Theories of change: what works in improving health in mid-life?

Jenny Secker1,5, Helen Bowers2, Dale Webb3 and Marlen Llanes4

Abstract

The need to promote healthy active ageing in order to offset the impact of an ageing population on national resources and ensure a high quality of life in older age is well recognized. In 2001, the English Department of Health established a national pre-retirement health initiative involving the development of eight pilot projects. A national evaluation using a ‘theories of change’ approach embedded within a realistic evaluation design was commissioned to draw out the lessons from across the projects. In this article we describe the methods used to identify and test out the projects’ theories of change, and the results obtained. The theories of change identified revolved mainly around engaging clients and empowering them to take action through the provision of information. Two projects also saw providing opportunities for social interaction as a means to engaging and empowering clients. Theory testing indicated that health improvement services could be effectively targeted at people in mid-life and that service settings and style played an important part in engagement. In particular contexts, combining free health checks with financial advice was a significant motivator for engagement, as was perceived health need in two deprived areas. Gains in knowledge were also important for empowerment in some contexts, but validation of existing knowledge could be more important in others. Opportunities to engage in social activities were a potent mechanism for empowerment amongst women living in two deprived areas. Further work is required to test these conclusions in other contexts, and to ascertain how people from minority ethnic groups and men, particularly those outside the labour market, can be engaged in health improvement initiatives.

Introduction

In common with other European countries (and beyond), England’s population is ageing. The number of people aged over 60 years outnumbers those under 16 years for the first time (Office of National Statistics, 2003). Those in the mid-life age group (50–65 years for the purposes of this study) form one of the largest cohorts of the total UK population, at 29%.

A range of responses has emerged to these demographic changes, spanning the spectrum of attitudes from a pessimistic view that equates age and ageing with ill-health and an increasing financial burden on the welfare state, to a more optimistic and proactive stance with a focus on active, healthy ageing [e.g. (WHO, 2002)].

In line with this more positive approach, European policy directives [cited in (Walker, 2001)] set
out a clear challenge to member states to adopt a life course approach to active ageing by addressing known risk factors from childhood onwards. In this context, targeting people at times of transition has proved an effective strategy for supporting change aimed at improving the prospects for an active later life (Phillipson, 2002). People in mid-life are typically in a period of transition due to many, often competing, factors such as changing work circumstances and changing or new caring roles (Granville, 2002), and are therefore likely to be receptive to services focused on improving health (Mann, 2001).

In terms of English health policy, the National Service Framework (NSF) for Older People (Department of Health, 2001) emphasizes the need to promote an active and healthy life in older age. In particular, Standard 8 includes a number of targets at a local and regional level for increasing opportunities and decreasing inequity of access to resources to promote the health and well-being of older people. Following publication of the NSF, the Health Development Agency (HDA) completed a literature search and mapping exercise in relation to pre-retirement health (Lethbridge, 2001). This revealed that pre-retirement planning and provision of support services for people aged 50–65 years was inconsistent, and on the whole underdeveloped, across England. However, some areas were identified which, with support as pilot sites, could further develop their services. Later that year, a pre-retirement health initiative was therefore established. The overall aim of the initiative was to inform the development of a national roll out of pre-retirement health advice and services for people aged 50–65 years. This was to be achieved through the development and evaluation of a 2-year programme of eight pilot projects across England. The HDA was commissioned to undertake the national steering role, supporting the development of work taking place within and across the pilots.

Pilot projects joined the pre-retirement health initiative in two waves during 2001. It is worth noting that the term ‘pre-retirement’ was not widely used by the pilots themselves, as their target groups were not necessarily employed or considering retirement. Information about each of the eight pilot projects and their activities is summarized in Table I.

Each project was expected to make arrangements for a local evaluation of its activities. In addition a multidisciplinary research team at the former Institute for Applied Health and Social Policy, King’s College London was commissioned to carry out a national evaluation bringing together lessons from across the pilot projects. In this article we draw on that national evaluation to examine ‘what worked’ in improving health in mid-life.

