narrowly conceived and should perhaps be substituted with notions of family with kinship relationships of all sorts. Mobilisation of the diversity of family formulations across societies is unlikely therefore to be a straightforward task.

Secondly, the evidence from the case study reports in this paper underpins the work of others which has demonstrated that women are particularly adept at fostering alliances and partnerships for health promotion, at local activism for health, creating durable health supporting networks and groups (Moser, 1996). However, Campbell (1995) has recognised the danger in tasking only women with the communitarian project to promote better parenting, social and civic life, without addressing imbalances of power and control between men and women. It may disadvantage women even further, making it more or less difficult to work, to achieve ambitions, to achieve equitable relationships. Suggesting that the solution to the problems of social cohesion and low levels of civic responsibility lies in encouraging women to stay in the home, knitting the social networks to nurture the social development of the next generation may observe the role of unemployment and low wages in causing family stress and poor health.

5.2.3 Theoretical Development

The issues mentioned above underline the extent to which social capital and its relationship to health is, as yet, poorly characterised, particularly in respect of gender, ethnicity and socio-economic disadvantage. To develop our understanding in this field, the Health Education Authority for England has commissioned an ambitious programme of work in the UK looking at the relationship between social capital and health in adults in disadvantaged communities; in families and children; and from the perspective of local government. New interest in studying the health promotion potential of social capital is emerging in several sites around the world from KwaZulu Natal in South Africa (Preston-Whyte et al 1997) to North America (Higgins et al 1996; Kreuter et al 1996). This mixed and varied programme of work spanning cultures and continents is critical, for social capital has thus far been conceptualised from a Western philosophical perspective. A cross-cultural programme of research may challenge this ethnocentric view and help us understand how versatile or elastic social capital might be as a resource and construct. It will certainly keep the notion under constant interrogation as we move towards developing new theories for health promotion in a changing world.

It could be argued that despite the publication of the Ottawa Charter in 1986 and the development of the successful WHO Healthy Cities Programme in the middle of the 1980’s, individualism continues to dominate many of the practical health education and disease prevention agendas, at least in industrialised countries. The construct of social capital may help in the shift towards developing theoretical frameworks which provide
better explanations of collective, collaborative alliance or partnership approaches for health promotion. Will it allow us to deliver more effective health promotion? - only time will tell, but the evidence presented here from health promotion alliances or partnerships in action around the world gives cause for optimism.
## 1: Effectiveness of Alliances for Health Promotion: Randomised Controlled Trial Studies

