

An evaluation of the Health Promoting Health Service Framework: the implementation of a settings based approach within the NHS in Scotland

SANDY WHITELOW¹, CLAUDIA MARTIN², ANN KERR³ and ERICA WIMBUSH³

¹Health & Social Studies, University of Glasgow in Dumfries, Crichton Campus, Bankend Road, Dumfries DG1 4ZL, UK, ²Scottish Centre for Social Research, (incorporating NatCen Scotland and Scottish Health Feedback) and ³NHS Health Scotland, Scotland

SUMMARY

In 1996 the Health Education Board for Scotland (now NHS Health Scotland) began a process of developing a 'settings'-based framework that would inform health promotion work across Scottish health services—the Health Promoting Health Service Framework (HPHS). It took the form of a flexible guidance document, attending to the foundations of integrated and sustainable health promotion practice via specific areas like partnership work, policy development and staff health. The project has subsequently been progressed over an extended period, comprising three phases: an initial development of the resource; piloting of the framework; and a wider assessment of implementation and initial impact. This paper reports on the latter phase. Within the context of various issues pertaining to the evaluation of a 'settings' approach and based on the use of case study methodology in nine HPHS pilot sites, this paper reports on the latter 2 year phase. This involved ongoing

concern for understanding intervention processes and a growing interest in intervention outcomes and the paper reports on findings in each of these domains. In relation to outcomes, some positive gains in various indicators were detected though significant problems were experienced in this aspect. More significantly, the work was able to gain insights into what we call 'necessary conditions' of implementation. We theorize a range of 'contextual' factors (e.g. responsiveness to health improvement policy agendas) and project specific 'mechanisms' (e.g. providing skilled support) and present these as a nexus of conditions required for effective implementation of health promotion practice within explanatory models. Most significantly, we stress the relative frailty of any settings implementation strategy based simply on the uncoordinated dissemination of a tool or resource.

Key words: health service settings; evaluation

INTRODUCTION

Evaluating settings-based practice has traditionally been seen as problematic. Poland *et al.* [(Poland *et al.*, 2000), p. 348] point out that, 'a settings approach presents some unique challenges with respect to evaluation compared with other health promotion programs' and St Leger notes the approach consequently, 'has been legitimised more through an act of faith than through

rigorous research and evaluation studies' [(St Leger, 1997), p. 100]. More specifically, Deschesnes *et al.* note 'very little is yet known about the way to implement effectively a comprehensive, integrated approach' [(Deschesnes *et al.*, 2003), p. 389]. These deficiencies can perhaps be put down to two features: the relative originality of the approach with resulting evaluative

efforts still 'catching up' [(Deschesnes *et al.*, 2003), p. 389]; and the difficulty of undertaking evaluative research in such complex circumstances (McQueen, 2000; Sanderson, 2000).

However, four developments have helped counter such pessimism. First, a stronger conceptual base has been cultivated that offers greater definitional clarity on the various forms of 'settings based' practice [e.g. (Johnson and Baum, 2001; Whitelaw *et al.*, 2001)]. Second, there have been advances in the theoretical base that portrays the longitudinal implementation of settings-based interventions within a multifaceted 'whole system' or 'socio-ecological' orientation [e.g. (Fahey *et al.*, 2004; Riley *et al.*, 2001, 2003; Newes-Adeyi *et al.*, 2000)]. This ultimately suggests the significance of the notion of 'capacity' (Hawe *et al.*, 1997) as that captures 'how well public health agencies conduct a *set of* organisational practices relating to assessing, planning, organizing resources to support implementation and evaluating (heart) health promotion activities' [(Riley *et al.*, 2001), p. 428 italics added]. Third, attention has been paid to the methodological underpinning of research and evaluation undertaken within health promotion (Nutbeam, 1998) and specifically around settings-based work (Chu *et al.*, 2000). Finally, there has been progress in understanding the specific features of health service-based settings work [e.g. (Lethbridge, 2000; Butler-Jones, 2000; Latter, 2001)]. These themes provided a context for the planning and execution of the work described here.