### Methods

Methodologically, the national evaluation comprised a realistic evaluation design (Pawson and Tilley, 1997) within which a ‘theories of change’ approach was embedded. The realistic evaluation design was chosen because more traditional evaluation designs cannot capture the outcomes of health promotion initiatives that are likely to be long-term and influenced by a range of external variables for which it is not possible, or necessarily desirable, to control. In addition, although traditional evaluation designs can shed light on what is or is not effective, they are unable to answer the crucial questions of why something works, for whom and in what circumstances. In contrast, realistic evaluation places emphasis on the mechanisms through which initiatives achieve particular outcomes in certain contexts, described by Pawson and Tilley as ‘context, mechanism and outcome configurations’. The way in which we interpreted and applied these terms is summarized in Table II.

The central tenet of the theories of change approach, developed at the Aspen Institute in Washington, DC (Connell et al., 1995; Weiss, 2000), is that any programme aimed at change will carry with it implicit assumptions, or theories of change, about why the adopted approach may be better than others at achieving stated aims and objectives. Making these assumptions explicit can potentially have benefits both for the programme (in terms of programme planning and improvement) and for the evaluation (understanding why programmes work
and attributing outcomes). The theories of change approach thus fits well with the realistic evaluation design, facilitating a more in depth exploration of the relationships between contexts, mechanisms and outcomes.

The combined realistic evaluation and theories of change strategy has been used in a previous UK evaluation of complex health initiatives, the Health Action Zones established in the late 1990s, and is advocated by the researchers concerned for its capacity to examine and establish the associations between process and outcome indicators in such complex contexts (Barnes et al., 1999).

The present evaluation was undertaken in three phases, of which Phases 2 and 3 are of most relevance here. Following initial mapping of the projects’ contexts, mechanisms and intended outcomes during Phase 1, Phase 2 explored the theories of change underpinning the projects’ work through a series of workshop exercises including:

- Project staff and partners reflecting individually on their motivation for involvement and...
expectations about what would be achieved and discussing these as a group.

- Noting individually the key components of the client’s journey into and through the project.
- Group discussion and refinement of the client’s journey.
- Reflection on and discussion of the project’s learning.

Phase 3 was designed to test out the theories of change identified from the Phase 2 workshops through semi-structured interviews with pilot project clients. We asked each pilot project to provide a randomly selected sample of 15 clients to be invited to take part in an interview. The means by which clients were selected varied depending on the resources available to each project. In Dorset, for example, a sophisticated software programme had been developed to store client data, thus enabling the sample to be selected electronically. At other projects with smaller numbers of clients the samples were simply selected from lists of all clients (e.g. every fifth name, depending on the total numbers involved). Although there was a risk of bias because we were dependent on the projects to carry out the selection, they were given clear guidance about what was required and we have no reason to think that the samples provided were biased by the selection procedure. However, it proved possible to achieve a reasonable sample at only five sites: East Devon, Hull and East Riding, Dorset, Hackney, and North Nottinghamshire. In Sandwell, problems in accessing the workforces with which the project engaged meant we were unable to carry out any interviews and were dependent instead on responses to questionnaires distributed to participants in the various events. In North Staffordshire, the volunteer lay advisors had only just begun work in their communities at the time of the Phase 3 data collection and, although we were able to interview the advisors themselves, we were unable to interview any users of their advice services. In Southwark, theft of the project’s computing equipment meant contact details for many people who engaged with the project were lost and we were able to interview only three people.

