HEALTH PROMOTION INTERNATIONAL Vol. 19. No. 1 © Oxford University Press 2004.
doi: 10.1093/heapro/dah113

The sustainability of health promotion interventions for different levels of social organization

HAL SWERISSEN AND BETH R. CRISP

Australian Institute for Primary Care, Faculty of Health Sciences, La Trobe University, Bundoora, Victoria, Australia 3086

SUMMARY

In health promotion, enthusiasm for sustainability has frequently overshadowed critical reflection with regard to whether this aim is warranted, let alone feasible. Consequently, the not insubstantial body of literature on sustainability in health promotion is not particularly helpful to decision makers. In this paper we seek to provide some guidance for the development of sustainability for health promotion interventions, arguing that it is necessary to be able to differentiate between (i) levels of social organization which are the focus of change, (ii) the programmes and agencies which are the means employed to achieve change, and (iii) the outcomes or effects that are achieved. Furthermore, funding allocations need to be congruent with programme characteristics if one is serious about achieving sustainability.

Key words: health promotion; policy development; sustainability

INTRODUCTION

It is perhaps not surprising that in an era when the resources for health promotion are limited and the expectations as to what can be achieved are high, that 'sustainability' has become a familiar catch-cry. Yet all too often enthusiasm has overshadowed critical reflection on whether aiming for sustainability is warranted, let alone feasible.

There has been a lack of consensus about conceptual and operational definitions of sustainability in respect to health programmes (Shediac-Rizkallah and Bone, 1998). For health promotion, sustainability may refer to intervention effects or the means by which these are produced—the programmes and agencies that implement interventions. The aim of health promotion is to produce intervention effects that may be sustained over time.

In the health promotion literature, there has been considerable concern about the need to maintain and retain health promotion programmes long term [e.g. (Schwartz *et al*., 1993; Bracht *et al*., 1994)]. While there is no doubt that such efforts are often warranted to ensure desirable effects, there are situations in which the retention of a health promotion agency may be more important than maintaining particular programmes in order to ensure an ongoing capacity for health promotion (Stern and Gibelman, 1990; Rosenberg and Weissman, 1995).

Furthermore, in some circumstances health promotion effects will be sustained without the need for ongoing intervention. When this occurs, efforts to sustain programmes are not warranted (Green, 1989). We have explored more fully the issues surrounding these differing targets for sustainability (programmes, agencies or effects) elsewhere (Crisp and Swerissen, 2002).

Knowing what it is that one seeks to sustain is a useful start, but whether such aspirations are realistic is another question. Unfortunately, to date the not insubstantial body of literature on sustainability in health promotion is not particularly helpful to decision makers. Definitions

are confused, there are relatively few empirical studies, and explanatory models tend to be relatively simplistic and descriptive, often failing to consider the substantial literature on learning theory, community action and social policy that has addressed non-health-related issues. Here we draw on this literature to provide some guidance for the development of a policy on sustainability for health promotion.

SUSTAINABILITY AND LEVELS OF SOCIAL ORGANIZATION

In developing a policy on sustainability for health promotion, it is necessary to be able to differentiate between (i) levels of social organization which are the focus of change, (ii) the programmes and agencies which are the means employed to achieve change, and (iii) the outcomes or effects that are achieved. Having previously discussed the sustainability of programmes, agencies and effects, we now turn to the complex relationship between the means of intervention (programmes and agencies), the outcomes or effects that are achieved and levels of social organization.

Levels of organization

A number of social intervention theorists have proposed that the social order of society is made up of increasingly complex levels of organization [e.g. (Rappaport, 1977)]. In this respect we would argue that health promotion interventions may be focussed on individual action, the physical and social organization of settings, and broader societal and institutional processes (Swerissen *et al.*, 2001). Although these levels of social organization are nested within one another, they involve different social processes.

