

# An evaluation of a walking scheme based in primary care: the participants' perspective

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Exercise promotion schemes often fail to keep people exercising after the first few months. However, schemes that promote walking have been associated with longer-term adherence to exercise. Health Walks is a community-based exercise programme that emphasizes brisk walking activity. In the first year of an important new scheme in the Thames Valley, over 700 people took part. A survey was designed to determine the motivation of the participants and the benefits of the scheme. It was mailed to all of the participants in the scheme, of whom 48% replied. The evaluation found that 90% of participants said that they would continue walking on the scheme. In addition to physical fitness, the countryside and the social aspects of the walks were important motivating factors. The majority of the participants were women, in higher social classes and over 50 years of age, indicating the efficacy of this type of activity for older participants. The average number of walks taken each month was only three, yet participants perceived that there were health benefits. This may be due to the additional exercise which participants engaged in outside the organized scheme. Over half of the participants said that they were doing more walking, in addition to the Health Walks, and relied on their car less for short journeys. Primary care groups and trusts only need to provide minimal support to develop and co-ordinate walking schemes, in contrast to traditional exercise prescription schemes. Further research is needed to examine whether 'walking for health' schemes encourage people to adopt healthy lifestyles.

**Key words:** health promotion; health walks; physical activity; primary care; walking

## Introduction

One of the targets of *Our Healthier Nation* relates to reducing death from coronary heart disease (CHD) and stroke-related diseases in people under 75 years of age by two-fifths by 2010 (Department of Health, 1999). Lack of exercise is now recognized as a major risk factor in the development of cardiovascular disease (Wannamethee and Shaper, 1999). Recent findings have shown that walking two miles a day is sufficient to halve the risk of heart attack in elderly men (Hakim *et al.*, 1999).

Despite knowledge of these benefits, the most effective way to promote physical activity is still unknown. One potential means of increasing physical activity is for primary care clinicians or general practitioners (GPs) to refer patients to exercise schemes. As almost all of the population visit their GP at least once every 2 years, this could potentially be an important prevention strategy (Eaton and Menard, 1999). About two-thirds of current exercise promotion strategies that were adopted by family health service authorities were leisure-centre-managed projects, and the remaining third involved practice-based behavioural counselling (Fox *et al.*, 1997). A review of 10 clinical trials on the effectiveness of primary care promotions found only modest evidence that these schemes are effective (Eaton and Menard, 1999).

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One of the problems was that the short-term benefits of these schemes were not continued over the long term. Eaton and Menard suggest that more active follow-up is required, using telephone contact, social support, buddy systems or perhaps financial support.

In a review of randomized control trials (RCTs) of activity promotion strategies for healthy people, Hillsdon *et al.* (1999) identified 17 studies, only two of which were from the UK. The results of the review were particularly interesting:

Trials that were able to demonstrate significant increases in activity involved exercise that was mainly home based, of moderate intensity, involved walking, and had regular follow-up.

(Hillsdon *et al.*, 1999: 38)

Walking is therefore an effective way to improve activity levels, yet the majority of exercise prescription schemes are leisure centre based. Perhaps this is why schemes promoted through primary care have shown only modest success (Riddoch *et al.*, 1998). Walking schemes offer considerable potential as they are structured, supervised, of low cost to the participants, emphasize low to moderate activity levels and are therefore an effective means of maintaining participants' adherence to exercise (Hillsdon *et al.*, 1999). However, no RCTs evaluating the benefits of walking have been conducted in the UK. In addition, almost all of the trials reviewed by Hillsdon *et al.* (1999) studied white, middle-class and middle-aged participants. Further trials are needed which incorporate different groups and which promote walking as an activity. In order to increase the attractiveness of walking for recreational purposes or as a mode of transport, attention will also need to be paid to environmental factors that influence personal safety and convenience (Hillsdon *et al.*, 1999). Before primary care trusts (PCTs) promote walking schemes as a means of reducing coronary heart disease, these issues need to be resolved.

