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Fenton, G, Hill, K orcid.org/0000-0002-2080-0262, Stocker, R et al. (1 more author) (2015) Older adults at risk of a cardiovascular event: a preliminary investigation of their experiences of an active lifestyle scheme in England. Ageing and Society, 35 (10). pp. 2141-2155. ISSN 0144-686X

https://doi.org/10.1017/S0144686X1400083X

Older adults at risk of a cardio-vascular event: a preliminary investigation of their experiences of a UK active lifestyle scheme

Background

Physical activity has been described as the best preventative medicine for older adults (SNIPHO 2007). It is proven to delay the need for care (BHFNC 2013) and substantial evidence describes its impact on cardio-vascular as well as psychological health, regardless of age (BHFNC 2013, DH 2011, Frost, Haw and Frank 2010, NICE 2012, US Department of Health and Human Services 2008, WHO 2011a, WHO 2011b). Many exercise-referral, exercise on prescription, active lifestyle and similar schemes, whether age-specific or not, are now funded by health and social care services throughout the developed world (Halbertet al. 2000, Harrison, McNair and Dugdill 2005, Rush 2003). Programmes are usually delivered by third-parties but are widely accessible to patients in contact with a variety of health professionals. However problems with non-uptake and non-completion are common, with adults at risk of a cardio-vascular event being especially likely not to complete (Dugdill, Graham and McNair 2005). Also, the ways in which such schemes are delivered vary (Dugdill, Graham and McNair 2005, Gardineret al. 2012, NICE 2012), and evaluation tends to focus on measures of attendance and satisfaction (Katikireddiet al. 2011) at the expense of other psychological and social outcomes (Dugdill, Graham and McNair 2005) in spite of their known influence on adherence and completion (BHFNC 2010, NICE 2007, Pentecost and Taket 2011).

This paper aims to understand the factors influencing attendance at a community based active lifestyle programme, and experiences and perceptions of any related benefits.

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Study setting

We interviewed attendees and former attendees at a community based active living scheme. This was a single-centre scheme based in a deprived area of a large Northern city in England. The scheme was free for twelve weeks for anyone referred by a health care professional (not solely the sampled population), thereafter a minimal charge was made for attendance. Our sample comprised adults over the age of 60 who had been referred by a health care professional, and who were deemed to be at higher risk of a cardio-vascular event due to being overweight, obese or having high-blood pressure. Following referral they were offered an individual appointment with a Health and Physical Activity Co-ordinator to discuss their goals and concerns about lifestyle change. They were then permitted free access to a 12-week weekly group education programme on the causes and management of chronic lifestyle-related conditions through activity and healthy eating (though indefinite attendance was allowed), and weekly supervised access to gym facilities. Programme sessions were delivered by a Health and Physical Activity Co-ordinator.

Routine attendance and satisfaction data had demonstrated prior to the current study that overall uptake and completion of the scheme were poor, and there were mixed views about the perceived impact it had on cardio-vascular health. This paper reports the views and experiences of a sample of attendees and former attendees at the scheme.

Method

Recruitment

This paper presents a preliminary exploration of the views and experiences of people attending a community-based active lifestyle programme, and aims to inform the design and

development of future programmes and programme evaluation. The small sample and single-centre setting limit the generalizability of the findings but nevertheless this study adds useful information in an area where there is limited evidence of effectiveness.

A Health and Physical Activity Co-ordinator approached attenders of the scheme (n=25) about participating in a focus group to discuss their experiences of the active lifestyle scheme. At a later date, potential participants for interview were identified through retrospective evaluation data, and invited to participate in an interview to discuss the active lifestyle scheme by letter (n=45). Follow-up letters were sent to encourage participation.

This study reports data from 13 older adults referred to the scheme. The focus group comprised eight participants, all current regulars of the active lifestyle scheme. Four of the eight participants then went on to participate in individual interviews, at which point data saturation was achieved. The remainder participated in the focus group alone. Purposive sampling was then employed (for those who did not participate in the focus group) to obtain, via interview, the views of former attendees and those who chose not to attend the scheme at all, in order to illustrate a range of attenders and non-attenders (n=5). This provided a total of 9 individual interviews. The overall response rate was 18.6 per cent. Reasons for declining the invitation included age, being too busy, or health difficulties.