Individual change

Interestingly, a good deal is known about the effectiveness and sustainability of health promotion interventions that are aimed at individual behaviour change. There is now a significant body of evidence on principles that underpin the most effective interventions to address behavioural risk factors [e.g. (Glanz and Rimmer, 1990)]. Most of these interventions are aimed at changing individual behaviour through provision of information through education and social marketing to change knowledge, attitudes and beliefs that are the precursors of behaviour change. However, in the absence of other measures, even well designed educational and social marketing interventions have a relatively low success rate in producing changes in behavioural intention for most common behavioural health risks [e.g. (Mittlemark *et al.*, 1993; Winkleby, 1994; Fortmann *et al.*, 1995; Tudor-Smith *et al.*, 1998)]. Moreover, even when individuals modify behavioural health risks, there is a high probability that they will not maintain the change they make (Quigley and Marlatt, 1999).

Interactive and individually tailored intervention programmes for behavioural health risks lead to higher levels of sustained behaviour change than social marketing. These programmes have adapted social learning theory and often introduce strategies to promote the maintenance and generalization of intervention effects. But it is difficult to recruit participants for them. It is also clear that behavioural risk factor interventions are more likely to succeed with more affluent, well educated groups with greater control over the social and material resources that affect their lives (Jarvis and Wardle, 1999).

Behavioural programmes tend to atomize health promotion. Because the environmental and social consequences for health-related action are not directly addressed by working with individuals and small groups, sustainable behaviour change is difficult to achieve. Neither do skills learnt to modify behaviour in relation to one form of health risk readily generalize to address others, and nor do skills learnt by one person necessarily transfer to another [e.g. (King and Remenyi, 1986)].

Consequently, behaviour change programmes targeted at individuals often require ongoing funding and resources if they are to have a sustained impact on populations. Fundamentally, behaviour change programmes targeted at individuals do not alter the social and environmental conditions that promote and maintain the behavioural risks that are the focus of intervention.

Organizational change

It is clear that health risks and outcomes are strongly associated with social and environmental circumstance [e.g. (Wilkinson and Marmot, 1998)]. In part, health promotion interventions have sought to address social and environmental determinants of health by organizational interventions

in a range of settings, including schools, work places, community, sporting and recreational organizations.

There is a significant body of evidence on the factors that affect the sustainability of setting-level interventions (Kickbusch, 1996; Leeder, 1997; Nutbeam, 1997). The principles and strategies for social intervention in organizations and communities are well developed [e.g. (Rappaport, 1977)]. In relation to physical settings, for example, there is a long history of effective and sustained public health intervention to prevent the spread of infectious disease and to reduce the impact of environmental toxins, primarily through the design and regulation of the physical environment and production processes. These interventions reduce risk by redesigning the physical environment and individual behaviour alters accordingly.

More recently, there has been greater emphasis on the modification of organizational practices that impact on chronic disease and injury. These include the availability of smoke-free settings, alcohol serving practices, food choices and sun protection measures (Corti *et al.*, 1995; Corti *et al.*, 1997). There is considerable evidence that once organizational policies and practices are adopted and put in place, they are maintained over time without the need for ongoing intervention programmes (Rothman, 1974; Jackson, 1985; Rappaport, 1995).

Organizational interventions draw heavily on the literature on organizational change and consultation. The sustainability of setting-level change within organizations has more to do with the changes to an organization's rules and practices rather than the behaviour of particular individuals. The intervention model assumes that changes to organizational rules and practices have a direct impact on the behaviour of individuals. But because settings are adaptive and dynamic, it is often difficult to get the 'rules of the game' to change. When the basic equilibrium of a social system is threatened there is often a 'backlash', and it is important that interventions take this likelihood into account. Organizations also vary in the extent to which their pre-existing structures and processes are able to facilitate organizational change to promote health. Considerable organizational development may be required where these do not exist. Although organizational change has greater potential to produce sustainable health promotion effects, there is a trade off between the effort required to change organizational practices and the potential for long-term sustainable change.

Social research on organizational change suggests that intervention programmes that achieve setting-level change need longer time frames and different skills and resources than individual-level change strategies in order to produce sustainable changes in practice (Rappaport, 1977). It is also worth noting that contractual relationships between funding organizations and organizations that provide programmes represent a unique form of organizational intervention insofar as the funding organization is effectively in a position where it can purchase organizational or structural change. The disadvantage of purchasing structural change is that organizations will resist withdrawal of funds once structural change has been effectively implemented, even when no further resources are actually required for implementation. One possible strategy to overcome this problem is to differentiate between the costs of implementing structural change and the incentives for maintaining it.