### **Thames Valley Health Walks scheme**

Health Walks is a programme of daily led walks in and around the local community. The walks are established primarily in order to get people fit, so are intended to be taken at a brisk pace. From five

to 30 people can take part on a walk. Depending on the walk length and participant speed, these walks take between 30 minutes and 1 hour to complete. The Thames Valley programme involves 22 circular and linear led walks. An itinerary of the walking programme is sent to all walkers and publicized locally. Regular social activity and meetings connected with the Health Walks also take place. All of the meeting points for the walks are on public transport routes. The scheme is supported by a published package with 12 walk route cards. These are designed to promote the walks to those who are not regular walkers, and include local and natural history points of interest. Volunteers, who have been trained to provide appropriate warm-up exercises before the walk and stretches after the walk, lead each walk. A front leader sets the pace, while the back marker remains behind the slowest member. All leaders complete a 1-day first-aid course.

Coinciding with the creation of the Thames Valley walking programme, the Countryside Agency and British Heart Foundation funded an independent evaluation of the scheme. The main element of the evaluation was an RCT examining the uptake of sedentary participants to Health Walks (Lamb *et al.*, 2000). Two surveys were developed, one aimed at the participants of the scheme and the other designed to explore the motivations of the walk leaders (Ashley *et al.*, 1999). Surveying took place in May 1999, 16 months after the first walks had started. As new participants joined the scheme every month, the questionnaires surveyed a cross-section of people who had been walking with the programme for between 1 week and 16 months.

Participants were recruited to the scheme from a number of sources. Initially, a public meeting to gauge local interest and attract potential walkers was held in November 1997 (the first walks began in January 1998 and were officially launched in July 1998). The project officer spoke to community groups about the walks, and encouraged local health centres to promote them to their patients. The walks were also promoted by the council's countryside service, and regular adverts were placed in local newspapers and posters displayed at community amenities. The effectiveness of each recruitment strategy was not identified. The RCT that was conducted concurrently with this survey did require that publicity and advertising in part of

the community should be kept to a minimum in order to ensure that the control group would not participate on Health Walks independently. In addition to other means of recruitment, 35 individuals from the intervention group of the RCT took part on the Health Walks programme. These were sedentary individuals randomly selected from a GP's record system (Lamb *et al.*, 2000).

### **Aim of the research study**

The aim of this study was to determine the effectiveness of Health Walks in an urban area, and specifically to examine the benefits of the scheme to its participants. In combination with a randomized control trial, this knowledge was expected to inform the development of future schemes across the country.

The objectives were as follows:

- 1) to establish the demographic profile of the Health Walks' participants;
- 2) to identify the walking practices of the walks' participants;
- 3) to examine the changes in transport usage as a result of the Health Walks;
- 4) to determine the factors that motivate individuals to participate in Health Walks;
- 5) to elicit the perceived health, fitness and emotional benefits of Health Walks;
- 6) to identify the important issues in planning and developing Health Walks.

### **Methods and design**

A questionnaire was developed to survey the participants of the scheme. Exploratory interviews were conducted with walk participants in order to identify a range of opinions and attitudes relating to the Health Walks. Information generated from these interviews, together with the literature, was used to inform the questionnaire development. The participant feedback questionnaire was sent to all of the individuals on the Health Walks mailing list ( $n = 768$ ). This included not only walkers, who gave their address when they first went on a walk, but also people who had asked for information. The questionnaire included a prepaid response envelope and covering letter. A reminder was sent

out to the participants after 3 weeks. A total of 476 individuals (62%) replied, of whom 110 subjects had not taken part in the walks because they had merely requested information. The remaining 366 individuals completed the questionnaire in full, giving a response rate of 48%.