THE HEALTH PROMOTING HEALTH SERVICE FRAMEWORK

In 1996, in partnership with health promotion specialists and NHS representatives, the Health Education Board for Scotland (HEBS—in 2003 HEBS was renamed NHS Health Scotland) began developing a 'settings'-based approach that would inform health promotion work across health services, a general project, *the Health Promoting Health Service (HPHS)* and a specific resource, *the HPHS Framework (HPHSF)* which took the form of a flexible guidance document, attending to the foundations of integrated and sustainable health service-based health promotion practice. The approach was rooted in profound biological, environmental and social determinants of health and stressed principles aimed at achieving social inclusion—namely

equity, participation, empowerment and sustainability. It focused, through its 'branches', on key types of health promotion activities, namely communication and coordination; working in partnership, the environment, policy development; health promotion programmes; staff health; training and development; and research and evaluation. The framework was evidence based and adopted a questioning approach, encouraging users to review current practice to identify potential development. This provided a framework for various potential functions, including, facilitating needs assessment, planning and auditing and standard setting. For further details see NHS Health Scotland (2005) [<http://www.hphs.co.uk> for more details].

THE EVALUATION: AIMS AND METHODS

Building on a recognition of the need for a long-term approach to development and dissemination of health promotion practice (Riley, 2003), the project has been undertaken over an extended period, comprising three broad phases: the development of the content and format of the HPHSF resource between 1996 and 1998; a piloting of the framework in 1998–99 (HEBS, 1999); and an assessment of implementation and initial impact (2000–2003). This paper reports on this latter phase, a 2 year investigation by the research agency *Scottish Health Feedback* [Now *The Scottish Centre for Social Research* (incorporating NatCen Scotland and Scottish Health Feedback)] of nine HPHS pilot site case studies concerned with what Nutbeam [(Nutbeam, 1998), p. 33] calls 'intervention demonstration' linked to an ongoing concern for understanding intervention processes and a growing interest in intervention outcomes.

The central aims of the evaluation were to (i) describe and assess the optimal form of support required for effective organizational *implementation*; (ii) begin to assess various levels of *outcomes*. A case study approach was adopted within nine purposively sampled sites: the coordination of health promotion activity across a locality-based health board and trust; rural pharmacy and elderly care; sexual health services for young people; hospital staff health within an acute trust; staff awareness of depression within a primary care trust; health promotion in a psychiatric unit; health promotion for coordinating and developing

work between primary and secondary care; a ward-based head and neck cancer awareness programme and a physical activity initiative within a forensic psychiatry unit. On the basis of the aforementioned recognition of 'settings' activity variance (Johnson and Baum, 2001; Whitelaw *et al.*, 2001), such variability was actively sought and was expressed in a number of ways, for example, geography (e.g. urban and rural locations); scope (e.g. from whole organizations to discrete projects); specific location (e.g. whole health boards, hospitals, primary care); topic type (e.g. physical activity, cancers, sexual health, staff health); and the nature of work being undertaken (e.g. broad policy, organizational coordination, education). Most of the projects were primarily led by practitioners (often nurses) for whom health promotion was not their 'primary' job, but part of those professionals' attempt to improve the well-being of staff or patients.

The developmental stage adopted a socio-ecological approach and put in place various supportive external and internal structures (local specialist support, access to training and local and national HPHS networks and some funding). Each site had senior management support for the work and a project leader. In turn, a small locally matched grant was provided by HEBS as well as the supporting structures suggested by the feasibility study (e.g. access to local specialist health promotion expertise and training; a national HPHS network; support with project monitoring). A variety of methods were used including semi-structured in depth interviews; participant observation; cross case questionnaires and documentary and financial analysis.

Besides monitoring potential impacts (primarily in this instance what Nutbeam [(Nutbeam, 1998), p. 30] calls 'health promotion outcomes'), our intent was to examine empirical case data against the backdrop of theoretical perspectives that sought to understand organizational implementation processes (Pawson and Tilley, 1998; MRC, 2000; Ukoumunne *et al.*, 1999). In particular, we wished to add to previous work that had described various 'pre-conditions' or 'components' of implementation (e.g. Deschesnes *et al.*, 2003; Yeatman and Nove, 2002; Zapka, 2000). In this sense, we believed that a case study approach would allow us to consider what Joffres *et al.* [(Joffres *et al.*, 2004), p. 89] call a 'time course for change'; that is, a longitudinal examination of a *dynamic interplay* of factors influencing implementation (Riley *et al.*, 2003). From this we hoped

to be able to produce a provisional model of implementation.