In total, we were able to interview 62 project clients, including the lay advisors in North Staffordshire, and obtained data on a further 40 from the Sandwell questionnaires. Two-thirds of the clients for whom data were available were white females. In Hackney, one black client took part in an interview and, in Sandwell, 16 Asian textile workers completed questionnaires. This reflects an overall predominance of white female clients across the projects stemming in part from the sole focus on women in Dorset (an overwhelmingly white locality), and in part from difficulties experienced in Hackney and Southwark in reaching the intended minority ethnic target groups. Unfortunately, few of the projects collected data relating to social class and it is not possible to examine this in any detail, beyond noting that Hackney and Southwark are amongst the most deprived localities in the UK, while Dorset is amongst the most affluent. The other localities combine areas of relatively high deprivation, both urban and rural, with pockets of relative affluence.

The interviews explored:
- Participants’ motivation for becoming involved in the project.
- Their perceptions of the main aims of the project.
- Their engagement with and experience of the project.
- The perceived impact of involvement with the projects.

The Phase 2 workshops and Phase 3 interviews were tape-recorded and transcribed for analysis.
Data were stored and retrieved using the NUD*IST software package. The Phase 2 transcripts were analysed using progressive focusing techniques to identify key themes within and across pilot projects. Data from the Phase 3 interviews were analysed using similar techniques to identify key themes within and across target groups. The interview themes were then examined to assess the extent to which the pilot’s theories of change were borne out by the experiences of their clients.

In the following section we summarize the results from Phase 2 in relation to the projects’ theories of change and then draw on the results from Phase 3 to address the question of what worked [see (Bowers et al., 2003) for the full evaluation report]. Because our remit was to derive lessons from across the pilots we are unable to provide detailed, contextualized accounts relating to each project’s clients. For this reason, extracts from the client data are used only to illustrate particularly striking experiences described by some clients.

**Results**

**The projects’ theories of change**

The majority of theories that emerged from the Phase 2 analysis in relation to the projects’ intended impact on clients concerned psychosocial change mechanisms and, in particular, two processes seen by all the pilots as central to ‘successful’ client journeys: engaging clients and engendering in them a sense of empowerment. One further theory espoused by two pilots (Southwark and Hackney) related to the perceived health benefits of social activity and interaction. The theories can be summarized as follows:

1. **Engagement** (all pilots)
   - That clients need and actively want the service provided, thus facilitating engagement.
   - That involving clients in identifying their own needs, informing project development and/or providing services will generate a sense of ownership that in turn will keep clients engaged.
   - That ‘hooking’ a broader range of activities onto a ‘gateway’ service will facilitate clients’ engagement in that broader range of activities.
   - That particular settings (e.g. community, primary care) provide a more effective context for engaging clients than other settings.

2. **Empowerment** (all pilots)
   - That providing information will increase clients’ knowledge.
   - That increased knowledge will engender a sense of empowerment.
   - That a sense of empowerment will enable people to take action to look after and thus improve their health and well-being (i.e. health gain).

3. **Social activity** (Southwark and Hackney)
   - That providing opportunities for clients to engage socially with others of a similar age will improve their health/well-being directly (e.g. walking groups) and/or indirectly (e.g. by enhancing quality of life).

It perhaps goes without saying that these theories of change are not new. Rather, articulated in various ways, they have long been enshrined as central tenets of health promotion and several of its contributory disciplines. This does not mean, however, that identifying and exploring them in the context of this evaluation was simply ‘reinventing the wheel’. On the contrary, precisely because psychosocial theories are so embedded within health promotion, they have arguably become taken for granted and unquestioned. In addition, they do not appear to have been extensively explored in relation to health-promoting activities designed for and experienced by this age group.

**What worked?**

On the basis of the data obtained during Phase 3, we were able to assess the extent to which the pilot projects’ theories of change identified during Phase 2 appeared to ‘hold water’. The theories of change are examined below in turn.