### **Analysis**

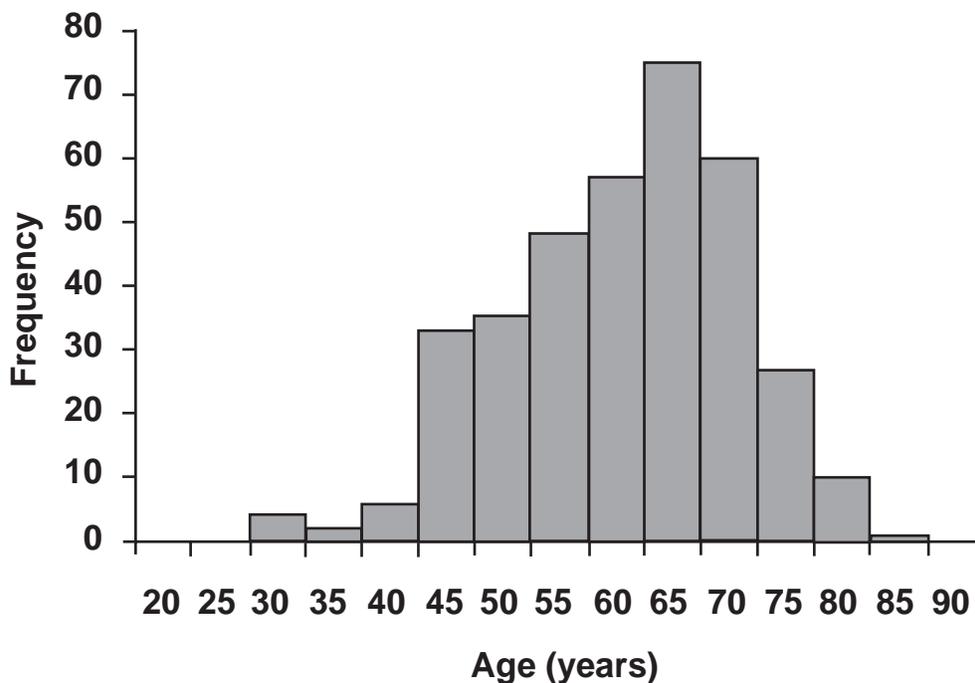
The questionnaires were coded and data entered into SPSS Windows for Statistical Analysis. The frequencies and percentages of responses were calculated, and Chi-square tests were applied in order to examine the associations between key variables. Only those individuals who said that they would continue walking with the programme were required to answer questions on motivation. Thus percentages which have been quoted for this section reflect a subset (90%) of all those who completed the survey. Throughout the Results and Discussion sections, all those who responded to the Thames Valley survey are simply referred to as 'participants in the walking scheme'. This implies that the responders are characteristic of all of the participants in the scheme.

### **Results**

#### **Demographic profile**

Participants were aged from 27 to 83 years, with a mean age of 58 years. The age distribution is shown in Figure 1. Almost four times as many women as men participated in the programme (78% female). The age distribution of the male participants mirrored that of the female participants. The majority of the participants were married (61%), and widowers (15%), divorcees (11%), single adults (6%) and cohabitants (6%) made up the remainder. Most of the participants were retired (47%) or in paid employment (40%). Other respondents included homemakers (11%) and the unemployed (2%).

The population of Thames Valley was 25 339 in the 1991 population census, of whom 50% were female. The majority (96%) of the population was white, but other ethnic groups that were represented included Asian (2%) and black. The Thames Valley Health Walk participants were reasonably representative in terms of employment,



**Figure 1** Age distribution of health walkers.

although there was a far higher percentage of retired people participating in the Health Walks (47%) than there was in the community (9%).

The social-class profile of the employed participants mirrored that of the Thames Valley population, although there was a higher proportion of skilled non-manual workers (e.g., secretaries or shop assistants) and fewer skilled manual workers (e.g., carpenters or bus drivers) among the participants. The commonest classification was social class II Managerial and Technical (41%) (e.g., managers, teachers). However, the social-class profile of the participants may be misleading, given that census classification was based solely on the head of the household (Black *et al.*, 1990).