In practical terms, the evaluative work comprised regular site visits where semi-structured interviews with project leaders and the wider membership of planning and action groups were conducted. A questionnaire-based summative survey of project workers' views was also conducted. The entire process was reflective and iterative—a process of emerging elucidation that informed later stages of data-gathering and more pragmatically shifted thinking and understanding of how the Framework was being used and what its impact might be within the national HPHS project steering group.

INITIAL PROCESS RESULTS

In the context of a 'pre-intervention' theoretical model, given the plethora of settings-based frameworks, toolboxes, guidance documents and benchmarks and standards (for example, The Wessex Institute Health Promoting Hospitals and Trusts Self Assessment and Peer Review Toolkit, Scotland's Health at Work Toolkit, the Healthy Living Blueprint for Schools, etc.) perhaps the traditional assumption that has underpinned the implementation of the majority of settings-based work has been the significance of some form of centrally produced resource as a catalyst. This notion had already been deemed as potentially problematic within the initial feasibility study (HEBS, 1999) and was confirmed in the wider literature [(McBride, 2000), p. 67]]. This proposition was investigated further here within an exploratory trial where an initial model was tested for validity. Based on the well-established notion of effective implementation and enduring sustainability being the product of various internal and external factors at different organizational levels (Swerissen and Crisp, 2004), in a fashion similar to Riley *et al.* [(Riley *et al.*, 2001), p. 427] we set out with an initial framework outlined in Figure 1.

THE HPHS TOOL: INITIAL ENGAGEMENT

At the onset, sites with existing expertise were quickly able to understand and utilize the framework. This however was not the case in others where such expertise was absent. Here,

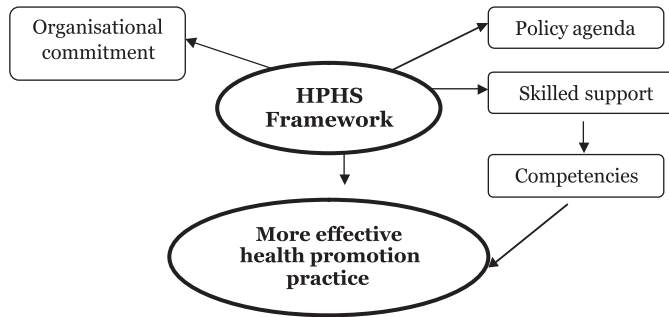


Fig. 1: Initial assumptions underlying the implementation process.

there appeared to be disparities between the health promotion concepts and expectations embodied in the framework and the knowledge and skills bases of generic health service staff. Many pilot sites contained individuals with little health promotion training and even if they did have such aspirations, many lacked a basic grounding in the framework's underlying concepts. Some thus reported it to be overly long and complex ['it appears daunting'] and theoretically difficult ['it appears a lofty concept wrapped in a heavy document and it doesn't appear easy to translate into practical possibilities'].

As such, it became clear that often, the framework was not operating as an 'off-the-shelf' resource. Indeed, it was not until some projects had been underway for up to 12 months that it was possible to use the framework in any meaningful way. The framework was therefore not the most useful entry point for health promotion activity. Rather, the early work comprised more pragmatic discussions of project aims, plans, problems encountered and a consideration of what HPHS might offer in the future; for example, a project leader stated:

We're doing really well and hope to look at the framework sometime.

So even where participants were already experiencing the early manifestations of ecological planning, the traditional barriers associated with health promoting health services such as deficient public health skills (Goel and McIsaac, 2000); a lack of conceptual clarity (Johnson, 2000) and restrictions in various resources such as dedicated staff time, facilities, materials (Zapka, 2000) were present, confirming that simply adding a resource to the mix was insufficient to precipitate change.

Based on these observations, the evaluation question was subsequently reformulated within a broader ecological context that focused on understanding a wider *nexus of conditions* for effective implementation. Drawing on Pawson and Tilley's (1998) notion of outcomes being 'context dependent' we deployed their broad concepts of 'context' (something about the practice context) and 'mechanisms' (something about the activities and procedures within the context) in structuring our thoughts. Within these categories we identified specific elements (below) that were tested and refined throughout the rest of the project.