<table>
<thead>
<tr>
<th>Author</th>
<th>Location</th>
<th>Randomised Unit</th>
<th>Topic</th>
<th>Intervention</th>
<th>Alliances/Partnerships</th>
<th>Level of Alliance</th>
<th>Outcomes</th>
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</thead>
<tbody>
<tr>
<td>COMMIT 1995</td>
<td>USA</td>
<td>Cluster/ Community</td>
<td>Smoking</td>
<td>Public education, organised community events, health care providers, worksites and other organisations, information resources</td>
<td>Health care agencies; business; local health officials</td>
<td>micro</td>
<td>Small but significant effect on increasing smoking cessation rate in light to moderate smokers</td>
</tr>
<tr>
<td>Windsor et al 1988</td>
<td>USA</td>
<td>Individual</td>
<td>Smoking</td>
<td>Self help manual, social support, monetary incentives, skills training, discussion employer/employee advisory committee</td>
<td>Employers and employees</td>
<td>micro</td>
<td>Self help and discussion achieved a 5% cessation rate (significant)</td>
</tr>
<tr>
<td>Shoebach et al 1992</td>
<td>USA</td>
<td>Individual</td>
<td>Smoking</td>
<td>Self help materials, social support and telephone counseling; group health cooperative.</td>
<td>Group health cooperative, university and research centres</td>
<td>micro</td>
<td>Combined approaches achieved cessation levels. 4.8% higher than controls (significant)</td>
</tr>
<tr>
<td>Kuiz et al 1993</td>
<td>USA</td>
<td>Individuals</td>
<td>Smoking</td>
<td>Self help manual, television slots and optional buddy support.</td>
<td>Smoker plus selected buddies for support (2/3 selected own buddies form outside home)</td>
<td>micro</td>
<td>Buddy support and self help manual resulted in excess of 3.1% smoking cessation over controls at 12 months.</td>
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<tr>
<td>Author</td>
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<tr>
<td>Nutbeam et al</td>
<td>UK</td>
<td>Cluster/Schools</td>
<td>Smoking</td>
<td>School and family smoking prevention programme</td>
<td>Schools and families and pupils</td>
<td>micro</td>
<td>Improved knowledge, no impact on behavior.</td>
</tr>
<tr>
<td>1993</td>
<td></td>
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<tr>
<td>Glasgow et al</td>
<td>USA</td>
<td>Cluster pairs of</td>
<td>Smoking</td>
<td>Skills development, change in worksite practices &amp; involvement of community</td>
<td>Health promotion facilitators; employers and employees</td>
<td>micro</td>
<td>Employees organised for changing behaviours. No evaluation data available yet</td>
</tr>
<tr>
<td>1994</td>
<td></td>
<td>matched worksites</td>
<td></td>
<td>resources, employees steering committee.</td>
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<tr>
<td>Perry et al</td>
<td>USA</td>
<td>Schools</td>
<td>Alcohol</td>
<td>School based skills training, parental involvement, peer leadership,</td>
<td>Schools, parents, local community leaders</td>
<td>micro</td>
<td>Difficult to influence supply and demand characteristics of communities.</td>
</tr>
<tr>
<td>1993</td>
<td></td>
<td></td>
<td></td>
<td>community wide awareness training by community leaders.</td>
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<tr>
<td>Johnson et al</td>
<td>USA</td>
<td>School</td>
<td>Smoking,</td>
<td>Schools and parent programmes, media in community, training of community</td>
<td>Schools, parents, community leaders, local media</td>
<td>micro</td>
<td>Significant reduction in uptake of cigarettes and marijuana over a 3 year period</td>
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<tr>
<td>1990</td>
<td></td>
<td></td>
<td>Alcohol &amp;</td>
<td>leaders.</td>
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<td></td>
<td></td>
<td></td>
<td>drug abuse</td>
<td></td>
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<tr>
<td>Perry et al</td>
<td>USA</td>
<td>Individuals</td>
<td>Diet</td>
<td>School and home based education sessions.</td>
<td>Schools, teachers and parents</td>
<td>micro</td>
<td>Short term significant differences in dietary behaviours in home based approach disappeared after one year</td>
</tr>
<tr>
<td>1990</td>
<td></td>
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<tr>
<td>Hopper et al 1992</td>
<td>USA</td>
<td>School Classes</td>
<td>Diet</td>
<td>School and home based education lessons.</td>
<td>Family and school.</td>
<td>micro</td>
<td>Significant increase in nutrition knowledge in home based course group.</td>
</tr>
<tr>
<td>Vandongen et al 1995</td>
<td>Australia</td>
<td>Individuals</td>
<td>Diet</td>
<td>School and home based nutrition and fitness programmes with student and parent educational material.</td>
<td>Schools, families, teachers and students.</td>
<td>micro</td>
<td>Significant improvements in fitness</td>
</tr>
<tr>
<td>Hall et al 1992</td>
<td>Canada</td>
<td>Individuals</td>
<td>Social well-being</td>
<td>Standard long term care package and project nurse, personal health skills development and referral to community services.</td>
<td>Project facilitator, community agencies, healthcare team.</td>
<td>micro</td>
<td>Intervention group significantly more likely to be alive and at home after 3 years (25% difference)</td>
</tr>
<tr>
<td>Gomel et al 1993</td>
<td>Australia</td>
<td>Worksites</td>
<td>CHD</td>
<td>Worksite steering committee; intensive behavioural counseling courses, risk assessment and education.</td>
<td>Employees, health department, employers</td>
<td>micro</td>
<td>Significant reductions in smoking, improvements in blood pressure and body fat with counselling intervention.</td>
</tr>
<tr>
<td>Author</td>
<td>Location</td>
<td>Randomised Unit</td>
<td>Topic</td>
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<tr>
<td>Johnson et al 1993</td>
<td>Ireland</td>
<td>Individuals</td>
<td>Parenting</td>
<td>Volunteer local community mothers programme, information on children’s educational development supported and trained by public health nurses and regional family development nurse.</td>
<td>Local women, health department in supporting new social support networks.</td>
<td>micro</td>
<td>Significant increases in immunisations; breast feeding; appropriate nutrition and educational care of children. Mothers significantly more likely to be outgoing, less unhappy and less tired than control mothers.</td>
</tr>
<tr>
<td>Van Assema et al 1994</td>
<td>Holland</td>
<td>Community</td>
<td>Cancers</td>
<td>Media; small group organising activities lectures, self help manual, letters to workplaces and risk behaviour reduction activities around smoking, alcohol, nutrition and solarium use.</td>
<td>Local communities, businesses, health department.</td>
<td>micro</td>
<td>Significant decrease in fat consumption in intervention site.</td>
</tr>
<tr>
<td>Walter 1989</td>
<td>USA</td>
<td>Schools</td>
<td>Lifestyle</td>
<td>School programme and interactive parent programme and seminars.</td>
<td>Schools and parents</td>
<td>micro</td>
<td>After 6 years significant net reductions in uptake of smoking and lowering of cholesterol and dietary fat.</td>
</tr>
<tr>
<td>Author</td>
<td>Location</td>
<td>Comparison Group Level</td>
<td>Topic</td>
<td>Intervention</td>
<td>Alliances/Partnerships</td>
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<tr>
<td>Kumusalo et al</td>
<td>Finland</td>
<td>Village</td>
<td>CHD/Nutrition</td>
<td>Local representation in devising action plans; village seminars; study groups and sports meetings; groups on health cooking, exercise first aid and communication.</td>
<td>Local village governing boards, adult education centres and local primary health care centres.</td>
<td>micro</td>
<td>Decreased cholesterol levels and increased Vitamin C levels in intervention populations post-test. Significantly different from controls.</td>
</tr>
<tr>
<td>Staessen et al</td>
<td>Belgium</td>
<td>Town</td>
<td>CHD/Nutrition</td>
<td>Briefing conferences; information leaflets; mass media programmes.</td>
<td>GP’s and other professionals, housewives for briefings and children in school plus local businesses; butchers, bakers etc. and town councils.</td>
<td>micro</td>
<td>Significantly decreased urinary sodium levels in intervention town population at post-test compared to controls.</td>
</tr>
<tr>
<td>Schulte et al</td>
<td>Holland</td>
<td>Hospital &amp; health centres</td>
<td>CHD</td>
<td>Health professionals and former patients share sessions. Partners included.</td>
<td>Professionals and patients.</td>
<td>micro</td>
<td>Decreased depression levels in intervention population at post-testing.</td>
</tr>
<tr>
<td>Author</td>
<td>Location</td>
<td>Comparison Group Level</td>
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<tr>
<td>Sellers et al</td>
<td>USA</td>
<td>City</td>
<td>Sexual Health</td>
<td>Distribution of condoms by peer (teenage) leaders; workshops in schools and community organisations, health centres and homes; presentations at community events; mass media; special marketing of condoms.</td>
<td>Institutions and organisations in public and non profit sector, parents and teenagers.</td>
<td>micro</td>
<td>Delayed onset of sexual activity in intervention population and reduced level of multiple sexual partners in young women compared to control population.</td>
</tr>
<tr>
<td>1994</td>
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<tr>
<td>Warrick et al</td>
<td>USA</td>
<td>School</td>
<td>Pregnancy &amp; education</td>
<td>School and community based services of students with babies; parenting skills classes; maternal and child health care; day care for babies; outreach; in-service education of teachers.</td>
<td>Schools and health services and social services; teenagers and parents.</td>
<td>micro</td>
<td>Young mothers more likely to stay at school in those with a support programme.</td>
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<tr>
<td>1993</td>
<td></td>
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<tr>
<td>Fisher et al</td>
<td>USA</td>
<td>Workplace</td>
<td>Smoking</td>
<td>Steering Committee of management and employees; smoking cessation programme; self-help skills development; community organising approach.</td>
<td>Management and employees.</td>
<td>micro</td>
<td>Increased smoking cessation by 20% in participants compared with 15% increase in cessation in non-participants. 5% overall cessation rate benefit.</td>
</tr>
<tr>
<td>1994</td>
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<tr>
<td>Ostwald 1989</td>
<td>USA</td>
<td>Workplace/ Companies</td>
<td>Nutrition</td>
<td>Health promotion information; screening; newsletter; exercise facility; instructions on cooking and purchasing low-fat foods; works canteen provided free daily low-fat food.</td>
<td>Management and employees</td>
<td>micro</td>
<td>After 5 months there was evidence of improved eating habits in the intervention company and in exercise but no significant differences relative to the control group.</td>
</tr>
<tr>
<td>Kronenfeld et al 1987</td>
<td>USA</td>
<td>Workplace</td>
<td>Health Lifestyle</td>
<td>Workplace policy development; health promotion programme with films, seminars, risk appraisal, stress management, smoking cessation, walking events and a newsletter.</td>
<td>Public agencies, health promotion project staff (facilitators) and agency management staff.</td>
<td>micro</td>
<td>A 20% reduction in heavy smokers in the intervention group and no change at control site. A reduction in heavy and binge drinkers (significant).</td>
</tr>
<tr>
<td>Brice et al 1996</td>
<td>USA</td>
<td>Senior Citizen Centre</td>
<td>Lifestyle &amp; capacity for independent living.</td>
<td>Comprehensive health promotion programme for the elderly.</td>
<td>Health promotion professionals and senior citizen management.</td>
<td>micro</td>
<td>Intervention population had healthier beliefs and reported healthier behaviour than controls at post-test.</td>
</tr>
<tr>
<td>Gemsone et al 1995</td>
<td>USA</td>
<td>Hospital</td>
<td>Healthy Lifestyle</td>
<td>Information for patients; training for GPs and attending physicians on health promotion.</td>
<td>Public health service office and hospitals.</td>
<td>micro</td>
<td>Doctors and patients reported an increase in prevention activity in the intervention site.</td>
</tr>
<tr>
<td>Author</td>
<td>Location</td>
<td>Comparison Group Level</td>
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<tr>
<td>Heath et al 1995</td>
<td>USA</td>
<td>Community Sites</td>
<td>CHD</td>
<td>Community coordinating council, screening at worksites; public areas; mass media; community events; cooking demonstrations point of purchase programmes in stores and restaurant labeling.</td>
<td>Local community organisations and agencies and local population.</td>
<td>micro</td>
<td>Increased knowledge of cholesterol. did not measure changes in local environment whether changes were sustainable/ long term policy development etc.</td>
</tr>
<tr>
<td>Kortonan et al 1986</td>
<td>Finland</td>
<td>Community</td>
<td>Smoking</td>
<td>Mass media; cessation contests; non-government organisation in collaboration with National Board of Health.</td>
<td>National and local agencies.</td>
<td>micro</td>
<td>4-5% higher level of reported smoking cessation in intervention group.</td>
</tr>
<tr>
<td>Lando et al 1990</td>
<td>USA</td>
<td>Community</td>
<td>Smoking</td>
<td>Local and national contest for smoking cessation; mass media.</td>
<td>State and local health agencies.</td>
<td>micro</td>
<td>Small non-significant effect in smoking cessation.</td>
</tr>
<tr>
<td>Melia 1995</td>
<td>England &amp; Scotland</td>
<td>Community</td>
<td>Skin Cancer</td>
<td>Charities campaign; GP education; mass media.</td>
<td>Charity and district health authorities.</td>
<td>micro</td>
<td>Increased public awareness in melanoma.</td>
</tr>
<tr>
<td>Author</td>
<td>Location</td>
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<td>Topic</td>
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<tr>
<td>Rietmeijer et al 1996</td>
<td>USA</td>
<td>Community</td>
<td>AIDS Prevention</td>
<td>Volunteer outreach education; infrastructure development/store front; counselling; professional support; bleach/clean injecting equipment (where allowed); local newsletter; peer educators involved in programme design; theory based (reasoned action).</td>
<td>Health department, local organisaitons &amp; business; federal agency (CDC); local population.</td>
<td>micro</td>
<td>22% increase in use of condoms with casual partners compared with a 2% decrease in the comparison site.</td>
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<td>A significant increase in use of bleach to clean needles and reduction in needle sharing.</td>
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<tr>
<td>Author</td>
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<tr>
<td>Baum &amp; Cooke</td>
<td>Australia (Noarlunga)</td>
<td>City</td>
<td>Health City</td>
<td>Committees; agency working and development and policies.</td>
<td>Cross-sectoral collaboration &amp; government commitment</td>
<td>micro</td>
<td>Increased local &amp; national policy development; improved sustainability through green projects; cross (non health) agency working not effective; not enough sharing of power &amp; control between professionals &amp; lay representatives; not enough local representation across community networks.</td>
</tr>
<tr>
<td>Ovellet et al 1994</td>
<td>Canada</td>
<td>City</td>
<td>Healthy City</td>
<td>Social action programme with inter-sectoral collaboration and citizen participation and policy development.</td>
<td>Agencies, government departments and local people.</td>
<td>macro</td>
<td>Increase in healthy public policy development insufficient citizen involvement in process.</td>
</tr>
<tr>
<td>Burns 1990</td>
<td>Northern Ireland</td>
<td>Community/ Neighbourhood</td>
<td>CHD</td>
<td>Local residents health group; policy development; women's group; leisure centre health promoters; organisational groups discussions from schools and churches to local business.</td>
<td>Cross-sectoral agencies locally and the local population.</td>
<td>micro</td>
<td>Better relationships across professional groups; increased skills in local women, a community.</td>
</tr>
<tr>
<td>Author</td>
<td>Location</td>
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<tr>
<td>Maibach et al 1991</td>
<td>USA</td>
<td>Community</td>
<td>micro</td>
<td>CHD</td>
<td>Mass media; self-help kits; doctors columns in newspapers; competitions; lectures</td>
<td>Local organisers and district health boards.</td>
<td>micro</td>
</tr>
<tr>
<td>Perez-Stable et al 1993</td>
<td>USA</td>
<td>Community</td>
<td>micro</td>
<td>Smoking</td>
<td>Culturally and locally relevant smoking cessation programme, media campaign, community involvement.</td>
<td>Local organisations, health agencies.</td>
<td>micro</td>
</tr>
<tr>
<td>Wojtowicz et al 1992</td>
<td>USA</td>
<td>School and Community</td>
<td>micro</td>
<td>Accident Prevention</td>
<td>School and community steering committee with parental involvement.</td>
<td>School, city council and police.</td>
<td>micro</td>
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<tr>
<td>Author</td>
<td>Location</td>
<td>Comparison Group Level</td>
<td>Topic</td>
<td>Intervention</td>
<td>Alliances/ Partnerships</td>
<td>Level of Alliance</td>
<td>Outcomes</td>
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<tr>
<td>Plantz et al</td>
<td>USA</td>
<td>Home</td>
<td>Home accident prevention in the elderly.</td>
<td>Home safety assessments; structural and physical improvements.</td>
<td>Health and other agencies.</td>
<td>micro</td>
<td>Reduced falls by 60%, reduced scalds and burns.</td>
</tr>
<tr>
<td>Bennett et al</td>
<td>USA</td>
<td>Community</td>
<td>Influenza Immunisation</td>
<td>Vaccine distribution outreach programmes; physician incentive programmes.</td>
<td>Cross agency partnerships.</td>
<td>micro</td>
<td>Increased immunisation rate.</td>
</tr>
<tr>
<td>Turner et al</td>
<td>USA</td>
<td>Church</td>
<td>Lifestyle</td>
<td>Health promotion staff and church members working on a programme; charismatic church leadership.</td>
<td>Church and health agencies.</td>
<td>micro</td>
<td>Improved nutritional intakes.</td>
</tr>
<tr>
<td>Klevens et al</td>
<td>USA</td>
<td>County</td>
<td>Environments for Health</td>
<td>Assessing local needs; local representation in agenda setting; professional training; creation of a team approach which was professionally led but crossed lay and professional boundaries.</td>
<td>Public health agencies; primary health care and local citizens.</td>
<td>micro</td>
<td>20% of local population took part in a street clean up; street leaders emerged more trust in street population after programme.</td>
</tr>
<tr>
<td>Title</td>
<td>Author/Resource Person</td>
<td>Region</td>
<td>Intervention</td>
<td>Alliances</td>
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<tr>
<td>Auditing Health Promotion Capacity in Slovenia</td>
<td>Peter Makara</td>
<td>EURO (Hungary)</td>
<td>New auditing service; consensus building tool; strategy for investment in health promotion; policy making potential.</td>
<td>Government with outside agencies (WHO/ EURO)</td>
<td>macro</td>
<td>Practical strategy; model for application in other European countries.</td>
<td></td>
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<tr>
<td>Central European Network on Education &amp; Research in Health &amp; Health Care</td>
<td>Peter Makara</td>
<td>EURO (Hungary)</td>
<td>Network to establish training and exchange programmes; comparative research programme; health promotion activities.</td>
<td>Northern Centre for Health Care Research (Holland). Zagreb School of Public Health, Slovakian Health Management School.</td>
<td>micro</td>
<td>Teaching programmes for health professionals; research on healthy aging and transitions in health care; health promotion on the agenda for discussion.</td>
<td></td>
</tr>
<tr>
<td>Investment in Health - WHO Model Regional West Saxony</td>
<td>Peter Makara</td>
<td>EURO (Hungary)</td>
<td>Health relevant policy options developed in discussion with regional representatives in the Healthy Region Project; local participation; range of approaches.</td>
<td>Research Centre for Regional Health Promotion; WHO/EURO, Yale USA and OPM (London), businesses and projects.</td>
<td>micro</td>
<td>Employees participation; cross sectoral collaboration; diverse activities initiated; redevelopment of regions under discussion.</td>
<td></td>
</tr>
<tr>
<td>Hungarian School Health Curriculum - International Collaboration: an example of good practice</td>
<td>Peter Makara</td>
<td>EURO (Hungary)</td>
<td>Curriculum development; school environment improvements; links to health services.</td>
<td>University of Southampton and National Institute for Health Promotion of Hungary; Ministry of Welfare and of Culture and Education.</td>
<td>micro</td>
<td>Cross ministry collaboration; collaboration of international experts; broadening of perspective on health promotion.</td>
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<tr>
<td>Title</td>
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<td>Health Promotion in Hungarian Gypsy</td>
<td>Peter Makara</td>
<td>EURO (Hungary)</td>
<td>Peer outreach on the streets and in the community; outreach work with gypsies in organisations and institutions such as prisons, juvenile homes, schools; information leaflets and materials such as condoms.</td>
<td>National Institute for Health Promotion, street gypsies; social work profession.</td>
<td>micro</td>
<td>Reorientation and reform of social work practice.</td>
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<tr>
<td>The School - a caring Community for Welfare</td>
<td>L. Tavesa (Vivian Rasmussen)</td>
<td>EURO (Macedonia)</td>
<td>European Health Promoting Schools, network member; monitoring of physical growth; health education classes; health clubs.</td>
<td>Teachers, pupils, parents, physicians, university.</td>
<td>micro</td>
<td>not yet available.</td>
<td></td>
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<tr>
<td>Influences from the Danish Network of Health Promoting Schools on the National Curriculum for Health Education.</td>
<td>B.B. Jansen (Vivian Rasmussen)</td>
<td>EURO (Denmark)</td>
<td>European Health Promotion Schools, network member; curriculum development; collaboration between school and community; European learning and a European dimension.</td>
<td>Politicians, teachers, health personnel, school managers, researchers, community representatives.</td>
<td>micro</td>
<td>not yet available.</td>
<td></td>
</tr>
<tr>
<td>Promoting Healthy School Meals for Norwegian Children.</td>
<td>Knut-Inge Klepp (Leif Aaro)</td>
<td>EURO (Norway)</td>
<td>National recommendations + materials, economic incentives for schools; national campaigns; legislation.</td>
<td>Ministers, Schools.</td>
<td>macro</td>
<td>Policy change; significant increase in pupils reporting that they eat lunch every day.</td>
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<tr>
<td>Title</td>
<td>Author/Resource Person</td>
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<tr>
<td>From Control Policy to Comprehensive Family Planning: Success Stories from Finland.</td>
<td>Matti Rimpela (Leif Aaro)</td>
<td>EURO (Finland)</td>
<td>Family planning policy; integration of contraceptive consultancy and municipal primary health care; legislation, local training and workshops.</td>
<td>National agencies, local health care and government.</td>
<td>macro</td>
<td>Policy development; decrease in teenage pregnancies and abortions; incidence of STD/HIV is low; improved infrastructure.</td>
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<tr>
<td>Everybody is needed - Sorba Skaraborg, Sweden</td>
<td>Charli C-G Eriksson (Leif Aaro)</td>
<td>EURO (Sweden)</td>
<td>Coalition building across sectors and NGO’s development for environmentally disadvantaged, peer leader programme.</td>
<td>National agencies, local health care and government, volunteer citizens.</td>
<td>micro</td>
<td>Inter-agency coalition is thriving; bottom up approach worked.</td>
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<tr>
<td>The prevention of night blindness in Bangladesh.</td>
<td>Akhtar Hussain (Leif Aaro)</td>
<td>EURO (Norway)</td>
<td>Mass media, folk singers, women volunteers at local level, village films, neighborhood groups, school sessions.</td>
<td>Worldview international foundations, University of Bergen, Local authority Governments + NGO’s</td>
<td>micro</td>
<td>Reduce night blindness in children under 9 yrs; increased knowledge; increase in consumption of dark leafy green vegetables.</td>
<td></td>
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<tr>
<td>Health Policy Development in Costa Rica</td>
<td>Charli C-G Eriksson (Leif Aaro)</td>
<td>EURO (Sweden)</td>
<td>Health Policy Development and implementation in primary and secondary care; socio economic development and fertility reduction; needs assessment; community development and educational opportunities.</td>
<td>International cross Government; cross sectoral within Government; local authorities and citizens.</td>
<td>macro</td>
<td>Significant decrease in infant mortality; policy development; improvement in equity, integration with economy, democracy and good governance social relationships and values.</td>
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<td>Title</td>
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<tr>
<td>Health Education by Community Participation</td>
<td>M. Al-Khateeb</td>
<td>EMRO (Sudan)</td>
<td>Needs assessment by officials trained; local villagers; health volunteers.</td>
<td>Ministry of Health, WHO University Faculty of Medicine.</td>
<td>micro</td>
<td>Significant increases in knowledge.</td>
<td></td>
</tr>
<tr>
<td>Health on the School Curriculum in Bahrain</td>
<td>M. Al-Khateeb</td>
<td>EMRO (Iran)</td>
<td>Alliance development between government ministries, NGO's and the community; participation of teachers in policy development; reorientation of services.</td>
<td>Ministries of Health, Education, Information, NGO, Private Sector, Teachers.</td>
<td>micro</td>
<td>Significant improvement in families and pupils knowledge and behaviours.</td>
<td></td>
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<tr>
<td>Practical health Promotion-Healthy City project</td>
<td>M. Al-Khateeb</td>
<td>EMRO (Iran)</td>
<td>Community participation in planning for the city's health; inter sectoral collaboration; volunteering; improving education of children and women.</td>
<td>Inter-government departments, NGO; business; local people</td>
<td>macro</td>
<td>Increases in number of women health volunteers; skills training in micro industrial developments.</td>
<td></td>
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<tr>
<td>Healthy Villages, Sanitation &amp; Employment project</td>
<td>M. Al-Khateeb</td>
<td>EMRO (Egypt)</td>
<td>Development of information and communication system; low cost sanitation technologies; mobilisation of local resources for health; volunteers.</td>
<td>Organisation for the development of Egyptian villages and Ministry of local administration.</td>
<td>macro</td>
<td>Environmental improvement and mobilisation of local resources for income generation.</td>
<td></td>
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<tr>
<td>Health Promotion in a modern village of basic minimum needs programme</td>
<td>M. Al-Khateeb</td>
<td>EMRO (Pakistan)</td>
<td>Village development committee; concept and communication skills development; group discussions at local level; income generating schemes; loans for small businesses; local health workers.</td>
<td>Local authorities, local volunteers, outside grant aid education.</td>
<td>Macro</td>
<td>Improvements in environment; increase in school enrollment and immunisation levels.</td>
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<tr>
<td>Title</td>
<td>Author/Resource Person</td>
<td>Region</td>
<td>Intervention</td>
<td>Alliances</td>
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<tr>
<td>The impact of intensified health education on sexual behaviour &amp; attitudes in primary school pupils in Kabale and Soroti districts</td>
<td>Bernadette Babishangire (David Nyamwaya)</td>
<td>AFRO (Uganda)</td>
<td>Teacher training &amp; counselling programme; local project steering committees to facilitate collaboration between pupils, teachers, supervisors &amp; community and NGO's; school health clubs; community leaders.</td>
<td>Ministry of Education; local agencies; new project steering committee.</td>
<td>micro</td>
<td>Knowledge of sexual health issues increased; 20% of pupils report abstaining from sex.</td>
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<tr>
<td>Training of village health committees to facilitate community participation &amp; involvement in health promotion in Botswana</td>
<td>David Nyamwaya</td>
<td>AFRO (Botswana)</td>
<td>Village health committees enhanced health promotion training programme; increased community participation; income generation activities in localities for nutritional improvements re. vegetable production.</td>
<td>Ministry of Health; local committees &amp; district officials; local community.</td>
<td>macro</td>
<td>Food security at household level; increased consumption of indigenous foods increased; acquisition of skills in crop rotation; increased food production; better local economic management.</td>
<td></td>
</tr>
<tr>
<td>The Zimbabwe School Health Programme</td>
<td>David Nyamwaya</td>
<td>AFRO (Zimbabwe)</td>
<td>Teachers involved in school health workshops of local agency representatives.</td>
<td>Local agencies; schools &amp; health management team.</td>
<td>micro</td>
<td>not described.</td>
<td></td>
</tr>
<tr>
<td>Network of African NGO's for Participatory Communication in women and girls</td>
<td>Marie Bernadette Kabre</td>
<td>AFRO (Abidjan)</td>
<td>Strengthening the capacity of NGO's to engage in community participation &amp; education of women; national workshops; local projects eg. training rural women research workers in nutrition.</td>
<td>NGO's</td>
<td>macro</td>
<td>Share information; select priorities for action; coordination.</td>
<td></td>
</tr>
<tr>
<td>Policy Reforms, Community Participation &amp; Primary Health Care</td>
<td>Joshua Adeniji</td>
<td>AFRO (Ibadan, Nigeria)</td>
<td>Primary health care committees at local level to encourage community participation; village health worker training; birth attendants.</td>
<td>Ministry of Health; local governments.</td>
<td>micro</td>
<td>Community participation and ownership in the programme was established.</td>
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<tr>
<td>The use of problem based learning approach to improve the health of school children in the Lake Regions of Tanzania</td>
<td>David Nyamwaya</td>
<td>AFRO (Tanzania)</td>
<td>School based parent-teacher associations to coordinate school activities; screening for worm infestation; school education training of teachers and health workers.</td>
<td>Teachers; parents and health workers.</td>
<td>micro</td>
<td>Sustained collaboration between parents &amp; teachers; behavioural changes (e.g. hand washing) in parents &amp; children; significant reduction in worm infestation.</td>
<td></td>
</tr>
<tr>
<td>A Health Promotion activity by the “ISOLENTUTHUKO” a community based organisation network Kwa Zulu Natal, South Africa.</td>
<td>Patti Joshua</td>
<td>AFRO (South Africa)</td>
<td>Network for health promoting activities; capacity building for community projects; mobilisation of community members; local workshops on health topics; peer educators.</td>
<td>Government departments; local community workers and volunteers.</td>
<td>micro</td>
<td>Network is operational.</td>
<td></td>
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<tr>
<td>Healthy Start Project</td>
<td>Tariq Bhatti</td>
<td>AMRO (Canada)</td>
<td>Increased public participation through collective action; parents and caregivers input; service and policy development; provision for supplementary foods for infants; information.</td>
<td>Local citizens; social workers; Ministry for Social Assistance Plan.</td>
<td>micro</td>
<td>Sustainability of parent &amp; caregiver programmes; increased level of awareness &amp; requests for food; local action on issues raised by parents in discussion with social workers; policy implementation; collaboration</td>
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<tr>
<td>Initiative</td>
<td>Leader</td>
<td>Organisation</td>
<td>Description</td>
<td>Scale</td>
<td>Details</td>
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<tr>
<td>National Strategy for the Integration of Persons with Disabilities (NSIPD)</td>
<td>Tariq Bhatti</td>
<td>AMRO (Canada)</td>
<td>Collaboration among organisations; agencies and individuals to positively affect active living of those with disabilities; National Strategy for the Integration of Persons with Disabilities.</td>
<td>Government; local agencies; local forms.</td>
<td>National alliances worked effectively; policy development.</td>
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<tr>
<td>Family violence prevention initiative (provincial)</td>
<td>Tariq Bhatti</td>
<td>AMRO (Canada)</td>
<td>Improved capacity for government departments to act cooperatively to respond to family violence.</td>
<td>Cross governmental departments &amp; inter-agency working.</td>
<td>Protocols &amp; procedures for action; service inventories; communications strategy; funding identified; training programmes.</td>
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<tr>
<td>Heart Health Demonstration Project</td>
<td>Tariq Bhatti</td>
<td>AMRO (Canada)</td>
<td>Tobacco Advocacy Committee; policy development, conference, activities.</td>
<td>Government &amp; Tobacco Advisory Committee.</td>
<td>Policy development; tobacco reduction strategies implemented; partnership/ collaborative activities.</td>
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<tr>
<td>Women Helping Women</td>
<td>Tariq Bhatti</td>
<td>AMRO (Canada)</td>
<td>Womens network &amp; skills development for social action, self help activities advisory committee; training sessions.</td>
<td>Local health departments, Women’s Group.</td>
<td>Promotional materials, committee, large recruitment of women, action plan for sustainability, trust.</td>
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<tr>
<td>Nobody’s perfect</td>
<td>Tariq Bhatti</td>
<td>AMRO (Canada)</td>
<td>Skills development; needs assessment; mutual support.</td>
<td>Parents working together with educators.</td>
<td>Improved behaviour, high levels of satisfaction, self help group participation, increased knowledge and mutuality.</td>
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<tr>
<td>Location</td>
<td>People</td>
<td>Organisation</td>
<td>Description</td>
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<tr>
<td>Nguagundi, the Mother/Child project</td>
<td>Shirley Perkins, Rhonda Dorman</td>
<td>WPRO (Australia)</td>
<td>Needs assessment of ante-natal clinic attenders developed with indigenous people &amp; an understanding of local culture; collaborative community based programme working with local women on ante natal care and parenting; easier access to primary health care. Aboriginal health care workers outreach.</td>
<td>micro</td>
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<tr>
<td>The Papua New Guinea Population &amp; Family Planning Project.</td>
<td>Rachel Burdon, Anamaria Decock</td>
<td>WPRO (Papua New Guinea)</td>
<td>Supports the National Population Policy launched in 1991; improvements in family planning services; training &amp; staffing of health professionals &amp; local health staff; needs assessment; awareness sessions.</td>
<td>National, regional and district agencies.</td>
<td>micro</td>
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<tr>
<td>The Evolution of a Health Promoting Schools Movement in Australia.</td>
<td>Louise Rowling</td>
<td>WPRO (Australia)</td>
<td>Health promoting school framework; organisational change in school to develop supportive psychosocial &amp; physical environments; school as a workplace; collaborative links between school &amp; communities.</td>
<td>Pupils, parents, teachers, health and youth services.</td>
<td>micro</td>
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<tr>
<td>The Kadavu Rural Health Project 1994-97</td>
<td>Graham Roberts</td>
<td>WPRO (Fiji)</td>
<td>Community capacity strengthening; information giving; policy &amp; planning development in village settings; village health worker training course.</td>
<td>Local people, researchers, village health authorities.</td>
<td>macro</td>
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<tr>
<td>Project Description</td>
<td>Country</td>
<td>Organization</td>
<td>Key Actions</td>
<td>Sectors</td>
<td>Scale</td>
<td>Benefits</td>
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<td>Tongan National Weight Loss Project</td>
<td>Tonga</td>
<td>WPRO (Tonga)</td>
<td>Raising awareness of diet &amp; exercise; national competitions for weight loss; mass media, leaflets and posters.</td>
<td>National Food &amp; Nutrition Committee; His Majesty the King; local businesses.</td>
<td>micro</td>
<td>Significant weight loss in population; increase in tourism through international coverage.</td>
<td></td>
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<tr>
<td>Positive Directions for Maori Health</td>
<td>New Zealand</td>
<td>WPRO (New Zealand)</td>
<td>Maori care givers, parenting skills, home based, community owned, improved access to health services.</td>
<td>Government, health agencies, Maori people.</td>
<td>macro</td>
<td>National policy development; health policy; reduction in smoking in pregnant women; increased birth weights; immunisation; breast feeding.</td>
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<tr>
<td>Healthy Cities - Healthy Islands (Kuching City, Malaysia)</td>
<td>Malaysia</td>
<td>WPRO (Malaysia)</td>
<td>WHO Healthy City Designation; needs/situational assessment; city plan; steering committee; Healthy City week to raise public awareness; neighborhood watch programmes.</td>
<td>Government; city officials; organisations; local business importance of characteristic individuals with energy and vision.</td>
<td>macro</td>
<td>Support of politicians; agency discussions &amp; collaboration on City planning; 20% reduction in crime in participating areas.</td>
<td></td>
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<tr>
<td>Health Promoting Settings in the Philippines</td>
<td>Philippines</td>
<td>WPRO</td>
<td>Philippine Health Promotion Programme (PHPP) encourages community development incentives &amp; advocacy for health; planning workshops.</td>
<td>National &amp; local government; local business.</td>
<td>macro</td>
<td>Local government units allocated funds to the programme; policy development.</td>
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<tr>
<td>Shanghai worksite - health promotion project.</td>
<td>Philippines</td>
<td>WPRO</td>
<td>Surveys for needs assessment; competitions; health education programmes; working environment improvements; worksite health promotion committee; Health Steering Committee.</td>
<td>Municipal health bureau; businesses &amp; employers; employees; university and health service researchers &amp; providers.</td>
<td>macro</td>
<td>Improvements in physical working environment policies; behaviour change in employees.</td>
<td></td>
</tr>
<tr>
<td>Clean &amp; Healthy Behaviour programme</td>
<td>Martha Osei</td>
<td>SEARO (Java)</td>
<td>Emerged from plan of Health Development of Indonesia, needs assessment at regional level, supervisory teams at local level, community staff reliance committee in each village, skills development for community peer leaders.</td>
<td>Women's organisations, Government Ministers &amp; local government</td>
<td>macro</td>
<td>Increasing participation of villages &amp; of local groups in environmental &amp; health programmes. New monitoring systems in place. Communities evaluating own programmes in behavioural change through quarterly meetings.</td>
<td></td>
</tr>
<tr>
<td>Worms Control Programme</td>
<td>Martha Osei</td>
<td>SEARO (North Sumatra, Indonesia)</td>
<td>Emphasises cooperative efforts of community; government and local immigrants; public health education; repair of water systems &amp; latrines; school health programmes.</td>
<td>Department of Health, local health authorities and private industry.</td>
<td>macro</td>
<td>Increased awareness and knowledge of the dangers of worm infestation. Reduced prevalence of disease.</td>
<td></td>
</tr>
<tr>
<td>No Smoking Islands</td>
<td>Martha Osei</td>
<td>SEARO (Maldives)</td>
<td>Youth engaged in active anti-smoking campaign with the Island Development committee; community leaders lobbied for tobacco ban; forums for discussion; peer education.</td>
<td>Local community, Development committee &amp; government Ministry of Health,</td>
<td>macro</td>
<td>Policy for a no smoking island was implemented; legislation against tobacco advertising and smoking in public buildings. No tobacco use on the island.</td>
<td></td>
</tr>
<tr>
<td>Comprehensive School Health Education</td>
<td>Martha Osei</td>
<td>SEARO (Sri Lanka)</td>
<td>School health clubs.</td>
<td>International funding agencies; schools, Ministry of Education.</td>
<td>micro</td>
<td>Clubs were popular.</td>
<td></td>
</tr>
<tr>
<td>Health Services</td>
<td>Country</td>
<td>Initiative</td>
<td>Description</td>
<td>Scale</td>
<td>Notes</td>
<td></td>
<td></td>
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<tr>
<td>Mongar Health Services Development</td>
<td>SEARO (Bhutan)</td>
<td>Reorganisation of infrastructure of primary health care; local needs assessment; community participation; local committees; community leaders; village health workers; environmental programmes; health education programmes.</td>
<td>Community members, agencies.</td>
<td>macro</td>
<td>Pit latrines run by local community health workers; increase use &amp; coverage of primary health care; community members sensitised to health issues.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Promoting Health Through Partnerships</td>
<td>USA initiative</td>
<td>Network/communication links; manual for mental &amp; emotional health promotion; teacher training; exchange visits of teachers &amp; pupils between USA and Europe; computer hardware in schools.</td>
<td>Corporate Sector: Johnson &amp; Johnson European Philanthropic Committee; European Schools; WHO/EURO; Community based foundation (New communities Foundation).</td>
<td>micro</td>
<td>Exchange visits and exchange of information has occurred.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Project Hope: Reforming the Polish Healthcare Programme</td>
<td>William Walsh</td>
<td>5 week training of managers for healthcare reform; conference.</td>
<td>International health education foundation (Project Hope) supported by the corporate sector; Ministry of Health &amp; Social Welfare; School of Public Health.</td>
<td>micro</td>
<td>Sharing learning, developing skills of management leaders in healthcare and health promotion in Poland.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

* The data in this table is necessarily brief and apologies to case study authors for truncated descriptions.