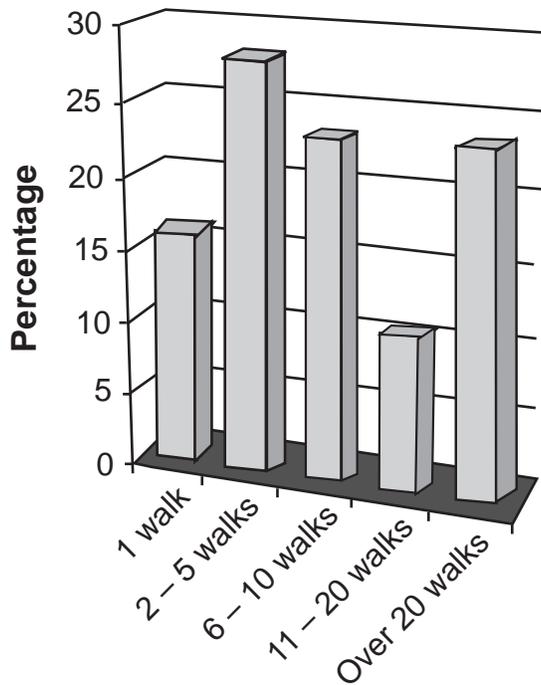
### The walking practice of participants

On average, 16 new people joined the Health Walks each month (range 5–37 walkers). The number of new walkers joining each month remained stable for the first 8 months of the scheme. There was a sharp rise in new participants during autumn 1998, with fewer people joining over Christmas 1998/99. There was also an increase in the number of new participants joining in February and March.

Figure 2 shows the number of walks in which individuals participated. Only 16% completed one walk, but almost a quarter of participants had completed over 20 walks. The average number of walks completed each month was three. Those who started the scheme at its inception (in spring 1998) and in the autumn were more likely to complete a greater number of Health Walks. Almost half of the participants felt that they were just fit (46%), 37% felt that they were fit, 10% felt they were unfit, 5% felt they were very fit and 2% felt they were very unfit.

### Walking activity and transport habits

Participants were asked if the Health Walks had changed their transport habits (i.e., whether they walked or used the car to travel short distances). Approximately a quarter (26%) of the participants felt that the Health Walks had changed their transport habits a great deal or quite a lot. In total, 64% felt that their transport habits had changed to some extent. Over half of the participants (52%) reported that they had walked more since being introduced to the scheme. Individuals who walked more also said that Health Walks had changed their transport



**Figure 2** Frequency of walks.

habits (they tended to walk instead of driving short distances) to a greater extent than those who did not walk more ( $\chi^2 = 32.46$ ,  $df = 4$ ,  $P < 0.001$ ).

### Satisfaction with Health Walks

The participants were asked which aspects of the Health Walks they most liked and disliked. The elements of the scheme that people most liked were the company and the opportunity to meet people (61%), the regular and convenient timetable where participants did not need to book (17%), the countryside and nature aspects (13%), the fitness and exercise aspects (13%) and the safety aspect of walking in a group (9%).

The main dislikes concerned the walking speed being too fast (17%), the inconvenient and awkward times (13%), the lack of variety and repetitive timetable (i.e., the same walks at the same time) (10%), the rain, mud and weather conditions (10%), and the stretching exercises before and after the walks (8%). About 30% of the responders said that they had no dislikes.

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### Motivation of Health Walks participants

Only those individuals who said that they were going to continue participating in Health Walks were required to answer this section. Participants were asked to rate how strongly they agreed with various statements concerning their reasons to continue with Health Walks (see Table 1). Over 80% of the respondents strongly agreed that they would continue with the Health Walks because they wanted to maintain or improve their fitness levels. Almost the same percentage of individuals strongly agreed that the opportunity to spend time in the countryside, the walks being nearby and convenient and the fact that the walks were enjoyable and fun were also important. Health-related factors motivated participants to a lesser extent. Around 55% strongly agreed that feeling better in themselves motivated them to continue with the Health Walks, 41% felt that they would continue because they had more energy, 22% would continue because they slept better and 11% would continue because they found that they had lost weight as a result of walking. There was only one factor with which a large number of people strongly disagreed, and that was that their doctor had told them to take more exercise (49%).