Community action

Setting-level interventions also include relationships between organizations, and between organizations and individuals (Crisp *et al.*, 2000). Social intervention strategies and tactics for community organization and development emphasize the use of social planning and social action models. There is now a significant literature on the use of social planning and social action models for community development and the creation of new settings. These strategies often require more intensive resources over much longer time frames than those required for organizational- or individual-level change (Goodman *et al.*, 1993; Wickizer *et al.*, 1998).

Potentially, community action strategies may have a significant impact on the physical and social determinants of health across the organizations and communities involved. However, there is usually significant resistance to the resource redistribution and the changes to the existing social relationships and practices concerned. Intervention programmes therefore require long-term support if they are to be sustained, and if they are withdrawn too early programme effects may disappear quickly.

Institutional change

Institutional change is usually focused on key societal decision makers and those who have direct influence upon them. Its focus is on achieving major policy change, redistribution of resources, and the establishment or reform of legislation and regulation. The intervention strategies that are employed are largely those of social advocacy, which usually includes the provision of information, lobbying, and the demonstration of community support. These interventions may involve the creation of new organizations and networks for this purpose, which require substantial ongoing resources over an extended period of time to achieve success. Moreover, it is likely that significant counter pressure and resistance to change will occur. It is unlikely that institutional change strategies can be sustained without ongoing support. However, institutional change, once achieved, has a pervasive effects on communities, organizations and individuals. Moreover, that change is usually sustained over time, although the capacity for its reversal should not be underestimated when it remains contested in the community.

Interventions and levels of social organization

It is important to note, as Watzlawick and coworkers have pointed out, that attempts to deal with one level of social organization in terms of another are doomed to confusion:

> For example, the economic behaviour of the population of a large city cannot be understood in terms of the behaviour of one inhabitant multiplied by, say 4 million ... a population of 4 million is not just quantitatively but qualitatively different from an individual, because it involves systems of interaction among individuals. [(Watzlawick *et al*., 1974), p. 6.]

They distinguish between two types of change that social (and health) interventions may produce: first and second order change. For them, first order change is change within a system that itself does not change. Interventions seek to change individuals (or their immediate environment) so that they are better able to adapt to the existing settings and institutions. In contrast, second order change produces change in the fundamental rules and processes of social systems. Often this requires change to the rules for the allocation and distribution of access, information and resources (Watzlawick *et al*., 1974).

According to Watzlawick and coworkers (Watzlawick *et al*., 1974), confusion of first and second order change leads to errors of 'logical typing'. As a result, inappropriate interventions are implemented. This may include attempts to change organizational and community processes when individual change strategies are warranted, but typically it involves the use of individual change strategies when problems are a function of underlying social determinants. For example, this might include a focus on 'lifestyle' issues for a high incidence of chronic and systemic disease associated with discrimination and exclusion of indigenous groups.

Often errors of logical typing attribute health problems to the deficits of the individuals who manifest them, whether those deficits are seen as environmental disadvantage (e.g. poor living conditions of aboriginal Australians) or an inherent characteristic of the individual (genetic characteristics of people with disabilities). Either way, the institutional and organizational factors that lead to the disadvantage are not in question. Instead interventions seek to change individuals (or their immediate environment) so that they are better able to adapt to the existing settings and institutions, when it is in fact the response of the social system to the characteristics of the individual (e.g. aboriginality) that underpins the problem. This leads to 'victim blaming' (Ryan, 1971).

In contrast, second order change, which produces change in the fundamental rules and processes of social systems, values the strengths of those who are seen to have problems. It requires the promotion of self determination and partnerships, rather than seeking to impose well meaning, but nevertheless victim blaming solutions. However it also means the redistribution of power and control over important resources; as a result, second order change is usually much more difficult to achieve.