FEATURES FOR IMPLEMENTATION

In relation to context

- An organizational commitment to health promotion and health improvement
- Responsiveness to broad health improvement policy agenda

In relation to mechanisms

- Developing health promotion competencies
- Providing access to skilled health promotion support
- Fostering leadership and advocacy
- Establishing a practical context
- Nurturing a critical mass of people within the organization who 'understand' the principles of health promotion ('multipliers')
- Providing access to a 'tool'/framework

Context

Organizational commitment

One of the key issues we explored was whether projects were able to attract and develop an

organizational commitment to health promotion on the basis of the framework. In some cases (mostly of a small scale, stand-alone nature), where wider support was not forthcoming and there was no *a priori* organizational support, projects struggled to do so simply on the basis of the framework. For some with *a priori* commitment to health promotion, the framework certainly contributed to an enhanced level of support. In other cases, the organizations did become more opportunistically committed to wider health agendas in response to emerging policy debates—the presence of the project and its use of HPHS then put them in a position to capitalize on that new commitment. In all of these cases it should be noted that what made that transition possible was not solely the presence of HPHS but the involvement of range of the other factors described below.

Responsiveness to broad health improvement policy agenda

In line with Lethbridge's (Lethbridge, 2000) notion of settings approaches providing 'added value' to the functioning of hospitals, there was an initial assumption that the operationalization of HPHS through the framework would increase responsiveness to wider healthy public policy developments. However, the evidence from this work suggests that such a simple linear relationship existed in only one case; where the project team contributed directly to the raising of awareness within senior managers of such policies. For others, the causal mechanism was operating in the opposite direction; organizations were already responsive and committed to these policy issues and that was why they were initially attracted to HPHS. In other sites, it was perhaps more a case of the project and framework being in the right place at the right time; as senior managers grappled with putting healthy public policies into practice, the framework provided a way forward.

Mechanisms

Developing health promotion competencies

The earlier feasibility study (HEBS, 1999) had identified a significant dislocation between the relatively complex contents of the initial framework and the health promotion competencies of staff using it. Despite revision, difficulties of engagement remained and were related to a

lack of understanding of principles and concepts. For some, this was overcome by having access to a health promotion specialist who could translate/interpret the framework. For others without this resource, it was often the acquisition of competencies through training (e.g. the HEBS 6 day 'Promoting Health: Developing Effective Practice Course') that enabled people to engage with the framework. As project workers gained a better understanding of health promotion principles, the framework became a document that made more sense in relation to what they were practically attempting to do. In themselves, health promotion competencies may not be *sufficient* but would appear to be a *necessary* condition for (more) effective practice.

Providing access to skilled health promotion support

Beyond initial competency development, it was understood that projects would require some additional form of external support. This was addressed via health promotion specialists who provided ongoing assistance. In line with Butler-Jones's (2000) recognition of the significance of high staff turnover within health services as a barrier to long-term public health activity, there was some variability across cases in the scale and consistency of support given and often appointed individuals moved mid-project to new posts. A general pattern did however emerge in successful cases that re-enforced the significance of facilitation. The initial input required appeared to centre on consolidating basic understanding of health promotion concepts; the relatively pragmatic matters of identifying a practical focus for the work; and providing basic support in understanding the Framework. As time progressed, assistance focused on more profound factors such as fostering partnership working and promoting organizational visibility of the work as a means of achieving sustainability.

Fostering leadership and advocacy

Project teams were at their most effective if they enjoyed a degree of leadership from within. This tended not to be predetermined. Mostly, it evolved and when it did, marked growth was achieved: links with other agencies were developed; knowledge, competence and confidence were enhanced; and, most notably, projects started to have an impact on the wider organization—for example, managers started to

know about the work and take an interest in its development. Without leadership and advocacy projects appear to have less chance of impacting more substantially and sustainably.

Establishing a practical context

We found that the Framework generally made little sense to field workers in the absence of a specific practical context and that this had to be purposefully identified and actively nurtured. Over a longer term, this context allowed staff to see the value of the breadth contained within the Framework and ultimately recognize the value of it.

Nurturing a critical mass of people within the organization ('multipliers')

Whilst there can never be a simple numerical indicator of a 'critical mass', experience from some cases suggested that a significant point can be discerned when it appears that there are people within the organization who have knowledge and understanding of the goals of health promotion to suggest that sustainability will be enhanced via their involvement [(as also noted by McBride (McBride, 2000), p. 70)]. Achieving a critical mass appeared to be aided by the presence of what we term here a 'multiplier' whose role was to explicitly promote the visibility of health promotion across the organization. For example, in one case, each ward within an Acute Hospital nominated a lead HPHS nurse to achieve such an effect.