+ Two additional case studies were forwarded to WHO/Geneva for consideration demonstrating the contribution of the private sector in the initiation and support of health promotion and are included for completeness.
References:


CDC (1997): Community indicators for HIV prevention: a Delphi exercise. HIV/STD Behavioural Branch of the center for Disease Control and Prevention, Atlanta, USA.


Gillies PA (1996): The contribution of social and behavioural science to the prevention of HIV. In (eds. Mann and Tarantola). AIDS in the world II. Oxford University Press, NY:


Appendix

Format of Presentation of Case Study Reports

Length: The case study report should be 3-5 type written pages in English using the following outline:

Name of person reporting:
Address:
Telephone:
Fax No:
E-Mail:

*****************************************

Title of Case Study:

Rationale for Initiative: (i.e. Why was it undertaken?)

Objectives of Initiative: (i.e. What was it trying to do?)

Description of Initiative: (i.e. How was it undertaken? What funding, resources and infrastructure was involved? Who was responsible for coordinating it?)

Evidence of Success: (Intended and unintended outcome)

Evaluation: (i.e. Was a formal evaluation undertaken? If yes, attach copy or describe approach used)

Reflections: (What were the reasons for successes? What factors, if any, limited success?)

Dissemination: (i.e. How were the findings of the health promotion initiative disseminated?)

Lessons learned:
Process for selecting recommended case studies for presentation at the Jakarta Conference

The HEA engaged in a consultative exercise with regional consultants for the selection of ten case studies to be presented at the 4th International Conference on Health Promotion, Jakarta, July 1997, to demonstrate successful health promotion "in action". Criteria for selection of the studies recommended to HWO, Geneva.

A one day meeting was held at the National Institute for Health Promotion in Budapest in March 1997, had three principal objectives:

- to identify the criteria for inclusion of case studies in the health promotion in action track of the conference.
- to establish a preliminary scheme for categorising case studies.
- to select exemplar case studies.

**Criteria for inclusion**

It was decided that case studies demonstrating successful health promotion should:

- adopt a wide perspective of health promotion
- taken together, reflect the range of scale of operation in practice from the micro local level of activity to the national level
- seek to meet the stated aims of the projects or interventions described
- represent health promotion activities in the northern and southern hemispheres of the globe

In terms of outcomes, it was proposed that success be interpreted as broadly as possible. Thus process indicators should be considered as useful not only in explaining why or how a programme worked, but as outcome indicators of success in and of themselves.

Indicators of success, either process or outcome indicators, should attempt to address the way in which interventions worked:

- at different levels
- in different ways
- other variable time scales and
- with differing benefits for individuals, families, communities and societies.

There was discussion over what counted as good evidence of health promotion and general agreement that study designs involving randomised controlled trials were often not appropriate to measuring the benefits from health promotion activities in the real world. Nonetheless, it was also recognised that there may be a place for a hierarchy of evidence, if such a hierarchy were indeed firmly in place. The usefulness of a hierarchy of different measures of effects would be dependent upon the questions the evaluations study was seeking to answer and care would need to be taken to value qualitative and quantitative information equally and/or appropriately.
Towards a schema for categorising case studies

Discussions suggested that the following descriptors could be identified in the data available from compilation of case studies:

Where an intervention takes place:
- city
- organisation
- school
- community neighbourhood

With whom:
- individuals
- groups
- whole populations, most particularly disadvantaged populations

How / approach used:

* Societal
  promoting cultural understanding/extrapolating from traditional structures
  institutional capacity building but only of lined to capacity building at a local level
  policy development
  national leadership
  development of cross-sectoral mechanisms for working nationally and locally
  democracy

* Community based
  developing community competency
  building community capacity
  mobilisation of commentates
  representation at local levels in setting agendas for change
  peer leadership approaches in commentates
  strengthening democracy and civic engagement/social network development in communities

* Organisational
  organisational flexibility, learning and change
  professional development and training
  service reorientation
  service transformations
* Individual
  - behaviours, attitudes, beliefs, knowledge

Outcomes?
quantitative and qualitative data (i.e. not mutually exclusive)
both process and end outcomes as indicators of success

Consultants involved in the process

Professor Leif Aaro, Norway
Mrs Ursel Broesskamp-Stone, Switzerland
Professor Pamela Gillies*, UK
Dr B Gultom, Indonesia
Dr Jamila Hashim, Malaysia
Professor Peter Makara, Hungary
Mr Dominic McVey*, UK
Mr Peter Trowell*, UK
Dr Marilyn Wise, Australia

* All Health Education Authority, London, UK. The HEA was contracted by WHO, Geneva to coordinate the development of Health Promotion case studies and analyse them, as part of the Review and Evaluation Tract (RET), one of three preparatory tracks towards the 4th. International Conference on Health Promotion, Jakarta, July 1997.
RET
LIST OF REGIONAL FOCAL POINTS – COLLECTION OF CASE STUDIES

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Fax:  60 82 424 959
Email: jkns2@po.jaring.my
Homepage:  http://www.jaring.my/jkns/welcome.html

* Dr Al-Khateeb – EMRO sent five cases to WHO/HQ on alliances for HP
REVIEW AND EVALUATION OF HEALTH PROMOTION

INTERNATIONAL COMPARISONS OF THE KEY FACTORS AFFECTING HEALTH: AN ANALYSIS OF THE INTERNATIONAL DATABASES ON HEALTH
- conference working paper -

provided by:
Megan Landon, Dominic McVey
Paul Wilkinson, Tony Fletcher
International comparisons of the key factors affecting health:

An analysis of international databases on health

By

Megan Landon  London School of Hygiene and Tropical Medicine
Dominic McVey  Health Education Authority
Paul Wilkinson  London School of Hygiene and Tropical Medicine
Tony Fletcher  London School of hygiene and Tropical Medicine
CONTENTS

Foreword

1. Introduction

2. Burden of Disease

3. Factors Correlating with health
   3.1 Economic development
   3.2 Social and educational factors
   3.3 The environment
   3.4 Food and nutrition
   3.5 Health care and intervention programmes
   3.6 Specific Health Issues

4. Discussion

5. References

6. Appendices
   Appendix 1 - data sources and quality
   Appendix 2 - country groups

7. Tables and Figures
List of Figures and Tables

Table 1: Percentage of total deaths in each region for selected disease categories, all ages, both sexes, 1990

Table 2: Air pollution and associated data in a selection of large cities

Figure 1: Percentage of deaths from selected causes by region

Figure 2: Life expectancy against GNP per capita

Figure 3: Percentage of income held by the richest 20% of the population against infant mortality and life expectancy

Figure 4: Temporal change in GDP per capita

Figure 5: Literacy against fertility and infant mortality rates

Figure 6: Changes in fertility rate, birth rate, life expectancy at birth and infant mortality by region, 1967-92

Figure 7: Access to safe water in rural and urban areas against diarrhoeal disease and infant mortality by region 1990-92

Figure 8: Percentage of population with access to safe water

Figure 9: Percentage of the population in urban areas against GNP per capita, 1993

Figure 10: Malnutrition and vaccination rates against child mortality

Figure 11: Access to health care and expenditure on health

Figure 12: Low birthweight babies against health expenditure
Foreword

As part of its contribution to the review and evaluation track of the Jakarta conference the Health Education Authority (HEA) have produced two papers. The first is “Partnerships for Health and Social Capital: a decade of progress” which summarises a review of the available evidence on the effectiveness of health promotion, and discusses possibilities for the future. As a back drop to this paper on evaluation the HEA and The London School of Hygiene and Tropical Medicine have produced a second paper which summarises the results of the data contained in a number of international data sets. This paper is a “macro-analysis” of the key factors which are believed to affect health and well being.

The work draws primarily on several key international databases and studies making global comparative assessments of health. The excellent work of Murray and Lopez for WHO and the World bank has been particularly useful in this exercise.

The limitations of the data sets in terms of the measures of health which are used and the incompleteness of the data from various parts of the world, have made the task of producing full international comparisons impossible. However, were possible, the broad themes and factors which appear to influence health indices are examined across countries, and those with particular reference to health promotion are highlighted.

This paper is a draft working paper for the Jakarta conference and further work is ongoing. The team from England who continue to work on the paper are:

Megan Landon    London School of Hygiene and Tropical Medicine
Paul Wilkinson   London School of Hygiene and Tropical Medicine
Tony Fletcher    London School of hygiene and Tropical Medicine
Dominic McVey   Health Education Authority

Particular thanks are due to Pamela Gillies (HEA), Ursel Broesskamp-Stone, Desmond O’Byrne and Ilona Kickbush (WHO- Geneva) for their comments and support.

Dominic McVey
Head of Research
Health Education Authority
England
1. Introduction

In this paper we look at the health of countries and regions throughout the world using routinely available statistics and consider some of reasons for the broad contrasts in health these comparisons reveal. The aim is to point to some of the major health challenges that face us at global level.

The main data sources used are those provided by national governments to international organisations such as the World Health Organisation, and made available as reports and collective databases. They include the World Bank database, the World Resources Report, the Health-For-All database and Murray and Lopez’s report on the Global Burden of Disease (see Appendix 1). Because of differences in the completeness, quality and coding of data at national levels, country by country comparison of these health statistics has to be treated with some caution. Some countries have limited or incomplete vital registration systems for births and deaths and so mortality for example is estimated from survey and census data, or by having sample death registration areas from which national figures are estimated. Where there are developed registration systems, there may be significant variation in the way deaths are reported. We have therefore chosen to concentrate on statistics least likely to be subject to differential reporting, including overall all-cause and age-specific mortality.

In various tables and figures which follow, countries are categorised by their demographic development and region of the world. Although a range of different conventions have been developed for such categorisations, the system used here is now well-established and in widespread use. It makes the broad distinction between demographically developed countries (comprising Established Market Economies and Former Socialist Economies of Europe) and demographically developing regions, comprising India, China (these two countries are each listed separately as they have large distinctive populations), Sub-Saharan Africa, countries of the Middle Eastern Crescent, Latin America and the Caribbean, and Other Asian countries and Islands (Appendix 2). Demographically developed and developing are separated by the proportion of economically inactive population at either end of the spectrum—developed has a greater proportion of population over 65 years and therefore in health terms a greater cost. Developing regions have a greater proportion under 15 years and have lower health cost if immunisation is employed.

For none of the comparisons shown in this report were data available from all relevant countries. Tabulations and graphs therefore include data from the selected countries which supplied them, and regional statistics are usually based on data from a limited number of countries rather than all countries within the region.
The selective availability of data adds to the interpretational difficulties which stem from variation in individual national data collection systems. Moreover, a multitude of factors contribute to international variations in health, and it is difficult from simple comparisons to ascribe specific causes to them. Nonetheless, some useful observations can be made about the need for further effort at national and international levels to improve health. The greatest needs remain those of the world’s most disadvantaged populations.

2. Burden of disease

Table 1 shows mortality by disease category and country group in 1990. While non-communicable diseases are the leading killers in demographically more developed countries, infectious and parasitic diseases are more important elsewhere and remain the biggest killers in Sub-Saharan Africa, where it is not only diarrhoeal diseases and respiratory infections that are major threats, but also tuberculosis, malaria, measles, HIV/AIDS and a range of other communicable diseases.

The very large global burden of maternal and perinatal deaths and deaths from diarrhoea and respiratory infections (Figure 1) attests to the inadequacy of current hygiene and public health measures to combat these largely preventable causes of death. The contrast between established market economies and lower income economies is stark. These causes of death together account for less than 5% of deaths in the highest income economies, but nearly 32% of those in sub-Saharan Africa and the Middle Eastern Crescent, 28% in India, and 22% in Latin America and the Caribbean. Improved environmental hygiene, especially in the supply of clean drinking water, good nutrition, improved primary health care and immunisation programmes are all important to help reduce these deaths.

Deaths from intentional and unintentional injuries, a category of which includes suicides, accidental deaths and deaths from conflicts, are a substantial cause of mortality in many countries. Unintentional injury appears to be particularly high in China and Latin America. War is unfortunately a major cause of death from intentional injuries in Sub-Saharan Africa. China’s high rate of death from intentional injury is contributed to by a high frequency of suicide. Some 0.3% of deaths there are recorded as suicide compared with 0.15% for the world as a whole. The reasons for this are unclear, but may in part be related to poverty and rural isolation. China also has an unusually high number of deaths by drowning. The poorest countries show the highest road traffic related mortality rates and there is evidence of a social class bias within countries with those most disadvantaged in a society more likely to suffer as a
consequence of traffic accidents. General childhood accidents also exhibit the same inequality with poorer children more likely to suffer from injury.

Few reliable data are available at national level on mental illness and behavioural problems, but the burden on society from these conditions is of increasing concern.

In world terms, and certainly for the demographically more developed countries, the main burden of mortality arises from non-communicable diseases. Given the demographic transition now occurring in many countries, with a change in the causes of death and character of morbidity from acute to chronic diseases, the global contribution of non-communicable disease is likely to increase. As the pattern of health problems of the developed countries become those of the rest of the world, it is reasonable to expect that some causes of ill health will become relatively and absolutely more important such as heart disease, some cancers, obesity, diabetes and osteoporosis, and road traffic accidents. But it is by no means clear that the lessons have been learned. The high and rising prevalence of smoking in countries such as China now targeted by the major tobacco manufacturers can be expected to lead to an 'epidemic' of smoking-related diseases in future years. Partly in response to the fall in smoking prevalence in higher income countries, tobacco companies are now choosing to target campaigns in lower income countries, where there are fewer pressures to restrict smoking advertising and as yet less threat of litigation.

3. Factors correlating with health

3.1 Economic Development

Of all the factors which correlate with health at an international level, economic development shows one of the strongest associations. Life expectancy in the highest income economies, is some 20 to 30 years greater than in the lowest income economies, a disparity that largely reflects the high perinatal and infant mortality in low income countries. There are many reasons for this difference. The higher a country's income, the more likely that its people live in a clean environment, have access to safe drinking water, are better educated, have balanced nutrition, work in safe conditions, and have access to high quality health care.

Figure 2 shows how life expectancy increases with Gross National Product per capita, and that its variation from country to country is much smaller in the high income than the low income countries. Life expectancy in some of the low income countries is similar to that of the highest income countries, while in others it is very much poorer. This observation broadly indicates that average wealth is not a pre-requisite of health, and that
other factors such as social and health policies can have a very significant influence on the prevention and outcome of disease. Encouragingly in 1996, 21 out of 48 least developed countries made gains in per capita GDP, this is most evident in Africa where populations with growing GDP per capita increased from 67% in 1995 to 87% in 1996. The economies of the newly independent states of the former Soviet Union are however still in decline.

It is clear that the absolute level of income is important, but there is also evidence that disparities in wealth within countries also influence health. Figure 3 shows the variation in life expectancy for high, middle and low income countries as a function of the distribution in income (proportion of income held by the richest 20% of the population, proportion of income held by the poorest 20%). Though gradients are rather shallower than with absolute income, similar trends are apparent in all three income groups, and they suggest that those countries with the most equitable distribution have the higher life expectancy, though the differences are generally fairly small (a few years). These countries also tend to be those with the lower infant mortality. Whether this is due to very poor health of the most disadvantaged people in socially polarised populations, or to a more subtle and general effect on the whole population from some undefined effect of social division is not clear. Nor is it clear whether it could be explained by the fact that countries with more egalitarian social policies are also those with more developed and inclusive health care programmes. Nonetheless, both absolute and relative poverty appear to be separately associated with poor health.

WHO has identified extreme poverty as the greatest cause of mortality and morbidity. Although there is country by country information on the number of people in extreme poverty, the figures are not comparable as each country uses its own definition of what constitutes poverty, and income has to be judged in the context of local social and economic circumstances. A level of income which would be below the poverty line in one country (say one of the established market economies) might be a living income in another region. But, however defined, it is clear that large numbers of people throughout the world have so few resources that they do not have access to adequate housing, nutrition, education and health care. The gains in wealth over recent decades have been greater in the more developed economies than elsewhere in both absolute and relative terms (Figure 4). Perhaps one of the greatest concerns is that the slowest rise in income has been in some of the poorest economies, in particular those in the sub-Saharan Africa, India and south America. Moreover, there is also evidence of a positive correlation between economic growth and income equality. Economic growth contributes to human development by influencing job opportunities, equity, access to productive assets, social spending, gender equality, good governance, and active civil society. At a
more basic level it enables the poorest members of society to afford better housing, food and access to health care. As is further discussed below, the proportion of Gross National Product spent on health care is inversely related to a country’s wealth, presumably reflecting the fact that health care is less 'essential' than many other areas of expenditure when resources are extremely limited. It is also important to remember that health is paid for by non-governmental organisations, private companies, and the family purse, 6 and not just by the government when examining these figures.

A problem facing many countries is in how to prioritise their health budgets most effectively in light of the changing nature of health problems from infectious to non-communicable disease and competing demands on the government purse. Unfortunately, in all countries there is a tendency for policy to be disproportionately influenced by the demands of those closest to the decision making process at the expense of social equity and efficiency. For instance, cardiovascular disease affects only a small proportion of the population in many developing countries, but it mostly affects the wealthier social groups who have a vested interest in ensuring the provision of secondary and even tertiary facilities for the treatment of this condition, whereas in terms of maximising the benefits of health expenditure, the most efficient use of the budget may lay in primary prevention or other health programmes.