It is also important to note that most models of health promotion intervention now recognize the interactive nature of the relationships between biological, individual, setting and institutional determinants. Sociological and ecological models of human behaviour emphasize that social systems are dynamic, interdependent and adaptive (Hawe, 1994). What is viewed from the outside as unhealthy or maladaptive practice or behaviour needs to be seen in a social and historical context [e.g. (Trickett *et al*., 1972)].

CONCLUSIONS

Interventions that are pitched at the wrong level of the social system are unlikely to be effective, let alone sustainable. For health promotion, this has been characterized as the shift from risk factor interventions to interventions aimed at risk conditions. Risk factor interventions are conceptualized at the individual level of social organization. Typically they focus on behaviours such as smoking, eating and physical activity.

On the other hand, risk conditions such as social cohesion and support, income security and access to social, educational and health services, are more usually thought of as a function of organizational, community and institutional levels of social organization. For example, there is now strong interest in findings that communities with high levels of income inequality tend to have less social cohesion, more violent crime and higher death rates. There is also evidence that friendship, good social relations and strong supportive networks improve health at home, at work and in the community, whereas low social support has been linked to increased rates of premature death, poorer chances of survival after heart attack, lesser feelings of well-being, more depression, greater risk of pregnancy complications and higher levels of disability from chronic diseases [e.g. (Wilkinson and Marmot, 1998)].

Individual action occurs within, and is maintained by a social context. Interventions that isolate individual action from its social context are unlikely to produce sustainable health gain in the absence of change to the organizational, community and institutional conditions that make up the social context. The relationships between intervention level, strategies and the likely sustainability of programmes and effects are outlined in Table 1. The proposed relationships provide a framework for guiding decisions about the likely sustainability of programmes and effects at different levels of social organization.

Health promotion programmes are more likely to produce sustainable effects if they address appropriate levels of social organization in seeking to achieve health promotion outcomes. Programme design and implementation should take into account the evidence linking intervention strategies, levels of social organization and the sustainability of programme effects. Furthermore, programmes should differentiate between intervention strategies to promote: (i) capacity building to develop and maintain the infrastructure required for health promotion; (ii) changes in individual, organizational, community and institutional levels of social organization that will lead to health gain; and (iii) the likely sustainability of these changes and the ongoing need for programme resources over time.

Judgements about the sustainability of health outcomes that result from health promotion should also take into account the need to maintain strategic support for health promotion interventions, the importance of retaining an ongoing capacity for health promotion interventions and the difficulty in demonstrating the health gain in the short term. Notwithstanding the benefits which can accrue to individuals, organizations or communities as a result of sustainable health promotion efforts, financial considerations often underpin the desires of funding agencies for sustainability. However, while long-term savings may eventuate, effecting sustainable change may require substantial financial resources and support over a long period of time. In fact many health promotion efforts fail to become sustainable because insufficient resources are provided in the short to medium time frame (Goodman *et al*., 1993). Indeed, funding bodies that are serious about facilitating sustainable health promotion efforts should be asking themselves whether they are providing sufficient funds to projects.

Some resistance to funding programme or effect sustainability should be anticipated, especially from those whose income stream is threatened by changes such as moving away from programmes that focus on changing individual behaviour towards programmes that seek to improve health by changing social environments. It may be that such changes need to be phased in, while at the same time working with current grant recipients to encourage them to explore new avenues in health promotion for which there is greater potential for sustainability. Arguably, to some degree, funding bodies must take responsibility for socializing recurrent grant recipients' expectations of what are appropriate and effective health promotion interventions. Consequently changes in funding policy and practices should be accompanied by providing information, if not training, about newly preferred funding priorities.