Providing access to a 'tool'/framework

In our revised theoretical model, this provision moves from being an initial and central ingredient to a more modest one that became valuable in providing a formal structure for activities subsequent to other prerequisites such as the acquisition of health promotion competencies and confidence.

OUTCOMES

Given the relatively extended duration of the HPHS project, some consideration of various forms of outcome was felt necessary. This was undertaken within the sites and supported and facilitated by the central research team. Significant problems were encountered in fostering the collection of such demonstrative data in

many of the cases that accordingly only allowed us to glean relatively partial and tentative insights in this domain.

In relation to the various dimensions of Nutbeam's [(Nutbeam, 1998), p. 30] outcome model, gains in the 'health promotion outcomes' and 'health literacy' within project teams were most evident. At the onset, very few were confident about their understanding of health promotion concepts and methods. When asked to reflect on their development at the conclusion of the project, it was clear that most identified a shift in their thinking, knowledge and skills as a consequence of training, support and experience. Some commented on the positive outcomes for them personally; for example, it was suggested by a project worker that involvement in HPHS had given her '*a broader view of health promotion and the realisation of the importance of partnership working and consultation*'. There were some isolated indications of developments in 'social mobilization, influence and action' in relation to for example, improvements in social networks and links to statutory organizations in elderly groups.

Perceptions of impacts on the wider organizations with respect to 'healthy public policy and organisational practice', were on occasions positive, particularly in circumstances where the necessary conditions were present. This perception tended to relate mostly to communication about the project to the wider organization and within the organization itself. Some also felt that involvement with the framework had contributed to broader policy development.

In cases where basic monitoring took place there were some indications of modest advancements in what Nutbeam (Nutbeam, 1998) calls 'intermediate health outcomes', such as: reductions in medication, increases in physical activity and; increased awareness of sexual health services and uptake of screening amongst young people; and weight loss in staff groups.

DISCUSSION: A MODEL FOR EFFECTIVE IMPLEMENTATION

The central finding of this work suggests that the implementation of 'settings' activity needs to involve multiple elements undertaken in a focussed and controlled fashion. Conversely, it suggests that stand-alone frameworks, tools or resources at best play contributory roles in

implementation and only when other elements are in place. If implemented in isolation or within a model of uncoordinated dissemination, they will tend not to be used. Based on our empirical experiences and building upon Figure 1, Figure 2 represents a revised theory of implementation that we believe more validly represents the role and influence of the HPHS Framework.

There were a number of factors that clearly marked out those projects that developed beyond being single topic, short life initiatives. Whilst small, stand-alone projects may be well managed and within their own limited terms effective, such initiatives were unlikely to do much more unless they could extend interest to a wider group within the organization; in our terms to create a 'critical mass'.

The critical steps appeared to be the fostering of various competencies within sites and the development of mechanisms for spreading 'the message'. This occurred most effectively when there was someone with a specific coordination remit who disseminated and promoted health promotion practice. For the most part, it appeared that project workers were not in a position to do this: it required someone within the organization with an overview and a remit to implement a coherent health promotion strategy and who could provide training, support, coordination and management.

The earlier feasibility study (HEBS, 1999) suggested that the broader goals of embedding

health promotion throughout an organization may take at the very least 1 year to occur and this was confirmed here; the first year of projects was often marked by slow progress and little obvious development. It also became clear that the framework on its own was insufficient to foster progress and the ingredients identified earlier go some way to explaining why this was the case. The complementary question then is, 'in what particular order are these ingredients introduced in order to achieve optimal implementation?'

First, in our experience, project workers needed to acquire basic skills and competencies before they could start to digest, let alone implement, the framework and that this is best done within a practical context or need. Second, skilled support was then crucial in the early stages of implementation to help workers make sense of the framework and to ensure that it was operationalized. Third, a small group of practitioners, however enthusiastic, were unlikely to garner the support of the wider organization unless they understood the organization's mechanisms. Achieving visibility was thus significant and it is in this sense that the existence of 'multipliers' was crucial. Mechanisms for increasing the pool of staff with health promotion competency within an organization were therefore needed and this in turn required effective leadership in integrating the work into existing structures and procedures. This more sequential cyclical