Measures

A focus group topic guide was developed, and adapted in vivo by one of the authors (KH) to allow participants to lead the conversation. It covered reasons for engagement with the scheme, its impact, and views about non-engagement. The focus group took place at the community centre and lasted for an hour. A semi-structured interview schedule was

developed for individual interviews, covering topics identified from the focus group in addition to participants' perspectives on referral, health, age and future lifestyle intentions. Assessments of alcohol use (using the AUDIT-C (Baboret al. 2001)), diet (NHS Leeds 2012), and physical activity (Washburnet al. 1993) were conducted. Interviews were conducted by one of the authors (GF) and lasted for one to two hours.

Analysis

We categorised participants by their levels of engagement with the scheme, using a published categorisation system as a guide (Pentecost and Taket 2011). We described 'current-regulars' as those who had attended the majority of scheduled individual appointments, education sessions and gym sessions in the three months prior to contact; 'previous-regulars' as attended the majority of scheduled individual appointments, education sessions and gym sessions, but ceased doing so (for any reason) more than three months prior to contact; 'low-contact' participants as, at any time, have attended none or only some of the scheduled gym sessions, and any number of scheduled individual appointments or education sessions and 'no-contact' participants as attended none or only some of the scheduled individual appointments, and none of the scheduled education or gym sessions.

Descriptive statistics from demographic and health questionnaire information provided by participants (n=13) were produced using SPSS 18 (SPSS Inc. Released 2009). Transcribed focus group and interview data were imported and analysed with thematic framework analysis (Ritchie and Spencer 1994) using Nvivo 9 (QSR International Pty Ltd 2010), supplemented with field notes and regular team discussion and consensus of emerging themes.

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Ethical approval was obtained from local NHS Research Ethics Committees. We used a mainly qualitative approach comprising a focus group and individual interviews, supplemented by descriptive data collected via questionnaire. Data collection took place in 2011 and 2012.

Results

Participant characteristics

Five participants (numbered 1 to 5) were classed as 'previous-regulars', one as 'no-contact' (numbered 9), one as 'low-contact (numbered 10) and six as 'current regulars' (numbers 6 to 8 and 11 to 13). Twelve (92%) were retired, and nine (69%) lived with a spouse. Only current-regulars reported caring responsibilities (67% of this group; n=4).

Table 1. Demographic and clinical characteristics have been summarised

Table 1: Participant demographic and clinical characteristics by level of scheme engagement

	Participant engagement classification				
	Current-regulars (n=6)	Previous-regulars (n=5)	Low-contact (n=1)	No-contact (n=1)	Total (n=13)
Median age (range)	68 (64-77)	68 (64-82)	64 (n/a)	70 (n/a)	68 (64-82)
Female n (% of assigned group)	4 (67)	2 (40)	1 (100)	1 (100)	8 (62)
White-British n (% of assigned group)	6 (100)	4 (80)	0 (0)	1 (100)	11 (85)
Median reported health difficulties (range)	2 (2-6)	2 (1-3)	3	2	2 (1-6)

Health difficulties amongst interviewed participants

Participants' descriptions of health difficulties and diagnoses were used as formal clinical data were unavailable. Of the range described, high or borderline-high blood pressure was most common (n=6; 67%), followed by high-cholesterol, arthritis or temporary limits to mobility (n=4; 44%). Three participants reported more than one health-related reason for

referral, five (38%) reported high blood-pressure, ten (78%) excessive weight, and all were unanimous in having accepted the reasons for the referral.

Lifestyle choices amongst interviewed participants

Of all interviewed participants, one (a current-regular) smoked and, two previous-regulars had given up. Only one (a previous-regular) was classified as at 'increased risk' of alcohol problems.

Activity data were available for eight participants, comprising four previous-regulars, three current-regulars, and one non-active participant. We were unable to collect reliable data from all participants due to the limited resources within the healthy living centre involved in this study to systematically and routinely collect these data. Of the four previous-regulars, two described levels within average and lower than average ranges. One participant of each range reported their activity levels as being lower than typical due to temporary health difficulties. Of the three current-regulars who provided data, all reported recent activity levels within the average range and said these were typical. Only the non-active participant regularly exceeded the average levels for their age and gender.