**Initial engagement**

The pilots’ assumptions that their target groups would actively need and want their services, and that
this would trigger engagement with the services offered, did not generally hold true. For the most part curiosity and the provision of a free service were stronger motivators for initial engagement than specific needs. In addition, the sense of being neglected in comparison with other groups was a key motivating factor for many of the pilots’ clients. A recurring theme across pilot sites was that the projects were addressing the needs of an age group participants felt was generally neglected. Several people, for example, described themselves as ‘forgotten’ or ‘left out’ in comparison with both younger and older people. However, the accounts of clients at two pilots (Hackney and Southwark) suggested that mental ill health and social isolation associated with relatively deprived localities may create more specific needs that will motivate people to engage with services.

A desire for financial information was also a strong motivating factor where this was offered and the provision of financial advice alongside the provision of health checks appeared to be an effective combination for the project clients concerned.

Neither the Hackney nor the Southwark projects were able to engage people from the localities’ minority ethnic communities to any great extent. The success of the Sandwell project in engaging female Asian textile workers suggests that, for this group at least, the workplace can be an appropriate venue.

Across all the projects the location and style of service settings also played an important part in engaging clients. In East Devon, the use of community venues such as pubs was appreciated, once early problems with privacy were resolved. Conversely, in Dorset, the women interviewed thought the primary care setting appropriate for this particular project. In North Nottinghamshire, people appreciated the fact that courses were held outside the workplace, while in Sandwell take up of the health checks suggests the workplace was an appropriate setting for this activity, perhaps particularly for men, who were in the majority at the health checks held on an industrial estate and at an engineering company.

Maintaining engagement
There was stronger support for the view that involving clients in identifying needs and in service development, where this was attempted, could be effective in maintaining engagement. In Hackney, the focus group approach generated a strong sense of ownership amongst the women involved, and they were able to go on to develop initiatives such as a video project. Similarly, in North Nottinghamshire, clients reported that participation in identifying their needs and shaping the courses offered was key to their ongoing engagement.

Extending engagement
Support also emerged for the view that hooking a broader range of activities onto a gateway service would extend clients’ engagement to other activities and services. In Dorset, women identified as at risk of osteoporosis did attend the workshops provided and advice to consult GPs was followed up. In addition, although none of the women we interviewed had engaged with services outside the NHS as a result of attending a health fair, data from the local evaluation indicate that other women did in fact do so. Similarly, in Hackney, clients engaged with a project partner that provided valued activities. In Southwark, a client who had extended her engagement from IT training to a walking group was extremely enthusiastic about this and clearly valued it highly:

I’ve been on one of the project coordinator’s walking projects. Now I don’t bus if I can walk... I’ve just basically changed the way I eat and I walk a lot more, I’ve always walked a lot and then I sort of got lazy when I had the accident and sort of stopped it and now I’ve started again I just love to walk around now and I do feel better at the end of the day for it.

Increasing knowledge through information
Overall, evidence to support the projects’ theory that providing information would lead to knowledge gain is not strong. Of the 54 project clients interviewed (the lay advisors in North Staffordshire are not included), only 22 reported gaining new knowledge. Where knowledge was gained this was primarily in relation to issues that were new to clients, notably financial planning in East Devon and North Nottinghamshire, and the use of IT and the Internet in...
Southwark. Where health is concerned, knowledge gain was most likely in the context of detecting previously undiagnosed conditions, as in Dorset, or in the context of introducing people to hitherto unknown agencies and activities, as in Hackney.

For most clients, health information was not new, probably reflecting mass media coverage of lifestyle issues. For these clients, the health information provided served to reinforce existing knowledge rather than increase knowledge overall. Forty-three clients reported that this had been a key impact of the projects and had clearly found it reassuring to learn that their own knowledge concurred with that of ‘experts’.

**Knowledge gain, empowerment, action and health gain**

Clearly, increased or reinforced knowledge does not necessarily lead to behaviour change and only 16 clients in four localities indicated that the projects had made an impact in this key respect. The changes identified included increased physical activity (Dorset, North Nottinghamshire, Hackney and Southwark), healthier eating (Dorset and North Nottinghamshire) and taking action in relation to retirement planning (North Nottinghamshire).