For each question, the responses were cross-tabulated with age, gender and marital status. There were notable differences in all three parameters. A higher proportion of women than men strongly agreed that they would continue with the Health Walks because they liked the opportunity to be in the countryside ( $\chi^2 = 20.86$ ,  $df = 2$ ,  $P < 0.001$ ), they found the seasons changing around them fascinating ( $\chi^2 = 29.39$ ,  $df = 2$ ,  $P < 0.001$ ), they felt better in themselves ( $\chi^2 = 8.93$ ,  $df = 2$ ,  $P < 0.05$ ), they felt that being involved in a community initiative was important ( $\chi^2 = 16.66$ ,  $df = 2$ ,  $P < 0.001$ ), they enjoyed the opportunity to socialize ( $\chi^2 = 26.0$ ,  $df = 2$ ,  $P < 0.001$ ) and they liked to be involved in organized activity ( $\chi^2 = 15.64$ ,  $df = 2$ ,  $P < 0.001$ ).

Those aged 60 years or over were more likely to agree strongly that they would continue with Health Walks than those under 60 years because they enjoyed the opportunity to socialize ( $\chi^2 = 9.14$ ,  $df = 2$ ,  $P < 0.05$ ) and because they liked to be involved in organized activity ( $\chi^2 = 13.89$ ,  $df = 2$ ,  $P < 0.001$ ). Those who were single, divorced, widowed or separated also strongly agreed that socializing was important ( $\chi^2 = 8.12$ ,

**Table 1** Motivation of participants

I will continue to Health Walk because:	Strongly agree (%)	Slightly agree (%)	Slightly disagree (%)	Strongly disagree (%)
I want to maintain/improve my fitness levels	82	17	1	0
I like the opportunity to spend time in the countryside	79	19	2	0
The Health Walks are nearby and convenient	78	17	4	1
The Health Walks are enjoyable and fun	77	20	3	0
I find it fascinating to see the seasons change	59	36	4	1
I enjoy the opportunity to socialize	58	36	5	1
I do feel better in myself	55	39	5	1
Being involved in a community initiative is important	49	44	5	2
I have more energy	41	46	11	2
I like to be involved in organized activity	37	50	11	2
I sleep better	33	50	21	8
My doctor told me to take more exercise	27	18	15	49
I have found that I lose weight by walking	11	42	33	14

df = 2,  $P < 0.05$ ), and that involvement in an organized activity was important ( $\chi^2 = 11.22$ , df = 2,  $P < 0.01$ ). Those who were married or cohabiting were more likely to disagree or slightly agree.

### Factors likely to sustain participation in Health Walks

The participants were asked what would encourage them to keep walking with the scheme. The most frequently cited factor was to include more varied and graded walks at different times (43%). Other responses included doing nothing (18%), to have walks closer to home (7%), the fact that they had too many other responsibilities (6%), to keep the Health Walks going/carry on (5%), to continue sending out timetable leaflets (5%) and to have more social events (4%).

The participants were also asked how new people could be encouraged to take part in the Health Walks scheme. Most respondents suggested advertising more widely through the local media (46%) (e.g., through local press and community groups). Advertising by word of mouth was frequently suggested (19%), and promotion through the general practice (13%).

### Health

Approximately half of the participants (47%) had visited their GP two to five times in the last year. Almost a quarter (22%) had been once and 17% had not been at all. Only 5% had been more than 10 times in the last year. Almost half of the

participants also said that they were being treated for a specific medical condition (45%). The majority of complaints were related to high blood pressure, angina and heart problems, asthma, thyroid problems and cholesterol levels. Those who were being treated for a medical condition and who visited their GP frequently strongly agreed that a recommendation from their doctor to exercise motivated them to take part in Health Walks ( $\chi^2 = 33.5$ , df = 3,  $P < 0.00$ ).

The participants were also asked whether the Health Walks had affected the frequency of their visits to the GP. Almost all of the participants said that these walks had not affected the frequency of their GP visits (95%), although a small minority (5%) said that they made fewer GP visits.