3.2 Social and educational factors

To understand and ultimately influence health practices it is important to understand the social and cultural context of different countries 7. Fertility and family size and composition are often influenced by the expectation that children will help support parents in older age, and are thus affected by expectations of whether a child is likely to survive into adulthood, and eventually contribute to family income. Thus the practice of having large families in part derives from the experience of high infant and childhood mortality and economic uncertainty. There is a strong inverse relationship between number of births per woman and infant mortality rate (Figure 5). Those countries with low birth rates are also those with low infant mortality and usually high income. Because they can be reasonably sure that their children will reach adulthood, and because economic prospects are more certain, parents in more developed economies with low infant mortality rates do not need to have large families to secure their future. In some countries, rapid population growth, with its attendant consequences, has occurred when maternal and child health has improved but the practice of having many children per family has continued. Religious practices also have a significant influence over fertility for instance by not allowing the use of contraception or abortion.
**Literacy:** Literacy, particularly female literacy, is rising throughout the world. As women are often responsible for managing the household, education enables them to utilise health information and health services more effectively. This is true for developed and developing countries, and education may be a very effective means of improving health. A study in Africa suggests that a 10% increase in female literacy is accompanied by a 10% decrease in child mortality.

Figure 5 shows the inter-relationship between female literacy, fertility and childhood mortality at international level. It is not possible to draw firm conclusions about cause and effect from comparisons at this level, but it is apparent nonetheless that female literacy is inversely related to infant mortality, though of course countries with higher literacy rates are often those with higher incomes. Evidence from other sources does support a direct influence of education on health, particularly in less developed countries, by its effect on domestic hygiene, the use of clean water, improved social networks and management of the household finances. It also improves job and marriage prospects for women, and this may have desirable longer-term effects on child health. The diagram below shows one theory of how investment in human resource development can influence poverty.

![Diagram 1: Mutually reinforcing cycles: reduction of poverty and development of human resources](image)

The most recent Human Development Report from the United Nations expresses concerns that some of the poorest countries are cutting education spending when it has been shown as a clear route away from poverty.

The proportions of children out of school is highest in South Asia and Sub Saharan Africa, where enrolment in primary school is still very low. The single biggest reason why the world has not succeed in delivering universal
primary education to all its children is that it has not invested enough resources in decent schooling. Sub Saharan Africa currently pays $12 billion in servicing its debts, whilst $2 billion would be enough to offer all the regions children a place in school.

Children not in school are likely to be working and one in five of the world's children aged 6 to 11 years are not attending school i.e. around 140 million. Definitions of Child labour are unclear because it is difficult to define when helping out at home becomes work. This problem is compounded because governments are not keen to measure a phenomenon that is officially not supposed to exist. It is estimated by the International Labour Organisation that there are 250 million child workers. As this figure excludes children in the industrialised world and many female child workers doing domestic work, a more a complete assessment would push the figures up to 500 million, or half the children in the developing world aged 5-14. Many are working in poor conditions for little pay and significant numbers are being exposed to very hazardous conditions. In 1990 a survey of Mexican-American children working on farms in New York state showed a third of them had been spayed with pesticides.

Migration and population displacement: There are a number of reasons for migration and population displacement: conflict, poverty, denial of human rights, land pressure. We continue to see refugee populations fleeing from war zones and observe the impact of health during movement, in camps and after relocation. Some are immediate effects, such as poor nutrition and hygiene, often leading to outbreaks of diarrhoeal illnesses, including cholera, and tuberculosis in camps. Other effects may take time to become manifest, such as post traumatic stress disorder and depression. The separation of family members, the number of orphaned children, the breakdown of social structures, and means of livelihood may all have long-lasting effects. Though there are few global data available, a recent report by the US Committee for Refugees estimated that world-wide there are 34 million refugees, asylum seekers or displaced persons.

3.3 The environment

The effects of the environment on health may encompass those of the physical surroundings, chemical and biological contamination of the air, water and soil, and social factors. The list of potential topics that could be discussed is very long. We have chosen to concentrate on four key areas of global concern: water-related health risks; the effects of increasing urbanisation; air pollution, and global climate change.

Water and sanitation. The provision of clean, safe drinking water and the hygienic disposal of sewage are among the most important public health
measures against the spread of disease. Hazards may be posed by biological (mainly faecal) contamination of drinking water, or by contamination with chemical agents, including heavy metals\textsuperscript{16} and agriculture runoff, including pesticides.

Figure 7, based on regional data, shows the correlation between access to safe water on the one hand and diarrhoeal illness and infant mortality on the other. That the graph for diarrhoeal episodes is similar to that for infant mortality in part reflects the fact that diarrhoeal illness is a major contributor to infant death in many developing countries. As might be predicted, the proportion of people with access to safe drinking water is generally higher in urban than rural areas. Over recent decades access has improved in most regions (Figure 8), though the proportions with access to safe water remain disappointing low in many countries, especially the lower income countries and in rural areas. The World Bank recommends increasing coverage of safe water and sanitation, but that systems and standards should be appropriate for each area; for example it is not feasible to except that a full urban, treated water and flush-sanitation system is necessary in all areas\textsuperscript{16} They also recommend that households pay for the access to water. It should also be noted that both quality and quantity of water are important to encourage good sanitation and washing of hands before food preparation and after toileting. The use of water and sanitation practices are also culturally bound, for instance, using sacred water from the polluted Ganges, and the application of 'night soil' as a fertiliser. Efforts to change practice are often needed as well as structural measures.

\textit{Urbanisation:} The proportion of people living in urban areas is increasing in many countries as they shift from agriculture to more industrial production. The more developed economies tend to have the highest proportion of people living in cities, (figure 9) but the most rapid changes are occurring in some of the developing countries, especially in those with a rapidly accelerating pace of economic growth.

One of the consequences of this is that population influx into cities may occur more rapidly than infra-structural development, and new migrants may experience new health hazards both from the urban environment and from inadequately controlled health and safety conditions of employment in new industries. The effects on health of this change in lifestyle have been the subject of increasing international scrutiny as shown in a recent World Resources Report on Urbanisation.\textsuperscript{17}

Moving to an urban area does not necessarily mean an automatic health improvement, there are wide intra-urban differentials in health status linked to a number of factors. Life in the leafy, well serviced suburbs is vastly different form the overcrowded squatter camp or tower block. There have
been a number of studies linking overcrowding with health status. The closer the proximity of household members means infections are more likely to be passed around; infections start earlier in life, and there is a greater risk of multiple infections and long-term adverse effects\textsuperscript{18}. There is also a greater mental health burden.

The world-wide movement of the Healthy Cities project has helped to focus attention on these problems and has aimed to bring a more integrated approach to city living and allow discourse between all those living and working in and for the city to come together to decide on improvements and priorities\textsuperscript{19}.

\textit{Air pollution}

Table 2\textsuperscript{20} shows the air pollution levels in a few very large cities and indicators for one of the key determinants of air pollution i.e. the amount of transport. Air pollution levels are affected by the number of vehicles on the roads, the climate, the amount of industrial pollution, the type of energy employed - from coal burning power stations to the use of biomass fuels in cooking. It is estimated that 2.5 billion people world-wide rely on biomass fuels of these 800 rely on agricultural residues and dung\textsuperscript{21}. Short term effects on daily mortality rates and hospital admissions and long term effects on mortality have been attributed to air pollution\textsuperscript{22}.

Health effects of environmental pollution generally range from respiratory and cardiovascular disease and cancer from air pollution to congenital malformations from hazardous waste sites. It has been estimated that 2\% of cancer deaths are associated with pollution\textsuperscript{22}.

\textbf{Areas of rapid industrialisation} Environmental changes are large in areas of rapid industrialisation such as the “Tiger economies” of the Eastern Pacific, as are the effects on health. The process is an acceleration of the pattern seen in other developing countries as access to convenience foods and ‘western’ lifestyles is increased. In areas of rapid industrialisation industrial pollution rises very fast, in Thailand as the GDP doubled between 1975 and 1989, atmospheric pollution increased tenfold. With increasing wealth there is more money available to trade from bicycles to scooters and from scooters to cars. Little thought and planning has gone into mass transit systems, and so private vehicle ownership becomes even more important, and a mark of prestige. Urban planning is crucial to prevent large squatter and slum developments forming and to provide essential services.

\textit{Climate change:} There is an increasing public and scientific awareness of the potential effects on human health of climate change. There are several
forms in which this is likely to manifest itself, from a change in the mean
temperature, a rise in sea levels, extreme weather events such as droughts
and cyclones and stratospheric ozone depletion. The impact estimated to
be caused by a rise in the mean temperature are, in descending order of
significance; vector borne disease, reduced food availability and hunger,
sea level rise, the effects on respiratory health of pollen and changes in
humidity, and the displacement of populations.\textsuperscript{23}

\textbf{3.4 Food and Nutrition}

Food security and diet related chronic diseases are both significant aspects
of nutrition. Access to safe and adequate food supplies varies both
between and within countries. Food security is generally improving except
in Sub-Saharan Africa and areas experiencing acute food famines are
decreasing. Malnutrition is a significant public health and economic problem,
inadequate nutrition can lead to a decline in working performance, problems
with pregnancy outcomes, inadequacy of the immune system and a decline
in infection resistance. Malnutrition is seen to be contributing cause to
over half the deaths of children in developing countries\textsuperscript{2} (Figure 10)
Protein-energy malnutrition effects 800 million world-wide, 3 billion suffer
from micronutrient deficiency, such as anaemia, vitamin D, vitamin A and
iodine deficiency.\textsuperscript{5} These can be helped by improved diets, food
fortification or supplementation all of which are cost effective solutions.

At the other end of the malnutrition spectrum is obesity caused by an
unhealthy diet and a sedentary lifestyle. As well as a health risk in itself
obesity is a risk factor for other diseases such as cardiovascular disease
and non-insulin dependent diabetes.\textsuperscript{24} As more countries pass into
demographic transition obesity becomes a world-wide problem,
compounded by changes in diet, working practices and social factors it is
also a product of the changing physical environment. For example in cities
such as Delhi walking to work, school or shops, or for pleasure is
restricted because of the physical layout of the streets, the volume of
traffic, noise and air pollution.

Diet is risk factor in many chronic diseases, from various forms of cancer
to cardiovascular and cerebro-vascular diseases and diabetes. It is also
implicated in determining adult disease status through maternal nutrition.\textsuperscript{25}
Another diet related disease, diabetes mellitus affects 135 million world-
wide - due to an ageing population, unhealthy diets, obesity and a
sedentary lifestyle, it also associated with heart disease, kidney failure,
blindness and problems in pregnancy, and is on the increase in developing
countries.\textsuperscript{5}
It is also worth considering the health and economic impact of food-borne diseases, such as brucellosis, cholera, diarrhoea disease, intestinal parasitic infections and toxoplasmosis. These are not restricted to developing countries or too areas with unsafe water, but outbreaks of salmonella listeria and ecoli for example in established market economies and of dysentery in the former Soviet Union have significant public health impact. There is potentially large underreporting of these type of disease, with the ratio of actual cases of food borne disease to reported cases varying from 25:1 to 100:1.

3.5 Health care and intervention programs

In 1996 the World Health Organisation at a conference on health care adopted the Ljubljana Charter which has as its premise the need to develop health care systems along principles of human dignity, equity, solidarity and professional ethics.

Access to health care covers a number of factors, physical access, access to health care personnel and access to specific services. Distance to health care is shown to directly effect morbidity. This is particularly significant where the most likely form of transportation to reach health care is by walking. For example 95% of episodes of diarrhoea occurring within 1 mile of a clinic where treated, and for patients within 2-3 miles it fell to 35%(female) and 70%(male). Even within urban areas in developed countries the distance to hospital has an effect on treatment and morbidity. Regular access to essential drugs varies from over 95% in established market economies to less than 50% in more than 50% of Sub-Saharan Africa. There is less than 80% availability in the former Soviet Union countries, India, China and Other Asia and islands regions. Access to health care facilities and amenities varies by region (Figure 11.). The greater the percentage of GNP per capita is the more GDP is spent on health, access to local health care (i.e the provision of at least basic facilities within walking distance) increases with an increase in the GDP spent on health. In the developing countries there has been an improvement in access to services over time. Figure 12 shows an example of the effect of health expenditure as a percentage of GDP on the number of low birthweight babies born. This is associated with increasing access to health care personnel and services as well as to dissemination of advice on diet and maternal care in pregnancy.

Immunisation: The clearest example of a successful intervention program is in immunisation, world-wide immunisation programs eliminated smallpox in the late 1970's and there are distinct relationships between immunisation levels and infant and early childhood mortality. See Figure 10.
3.6 Specific health issues

AIDS: The spread of HIV/AIDS varies from country to country and has held stable in some areas, although a new wave of young men in the developed world is being affected by male to male contact\textsuperscript{29}. The prevalence in Africa continues to rise and is now responsible for 62% of the 22.6 million\textsuperscript{29} people living with AIDS/HIV world-wide. Some of this rise can be attributed to demographic change as populations shift from rural to urban areas, and also to the number of more immediate events such as natural disasters, social disintegration, armed conflict and mass population movement\textsuperscript{29}

The impact of AIDS on human development has been marked, in some areas, for instance it has put human development back in Zambia by 10 years and is likely to similarly affect Thailand, Myanmar and India as the virus spreads through this area. This is particularly significant as it the economically active age group 20-45 which is most affected \textsuperscript{30}. The pattern of the spread of AIDS varies internationally as does the type of intervention suitable for each region. Female literacy levels are associated with a lower spread of infection, possibly associated with an overall improvement in sexual health and the success of messages to use condoms. As mentioned the rise in AIDS/HIV among young men in the developed world calls for a new education approach targeted at this group.

Tuberculosis: Average notification rates for TB (sputum smear positive) have risen by 51% in Africa from 1984-86 to 1990-93, and by 37% and 30% in SE Asia and the W Pacific respectively. This is strongly linked to the rise in HIV infection, and to drug resistant strains\textsuperscript{31}. Policy recommendations made at a recent conference on Tuberculosis centred on a co-ordinated international effort by every country to prioritise the elimination of TB with support from WHO and IUATLD\textsuperscript{31}.

Time trends -Former socialist economies of Europe.

Life expectancy has fallen in CIS (by some estimates male life expectancy has fallen by 5 years) and Eastern Europe due to social and economic change\textsuperscript{40}. Infant mortality has risen by 13% in Russia and the Ukraine. There are a number of contributing factors; differences in the quality of medical care, environmental pollution, lifestyle and behaviour, social deprivation, smoking\textsuperscript{32}.

4. Discussion

In this analysis we have attempted to assemble the various pieces of available information to map the key social, economic and environmental factors which show a correlation with established health indicators. The degree to which this has been achieved has been limited by the quality of
the data on the databases and the time available to conduct the analysis. Some regions have more developed infrastructure and more incentive for collecting information on health, literacy etc. whilst others do not even record the cause of death. Even where there are developed registration systems there may be significant variation in the way deaths are recorded. Moreover, for all countries and regions the indicators of "good health" for a population tend to be disease focused measures on life expectancy and infant mortality, with little reference to measures on quality of life and well-being encompassing psychosocial measures. We chose to concentrate on statistics least likely to be subject to differential reporting, including overall all-cause and age specific mortality.

Even if the data were truly comparable it is difficult from simple comparisons to ascribe specific causes to the observed international variations in health. Nonetheless some useful observations have been highlighted about the areas of greatest need.

Whilst medical intervention is clearly important some researchers argue that medical effort adds no more than about five years life expectancy and most of this comes from treatment rather than prevention\textsuperscript{27}. The growing evidence from developed and developing contexts indicates that wealth, income inequalities, social support, education and housing are related to differences in life expectancy, infant mortality and psycho social well-being,\textsuperscript{28,29} and newer dangers from pollution are clearly taking their toll. Whilst researchers around the world are demonstrating the links between all these factors and health as measured, for example, by life expectancy and infant mortality, there is a need for improved measures on health and well being and the social and enviromental factors which influence them. Clearly efforts should continue to improve and standardise data collection of international information on health.

Of all the factors which correlate with health at an international level economic development shows one of the strongest associations. Life expectancy in the highest income countries is some 20-30 years greater than in the lowest income countries. However, there is considerable variation in this pattern. Life expectancy for some of the lower income countries is similar to that of the higher income countries while in others it is very much poorer. Whilst people in higher income countries are more likely to live in a healthier environment with clean water, good nutrition and access to health care, this observation indicates that wealth is not always a pre-requisite of increased life expectancy; social and health policies are probably having a significant influence on the prevention and outcome of disease.

Whilst absolute levels of income and poverty are important there is considerable evidence from numerous research studies that there is a
relationship between income distribution and life expectancy and this has been shown to exist in both rich and poor countries. Moreover, there is growing evidence that income distribution is closely related to the social fabric of society and that egalitarian societies tend to be healthier societies.\textsuperscript{36,37} Psycho social factors relating to social cohesion and a sense of community are having an effect on health and well being. Social support, civic involvement and constructing partnerships in communities are some of the many factors that build “social capital” in society\textsuperscript{38}, and are important mechanisms for the promotion of health and the prevention of disease.\textsuperscript{37,39}

As the developing world populations begin to age and as a populations birth rate falls, the number of adults relative to children increases and the burden of disease in a population shifts from children to adults. Non-communicable diseases such as depression and heart disease begin to replace infectious diseases and malnutrition as the main cause of disability and premature death. Currently non-communicable disease accounts for half the deaths in developing countries but by the year 2020 they are expected to account for seven out of ten deaths. Moreover Injuries and unintentional injuries are becoming more prevalent and could become as significant a cause of ill health as infectious diseases.\textsuperscript{1}

This “epidemiological transition” will pose a serious challenge to heath care and health promotion. Regions going through this transition notice a change in the main causes of death and the social distribution of important conditions.

Individually focused behavioural interventions based on theories of psychosocial behaviour change have been shown to have a significant but limited impact in changing behaviour, tending to reach only the better motivated and better educated individuals. The need to understand the broader social, economic and environmental determinants of health and to build the mechanisms by which communities of individuals can address them remains the challenge for health promotion
5. References


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37 Wilkinson RG, Unhealthy Societies; The Affliction of Inequality. Routledge 1996


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6. Appendices

Appendix One

Data sources and data quality
Data has been combined from various sources to create some of the tables and graphs, only where the year is similar and there is information for both factors has the country been used. This means that each set of data is based on slightly different criteria and does not begin to address the issues of data quality or completeness of collection. Most of the data in this paper has been compiled from UN sources, and they are reliant on what is sent to them by the member countries.

See the original reports or database sources for a detailed description of the limitations of the data, including availability and accuracy.

HDR\textsuperscript{40} Human Development Report - published since 1990
Contains a Human Development Index (HDI), the 1996 edition uses data from 1993. The Index comprises; life expectancy at birth(years), adult literacy rate(%), combined first, second and third level gross enrolment ratio(%), GDP and adjusted GDP. High, middle and low human development index categories.

HFA\textsuperscript{41} contains data supplied by member states for the years 1983, 1985, 1988, 1991 and 1994 for the monitoring of health for all as a global strategy by the year 2000.

WRD 96-97\textsuperscript{42} Contains data from a variety of sources including UNSTAT, FAO, ILO, UNESCO, WHO and OECD

WBD\textsuperscript{43} Mainly economic, but some health and demographic information supplied by the World Bank.
Appendix Two

Country Groups
There are a number of popular ways to define country groups -. Developing/developed, industrial/third world, north/south, by income group, by the human development index and by region. There is at times emotive debate surrounding the description given to countries in a state of change, and none of the descriptions are wholly suitable. However the regions used to define areas and countries groups used by the World Bank and Murray and Lopez are used here. On comparison with some of the other measures they appear to be distinct groups.