Strong evidence for a link between knowledge, empowerment, action and health gain emerged only from North Nottinghamshire, where the provision of pre-retirement courses in conjunction with health checks proved a potentially potent mechanism for motivating people to take action to address both their health and financial well-being. For many clients of the North Nottinghamshire pilot, concerns about financial and leisure issues following retirement predominated. In these circumstances, our results suggest that health information and advice can just as effectively be hooked to a ‘gateway’ service focusing on financial and lifestyle planning topics as vice versa.

In Southwark and Dorset, some evidence of a link between knowledge gain, empowerment, action and health gain emerged, but was weakened in that only a few people, four in Dorset and one in Southwark, reported behaviour changes. In Hackney, six of the eight women interviewed reported increasing their physical activity as a result of their involvement in the pilot project, but this seemed more closely linked with the opportunity to engage in social interaction than with new or reinforced knowledge, as discussed below.

As the Southwark interview extract cited above and those from Hackney below indicate, where clients did report behaviour change they also reported that this had improved their physical and/or mental well-being.

**Social interaction**

There was strong evidence in Hackney that the focus group and other activities did lead to a sense of increased empowerment and related behaviour change, as these interview extracts indicate:

I find I do have a voice and that people are prepared to sit and listen to me and I’m also able to listen to other people as well... So my mental health has really improved a great deal... also confidence that I’m taking part in quite an important focus group and quite an important project really and I’ve got my say... Now about nine months ago I wouldn’t have bothered volunteering... I’ve stopped drifting. It’s given myself a shake and think oh wow you know there is life after retirement.

Well my mental health is much better, which has helped my physical health because now instead of saying I’m too tired to go out I’ll say right I’m going to go out and I’m going to meet so and so.

Although the evidence available from Southwark is limited, a similar strong impact was evident in the account cited earlier of the woman who had joined a walking group.

The benefits of social interaction were not explicitly identified as a theory underpinning the work in Sandwell, but the Asian women who participated in the exercise programme provided for one company highlighted this as a key motivating factor for their attendance. Thus, at this project too, there was evidence of a link between social interaction and action for health improvement.
Discussion

The small numbers of project clients we were able to interview for Phase 3 of the evaluation meant that we were unable to explore the pilot projects’ theories of change as broadly as we would have wished, and we therefore identify some issues that require further exploration and testing later in this discussion. Nevertheless, we found that the theories of change approach, embedded in a realistic evaluation design, afforded powerful insights into what worked for those clients we were able to interview.

Some themes emerged strongly across all or most of the eight pilot sites, allowing us to draw a number of tentative conclusions. Where engagement is concerned, it was clear that services could be effectively targeted at the mid-life age group, in large part because people in this age range saw themselves as a neglected group. In addition, it was clear that service settings played an important part in engaging the target population and that a welcoming atmosphere created by staff with good interpersonal skills was central. The appropriate setting depended on the type of service delivered and the intended target group. In this respect our conclusions are limited to specific groups as follows:

- Primary care was an appropriate setting for delivering clinically oriented services to women in the relatively affluent area of Dorset.
- The workplace was an appropriate setting for engaging men in employment in North Nottinghamshire and Sandwell, and was also effective in Sandwell in engaging female Asian workers.
- Use of community settings where people already congregated was an effective way of reaching farmers and others in rural East Devon.

We can also be reasonably confident that the combined provision of free health checks and financial information relevant to retirement was a significant motivator for engagement. Where services are provided or hosted by health service organizations it is important to bear in mind that in some contexts, such as the workplace, financial information appeared to be more important and that health checks might more effectively be ‘hooked’ onto this type of ‘gateway’ service than vice versa. In general, providing ‘gateway’ services linked to other services and activities was an effective means of extending clients’ engagement to these services and activities.