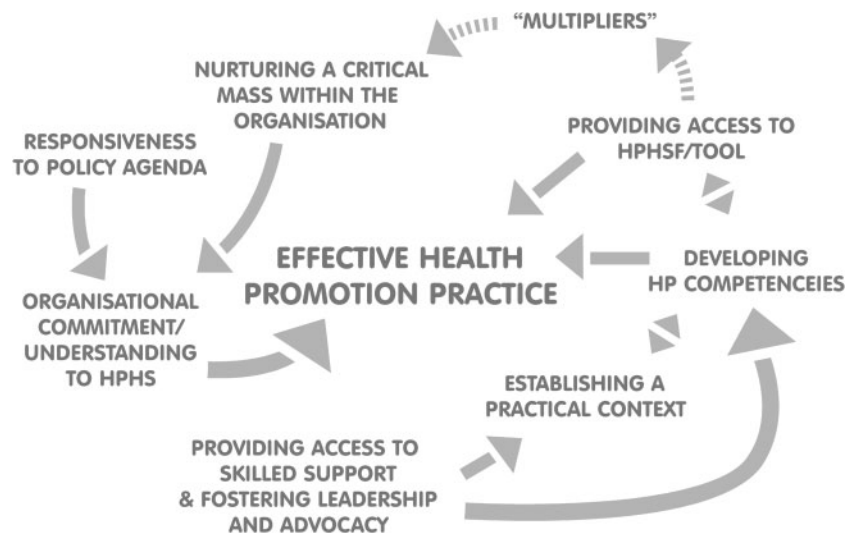


Fig. 2: Conditions for effective health promotion practice: a revised model for understanding HPHS use and impact.



Fig. 3: A spiral process of HPHS implementation.

vision of the implementation process is captured below.

KEY LEARNING POINTS

A number of conclusions are offered. First, there are indications that positive outcomes are possible within a settings-based approach in health services. These outcomes appear to be associated with the need for these interventions to deploy multiple elements in a focussed and controlled way. Perhaps in contrast to other settings, it appears that a tool itself cannot exist as a stand-alone intervention or be simply 'rolled out' in an unsupported nature across health sites. Rather it plays a *contributory* role within a wider nexus of conditions.

Secondly, in line with Riley *et al.*'s (Riley *et al.*, 2003) recognition of "the dominant influence of *internal* organizational factors on the implementation change process (in contrast to) *external* organizational relationships or partnerships" [(Riley *et al.*, 2003), p. 765 italics added)], we suggest the significance of relatively modest 'organic' developments in achieving early change within the context of a flexible and pragmatic approach to implementation that engages significantly with the main concerns of the setting.

Finally in research terms, we tried throughout the project to adopt a grounded pragmatic approach that would allowed us to examine how health service-based settings approaches were 'really' undertaken (or not), hence our interest here in examining implementation and the

nature of the impacts these actions may have. With respect to implementation, we have offered a glimpse (or glimpses) into what in relation to general policy Easton termed, 'the black box' (Easton, 1965) upon which a *provisional* model has been developed. The nature of such processes is clearly complex and dynamic and many issues still remain for us in working towards a better model that offers a more generalized vision of implementation. Naturally, we would encourage others to test and falsify it on the basis that it can be further enhanced.

Address for correspondence:

Sandy Whitelaw
Health & Social Studies
University of Glasgow in Dumfries
Crichton Campus
Bankend Road
Dumfries DG1 4ZL, UK
E-mail: s.whitelaw@crichton.gla.ac.uk

REFERENCES

- Butler-Jones, D. (2000) Commentary. In Poland, B. D., Green, L. and Rootman, I. (eds) *Settings for Health Promotion: Linking Theory and Practice*. Sage, London.
- Chu, C., Breuckner, G., Harris, N., Stizel, A., Xingfa, G. and Dwyer, S. (2000) Health-promoting workplaces—international settings development. *Health Promotion International*, **15**, 155–195.
- Deschesnes, M., Martin, C. and Hill, A. (2003) Comprehensive approaches to school health promotion: how to achieve broader implementation? *Health Promotion International*, **18**, 387–396.
- Easton, D. (1965) *A Framework for Political Analysis*. Prentice-Hall, Englewood Cliffs.