DEMOGRAPHICALLY DEVELOPED REGIONS

Established market economies (EME)

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Formerly socialist economies of Europe (FSE)

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DEMOGRAPHICALLY DEVELOPING COUNTRIES

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Other Asia and islands (OAI)

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<th>China</th>
<th>Other Asia and islands</th>
<th>Sub-Saharan Africa</th>
<th>Latin America and the Caribbean</th>
<th>Middle Eastern Crescent</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Number (1000)</td>
<td>% total</td>
<td>Number (1000)</td>
<td>% total</td>
<td>Number (1000)</td>
<td>% total</td>
<td>Number (1000)</td>
<td>% total</td>
</tr>
<tr>
<td>All non-communicable</td>
<td>29055</td>
<td>58.1%</td>
<td>6238</td>
<td>87.6%</td>
<td>3264</td>
<td>56.7%</td>
<td>4700</td>
<td>49.1%</td>
<td>6519</td>
</tr>
<tr>
<td>Cardiovascular diseases</td>
<td>14345</td>
<td>28.7%</td>
<td>3175</td>
<td>44.6%</td>
<td>2153</td>
<td>37.4%</td>
<td>2386</td>
<td>24.9%</td>
<td>2566</td>
</tr>
<tr>
<td>Malignant neoplasms</td>
<td>6129</td>
<td>12.3%</td>
<td>1764</td>
<td>24.8%</td>
<td>667</td>
<td>11.6%</td>
<td>776</td>
<td>8.1%</td>
<td>1408</td>
</tr>
<tr>
<td>Other non-communicable</td>
<td>8581</td>
<td>17.2%</td>
<td>1299</td>
<td>18.2%</td>
<td>444</td>
<td>7.7%</td>
<td>1538</td>
<td>16.1%</td>
<td>2545</td>
</tr>
<tr>
<td>All communicable</td>
<td>16690</td>
<td>33.4%</td>
<td>439</td>
<td>6.2%</td>
<td>136</td>
<td>2.4%</td>
<td>4069</td>
<td>42.4%</td>
<td>1343</td>
</tr>
<tr>
<td>Diarrhoeal diseases</td>
<td>2873</td>
<td>5.7%</td>
<td>3</td>
<td>0.0%</td>
<td>4</td>
<td>0.1%</td>
<td>825</td>
<td>8.6%</td>
<td>95</td>
</tr>
<tr>
<td>Maternal and perinatal</td>
<td>2921</td>
<td>5.8%</td>
<td>52</td>
<td>0.7%</td>
<td>39</td>
<td>0.7%</td>
<td>775</td>
<td>8.1%</td>
<td>319</td>
</tr>
<tr>
<td>Other communicable</td>
<td>4566</td>
<td>9.1%</td>
<td>94</td>
<td>1.3%</td>
<td>15</td>
<td>0.3%</td>
<td>911</td>
<td>9.5%</td>
<td>162</td>
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<tr>
<td>Respiratory infections</td>
<td>4314</td>
<td>8.6%</td>
<td>275</td>
<td>3.9%</td>
<td>55</td>
<td>0.9%</td>
<td>1096</td>
<td>11.5%</td>
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<tr>
<td>Tuberculosis</td>
<td>2016</td>
<td>4.0%</td>
<td>15</td>
<td>0.2%</td>
<td>23</td>
<td>0.4%</td>
<td>452</td>
<td>4.7%</td>
<td>356</td>
</tr>
<tr>
<td>Injury</td>
<td>4227</td>
<td>8.5%</td>
<td>445</td>
<td>6.2%</td>
<td>362</td>
<td>6.3%</td>
<td>611</td>
<td>6.4%</td>
<td>1023</td>
</tr>
<tr>
<td>Intentional Injury</td>
<td>1432</td>
<td>2.9%</td>
<td>143</td>
<td>2.0%</td>
<td>106</td>
<td>1.8%</td>
<td>105</td>
<td>1.1%</td>
<td>394</td>
</tr>
<tr>
<td>Unintentional Injury</td>
<td>2794</td>
<td>5.6%</td>
<td>302</td>
<td>4.2%</td>
<td>256</td>
<td>4.4%</td>
<td>507</td>
<td>5.3%</td>
<td>630</td>
</tr>
<tr>
<td>All cause</td>
<td>49971</td>
<td></td>
<td>7121</td>
<td></td>
<td>5762</td>
<td></td>
<td>9571</td>
<td></td>
<td>8885</td>
</tr>
<tr>
<td>Population (millions)</td>
<td>5267</td>
<td></td>
<td>798</td>
<td></td>
<td>346</td>
<td></td>
<td>850</td>
<td></td>
<td>1134</td>
</tr>
</tbody>
</table>

Table 1: Percentage of total deaths in each region for selected disease categories*, all ages, both sexes, 1990

* Estimated disease burdens, Murray and Lopez, 1994
<table>
<thead>
<tr>
<th>City</th>
<th>Beijing</th>
<th>Calcutta</th>
<th>Los Angeles</th>
<th>Mexico City</th>
<th>Sao Paulo</th>
</tr>
</thead>
<tbody>
<tr>
<td>Region</td>
<td>China</td>
<td>India</td>
<td>Established Market Economy</td>
<td>Latin America and Carribean</td>
<td>Latin America and Carribean</td>
</tr>
<tr>
<td>Income group</td>
<td>Low</td>
<td>low</td>
<td>High</td>
<td>Low middle</td>
<td>Upper middle</td>
</tr>
<tr>
<td>Motor vehicles($10^3$)</td>
<td>200</td>
<td>500</td>
<td>7,900</td>
<td>2,400</td>
<td>4,000</td>
</tr>
<tr>
<td>Climate</td>
<td>Continental cool summer</td>
<td>Savannah</td>
<td>Mediterranean</td>
<td>Marine west coast</td>
<td>Tropical rain forest</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Air quality: annual mean and (maximum concentrations $\mu g m^{-3}$)</th>
<th>WHO guidelines</th>
</tr>
</thead>
<tbody>
<tr>
<td>$SO_2^*$</td>
<td>25-130(682)</td>
</tr>
<tr>
<td>$N_2O$</td>
<td>14-54(76)</td>
</tr>
<tr>
<td>$O_3$</td>
<td>(320)</td>
</tr>
<tr>
<td>Suspended particulate matter</td>
<td>250-410(1286)</td>
</tr>
</tbody>
</table>

*daily maximum, others hourly maximum

**Table 2**: Air pollution and associated data in a selection of large cities

Adapted from WHO/UNEP 1992
Figure 1: Percentage of deaths from selected diseases by region

Legend: CVD - cardiovascular disease, Malig neop - malignant neoplasms, Resp inf - respiratory infections, Diarrhea - diarrhoeal diseases
Life expectancy against GNP per capita, 1993

- Female
- Male
- Male trend
- Female trend
Figure 3: Percentage of income held by the richest 20% of the population against infant mortality and life expectancy
Figure 4: Temporal change in GNP per capita
Figure 5: Literacy against fertility and infant mortality rates
Access to safe water against incidence of diarrhoeal disease episodes (per 100,000 of population)

Access to safe water against infant mortality rate (per 1000 live births)

Figure 7: Access to safe water in rural and urban areas against diarrhoeal disease and infant mortality by region, 1990-2
Figure 9: Percentage of the population in urban areas against GNP per capita, 1993.
Malnutrition against child mortality (per 1000 live births) in children under 5 years, 1993

Immunisation for DPT against mortality in children under 5 (per 1000 live births) 1992-3

Figure 10: Malnutrition, vaccination rates and child mortality
Figure 12: Low birthweight babies against health expenditure
Towards an Evaluation of Healthy Cities Programmes
Towards an Evaluation of Healthy Cities Programmes

Dr Greg Goldstein  
Coordinator, Healthy Cities  
Urban Environmental Health  
WHO Geneva

1. Introduction

This paper will report on a discussion of the evaluation of Healthy City projects held at the 4th ICHP, in Jakarta, 1997. Evaluation is important to measure the effectiveness of actions that can improve health, as well as to plan such actions. This paper considers approaches to evaluation that may be useful in managing programmes that can improve health - with a view to the evaluation of Healthy Cities projects and programmes.

At the Conference there were many reports of HC projects being implemented and planned; however evaluations were few and far between. In part this may be due to the recent development of the HC programme, especially in developing countries. But there remain a number of difficult evaluation issues that continue to present challenges. Nutbeam (1997) notes the importance of working through settings and across sectors in the advancement of public health, but emphasises that the case for doing so will be greatly strengthened by improved evaluation of settings-based interventions such as Healthy Cities.

Harrison has pointed out that the high ambition of the goals of healthy city projects makes them vulnerable to attack, and suggests that rigorous evaluation should not be avoided (Harrison, 1996).

This article argues that care should be taken to ensure that our interest in evaluation is balanced with attention to the implementation of the programmes and activities under evaluation. Evaluation is not a goal unto itself; but should serve to guide programme development. Health programmes that address the living and environmental conditions of cities and neighbourhoods pose more severe challenges of programme evaluation than specific disease control measures. As an example, a common pitfall is to evaluate a program that is not fully implemented. Evaluations of Healthy Cities involve two particular evaluation challenges, the broad array of health and environment issues that are addressed, and the wide array of partnerships and participation in the project.

1.1 Healthy Cities address a broad array of health problems

The Healthy Cities programme deals with all aspects of the living conditions and their impact on health, including the physical environment, and the social and economic conditions. Such conditions impact on the health status of people in all countries. However people living in developing countries may be exposed to a double burden of ill health from factors associated with rapid industrialisation and urbanisation, and as well are exposed to infectious diseases such as diarrhoeal, respiratory and parasitic infections.
Throughout the world both old and new health crises abound. Old public health hazards such as unsafe food and water, microbiological contamination of the environment, and poor housing and living conditions continue to create a heavy burden of disease. There are new infectious diseases such as Ebola, legionella and hanta virus, and many communicable diseases are resurgent, including dengue, tuberculosis, cholera and plague. There have been rapid developments in communications and information technologies that can assist health education and promotion, while presenting new hazards through erosion of traditional lifestyles and the promotion of behaviours that are risky to health. A new challenge for public health has arisen with increased longevity and more elderly people in many regions, leading to increased demands on the health system. Some new environment and development problems such as climate change, reduction in biodiversity and ozone layer depletion have profound implications for all humanity and for future generations. (Editorial, 1991; Editorial, 1992; Epstein 1992; Kilburn 1995)

In both urban and rural areas world-wide, efforts to combat poverty and improve living standards have involved the development of industry (including cottage and small-scale industries) and/or intensification of agricultural production. Whilst these efforts have brought considerable benefits, they have also resulted in environmental problems such as pollution, chemical contamination and physical hazards in both settlements and workplaces. Occupational hazards are now as important in low-income countries as they are in the economically developed countries.

Children are a population group particularly vulnerable to environmental insults and poor living conditions, and as a group are likely to benefit the most from health interventions that focus on improved living conditions. Their particular vulnerability arises in part because they are more exposed to factors in the environment through normal hand-to-mouth activities and exploration of their surroundings, and in part because their organ systems are not fully developed.

The idea of “settings” is integral to Healthy Cities, including the settings of the home, neighbourhood, workplace, school and food-markets. The health status may be determined more by the living conditions in settings than by the provision of health care facilities.

A new understanding of social health issues including violence is emerging. Wilkinson (1996) has shown how the effects of poverty are mediated through low social cohesion, marginalization of poor people, and lack of social participation. The startling possibility has emerged that the serious health problems of poor people are not only the result of a lack of clean water, a decent house, sanitation and basic services. They also result from despair, anger, fear, worry about debts, worry about job and housing insecurity, feelings of failure and social alienation.

1.2 Healthy Cities Programmes involve partnerships and participation

The terms intersectoral collaboration (IAH), or using an “integrated approach” refer to any effort to ensure health issues are addressed in municipal and national plans and activities, by many key development sectors (industry, housing, local government, agriculture, transport etc) (WHO, 1992). It is now apparent that the health sector has paid too little
attention to the living conditions in rural and urban settlements, which are of primary importance for influencing the level of health in any community. It is known that overall improvements in mortality and morbidity have generally come from higher standards of living and technological progress, rather than from regulation (Lotti, 1991).

IAH is listed as an element of Primary Health Care, but out of all elements of primary health care, IAH may be the least successful (Tarimo and Webster, 1994). Although IAH has been an essential part of WHO’s Primary Health Care policy - especially since 1978 and the Alma Ata Conference - a report to the UN Commission on Sustainable Development in 1994, by WHO (as Task Manager of Chapter 6 of Agenda 21), indicated that health issues are frequently not being addressed in many countries in development planning in key sectors. This apparent failure of IAH is surprising, given the importance that a majority of health planners attach to it. One reason is the pervasive myth that good health is the result of medical and hospital services. There is a general lack of understanding of the nature of health, and specifically of the important influence of social and living conditions on health, sometimes by people within the health sector itself.

In most countries lack of attention to health in settlements planning and management has resulted in a “down-stream” role for the health sector, whereby it deals with the diseases and injuries caused by unhealthy living conditions, while lacking a significant capacity to change them. The health sector at present in most countries is generally lacking the capacity to assess the health impacts of development activities. It is arguable that until it develops this capacity, its ability to participate in intersectoral work may be limited. Health concerns and information, for example mortality and morbidity data, is of interest to other development sectors, only to the extent that:

(a) some linkage can be established between the health problem being measured and the activities of the development sector. That is, the health burden of the development activities should be measured (in terms of death, disability etc), with an estimation of the contribution that the various social and environmental factors are making to health problems;

and

(b) there is identification made, and promotion given to various health opportunities presented by development programmes.

Thus urban development activities such as housing or industrial development have the potential to enhance health status of the population if health promotion and protection measures are undertaken in implementing the development:

- for example, in industrial development, occupational safety considerations and pollution control should be integral;
- or in housing development, basic environmental services and primary health care measures should be implemented with community participation.

Typical urban health and environment problems require government action and involve decisions on allocation of scarce resources. They nearly always require intersectoral action for health. They involve issues of equity, with citizens, industry, government agencies, scientists
and others having an interest in the outcome of the policy implementation process. Walker (1994) in discussing environmental policy notes “it is not merely a question of ecological and health risk assessment or cost benefit analysis but a range of issues including environmental monitoring and surveillance and the integration of programs, services and research into a unified cohesive framework”.

The Healthy City approach has attracted attention as an outstanding example of intersectoral collaboration. It uses the construction of a “city health plan” as a framework for establishing a linkage between living conditions and health, and the subsequent efforts to improve living conditions.

Settings are major social structures that provide channels and mechanisms of influence for reaching defined populations. The city as a whole may be viewed as a setting. Each setting has a unique set of members, authorities, rules and participating organizations. Generally these structures are organized for more deeply binding purposes than the single mission of health. Settings involve frequent and sustained interaction, and are characterised by patterns of formal and informal membership and communication. These qualities create efficiencies in time and resources for health education programming and offer more access and greater potential for social influence.

Mullen (1995) has identified these characteristics of settings that facilitate health promotion:

<table>
<thead>
<tr>
<th>CHARACTERISTICS OF SETTINGS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Provide channels for delivering health promotion programmes</td>
</tr>
<tr>
<td>Diffusion of information occurs in, is facilitated by settings</td>
</tr>
<tr>
<td>Represent relationships between participants, authorities, and organisations</td>
</tr>
<tr>
<td>Provides access to gatekeepers</td>
</tr>
<tr>
<td>Provide entry points and access to specific populations</td>
</tr>
<tr>
<td>Unique practices and training traditions</td>
</tr>
<tr>
<td>Professional identities linked to settings</td>
</tr>
</tbody>
</table>

2. Evaluation of Healthy Cities: some general considerations

The increasing international and national support for Healthy City Projects (and related settings type activities) in developing countries has led to increased attention on how to evaluate such projects. Evaluation research on an activity involving community participation and community development will never be as confined and manageable as one involved with a specific task (for example, weight loss or smoking cessation) (Baum, 1996). In evaluating a HC/settings-related project (or other similar type of integrated intervention measure to improve health and environmental conditions), one needs to understand as well as describe the needs of a community. Quantitative data (based on population surveys, about issues such as morbidity, use of services, housing quality, employment status etc) may be illuminated by qualitative data collected from community groups and individuals. Duhl and Hancock (1988)
have noted "unless data are turned into stories that can be understood by all, they are not effective in any process of change, either political or administrative".

Holman (1997) has pointed out that the challenge is to integrate epidemiological methods with newer perspectives provided by social ecology, "to provide a powerful interdisciplinary apparatus for advancing knowledge of health determinants and outcomes, that are as much to so with social capital at the organizational and community level as they are with physical properties".

A key issue in evaluation of a HCP is recognition that boundaries may be required, both on the list of activities included in the HCP, and the evaluation questions. Many aspects of Healthy Cities projects are fundamental ideas about public health that have clear lineage to public health writings of earlier decades and even centuries. Ashton (1992) in describing the evolution of public health in England demonstrates how the Health of Towns Association developed and advocated the « sanitary idea » of public health and achieved its enactment in legislation – the Public Health Act of 1848. The English « sanitary idea » has major elements of the current Healthy Cities programme, was summarized as:

- The legitimacy of working locally
- Resourcefulness and pragmatism
- Humanitarianism and a strong moral tone
- The recognition of the need for special skills and qualifications
- Appropriate research and inquiry
- The need to focus on «positive» health – (that is, to recognise that a program to improve health may have a different emphasis to one that aims to control diseases, even if both have much in common)
- The value of producing reports on the state of health of the population
- Populism and « health advocacy », and what is now called an «intersectoral approach »
- The recognition that public health needed to be the responsibility of a democratically accountable body.

One may ask what was missing from the « sanitary idea » of the 1840's that is now within the Healthy City approach? In terms of fundamentals, the answer is not so much. One might complain about a lack of environmental sensibility, of discussion of the city as an ecosystem, or the absence of any idea of responsibility for stewardship of the environment for the benefit of future generations.

Some "boundary" questions that are considered in evaluations are:

Should the evaluation demonstrate a health benefit from working locally, or is the value of local community participation taken as a given?
Should interventions be designed to show that the populism and "health advocacy" of Healthy Cities results in more health gain than alternate interventions without this element?
Is it necessary to show that a comprehensive school health programme (or occupational health programme) impacts on health status, because it is part of a Healthy City programme (while similar activities not attached to a HCP enjoy a consensus view that they are effective)?
In a city project that mobilizes say 7 working groups dealing with issues such as housing, food-markets, school health, women's health, etc, a common question is how can it be fairly determined which health promotion activities are a result of the Healthy Cities project, and which were likely to have occurred without it.
Many other practical questions continue to pose challenges, for example:

How can community participation in the evaluation be realised?

Local Healthy City Coordinators or municipal officials may consider that HC is a municipal program, that is evaluated in accord with the evaluation methods of other municipal programs, such as street maintenance or water and sanitation services. This framework may be incompatible with evaluation frameworks offered by international partners, or partners in the Ministry of Health.

2.1 Evaluation Framework

An evaluation framework is suggested, (following Werna and Harpham, 1992):

Inputs: the set of means (money, equipment, materials, technical advice, training) mobilized by the project;

Process: the variety of activities and the types of interactions between the various participants and stakeholders in the project

Outputs: the services and benefits that have been provided by the project to beneficiary groups;

Outcomes: often this term is defined to mean impact (see below). Here outcome is defined as the effects or results (vaccines given to children, knowledge conveyed to community) and coverage (percent of couples using contraception, attendance at antenatal care);

Impact: effect on disease burden or health status, for examples changes in mortality, morbidity, nutritional status.

Werna and Harpham (1992) summarize 4 different positions in the literature regarding the use of process and/or impact indicators for HCP:

the primary use of process indicators supplemented by a few impact indicators (Baum, 1993)
parallel use of both types of indicators (Draper et al, 1993 WHO, 1995)
the sole use of impact indicators (Collin 1992).

Commentators on Healthy City evaluations in the last 5 years are fairly unanimous in placing a heavy emphasis on process indicators which focus on the institutional and participatory aspects of the project (Werna and Harpham, 1992). Thus for example there may be a focus on determination of the proportion of schools that are undertaking a healthy schools program in the city, and what activities are done as part of this, but not on the question whether having such a school program makes a difference to the health of pupils. Similarly, an evaluation may describe how many neighbourhoods participated in a healthy neighbourhoods program - and what improvements to water and sanitation were undertaken as part of the program, but may not seek to answer the question whether the improvements in water and sanitation were beneficial to health.