Table 1: A typology of interventions and sustainability

Intervention level	Intervention strategies	Program sustainability	Effect sustainability
Individual	Focus on information, modelling, education and training to promote individual change in knowledge, attitudes, beliefs and behaviour health risks, such as smoking, eating and physical activity	Relatively short time frame for initial implementation, but requires ongoing resources if programme to be maintained	Low impact on behavioural outcomes at both the individual and population level in the absence of other levels of intervention; often requires multiple exposures and attempts
Organizational	Focus on organizational change and consultancy to change organizational policies (rules, roles, sanctions and incentives) and practices that produce changes in individual risk behaviour; greater access to social, educational and health resources that promote health	Requires few ongoing resources once organizational change has been implemented, but a longer term time frame for establishing the programme and a systematic process for the withdrawal of resources are required	High impact on individual action and physical environment within the setting once organizational change has been implemented, but significant resistance to organizational change may occur and organizations may not have the processes and structures to implement change. Also, setting may have only a limited impact on individuals
Community action	Focus on social action and social planning to create new settings (organizations, networks, partnerships) to produce change in organizations and redistribute resources that affect health	Often requires significant additional resources over an extended time frame, but may be systematically withdrawn once new settings have been created and resource redistribution occurs	High impact on individual action and physical environment once new settings are created, and settings may have pervasive effects on individuals, but significant resistance may be encountered over an extended period of time and the evidence for sustainability is mixed.
Institutional change	Focus on social advocacy to change legislative, budgetary and institutional settings that affect community, organizational and individual levels of social organization	Often requires significant resources over an extended time frame, but may be withdrawn once institutional change has been achieved	High impact on a wide range of settings and thereby on the physical environment and individual action once institutional change has been achieved, but significant resistance to institutional change is usually encountered

ACKNOWLEDGEMENTS

This research was funded by the Victorian Health Promotion Foundation (VicHealth).

Address for correspondence:
Associate Professor Hal Swerissen
Australian Institute for Primary Care
Faculty of Health Sciences
La Trobe University
Bundoora
Victoria
Australia 3086
E-mail: h.swerissen@latrobe.edu.au

REFERENCES

Bracht, N., Finnegan, J. R., Rissel, C., Weisbrod, R., Gleason, J., Corbett, J. *et al*. (1994) Community ownership and program continuation following a health demonstration project. *Health Education Research*, **9**, 243–255.

Corti, B., Holman, C. D. J., Donovan, R. J., Frizzell, S. K. and Carroll, A. M. (1995) Using sponsorship to create healthy environments for sport, racing and arts venues in Western Australia. *Health Promotion International*, **10**, 185–197.

Corti, B., Holman, C. D. J., Donovan, R. J., Frizzell, S. K. and Carroll, A. M. (1997) Warning: Attending a sport, racing or arts venue may be beneficial to your health. *Australian and New Zealand Journal of Public Health*, **21**, 371–376.

Crisp, B. R. and Swerissen, H. (2002) Program, agency and effect sustainability in health promotion, *Health Promotion Journal of Australia*, **13**, 40–42.

Crisp, B. R., Swerissen, H. and Duckett, S. J. (2000) Four approaches to capacity building in health: Consequences for management and accountability. *Health Promotion International*, **15**, 99–107.

Fortmann, S. P., Flora, J. A., Winkleby, M. A., Schooler, C., Taylor, C. B. and Farquhar, J. W. (1995) Community intervention trials: reflections on the Stanford five-city project experience. *American Journal of Epidemiology*, **142**, 576–586.

Glanz, F. L. and Rimmer, B. (eds) (1990) *Health Behaviour and Health Education: Theory, Research and Practice*. Josey-Bass, San Francisco, CA.

Goodman, R. M., Steckler, A., Hoover, S. and Schwartz, R. (1993) A critique of contemporary health promotion approaches: based on a qualitative review of six programs in Maine. *American Journal of Health Promotion*, **7**, 208–220.

Green, L. (1989) Is institutionalization the proper goal for grant-making? *American Journal of Health Promotion*, **3**, 44.

Hawe, P. (1994) Capturing the meaning of 'community' in community psychology. *Health Promotion International*, **9**, 199–210.

Jackson, T. (1985) On the limitations of health promotion. *Community Health Studies*, **9**, 1–6.

Jarvis, M. and Wardle, J. (1999) Social patterning of individual health behaviours: the case for cigarette smoking. In Marmot, M. and Wilkinson, R. (eds) *Social Determinants of Health*. Oxford University Press, Oxford, pp. 240–255.