### Adherence to the Health Walks scheme

Only 10% of those questioned indicated that they would not continue with the programme, and the majority (90%) indicated that they would continue with the Health Walks. Around 18% thought that they would continue in the immediate future, and 72% said that they would continue for as long as possible. The most frequent reasons given for not continuing were due to other commitments and being too busy (27%), the walks being too fast so they could not enjoy the scenery (13%), and the timing of the walks being inconvenient (10%).

### Adverse effects and injuries

Two serious injuries resulted from the Health Walks. Both happened to women over 75 years of

age and required hospital treatment (one for a broken shoulder and the other for a broken ankle). Both injuries were caused by falls that occurred on flat terrain. These may have been associated with poor flexibility. The risk assessment of the project was revisited and more detailed advice on footwear resulted. Non-serious injuries were not reported.

## Discussion

### Walking practice

The season in which people joined the Health Walks was associated with the number of walks they went on to complete. A higher percentage of committed walkers (those who completed more Health Walks) started the scheme at its inception in spring 1998 and in autumn 1998. Participants who joined the scheme at the beginning had more input into the design and ownership of Health Walks, and were therefore more committed and took part in more walks. Indeed, most of the walk leaders had been with the scheme for over a year. In the guide *Health Walks: A Step by Step Guide* (Bird, 1997), the initial meeting in the town or village hall was regarded as an ideal opportunity to recruit the walk leaders. The reason why autumn was the peak period for committed walkers to start is open to speculation. One participant stated that they already had a busy schedule of activities in the summer.

### Factors motivating Health Walkers

The fact that 'maintaining and improving your fitness level' was the most important factor motivating individuals to Health Walk indicates that people are joining primarily in order to get fit. Interestingly, nearly all of the participants classified themselves as *fit* or *just fit*. As all of the walks were based for and around the local community, it was not surprising that access was not a problem for the majority of people. Three-quarters of the participants felt that the proximity of the walks was an important motivating factor.

To maintain adherence to exercise over the long term, Eaton and Menard (1999) suggest that social support, telephone contact and buddy groups are important in exercise prescription schemes. The Health Walks scheme naturally fosters or incorporates these activities. Older participants (those over 60 years of age), women and those who were

single, divorced or widowed all agreed that socializing and being involved in an organized activity were particularly important in motivating them to continue with the Health Walks. In addition, all of the participants were sent regular updates about the Health Walks events and the walking schedule by the project officer, and were thus kept informed and in contact with the scheme.

Different elements of the Health Walks scheme appear to appeal to different subgroups of participants. Older women in particular said that the reason why they joined the Health Walks scheme was partly influenced by the safety of walking in a group. This finding has been supported by previous research into Health Walks and countryside leisure (Burgess, 1995; Bartlett *et al.*, 1996). Proportionately more women than men also considered the following factors to be important in increasing their motivation to continue Health Walking: a chance to be in the countryside, watching the seasons change around them, feeling better in themselves and being involved in a community initiative. These findings clearly suggest that men and women derive quite different benefits from the scheme.

Compared to other factors that motivated individuals to continue with the Health Walks, recommendation from their GP was the least important. Yet 90 people did feel that their GP was a motivating factor, especially those who visited their GP frequently or who were being treated for a medical condition. This suggests that GPs are playing a role in encouraging their patients to exercise. A number of participants in the scheme also mentioned that promotion through primary care was a means of encouraging more people to Health Walk. In this study, the countryside service provided a base from which the walking scheme operated. Although the local health centre was not directly involved with the scheme's operation, other schemes have successfully used their local health centre (Bartlett *et al.*, 1996). With the advent of primary care trusts as care-commissioning bodies there is great scope to promote community walking schemes. As Health Walks are organized and led by volunteers, the input needed from primary care professionals is minimal. However, what is important is that local health centres legitimize the scheme as a health initiative by displaying or distributing information

on the walking programme and talking to patients about the benefits of walking.