It may be noted that in the debate on the relative importance of process and outcome/impact evaluations, little attention is paid to the lack of demonstrated feasibility of the latter in Healthy Cities work. Schrettenbrunner and Harpham 1993 have noted that the problem of attributing change to an intervention, as measured by impact indicators, remains a major problem in evaluation of broad-based and participatory health programs. To the
knowledge of the author, there has not been one impact-orientated evaluation of a broad-based community health programme of sufficient quality that it might serve as a model for evaluation of HC programmes. The methodological constraints to such an evaluation are formidable, and may indeed make such an undertaking virtually impossible. In one city known to the author, a sustained effort was made: 2 districts were enrolled in a research effort to determine if a “Healthy City” process (district 1) led to a greater health impact than if the health interventions were confined to clinic-based and personal preventive actions (district 2). For many obvious and less obvious reasons this effort (and other similar efforts) failed. This exercise has not been written up, despite the importance of the result, as there may have been embarrassment about the failure to predict the pitfalls, or that the cost of the evaluation was approximately 10 times the amount actually spend on the implementation of the HCP. The large disparity between the cost of the implementation and the evaluation related to the fact that local staff did the implementation, but the research at the required level needed international staff.

One oft-cited Healthy Cities evaluation, of a participatory type, is something of a model evaluation (Baum, 1993). It involved 3 categories of research activity:

A needs assessment
Evaluation of the process of the Healthy Cities project
Development of social indicators relating to the health status of the community, including the collation of both qualitative and quantitative indicators.

Information was collected on the following:

- policy changes
- collaboration between different sectors in services provision and planning
- community involvement and awareness
- changes in the way local public service workers approached their work
- perceptions of key stakeholders of the project.

Information was collected using these methods:

- key informant interviews
- audit of attendance at meetings
- questionnaire surveys of key groups (committee members, local health workers, local community)
- analysis of local media
- documentation of additional resources attracted to the project
- ongoing monitoring of the project by the research team.

Many Healthy City practitioners have adopted similar evaluation approaches. In the 4th ICHP, there was a consensus in the working groups on HC that a Healthy City-type project in a city may be evaluated according to the performance in 4 domains:

a. Progress in formulating and implementing a health plan. Both indicators of process and outcome, based on qualitative and quantitative methods of evaluation may be applied to this item. Outcome evaluation (which may for example relate the HC project
implementation to measured improvements in child health status) are more applicable to the implementation of a health plan, than to domains (b-d). Under consideration is the extent of community-wide involvement by many different agencies and actors, and the extent of development of partnerships between government agencies (health, water, sanitation, housing, social welfare etc), universities, NGOs, private companies and community organizations and groups.

b. The commitment and involvement of the city/local leadership to the concept. A test of this is whether and how much there is increased participation of community members and various stakeholders in the planning and management of various municipal development activities.

c. The establishment and operation of a Healthy City Committee and Task Groups that involve and engage the various actors;

d. Progress in networking with other Healthy Cities.

An “evaluation in progress” was discussed from 5 cities at 4th ICHP that are part of a project entitled UNDP/LIFE/WHO Healthy Cities Programme. In all 5 cities efforts are proceeding to collect health status information and information on living conditions as part of the development of a city health plan. This information is guiding the current activities and organizational arrangements (Task Force establishment etc) and will be vital in monitoring the impacts of the projects. In discussion it was noted that there were practical difficulties in establishing a common evaluation format in the 5 cities in 5 different countries.

Data on each City is summarised in the following tables, using the activities for the “start-up phase”, “organization” and “implementation” phases as checkpoints, and a simple rating system. These phases are described in details in a handbook (Goldstein, 1995)

+ there are activities underway in relation to the activity
+++ substantial achievement in undertaking the activity has been made.
++++ excellent or better than expected achievement in undertaking the activity
### PHASE 1

<table>
<thead>
<tr>
<th>Activity (Start-up Phase)</th>
<th>Cox's Bazar</th>
<th>Quetta</th>
<th>Managua</th>
<th>Fayoum</th>
<th>Dar es Salaam</th>
</tr>
</thead>
<tbody>
<tr>
<td>Start date of phase</td>
<td>April 95</td>
<td>April 95</td>
<td>April 95</td>
<td>April 95</td>
<td>April 95</td>
</tr>
<tr>
<td>1.1 Develop Local Task Force or Partnership Task Force</td>
<td>++</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>1.2 Build public support</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>1.3 Raise awareness</td>
<td>++</td>
<td>+</td>
<td>++</td>
<td>++</td>
<td>++</td>
</tr>
</tbody>
</table>

The numbers (1.3) or (3.4) appearing throughout this document refer back to the activities in the above tables, in order to relate the table of project activities with the rating system to the accompanying text.

### PHASE 2

<table>
<thead>
<tr>
<th>Activity (Organization Phase)</th>
<th>Cox's Bazar</th>
<th>Quetta</th>
<th>Managua</th>
<th>Fayoum</th>
<th>Dar es Salaam</th>
</tr>
</thead>
<tbody>
<tr>
<td>2.1 Gaining approval of the municipal government.</td>
<td>++</td>
<td>+++</td>
<td>+</td>
<td>++</td>
<td>++</td>
</tr>
<tr>
<td>2.2 Setting up a project office and appointing coordinators of Task Forces</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>++</td>
<td>+</td>
</tr>
<tr>
<td>2.3 Preparation of a Municipal Health Plan (MHP) underway</td>
<td>++</td>
<td>+</td>
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</tr>
<tr>
<td>2.4 Raising awareness of the MHP</td>
<td>++</td>
<td>+</td>
<td>++</td>
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</tr>
<tr>
<td>2.5 Mobilization of resources</td>
<td>+</td>
<td>+</td>
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<td>++</td>
<td>+</td>
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</tbody>
</table>
### PHASE 3

<table>
<thead>
<tr>
<th>Activity (Implementation Phase)</th>
<th>Cox's Bazar</th>
<th>Quetta</th>
<th>Managua</th>
<th>Fayoum</th>
<th>Dar es Salaam</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.1 Further development and implementation of the MHP</td>
<td>+</td>
<td></td>
<td></td>
<td>+</td>
<td>+</td>
</tr>
<tr>
<td>3.2 Assessment and adjustment of municipal policies and programmes</td>
<td>+</td>
<td></td>
<td>+</td>
<td>+</td>
<td></td>
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<tr>
<td>3.3 Exchange of technologies and experiences between network cities</td>
<td></td>
<td></td>
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<tr>
<td>3.4 National Networking</td>
<td>+</td>
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<tr>
<td>Activity</td>
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<tr>
<td>4.1 Healthy Schools</td>
<td>+++</td>
<td>+</td>
<td></td>
<td>+++</td>
<td>+</td>
</tr>
<tr>
<td>4.2 Healthy Marketplaces</td>
<td>++</td>
<td></td>
<td></td>
<td>++</td>
<td>+++</td>
</tr>
<tr>
<td>4.3 Settlements upgrading</td>
<td>++</td>
<td>+</td>
<td>+</td>
<td>++ includes on-site sanitation</td>
<td>+</td>
</tr>
<tr>
<td>4.4 Health and living conditions studies</td>
<td>++ (Ward 1) housing, water, sanitation, solid waste</td>
<td>+</td>
<td>+++ HEDLAMP; studies on sanitation, solid waste disposal, water, housing</td>
<td></td>
<td>HEDLAMP</td>
</tr>
<tr>
<td>4.5 Training</td>
<td>++(schools)</td>
<td></td>
<td>+++</td>
<td>++ (schools, hygiene education, leak reduction)</td>
<td>++ (vendors)</td>
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<tr>
<td>4.6 City or neighbourhood cleaning</td>
<td>++</td>
<td></td>
<td>++</td>
<td>++</td>
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<tr>
<td>4.7 Water or waste-water projects</td>
<td></td>
<td></td>
<td>++</td>
<td></td>
<td>+ (cholera campaign)</td>
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<tr>
<td>4.8 Income generation</td>
<td>+ under discussion</td>
<td></td>
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*blank = this activity not reported in this location*
The above tables serve as a description of the progress in implementation of the ongoing projects. An additional evaluation technique that has been recently applied in the above cities is a SWOT analysis, with the use of key informants:

**SWOT Analysis (Strengths, Weaknesses, Opportunities and Threats) of the UNDP LIFE/WHO Healthy Cities Projects.**

**STRENGTHS**

♦ generates own financial support, including support that is given from municipalities, and also ministries of health, NGO’s, WHO and communities
♦ promotes public-private-civil society partnerships, and community involvement in municipal services
♦ has a clear direction of targeting poorer groups, and addresses equity issues; health is excellent cross-cutting issue that unifies the community and focuses on poor
♦ complements municipal planning exercises, and highlights health issues
♦ part of a world-wide movement, and is active and institutionalised, with many partners and long-term in nature
♦ City-wide engagement, with projects able to impact on overall city living conditions
♦ settings strategy is effective way to obtain participation of various sectors, and helps to establish and maintain partnerships
♦ Has established a UNDP-Dutch-WHO partnership
♦ Has allowed policy experiments and research
♦ Has made use of the wide dissemination of NGO’s and CBO’s in the community
♦ peer pressure applied to network members for more participatory approaches and for focus on poor
♦ addresses gender issues, with many women on HCP task forces in various countries
♦ international links encourage consideration of best practices techniques from other cities/countries

**WEAKNESSES**

♦ may take 1-2 years or longer to establish project infrastructure
♦ name not understood, project hard to understand, and increasing awareness takes time
♦ evaluation is difficult, with a lack of good studies of evaluation experience
♦ coordination of a project is difficult
♦ monitoring data is hard to generate in a comparable fashion
♦ slow, may take considerable time to repair distrust between municipal government and community
♦ few strategies are available for local resource mobilization
♦ little funding available
♦ small grants mechanism has not been widely taken up
transfer of city government officials may lead to disruption of HCP (if strong community base is not established)
little exchange of information has occurred among project cities
local government "reforms" may reduce availability of staff for participation in project
may be hard to get consensus among many city departments as to priorities etc
complex interagency relations at local and global levels
difficult to identify operational people
difficult to make comparisons among the 5 diverse project cities

OPPORTUNITIES

strong interest of Mayors in the project
many potential partners, eg tourism and industrial development in Bangladesh, as these sectors find health programme synergistic to their goals. Also, health is a global issue and many potential partnerships exist, if a clear strategy of multi-stakeholder partnerships is promoted
partnership with local government organizations
improves health and environment, and can link with a number of comparable movements
research on governance, participation is possible, with many interested organizations
greater communication between towns and city, locally, nationally and internationally has many benefits, including education, trade
mainstreaming of approach
improved communications technology, including websites

THREATS

suspicion of HCP motives by other development agencies in the city (fear of being "taken over"
political polarisation between local government and community, and government misunderstanding
economic crisis in public sector at all levels, leads to back to "1960 thinking" for example health sector should focus on primary (curative) care
vertical approaches still appeal to specialized professionals
promises much, and there is a risk it will be seen to do little
may lose appeal for donors, due to cannot be implemented on tightly controlled time schedule, with narrow and specific outputs; eg cannot be implemented in 2 years.
some international development agencies are against integrated participatory approaches
external funding may be ending
bureaucratization of the approach
disasters both natural and human-made
inadequate documentation and analysis

These assessments have provided useful feedback to participants in the ongoing projects.

2.2 Conclusions
Process indicators which focus on the institutional and participatory aspects of a Healthy city project remain the mainstay of evaluation activities. The problem of attributing change to an intervention, as measured by impact indicators, is an unresolved issue in the evaluation of broad-based and participatory health programs. Common evaluation activities include a needs assessment, review of the process of the Healthy Cities project, and the analysis of both qualitative and quantitative indicators. Information domains of central importance are policy changes, collaboration between different sectors in services provision and planning, assessment of community involvement and awareness, changes in work practices of municipal staff, and perceptions of key stakeholders of the project.

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References


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AN EXAMINATION OF TWO LARGE-SCALE APPROACHES FOR PROMOTING HEALTH THROUGH SCHOOLS

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Health Education and Health Promotion Unit²,
Division of Health Promotion, Education and Communication,
World Health Organization, Geneva, Switzerland
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Copenhagen, Denmark

# CONTENTS

<table>
<thead>
<tr>
<th>Section</th>
<th>Page</th>
</tr>
</thead>
<tbody>
<tr>
<td>List of Abbreviations</td>
<td>i</td>
</tr>
<tr>
<td>Introduction</td>
<td>1</td>
</tr>
<tr>
<td>- Barriers</td>
<td>1</td>
</tr>
<tr>
<td>- Recommendations</td>
<td>2</td>
</tr>
<tr>
<td>Two large scale approaches for improving school health programmes</td>
<td>3</td>
</tr>
<tr>
<td>- The European Network of Health Promoting Schools</td>
<td>3</td>
</tr>
<tr>
<td>- CDC/DASH strategies to promote Comprehensive School Health Programmes</td>
<td>3</td>
</tr>
<tr>
<td>Common qualities and unique characteristics</td>
<td>3</td>
</tr>
<tr>
<td>- Rationale and vision</td>
<td>4</td>
</tr>
<tr>
<td>- Staffing, responsibility and financial support;</td>
<td>6</td>
</tr>
<tr>
<td>- Collaboration and cooperation</td>
<td>9</td>
</tr>
<tr>
<td>- Evaluation and surveillance</td>
<td>12</td>
</tr>
<tr>
<td>- Capacity building and training</td>
<td>16</td>
</tr>
<tr>
<td>- Broad strategies and multiple points of intervention</td>
<td>18</td>
</tr>
<tr>
<td>- Standards and requirements</td>
<td>21</td>
</tr>
<tr>
<td>Conclusion</td>
<td>23</td>
</tr>
<tr>
<td>References</td>
<td>25</td>
</tr>
</tbody>
</table>
# List of abbreviations

## General abbreviations:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>AIDS</td>
<td>Acquired Immune Deficiency Syndrome</td>
</tr>
<tr>
<td>HP</td>
<td>Health Promotion</td>
</tr>
<tr>
<td>HIV</td>
<td>Human Immune deficiency Virus</td>
</tr>
<tr>
<td>WHO</td>
<td>World Health Organisation</td>
</tr>
</tbody>
</table>

## Abbreviations used in the ENHPS:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>CE</td>
<td>Council of Europe</td>
</tr>
<tr>
<td>EC</td>
<td>European Commission</td>
</tr>
<tr>
<td>ENHPS</td>
<td>European Network of Health Promoting Schools</td>
</tr>
<tr>
<td>HPS</td>
<td>Health Promoting School</td>
</tr>
<tr>
<td>IPC</td>
<td>International Planning Committee</td>
</tr>
<tr>
<td>NC</td>
<td>National Coordinator</td>
</tr>
<tr>
<td>NSC</td>
<td>National Support Centre</td>
</tr>
<tr>
<td>SPM</td>
<td>School Project Manager</td>
</tr>
<tr>
<td>SPT</td>
<td>School Project Team</td>
</tr>
<tr>
<td>TS</td>
<td>Technical Secretariat</td>
</tr>
<tr>
<td>WHO/EURO</td>
<td>World Health Organization, Regional Office for Europe</td>
</tr>
</tbody>
</table>

## Abbreviations used in the CSHP:

<table>
<thead>
<tr>
<th>Abbreviation</th>
<th>Description</th>
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<tbody>
<tr>
<td>CDC</td>
<td>Centers for Disease Control and Prevention</td>
</tr>
<tr>
<td>CSHP</td>
<td>Comprehensive School Health Program</td>
</tr>
<tr>
<td>DASH</td>
<td>Division of Adolescent and School Health</td>
</tr>
<tr>
<td>HHS</td>
<td>U.S. Department of Health and Human Services</td>
</tr>
<tr>
<td>LEA</td>
<td>Local Education Agency</td>
</tr>
<tr>
<td>MMWR</td>
<td>Morbidity Mortality Weekly Report</td>
</tr>
<tr>
<td>PHS</td>
<td>Public Health Service</td>
</tr>
<tr>
<td>SC</td>
<td>State Coordinator</td>
</tr>
<tr>
<td>SEA</td>
<td>State Education Agency</td>
</tr>
<tr>
<td>SHA</td>
<td>State Health Agency</td>
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</tbody>
</table>
AN EXAMINATION OF TWO LARGE-SCALE APPROACHES FOR PROMOTING HEALTH THROUGH SCHOOLS

Authors: van den Cruyjsen, M.; Jones, J.T.; Barnekow Rasmussen, V.; de Leeuw, E.J.J.

"Research carried out in both developing and developed countries demonstrates that school health programmes can simultaneously reduce common health problems, increase the efficiency of the education system and thus advance public health, education, social and economic development."


INTRODUCTION

In 1995, the World Health Organization (WHO) convened an Expert Committee on Comprehensive School Health Education and Promotion which reviewed school health programmes and research from both developing and developed countries. The Committee synthesized information about barriers to the development of school health programmes and made recommendations for improving such programmes. In follow-up to the Expert Committee Report, WHO's Division of Health Promotion, Education and Communication is working with WHO Regional Offices to implement large-scale networks of organizations responsible for and interested in improving school health programmes.

This article aims to contribute to the development of large-scale networks by: 1) summarizing the barriers and recommendations cited in the WHO Expert Committee Report; 2) examining the basis, structure and functions of two large-scale approaches for improving school health programmes; and 3) identifying programme qualities and characteristics which may help overcome barriers or implement recommendations cited by the WHO Expert Committee.

Information in this article may be useful to organizations interested in setting up similar approaches to school health, especially in the initial stages of planning. It may also be useful to policy- and decision-makers who are looking for ways to help governmental and non-governmental organizations plan and work together to promote health through schools.

Barriers

WHO's Expert Committee reviewed barriers to the development of school health programmes which were identified by national, district and local education and health officials in international consultations convened by WHO and other organizations. The Committee concluded that there are five broad barriers, commonly identified at each organizational level.
These barriers are:

1. Inadequate vision and strategic planning;
2. Inadequate understanding and acceptance of programmes;
3. Lack of responsibility and accountability;
4. Inadequate collaboration and coordination among persons addressing health in schools;
5. Lack of programme infrastructure; and financial, human, and material resources (Expert Committee report, 1995).

Recommendations

To strengthen each Nation's capacity to improve health as well as education, WHO's Expert Committee recommended:

- expanding investments in schooling;
- expanding the educational participation of girls;
- schools provide a safe learning environment for students and a safe workplace for staff;
- schools serve as an entry point for health promotion and a location for health intervention;
- schools enable children and adolescents at all levels to learn critical health and life skills;
- policies, legislation and guidelines be developed to ensure the identification, mobilization and coordination of resources at the local, national and international levels;
- teachers and school staff be valued and provided with the necessary support to enable them to promote health;
- the community and school work together to support health and education;
- school health programmes be well designed, monitored and evaluated to ensure their successful implementation and outcome, and;
- international support be further developed to enhance the ability of countries, local communities and schools to promote health and education.

The Committee noted that the implementation of its recommendations could make a significant contribution towards achieving the goals of major health, education and social movements, including Health for All by the Year 2000, Education for All, The Children's Summit, The Social Summit, and the Fourth World Conference on Women.

Given the findings of the WHO Expert Committee, information relevant to overcoming barriers and/or implementing its recommendations should be of value to persons interested in improving school health programmes. Below, we examine two large-scale approaches for improving school health to identify such information.
TWO LARGE-SCALE APPROACHES FOR IMPROVING SCHOOL HEALTH PROGRAMMES

Within the last decade, two large-scale approaches for improving school health programmes were initiated, one in Europe and the other in the United States of America. They are the European Network of Health Promoting Schools (ENHPS) and the strategies for developing Comprehensive School Health Programmes (CSHP) of the Division of Adolescent and School Health at the Centers for Disease Control and Prevention (CDC/DASH). Information about the approaches was obtained from published reports, policy documents, and programme materials. Information was also obtained through interviews with persons participating in each effort.

The European Network of Health Promoting Schools

The ENHPS is a tripartite project, launched by the World Health Organization Regional Office for Europe (WHO/EURO), the European Commission (EC) and the Council of Europe (CE) (WHO/EURO, CE & EC, 1993c). The purpose of the ENHPS is to strengthen the capacity of schools to be healthy settings for living, learning and working. The initiative was started in the summer of 1991, with four pilot countries. Today, 37 countries participate in the Network.