Kickbusch, I. (1996) Tribute to Anton Antonovsky: 'What creates health'. *Health Promotion International*, **11**, 5–6.

King, N. and Remenyi, A. (1986) *Health Care: A Behavioural Approach*. Grune and Stratton, Sydney.

Leeder, S. R. (1997) Health-promoting environments: the role of public policy. *Australian and New Zealand Journal of Public Health*, **21**, 413–414.

Mittelmark, M. B., Hunt, M. K., Heath, G. W. and Schmid, T. L. (1993) Realistic outcomes: lessons from community-based research and demonstration programs for the prevention of cardiovascular diseases. *Journal of Public Health Policy*, **14**, 437–462.

Nutbeam, D. (1997) Creating health-promoting environments: overcoming barriers to action. *Australian and New Zealand Journal of Public Health*, **1**, 355–359.

Quigley, L. and Marlatt, A. (1999) Relapse prevention: maintenance of change after initial treatment. In McCrady, B. S. and Epstein, E. E. (eds) *Addictions: A Comprehensive Guidebook*. Oxford University Press, New York, pp. 370–384.

Rappaport, J. (1977) *Community Psychology: Values, Research and Action*. Holt Rinehart and Winston, Sydney.

Rappaport, J. (1995) Empowerment meets narrative: listening to stories and creating settings. *American Journal of Community Psychology*, **23**, 795–807.

Rosenberg, G. and Weissman, A. (1995) Preliminary thoughts on sustaining central social work departments. *Social Work in Health Care*, **20**, 111–116.

Rothman, J. (1974) *Planning and Organising for Social Change: Action Principles from Social Science Research*. Columbia University Press, New York.

Ryan, W. (1971) *Blaming the Victim*. Pantheon Books, New York.

Schwartz, R., Smith, C., Speers, M. A., Dusenbury, L. J., Bright, F., Hedlund, S. *et al*. (1993) Capacity building and resource needs of state health agencies to implement community-based cardiovascular disease programs. *Journal of Public Health Policy*, **14**, 480–493.

Shediac-Rizkallah, M. C. and Bone, L. R. (1998) Planning for the sustainability of community-based health programs: conceptual frameworks and future directions for research, practice and policy. *Health Education Research*, **13**, 87–108.

Stern, L. W. and Gibelman, M. (1990) Voluntary social welfare agencies: trends, prospects and issues. *Families in Society*, **71**, 13–23.

Swerissen, H., Duckett, S. J., Daly, J., Bergen, K., Marshall, S., Borthwick, C. *et al*. (2001) Health promotion and evaluation. *Health Promotion Journal of Australia*, **13** (Suppl.).

Trickett, E. J., Kelly, J. G. and Todd, D. M. (1972) The social environment of the high school: Guidelines for individual change and organizational redevelopment. In Golann, S. E. and Eisdorfer, C. (eds) *Handbook of Community Mental Health*. Appleton-Century-Crofts, New York, pp. 331–406.

Tudor-Smith, C., Nutbeam, D., Moore, L. and Catford, J. (1998) Effects of the Heartbeat Wales programme over five years on behavioural risks for cardiovascular disease: quasi-experimental comparison of results from Wales

and a matched reference area. *British Medical Journal*, **316**, 818–822.

Watzlawick, P., Weakland, J. H. and Fisch, R. (1974) *Change: Principles of Problem Formation and Problem Resolution*. Norton, New York.

Wickizer, T. M., Wagner, E., Cheadle, A., Pearson, D., Beery, W., Maeser, J. *et al*. (1998) Implementation of the Henry J. Kaiser Family Foundation's Community Health Promotion Grant Program: a process evaluation. *Milbank Quarterly*, **76**, 121–147.

Wilkinson, R. and Marmot, M. (eds) (1998) *Social Determinants of Health: the Solid Facts*. WHO, Copenhagen.

Winkleby, M. A. (1994) The future of community-based cardiovascular disease intervention studies. *American Journal of Public Health*, **84**, 1369–1372.