The participants were asked how they could be encouraged to keep walking on the scheme. Most of their responses related to varying and grading the walks. Grading the walks was also suggested by several of the walk leaders who had experienced difficulties in dealing with a broad spectrum of ability on their walks. In the Thames Valley, all of the walks were on similar terrain, although they varied in length. Apart from a starter walk that was held every week, the walks were not graded according to difficulty. Individuals were told that they should walk at their own brisk pace, and it was emphasized that the walk was for health. This may account for the smaller number of younger adults and men participating in Thames Valley. In a pilot study based in Sonning Common, certain walks with steep gradients and longer distances had attracted a larger number of younger adults and men. In this respect, Thames Valley was limited by its topography, as there were no hills with steep terrain. It is interesting to note that some responses from the Thames Valley participants related to the pace of the walks being too slow. One of the recommendations from the pilot study report was that it was essential to stress the effectiveness and challenging nature of this type of exercise in order to attract more men. Previous research has suggested that men do not believe walking is truly exercise as it offers no health benefits (Lombard *et al.*, 1995).

## Conclusion

Exercise prescription schemes often have difficulty in maintaining adherence in the long term (Eaton and Menard, 1999). This scheme, in common with the pilot scheme based in Sonning Common (Bartlett *et al.*, 1996), has been very successful in encouraging participants to walk and in keeping them walking. Over 80% of participants in both schemes said that they would continue Health Walking in the future. An objective measure of adherence is available from the RCT (Lamb *et al.*, 2000).

Exercise promotion trials often attract white, middle-class and middle-aged participants (Hillsdon *et al.*, 1999), and this scheme appears to be no exception. The profile of the walkers was very similar to that of the Sonning Common pilot study,

with the majority of walkers being over 50 years old, female, and in the higher social classes. One of the goals of the research was to examine the concept of Health Walks in an urban area with a more diverse population. The social class and ethnic origin of participants generally reflected that of the Thames Valley population. This perhaps indicates that the choice of location was not ideal for examining this goal. Further research needs to examine the concept of Health Walks in areas with lower socioeconomic status and more ethnically diverse populations.

The majority of the participants were over 50 years old. This reflects the general trend for older people to prefer walking for exercise (Eaton *et al.*, 1994), and it indicates the efficacy of this type of health promotion for increasing exercise in the older community. The attraction of older adults to Health Walking is particularly important, as exercise is an essential element in maintaining people's quality of life as they age. Although people are now living longer, they are not necessarily enjoying a longer period of independence and autonomy. Health Walking programmes provide an opportunity for adults to take more exercise, allowing them to increase their level of physical functioning and maintain their autonomy. In addition, the importance of the social aspect of the scheme cannot be underestimated, not only in motivating participants to continue exercising but also in reducing the likelihood of social isolation. As well as the considerable benefits of exercise for older adults, the people who also derive the greatest health benefit from exercise are the sedentary. The recently published RCT found that sedentary adults who were offered the opportunity to participate in Health Walks took up more activity than individuals who were offered advice only (Lamb *et al.*, 2000).

Recent guidelines suggest that exercise of moderate intensity (such as brisk walking) for at least half an hour three times a week is required in order to maintain health benefits (American College of Sports Medicine, 1995). However, the average number of walks being taken by each person per month was only three. Despite the low average number of walks taken each month, the participants perceived that there were still health benefits. This may have been a result of the additional walking they did outside the organized scheme. Although this study did not quantify the amount of exercise

that participants undertook outside the scheme, over half said that they were doing more walking. This 'knock-on' effect on other activity needs to be explored further. The amount of additional walking that participants were doing also had an effect on their transport habits. Those who did additional walking felt that their transport habits had changed to a greater extent (i.e., they tended to walk instead of driving short distances). This is particularly important as walking is being actively encouraged by the Department for the Environment, Transport and the Regions (DETR). The recent strategy for walking (Department for the Environment, Transport and the Regions, 2000) provides incentives for local government to include walking in the development of local transport plans. As Health Walks can affect local transport, funding and support of Health Walking schemes should be sought, not only through primary care and other health and recreation channels, but also through collaboration with transport initiatives. This finding has important ramifications for future programmes, specifically their role in encouraging more people to integrate exercise into everyday life.

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