The conclusions we are able to draw regarding improving the health of people in mid-life living in areas of social and economic deprivation are limited by the small numbers of people we were able to interview in Hackney and Southwark, the two pilot sites with the highest levels of deprivation. On the basis of the evidence we were able to obtain it appeared that perceived need, although not generally a strong motivation for engagement, could be a strong motivator in deprived areas. Related to this, experience in Hackney and North Nottinghamshire indicated that the engagement of target groups who are seen as ‘hard to reach’ can be sustained by involving them in identifying needs and developing services. It remains uncertain whether this is an effective means of sustaining engagement in other contexts.

Turning to empowerment, knowledge gain was important in some contexts such as the introduction of information about new issues (e.g. financial planning), the detection of previously undiagnosed conditions and introducing people to previously unknown agencies. However, in line with adult education principles (Knowles, 1980), the reinforcement and validation of pre-existing knowledge was a more potent mechanism for empowerment in other contexts. This suggests that working in partnership with clients to identify ways of making use of existing knowledge is likely to be more effective in many contexts than the delivery of ‘expert’ information alone. In Hackney and Southwark, providing opportunities for women living in deprived areas to engage in social activities with others of the same age was a potent mechanism for generating a sense of empowerment.

Given the small number of clients who reported behaviour change, the relationship between knowledge, empowerment, action and health gain is less clear. Combining health checks with financial advice, as in North Nottinghamshire, and providing opportunities for social interaction, as in Hackney...
and Southwark, appeared most effective in this respect. The link between social activities and behaviour change is strengthened by the experience of the Asian women in Sandwell, for whom the opportunity for social contact was a key factor in their engagement in an exercise programme. In addition, there is a considerable body of research linking social interaction with improved physical and mental well-being in older age, lending further support to this conclusion (Michael et al., 1999; Unger et al., 1999; Pinquart and Sörenson, 2000).

The issues left outstanding by the evaluation revolve mainly around the extent to which our conclusions are applicable to target groups and populations other than those we were able to involve in the study. In particular further work is required to ascertain how people from minority ethnic groups, especially those not in work and therefore not reachable through the workplace, can be engaged and empowered to improve their health in mid-life. In addition, the relatively small proportion of men in our sample, coupled with the fact that two pilot projects (Dorset and Hackney) were not intended to or did not manage to engage men, means that the question of how to reach men, again especially those outside the labour market, still needs to be addressed. The potential of the Southwark project, which provided access to IT and the training required to use it for people who were unlikely to have Internet access at home or at work, also merits greater investigation than we were able to achieve.

A broader issue concerns the extent to which the different approaches taken by the pilot projects can be combined and delivered to good effect to a wider range of target groups than those reached by the individual pilots. For this reason we are not able to put forward specific recommendations here for agencies working with people in mid-life. However, a key recommendation to the HDA from our evaluation was the establishment of demonstration projects, larger in scale and scope than the original pilots, to test out this and the other outstanding issues. The HDA has now formulated a 3-year strategy and action plan for addressing health inequalities in mid-life, incorporating this and other key messages from the research.

### Conclusions

In summary, pending further exploration of the outstanding issues identified above, we are able to draw seven tentative conclusions from the national evaluation of pre-retirement health pilot projects:

1. Health improvement services can be successfully targeted at people in mid-life.
2. Combining financial advice with free health checks is a significant motivator for engagement amongst this age group.
3. Service settings and the interpersonal skills of staff also play an important part in engaging people.
4. Involvement in identifying needs and developing services can motivate people to engage with services.
5. Access to other services and activities via a gateway service can extend clients’ engagement to other services.
6. Working in partnership with clients to find ways of building on existing health knowledge may be more effective in fostering a sense of empowerment than the delivery of ‘expert’ information alone.
7. Combining health checks with financial advice and providing opportunities for social interaction can also foster a sense of empowerment, the latter especially in areas with high levels of deprivation. These mechanisms also hold promise in terms of behaviour change and health gain.

### References


Received on May 18, 2004; accepted on September 14, 2004