- Fahey, D., Carson, E., Cramp, D. and Muir Gray, J. (2004) Applying Systems Modelling to Public Health. *Systems Research and Behavioural Science*, **21**, 635–649.
- Goel, V. and McIsaac, W. (2000) Health promotion in clinical practice. In Poland, B. D., Green, L. and Rootman, I. (eds) *Settings for Health Promotion: Linking Theory and Practice*. Sage, London.
- Hawe, P., Noort, M., King, L. and Jordens, C. (1997) Multiplying health gains: the critical role of capacity building within health promotion programmes. *Health Policy*, **39**, 29–42.
- HEBS (1999) *Report on the Pilot Study Health Promotion Health Service*. Health Education Board for Scotland, Edinburgh.
- Joffres, C., Heath, S., Farquharson, J., Barkhouse, K., Hood, R., Latter, C., et al. (2004) Defining and operationalising capacity for heart health promotion in Nova Scotia. Canada. *Health Promotion International*, **19**, 39–49.
- Johnson, J. (2000) The health care institution as a setting for health promotion. In Poland, B. D., Green, L. and Rootman, I. (eds) *Settings for Health Promotion: Linking Theory and Practice*. Sage, London.
- Johnson, A. and Baum, F. (2001) Health promoting hospitals: a typology of different organizational approaches to health promotion. *Health Promotion International*, **16**, 281–287.
- Latter, S. (2001) The potential of health promotion in hospital nursing practice. In Scriven, A. and Orme, J. (eds) *Health Promotion: Professional Perspectives*. Palgrave/OU Press, Milton Keynes.
- Lethbridge, J. (2000) Commentary. In Poland, B. D., Green, L. and Rootman, I. (eds) *Settings for Health Promotion: Linking Theory and Practice*. Sage, London.
- McBride, N. (2000) The Western Australian School Health Project: comparing effects of intervention intensity on organizational support for school health promotion. *Health Education Research*, **15**, 59–72.
- McQueen, D. (2000) Perspectives on health promotion: theory, evidence, practice and the emergence of complexity. *Health Promotion International*, **15**, 95–97.
- MRC (2000) *A Framework for Development and Evaluation of RCTs for Complex Interventions to Improve Health*. Medical Research Council Health Services and Public Health Research Board, London.
- Newes-Adeyi, G., Helitzer, D., Caulfield, L. and Bronner, Y. (2000) Theory and practice: applying the ecological model to formative research for a WIC training programme in New York State. *Health Education Research*, **15**, 283–291.
- NHS Health Scotland (2005) Health Promotion Health Service Framework. <http://www.hphs.co.uk>.
- Nutbeam, D. (1998) Evaluating health promotion—progress, problem and solutions. *Health Promotion International*, **13**, 27–44.
- Pawson, R. and Tilley, N. (1998) *Realistic Evaluation*. Sage, London.
- Poland, B. D., Green, L. and Rootman, I. (eds) (2000) *Settings for Health Promotion: Linking Theory and Practice*. Sage, London.
- Riley, B. (2003) Dissemination of heart health promotion in the Ontario Public Health System: 1989–1999. *Health Education Research*, **18**, 15–31.
- Riley, B., Taylor, S. and Elliott, S. (2001) Determinants of implementing heart health promotion activities in Ontario public health units: a social ecological perspective. *Health Education Research*, **16**, 425–441.
- Riley, B., Taylor, S. and Elliott, S. (2003) Organizational capacity and implementation change: a comparative case study of heart health promotion in Ontario public health agencies. *Health Education Research*, **18**, 754–769.
- Sanderson, I. (2000) Evaluation in Complex Policy Systems. *Evaluation*, **6**, 433–454.
- St Leger, L. (1997) Health promoting settings: from Ottawa to Jakarta. *Health Promotion International*, **12**, 99–101.
- Swerissen, H. and Crisp, B. (2004) The sustainability of health promotion interventions form different levels of social organisation. *Health Promotion International*, **19**, 123–130.
- Ukoumunne, O., Gulliford, M., Chinn, S., Sterne, J. and Burney, P. (1999) Methods for evaluating area-wide and organisation-based interventions in health and health care: a systematic review. *Health Technology Assessment*, **3**, iii–92.
- Whitelaw, S., Baxendale, A., Bryce, C., Machardy, L., Young, I. and Witney, E. (2001) ‘Settings’ based health promotion: a review. *Health Promotion International*, **16**, 235–244.
- Yeatman, H. and Nove, T. (2002) Reorienting health services with capacity building: a case study of the core skills in Health Promotion Project. *Health Promotion International*, **17**, 341–350.
- Zapka, J. (2000) Commentary. In Poland, B. D., Green, L. and Rootman, I. (eds) *Settings for Health Promotion: Linking Theory and Practice*. Sage, London.