CDC/DASH strategies to promote Comprehensive School Health Programmes

The primary goal of CDC is to identify, control and prevent priority health problems. DASH contributes to CDC's goal by stressing the prevention of priority risk behaviours among youth and adolescents, especially through CSHP. CDC/DASH strategies to develop CSHP involve 25 national organizations; 57 official state and territorial education and health agencies; 18 local education agencies in large metropolitan areas; three demonstration centers that train policy-makers and programme managers; and regional training centers that train teachers. These agencies and organizations work together with CDC/DASH as a "national" rather than "federal" programme.

COMMON QUALITIES AND UNIQUE CHARACTERISTICS

There are several qualities held in common by the ENHPS and the strategies of CDC/DASH which are relevant to overcoming barriers to the development of school health programmes and implementing recommendations of WHO's Expert Committee. All qualities are interrelated, but for the purposes of this review, they are classified as follows:

- rationale and vision;
- staffing, responsibility and financial support;
- collaboration and cooperation;
- evaluation and surveillance;
- capacity building and training;
- broad strategies and multiple points of intervention;
- standards and requirements.

These qualities are characterized below.
Rationale and Vision

The ENHPS and CDC/DASH strategies to strengthen school health programmes are each founded on a well defined rationale and vision. The rationale and vision serve as a foundation for strategic planning, supportive arguments, and guidance about what schools and support agencies can do to effectively promote health. The rationale and vision of the ENHPS and that of CDC/DASH differ significantly from each other. Yet, each provides an important basis for justifying the implementation of school health programmes and targeting actions.

ENHPS

The rational and vision of the ENHPS is based on the Ottawa Charter for Health Promotion. It suggests that health is created by caring for oneself and the others; being able to make decisions and have control over one's life circumstances; and ensuring that society creates conditions that allow the attainment of health by all its members. It stresses that health is created by people in settings where they live, learn and work. The assumption underlying this rationale, is that much disease and premature death would not occur if settings where people live and work, gave greater support for healthy living (Kadijk, 1995).

The vision of the ENHPS is delineated in its concept of the "Health Promoting School", which are schools that strive to achieve healthy lifestyles for the total school population by developing supportive environments conducive to the promotion of health. It offers opportunities, and requires commitment, for the provision of a safe and health-enhancing social and physical environment. A Health Promoting School will create the means for all who live and work within it, to take control over, and improve their physical and emotional health (WHO/EURO, CE & EC, brochure ENHPS, 1997).

The eleven points below describe the Health Promoting School in a more concrete manner:

- provide a health promoting environment with regard to safety, meals, buildings, playgrounds, leisure facilities etc.;
- promote a sense of responsibility in the respect of the individual's, family's and community's health;
- encourage a healthy way of life and present a realistic and attractive range of health choices;
- enable all pupils to fulfil their physical, psychological and social potential and actively promote the self-esteem of all pupils;
- make clear for staff and pupils the social aims of the school and its potential for the promotion of health and safety;
- develop and foster good staff-pupil and pupil-pupil relationships in the daily life of the school and provide good school/home/community links;
- exploit the availability of community resources and utilize the potential of specialists and other resources in the community for advice and support in health education and action for health promotion;
- plan a coherent health education curriculum;
- equip pupils with the knowledge and the skills;
- take a wide view of school health services;
- provide a health knowledge base and skills in obtaining, interpreting and acting upon information related to health (WHO/EURO, CE & EC, 1993a, Logghe, 1995).

A unique feature of ENHPS is its strong emphasis on the extent to which health is influenced by the school's "ethos"; that is, its culture, underlying sentiments, beliefs, policies and practices, and that of the community at large. The ENHPS's broad view of the school/community environment calls for school and community leaders, teachers, students and parents to identify and modify policies, practices and processes of the school/community to ensure that they help to create rather than undermine health.

**CDC/DASH**

The rationale used by CDC/DASH is founded in public health and epidemiologic strategies which suggest that important health and social problems can be efficiently and effectively prevented or reduced by identifying, preventing and controlling their causes. In the U.S.A., motor vehicle crashes, unintentional injuries, homicide and suicide result in 72% of all deaths among young people (5-24 years of age), as well as a considerable amount of disability. AIDS is also a leading cause of death among young people. Similarly, heart disease, cancer and stroke result in 67% of all deaths among persons over 25 years of age. Because of the high percentage of deaths and disabilities caused by these health and social problems they are considered priority public health problems and thus require priority action.

CDC/DASH stresses that priority public health problems in the USA can be significantly reduced by preventing or reducing six types of behaviour. These include behaviours that result in un-intentional or intentional injuries; alcohol and drug abuse; sexual risk behaviours that contribute to unintended pregnancy, STD and HIV infection; tobacco use; excessive consumption of dietary fat and calories; and insufficient physical activity. Because these six types of behaviour are initiated during youth, extend into adulthood, have short- and long-term consequences, and simultaneously contribute to important health and social problems, they are identified by CDC/DASH as priorities for prevention in the Comprehensive School Health Program.

A unique feature of CDC/DASH strategy is its emphasis on priority health problems. Because school time and resources are finite, all issues related to health cannot be addressed. CDC/DASH encourages schools to focus on priority risk behaviours, addressing the factors that contribute to them, as a means to use the school's limited time and resources to achieve the most significant health gains.

CDC/DASH's vision for preventing important health problems is the implementation of eight components of the Comprehensive School Health Program (CSHP). These components are:

- school health education;
- school health services;
- healthy school environment;
- physical education/activities;
- nutrition services;
- counselling, psychological and social services;
- faculty and staff health promotion;
- integrated school and community efforts.

CDC/DASH encourages school health education to be integrated into each of the other seven components of a CSHP. Schools are encouraged to develop a school health education curriculum and provide sufficient time and training so that it can be delivered as planned. Additionally, CDC/DASH encourages schools to integrate health education into other subjects and to provide all teachers with training about important health issues such as the prevention of HIV infection and violence. The components mentioned above are described in more detail in the paragraph "Broad strategies and multiple intervention points".

Thus, the ENHPS and CDC/DASH have created a rational and vision for strategic school health programme planning. The absence of these qualities is a barrier to the successful development of such programmes.

**Staffing, Responsibility and Financial Support**

Both the ENHPS and CDC/DASH's strategies to strengthen school health programmes are supported by people in the network with clearly defined roles and responsibilities. Both raise funds for providing financial resources to help participating organizations mobilize their existing resources in support of school health programmes. In almost every country, health and education institutions, and other organizations, have resources that could be used to help schools promote health. However, the mobilization of resources requires investments of time and money. Maximizing the use of available resources, whether at the international, national, state or local level, requires staff with sufficient time, authority, responsibility and financial resources to plan, implement and coordinate efforts.

**ENHPS**

In the ENHPS, the three organizations working on the international level: the WHO Regional Office for Europe (WHO/EURO), the Council of Europe and the European Commission, each assign staff to serve on the Network's International Planning Committee (IPC). Members of this Committee work together to identify criteria for the network, ensure its development, provide guidance to project support centers and national project coordinators, plan training, facilitate twinning and exchanges between network participants, support and review evaluation, and organize network meetings.

The ENHPS maintains a Technical Secretariat (TS) to carry out the day to day management. The TS is hosted by WHO/EURO, and is responsible for monitoring membership applications, providing advice and support to countries about applying country and network resources for the implementation of country projects; facilitating contacts with and support from the
Ministries of Health and Education in participating countries: organizing training and other events; and developing a wide range of organizational, educational and managerial tools for the implementation of the health promoting school projects (Logghe, 1995, Ruiter, 1995). Members of the TS are responsible for working with specific countries so that each participating country has a focal point in the TS to work with.

Each country participating in ENHPS has a national coordinator, jointly designated by the Ministries of Education and Health. The National Coordinator is responsible for management, coordination and the day-to-day development of the network at country level. The national coordinator works with a project support team from a designated National Support Centre to select project schools, develop guidelines for the schools, support School Project Managers through training programmes and other activities, organize meetings and disseminate supportive information. The National Coordinator is the main link of communication between the TS, the National Support Centre and the School Project Coordinators.

Funding for the ENHPS's activities comes from various sources. Strength and sustainability is derived from accessing multiple sources of funding for particular aspects of the project. The Council of Europe, the European Commission and the WHO Regional Office for Europe each make substantial contributions, together with other institutions, philanthropic organizations and member countries of WHO. The ENHPS has successfully acquired funding for the development of its long-term plans and strategies.

The Technical Secretariat receives funding from WHO/EURO, the European Commission, and the Council of Europe for the coordination of ENHPS. The European Commission has up till now given EU Member States funding for country support: each of the EU Member States has to send in an application for financial support for their Health Promoting Schools projects. National Coordinators apply for funding by submitting a description of the national project to the Commission.

In the participating countries the National Coordinator and the National Support Centre also receive funding for project activities from both the national health and education budgets, and several other organizations in the country.

Supplementary funding is provided for countries which are in transition, in particular countries of Central and Eastern Europe and the Newly Independent States of the former Soviet Union. They receive funding from WHO/EURO as well donations from countries such as Austria, the Netherlands and Switzerland. Additional sources of funding have come from the Council of Europe. In some cases, funding has also been secured from the private sector. The Johnson and Johnson European Philanthropy Committee assisted with piloting and the production of one of the manuals produced by the ENHPS.
CDC/DASH

CDC/DASH provides financial and technical support to national organizations, and state and local education agencies, to help schools implement education to prevent HIV infection and promote the development of CSHP. A CDC/DASH programme officer is assigned to work with each organization and agency that receives support. Additionally, DASH dedicates staff to provide technical support to help organizations develop interventions, conduct surveys, and plan and implement evaluations.

Most of CDC/DASH’s funding is provided for HIV prevention in schools by the United States Congress. Each organization which receives funding from DASH receives support for a full-time coordinator and at least one support person. Funded organizations include 25 national organizations, 57 state and territorial education agencies and 18 local education agencies. The coordinators are responsible for strengthening school health efforts to prevent HIV infection and other important health problems, and for integrating those efforts into school health education, a major component of a CSHP. DASH also provides support for full-time coordinators in 3 national demonstration centers that train school policy-makers and programme managers; and for the overall management of regional training centers that help teachers in every state.

In 1992, CDC/DASH received funding to help strengthen State-level infrastructure for CSHP. CDC/DASH now provides funding to 13 states to support two high level policy-makers, one in the State Education Agency and one in the State Health Agency. The two policy-makers are responsible for organizing resources within their respective agencies in support of CSHP. They are also responsible for working together to coordinate their efforts. DASH plans to expand support for state-level CSHP infrastructure to additional states as funding becomes available (U.S. Department of Health and Human Services and CDC).

CDC/DASH supports a large number of national public and private organizations, encourages national organizations which have relevant capacity, experience and constituents to work in support of school health programmes. Having a full-time coordinator, who is responsible for promoting improvement of school health programmes, helps the national organizations recognize the value of school health promotion. CDC/DASH’s relatively modest investments in national organizations helps to mobilize significant resources and support from within each organization.

Thus, the ENHPS and CDC/DASH have acquired staff to implement their strategies and visions, designated specific roles and responsibilities that need to be carried out, and acquired the financial resources to support efforts to improve school health. Furthermore, they are helping their constituents to do the same.
Collaboration and Cooperation

Both the ENHPS and CDC/DASH strategies for strengthening school health programmes facilitate collaboration and cooperation between organizations at various levels. Collaboration and cooperation are important to build networks and infrastructure, share expertise, and plan and implement concerted and coordinated actions. Coordination is essential for making the most of limited resources. Although the ENHPS and CDC/DASH promote collaboration at all levels, the extent to which they focus their actions on each level differs.

ENHPS

At the international level, WHO/EURO, the CE and the EC collaborate in an International Planning Committee (IPC) to coordinate their efforts. Collaboration between the three international project partners in setting up and maintaining the European network has been an essential part of the network's success. Their collaborative approach to the development of Health Promoting Schools provides added value to individual projects, offers a coherent framework within which to foster and sustain innovation, helps to widely disseminate models of good practice, avoids duplication, and makes opportunities for health promotion in schools more equitable and available throughout Europe. Cooperation between the partners helps to continue and maximize the success of the project (WHO/EURO, CE & EC, 1993c).

The ENHPS promotes inter- and multi-sectoral participation and interdisciplinary collaboration by seeking cooperation with both Non Governmental Organizations (NGOs) and InterGovernmental Organizations (IGOs), and by using resources within and outside the educational and health systems. Before countries can enter the network, a guarantee of commitment and inter-sectoral cooperation is requested between the Ministry of Education and the Ministry of Health. The ministries together designate a national Coordinator and a National Support Center which are responsible for selecting schools to participate in the project and for working as a "team" to support the development of Health Promoting Schools.

Strong emphasis is put on fostering cooperative working relations within the school and between the school and the community. At school level, training and technical support is provided to develop healthy, cooperative relationships between members of the school community (pupils, parents, teachers and other staff). The school is helped to become a network of caring support for the young people. Community organizations are assisted to develop good links and to work together in implementing the Health Promoting School. Through cooperation with the larger community, and other institutes, a Health Promoting School obtains community resources for health promotion and serves an important centre for the benefit and health of all who live in the community (WHO/EURO, CE & EC, 1993a, Logghe, 1995, Ruiter, 1995).
The ENHPs's efforts to foster networks for collaboration and cooperation at all levels is a critical element in the project's activities, particularly between the health and education sectors. The project has been recognized by Member States in Europe, the Council of Europe, The European Commission and UN agencies as a good model of practice in co-operation at international level (Ziglio, Rivett & Rasmussen, 1995).

**CDC/DASH**

At the national level, CDC/DASH collaborates with other divisions within CDC; the U.S. Public Health Service (PHS); Health and Human Services (HHS); the U.S. Department of Education; other federal agencies; and national professional, voluntary, and philanthropic organizations (see box), to promote the development of CSHPs.

<table>
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<th>BOX 1.</th>
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<tbody>
<tr>
<td>AAHE Association for the Advancement of Health Education</td>
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<tr>
<td>AASA American Association of School Administrators</td>
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<tr>
<td>AFY Advocates for Youth</td>
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<tr>
<td>AMA American Medical Association</td>
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<tr>
<td>ANA American Nurses' Association</td>
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<tr>
<td>ASHA American School Health Association</td>
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<tr>
<td>ASTHO Association of State and Territorial Health Officials</td>
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<td>CCSSO Council of Chief State School Officers</td>
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<td>CHEF Comprehensive Health Education Foundation</td>
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<tr>
<td>CIS Cities in Schools, Inc.</td>
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<tr>
<td>EDC Education Development Center</td>
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<td>ETR Education, Training, Research Associates</td>
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<tr>
<td>GIRLS Girls, Inc.</td>
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<tr>
<td>NACHC National Association of Community Health Centers, Inc.</td>
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<td>NCHE National Center for Health Education</td>
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<td>NAFEO National Association for Equal Opportunity in Higher Education</td>
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<td>NASBE National Association of State Boards of Education</td>
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<td>NaSHEC National School Health Education Coalition</td>
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<td>NCAS National Coalition of Advocates for Students</td>
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<td>NCSL National Conference of State Legislatures</td>
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<td>NEA National Education Association</td>
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<td>NNRYNS National Network of Runaway and Youth Services</td>
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<td>NSBA National School Boards Association</td>
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<td>PEFN Public Education Fund Network</td>
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<td>SIECUS Sexuality Information and Education Council of the United States</td>
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Box 1: National organizations working with CDC/DASH to strengthen school health programmes
CDC/DASH focuses its efforts on developing the capacities of national organizations that have the experience, capacities or constituents to help improve school health programmes nationwide, and on official state education and health agencies which are responsible for building capacities of schools in their respective states. CDC/DASH also assists local education agencies in the nation's largest metropolitan areas because of their size and needs. CDC/DASH does not provide technical and financial support directly to schools.

CDC/DASH fosters close collaboration between national organizations and official state and local agencies by holding planning meetings prior to the submission of their applications for cooperative agreements with CDC/DASH. Organizations and agencies are encouraged to plan joint projects and to maximize the use of the resources which they request by concerted planning and cooperation. CDC/DASH also engages representatives from these organizations in reviewing and criticising each others' applications for cooperative agreements and annual workplans. In this way, CDC/DASH helps national organizations and official agencies to learn about each others' capacities and needs.

CDC/DASH also holds annual school health conferences which bring together federal agencies, national organizations and state and local education agencies. The conferences are organized with the involvement of participating organizations to address their needs and interests in school health programmes. The conferences also serve as planning forums for the development of concerted actions.

CDC/DASH supports "national" training and demonstration centers, which are developed in official state and local agencies. State and local agencies demonstrate their efforts to other state and local programmes, not as "model programmes", but as models of programmes. Demonstration centers describe their achievements and their difficulties to representatives from national organizations and other state and local agencies. The activities of the demonstration centre serve as a catalyst for discussion about common problems and solutions to those problems. Because CDC/DASH provides multiple opportunities for planning and working together, most policy documents, materials, and guidelines developed by national organizations, and state and local education agencies, are developed collaboratively.

Thus, the ENHPS and CDC/DASH each demonstrate a range of collaborative and cooperative strategies and actions at their own level, as they encourage collaboration and cooperation among organizations at other levels.

Evaluation and Surveillance

Both the ENHPS and CDC/DASH's strategies to strengthen school health programmes focus on priority objectives that are relevant to their overall organization. This quality is essential for evaluation, strategic planning, and continued commitment and support from high levels within their organizations. Both ENHPS and CDC/DASH evaluate the implementation and/or effectiveness school health programmes and thus foster programme accountability. Additionally, ENHPS and CDC/DASH are involved in surveillance efforts to monitor trends in
health status and/or health risk behaviours. Such efforts provide data which can be used to adjust objectives and shape or justify programmes.

Evaluation and surveillance efforts acquire information that helps people understand the importance and value of school health programmes. They provide evidence that policy- and decision-makers can use to justify decisions about investments in school health programmes. Additionally, they provide programme managers with data to monitor progress, demonstrate achievements and improve programmes. Information gathered through evaluation and surveillance research are important resources for acquiring other resources, such as funding, personnel and materials.

ENHPS

The ENHPS activities are directly related to one of WHO's Regional Health for All targets, "By the year 2000, all settings of social life and activity, such as the city, school, workplace, neighbourhood and home, should provide greater opportunities for promoting health" (WHO/EURO, CE & EC, 1993b).

The ENHPS's pilot projects were initiated in four countries in 1991, and ENHPS was not formally established until 1992. Thus, ENHPS current evaluation efforts are focused more on programme implementation than programme outcomes. In order to develop and promote evaluation as part of the ENHPS, a project called "Towards an evaluation of The European Network of Health Promoting Schools" is monitoring the kinds of evaluation initiatives the various networks are undertaking. Through the use of key words in the Network's School Information Database, researchers can determine to what extent various networks are developing evaluation instruments, using teams of experts to guide evaluations, surveying pupils, comparing activities or developing evaluation. During the next two years, an evaluation model will be tested covering all aspects of the ENHPS (Kadijk, 1996).

The ENHPS encourages Health Promoting Schools to evaluate such items as the quality of teaching, methods used, management practices, curriculum development and the involvement of the community, in addition to traditional health behaviour indicators. Some schools have used the questionnaire developed by the Health Behaviour in School-Aged Children (HBSC), a WHO Cross-National Survey which most recently has been used in 25 countries and regions to increase scientific knowledge about health behaviours of young people. The ENHPS promotes the adoption of new evaluation tools and the identification of clear aims and objectives before, during and after activities are completed. Research findings are encouraged to be used to foster programme improvements.

Increasingly, the ENHPS will focus its research on broad aspects of school life, such as ways that schools serve as settings for Health Promotion and institutions for change; facets of schools that are affected by change; the tempo of change; social and political considerations in the change process; management of change at a local, regional and national levels; and ways
individuals, agencies, institutions will be affected by change. Such measures are consistent with the broad concepts and purposes underlining the Health Promoting School.

CDC/DASH

CDC/DASH's programmes to promote CSHP contribute to achieving the Nation's Health Objectives for the Year 2000. The health objectives call for increasing the quantity and quality of various school health programmes and their components, as well as achieving health outcomes. CDC/DASH conducts both surveillance and evaluation research to monitor progress in achieving national objectives and to assess the impact of school health programmes.

CDC/DASH conducts surveillance research to define and monitor: priority health outcomes among youth; health behaviours that most influence those outcomes; knowledge, attitudes and skills (KAS) that affect relevant behaviours; and school health policies and programmes.

Priority health outcomes among youth: CDC/DASH monitors health objectives for youth which are established as part of the Nation's Health Objectives for the Year 2000. CDC/DASH routinely summarizes health outcome data among adolescents in the U.S.A. in CDC's Morbidity and Mortality Weekly Report. CDC/DASH also periodically summarizes information about priority health outcomes in a monograph series titled "Adolescent Health: State of the Nation". Two monographs that are now available are: "Mortality Trends, Causes of Death and Related Risk Behaviours Among U.S. Adolescents" and "Pregnancy, Sexually Transmitted Diseases and Related Risk Behaviours Among U.S. Adolescents".

Health behaviours that most influence priority health outcomes: CDC/DASH developed the Youth Risk Behaviour Surveillance System (YRBS) to focus the nation on behaviour causing important health problems. Through this system, CDC/DASH monitors how risk behaviour changes over time, using comparable data collected at national, state and local levels. YRBS includes three surveys: 1) State and local surveys of youth in schools that are conducted by teachers, school nurses and even parents; 2) national surveys of youth in schools that are conducted by professional surveyors; and 3) a one-time national survey of in-school and out-of-school youth conducted in homes.

The risk behaviours that CDC/DASH monitors, and helps State and Local Education Agencies to monitor, are those associated with leading causes of death, disease and disability among youth and adults in the USA. The questionnaire used for monitoring risk behaviours was developed by DASH in collaboration with a wide range of federal agencies, national organizations, state and local education and health agencies, and universities. The state, local and national school YRBS surveys obtain self-reported information from youth 14 to 17 years of age. The surveys are anonymous, self-administered and are made up of only 84 questions. They are designed to be completed in one class period of 45 minutes and are conducted on a biannual basis.
The results of the school-based surveys are used to:

- focus school administrators, decision-makers, health educators and teacher training programmes on behaviour that can most clearly influence health;
- monitor progress in achieving national health goals, such as reduced smoking and drug use among youth;
- monitor progress in achieving the national education goal of safe, disciplined and drug-free schools;
- mobilize resources and support for implementing and maintaining comprehensive school health programmes.

In addition to the school surveys, in 1992, DASH provided technical and financial support for a national home survey among youth. The survey covered youth from the age of 12 to 21 both in- and out-of-school. Because of the expense of such surveys they are not conducted on a regular basis as are the school surveys. The main advantage of the home survey is that it provides the opportunity to analyze the links between the health behaviour of parents and their children, and to compare the behaviours of in- and out-of-school youth.

Since 1986, when CDC began to provide funds to State and Local Education Agencies to improve school health programmes and monitor the prevalence of important risk behaviours, CDC reports that there has been an increase in national, state and local efforts to improve school health education throughout the United States.

School policies and programmes: In 1994, CDC/DASH completed a School Health Policies and Programs Study which examined multiple components of a CSHP at the state, district and school levels. CDC/DASH assessed the nationwide status of policies and programmes for school-based health education, physical education, health services, food service and health policies prohibiting tobacco use, alcohol and other drug use and violence. CDC/DASH identified gaps in the quantity and quality of various school health programmes, and their components, to further understanding of the opportunities to facilitate the delivery of quality school health programmes. The report of the study is used to reinforce the need for the active support and involvement of public health officials, educators, communities and families in strengthening existing programmes and creating new ones to improve the health through schools (Kann et. al, 1995, p. 289).

CDC/DASH conducts evaluation research to assess the impact of school health programmes and interventions. CDC/DASH collects published and unpublished school health-related research data and aggregates results to help educators develop interventions that are based on the best research available. For example, DASH aggregated research about interventions to reduce sexual risk behaviour among school age youth, and initiated a cumulative database of such research. With these activities, CDC/DASH began "Research to Classroom; Programmes that Work", a project designed to apply research findings to the education of youth. Three curricula have been identified and disseminated through the Research to Classroom project.
Seventy five percent of the state education agencies have conducted training in one or more of these curricula during fiscal year 1995.

CDC/DASH also works with state and local education agencies to evaluate their efforts to improve school health programmes. In 1995, CDC/DASH conducted evaluation consultations with 21 agencies to assess and improve HIV-related interventions, and assisted 10 states to evaluate their comprehensive school health programmes. CDC/DASH also prepares evaluation tools to assess HIV prevention efforts and school health programmes infrastructure.

Although the surveillance and evaluation efforts of the ENHPS and CDC/DASH differ, in total they demonstrate a full range of options that should be considered in planning a research agenda for large scale programmes and networks.

**Capacity Building and Training**

The ENHPS and the CDC/DASH strategies to strengthen school health programmes, use quite similar means to build capacities related to school health. Both use meetings and conferences to exchange information, ideas and experiences; build infrastructure and foster collaboration; and help generate funding for efforts to strengthen school health. One of the most important aspects of building networks and programmes for school health promotion is to build the capacity of people that work in the networks or programmes. This requires capacity building efforts such as training, as well as other means including motivation, advocacy, material development, evaluation for programme improvement, and other means of assistance and support.

**ENHPS**

In the ENHPS, the International Planning Committee works through its TS to build capacities of National Coordinators and School Project managers by providing materials and documents that set out the vision of the European Network. The inspiration works in three ways; from the IPC to the TS and from the TS to the National Coordinators, and back. The materials and documents help coordinators and managers transform the vision into a strategy for setting up a National Network of Health Promoting Schools. Together with the ENHPS requirements, these materials and documents, help to strengthen the knowledge and capacities of people involved in the national Health Promoting Schools projects. Capacity building efforts are also planned and implemented by the Technical Secretariat for the project as a whole. This includes monitoring, coordination, training and providing support for National Coordinators (Logghe, 1995, Ruiter, 1995).

The TS provides technical support for training related to the development of Health Promoting Schools and network development in general. WHO/EURO offers strategic support for the development of sub-regional training, exchanges and material development.
Translation, adaption and training for the manuals on Promoting Mental and Emotional Health in the ENHPS, Promoting the Health of Young People in Europe, and Promoting the Health in Second Level Schools in Europe, is provided.

The ENHPS organizes annual meetings for the National Coordinators to exchange information, ideas and experience. The meetings are perceived as very important and valuable by the National Coordinators. The meetings provide opportunities for National Coordinators to discuss and exchange experiences about common problems that they face in their countries and in schools. These meetings also facilitate contact and collaboration between National Coordinators, technical experts and funders. There are also differences between the barriers that countries in certain geographical areas face in implementing the Health Promoting Schools projects. For this reason there are sub-regional meetings organized to concentrate on specific problems.

In the countries, National Support Centers for Health Promoting Schools, are often accommodated within an existing national or regional centre for health promotion and/or health education. The National Support Centers build capacity among the people involved in the Health Promoting Schools project at the country level. They provide guidelines for schools participating in the national network, promote coordination at the country level, support School Project Managers through the organization of training programmes and other activities, organize meetings and disseminate supportive information.

CDC/DASH

CDC/DASH is responsible for providing and organizing technical support to build the capacity of national organizations and official state and local agencies that work with CDC/DASH to strengthen school health programmes. One of its main activities is to build infrastructure for state-level actions to promote CSHP. Infrastructure, refers to the basic support system on which state-wide efforts to promote CSHP depend and grow. CDC/DASH infrastructure development activities are designed to build the capacities of state agencies to improve funding and authorization; personnel and organizational placement, resources, and communication. When fully implemented, CSHP infrastructure will enable states to establish a collaborative organizational pattern that facilitates state wide (and local) CSHP planning, implementation, and evaluation that is consistent with community values and needs. Currently, only thirteen states receive funding from CDC/DASH for developing state-level infrastructure for CSHP.

CDC/DASH supports several types of training to promote the development of CSHPs. Two State Education Agencies and a Local State Agency are selected every few year to serve as Training and Demonstration Centres. Representatives from other State and Local Education Agencies attend the Training and Demonstration Centres once each year to learn how school health is being promoted by that State or Local Agency. The
presented programmes are critiqued by the participants and the sessions are used as forums in which persons with similar responsibilities can share their experiences and learn together.

Many of the national organizations that CDC/DASH fund also provide training for State and Local Education Agencies. National organizations often collaborate in designing training. For example, two national organizations receive support from CDC to provide training summaries about the strengths and limitations of several of the most widely used school health education programmes. They also can help to provide training on specific interventions that have been found effective in reducing important risk behaviours among youth.

Because training for teachers is considered a critical element of improving school health programmes, CDC/DASH also provides support for one national organization to organize and maintain Regional Teacher Training Centres. These Centres provide training in school health education and programme development to thousands of teachers and curriculum planners in any give year.

**Broad strategies and multiple intervention points**

Both the ENHPS and CDC/DASH strategies to strengthen school health programmes include broad strategies. Both foster resource development and collaboration among public and private agencies in all sectors to promote health through schools. ENHPS and CDC/DASH also encourage all agencies to consider multiple intervention points in planning and implementing actions. Such points include improving school policies, environmental conditions, curricula, training programmes and extra-curricula activities. They also include improving health and social services and in activating the community to support health. Such broad strategies and multiple interventions are necessary to implement recommendations made by WHO's Expert Committee.

**ENHPS**

The ENHPS is, in itself, a broad strategy which both provides and builds infrastructure for the development of school health programmes. The three international organizations which support the ENHPS provide the means by which and national coordinators and relevant organizations can meet, share experiences, plan collaborative actions and receive technical support and training. Furthermore, participation in the ENHPS fosters the development of policies and resources at the international, national and local levels and supports the creation of "project schools" which demonstrate to other schools and to national authorities the variety of ways in which a "Health Promoting School" can promote health.

A full range of opportunities to promote health through schools is identified in the concept of the Health Promoting School. The ENHPS also identifies a wide range of targets for interventions, putting emphasis on the school's environment, students, staff and the relationship between the school and the community.
The ENHPS encourages schools to develop health promoting environments for working, living and learning both in its physical structure (buildings, play areas, lighting, ventilation, water supply, furniture etc.) and in its organizational and social structure (management, safety measures, traditions and customs).

The ENHPS encourages schools to promote health in interaction with students by developing and using a curriculum with a holistic view of health, giving teachers sufficient time to cover health issues, encouraging healthy lifestyles and involving the use of appropriate teaching techniques. The curriculum enables pupils to move towards their full physical, psychological and social health potential, empowers them to act and promotes confidence and self-esteem. The ENHPS encourages school personnel to incorporate health throughout the school curriculum and to use participatory learning methods, such as role playing, small group discussions, case studies, group work and community action projects in order to develop decision-making, negotiating and problem-solving skills. The democratic approach is essential for the project.

The ENHPS encourages schools to provide health promotion efforts for everyone involved within the school, including the teachers and other staff. Through healthy working conditions, such as appropriate teaching schedules, specific services and programmes, the school enables staff to move towards their maximal physical, psychological and social health potential and encourages them to adopt healthy lifestyles.

The ENHPS stresses the importance of cooperative relationships between members of the school community (pupils, parents, teachers and other staff) and the community as a whole. It helps schools and communities to join in a network of caring support for the young people and for schools to become a centre for the benefit and health of all who live in the community. It encourages schools to cooperate with other sectors and members of the larger community, such as local companies and other institutes. By developing a cooperative relationship, schools obtain the use of community resources for health promotion and contribute their resources in support of all who live in the community (WHO/EURO, CE & EC, 1993a, Logghe, 1995, Ruiter, 1995).

A unique feature of the ENHPS is its twinning projects. International collaboration and exchange is stimulated between schools in different countries. National Coordinators and school personnel visit their counterparts in neighbouring countries, and have opportunities to visit and learn from their colleagues in other Health Promoting Schools. Twinning efforts are very popular and provides incentives for all involved.

**CDC/DASH**

CDC/DASH focuses on six interactive strategies:

1. Surveillance to define and monitor outcome and process objectives;
2. Support for States to help local schools implement effective programmes;
3. Support for national organizations to help local schools implement effective programmes;
4. Convening relevant groups to collaboratively help plan and implement strategies;
5. Evaluation research to assess programme effectiveness;
6. Research synthesis and application to improve programme effectiveness.

Because each of the strategies are interactive, they are planned and conducted in relation to each other. For example, CDC/DASH's strategy to provide support for States is clearly linked to the other strategies because it helps states to:

1. Periodically implement state-wide surveys to monitor the prevalence of priority risk behaviours (Strategy 1);  
2. Develop guidelines, training materials, training programmes and provide technical support to help schools strengthen education to prevent HIV infection as an integral part of CSHE;  
3. Collaborate with State Education and Health Agencies and other national education and health organizations to advocate for the development and implementation of effective school health programmes.

4. Periodically monitor the extent to which comprehensive school health programmes are available to students in schools;

Using the six interactive strategies, DASH encourages schools to implement eight components of the CSHP. Each component of the comprehensive school health programme is a distinct but interrelated programme of interventions. They components are described below:

Comprehensive school health education is a common aspect of all the components. It comprises a planned prekindergarten to grade 12 curriculum that addresses the physical, mental, emotional and social dimensions of health.

School health service programmes promote the health of students through prevention, case finding, early intervention and remediation of specific health problems (Allensworth, Kolbe, 1987). Health service programming starts with immunizations and health screenings required before entry to kindergarten and continues through a student's academic career with periodic screenings. Professionally prepared school nurses most often coordinate and provide the health service programme (Stone, Perry, 1990).

A school health environment includes the psychological climate and physical surroundings in which students and school personnel are expected to work (e.g. environmental aspects of sanitation, heating and lighting as well as activities for students safety. The programme consists of school activities aimed at providing students with a healthy environment in which to learn and grow (Stone, Perry, 1990).
The goals of the school food service are to provide nutritionally adequate meals at a reasonable price, and to serve as a learning laboratory for health and nutrition education (Stone, Perry, 1990).

Physical education programmes can improve motor performance, physiologic and metabolic functions, aerobic capacity, frequency and duration of exercise. They also have a positive effect on cognitive performance, social development and relief for stress (Allensworth, Kolbe, 1987).

School counselling and social services. Counsellors provide broad-based intervention programmes to promote the physical and emotional health of students. The programme should also provide developmental guidance.

Faculty and staff health promotion. Schools are ideal settings for worksite health promotion programmes, because they already have the facilities and professional resources required to develop and implement the programme (Allensworth, Kolbe, 1987).

The need for an integrated school and community approach is being rediscovered as an effective strategy to promote the well-being of children and youth.

Standards and requirements

Both the ENHPS and the CSHP use standards and requirements. But because of the differences in their rationales and visions, they use standards and requirements in different ways. Standards and requirements are used to create situations that are likely to achieve network or programme goals and objectives. They provide a means by which to compare plans and actions against what is desired. Standards and requirements are the policies of the organizations which set them and can facilitate actions considered essential, but unlikely to occur in the absence of a standard or requirement.

ENHPS

The ENHPS has established a set of requirements which have to be met by countries to become members of the Network and also for schools to become Health Promoting Schools. For example, the ENHPS requires that countries designate a National Coordinator who serves as the focal point and is responsible for the HPS project in the country. The National Coordinator should be supported by a National Support Centre, which is part of an existing national or regional centre for health promotion/education. To facilitate the National Coordinator in his work, an collaborative agreement between the Ministries of Health and Education is required. The National Coordinator is expected to develop a strategy for the country network and guidelines for schools.

The ENHPS requires that Health Promoting Schools appoint a school project team and a school project manager. The school project team and the school project manager, in
collaboration with the school, teachers, pupils and the community, are required to agree to the concept of the Health Promoting School. Schools selected to be project schools of the ENHPS, (10-15 schools per country) become Health Promoting Schools by achieving standards and criteria set by National Coordinators within their own countries.

**CDC/DASH**

National organizations, and state and local education agencies, are required to competitively apply to receive funding to strengthen school health programmes through “Cooperative Agreements” with CDC/DASH. A "Cooperative Agreement" is used to delineate the activities of CDC/DASH and those of the organization which applies to work with CDC/DASH. The application is required to contain: the background and need of the proposed activity, its goals and objectives, an operational plan, and a project management and staffing plan. The application must include the designation of a coordinator; an agreement to collaborate, share experiences and coordinate the use of resources with other programmes; an evaluation plan; and a justified budget.

Applications for Cooperative Agreements with CDC/DASH are generally reviewed by a group of peers using a process organized by CDC. If the application meets the requirements for objectives, activities and evaluation, the plan is identified as acceptable. In funding and supporting projects, CDC tries to support: national organizations with the most promising plans and greatest capacity to influence and improve school health programmes; all state education agencies; and local education agencies from the largest metropolitan areas.

DASH has also developed guidelines for school-based health promotion. These are not requirements, but serve as standards for programme quality. Guidelines are based on research and the experience of a wide range of practitioners. For example, associations between unhealthy dietary patterns, physical activity and adult chronic disease have been documented. In response to evidence that the unhealthy patterns frequently begin in childhood or adolescence, DASH has developed two sets of guidelines for school-based programmes; one to promote healthy dietary behaviours, and the other to promote healthy physical activity in the context of a comprehensive school health programme. The guidelines include specific recommendations to help states, districts and schools implement health promotion programmes and policies that have been found to be most effective in promoting healthy eating and physical activity patterns among youth.

CDC/DASH also provides funding and technical support to national organizations and official state and local education agencies to develop their own standards and guidelines. DASH encourages organizations to work together in doing so, in order to share opinion and logic, increase understanding of issues, and to create support for the guidelines from other relevant organizations. Examples include: Someone At School Has AIDS.
CONCLUSION

WHO's Expert Committee on School Health concluded that, without question, promoting health through schools, "could simultaneously reduce common health problems; increase the efficiency of the education system; and thus advance public health, education, social and economic development" in all nations. The possibility of such significant and far reaching benefits, merits large scale, intersectoral efforts to help schools become Health Promoting Schools. The two large scale approaches examined in this paper provide insight into qualities and actions that might be useful in planning and implementing large scale international, national or local efforts to strengthen the school's capacity to promote health. The approaches examined suggest that:

* A sound vision can provide direction and guide actions. If the vision is clearly delineated into goals and objectives, they can be used as planning guidelines and as indicators for monitoring progress.

* Collaboration and cooperation between persons and organizations, at all levels, can enhance individual efforts and reduce duplication. Collaborative efforts bring together persons and organizations which have different means and possibilities for action; and make it possible for organizations to plan and apply multiple and varied strategies to strengthen each other's efforts.

* Clearly defined roles and responsibilities, and an application process which ensures that collaborators are interested in working toward common goals can reduce misunderstanding and complexities among individuals and organizations striving to work together.

* Support and investment in persons and organizations that can help improve school health promotion must be a primary function of organizations that are striving to improve health through schools. This includes building individual and organizational capacities by providing training, conferences and meetings to exchange experiences within and between organizational levels (from management to teachers); and by ensuring that persons who can help improve school health promotion have the time, resources and responsibility to do so. Capable persons collaborating at all levels, helps to ensure that many people are able to advocate for the programme and its ideas.

* If process and effect evaluation is a structural part of the approach, adjustments can be made, and the outcomes can provide policy makers with arguments that help to justify the programme and its philosophy.

The efforts of the ENHPS and CDC/DASH should be carefully examined and considered by international, national and local organizations that want to further develop and enhance the ability of schools to promote health and education.
REFERENCES


US Department of Health and Human Services and CDC. *State and Local Comprehensive School Health Programs to Prevent Important Health Problems and Improve Educational Outcomes*. Program announcement number 309.


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