All participants reported making some changes to their diet for health reasons. Participants were more likely to follow protein and sugar recommendations (n=7), than fruit and vegetables, fat and dairy recommendations.

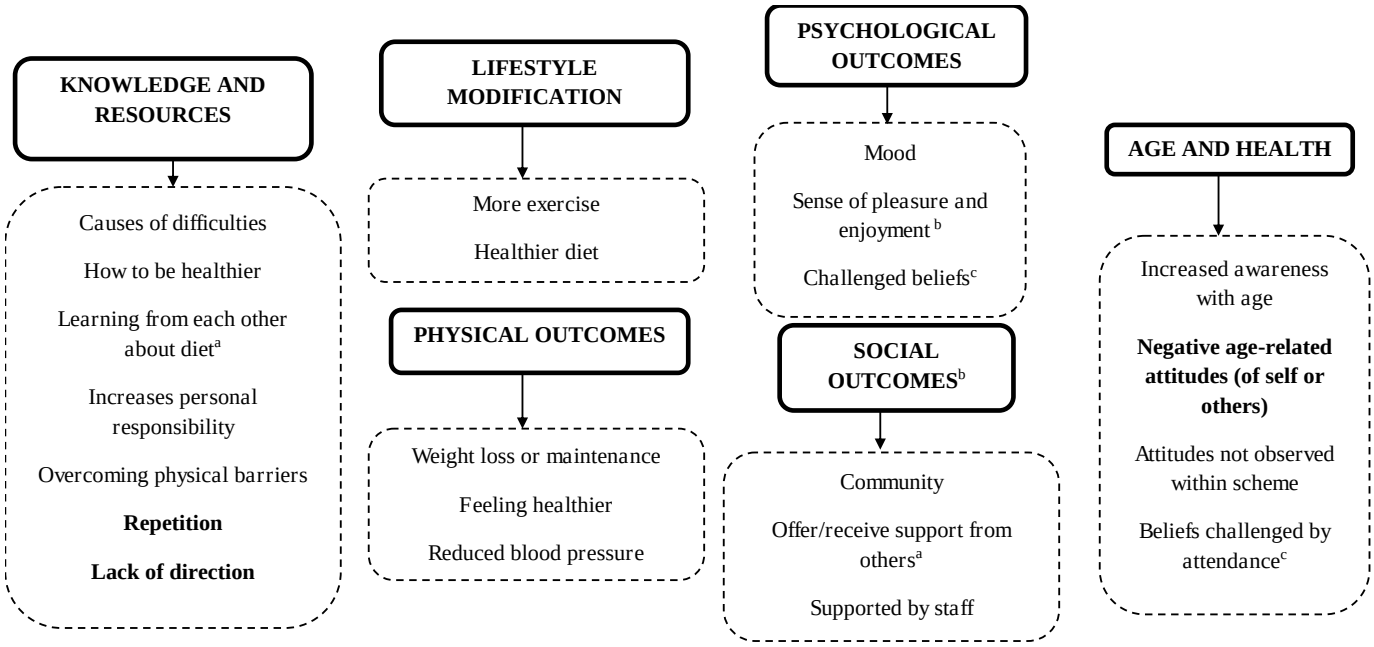
Qualitative analysis

Participants were of similar ages, reported similar reasons for referral and commonly described an increased awareness of their own health needs with advancing age. Current-regulars were more likely to report social circumstances incorporating caring responsibilities

and a greater range of health difficulties. All current and previous-regulars perceived the referral to have been appropriate, and some level of attempt to improve their health prior to referral was commonly reported. These factors may explain our participants' overall levels of engagement with the scheme; at least initially.

Identified themes

Figure 1. Participant generated themes around positive and negative aspects of the scheme



Variation between categories by attendees is described below.

Knowledge and resources.

Participants generally agreed that their attendance at the scheme made them feel more educated about health difficulties of which they had or were at risk, and said they had learned how to lead a healthy lifestyle to minimise the impact of such difficulties or prevent them.

*'(they ta*lked about) things that could happen if you weren't active...I found that really *interesting...'if you don't help yourself: that's what can happen'.'*

(Participant number 4)

All participants mentioned the opportunities that the group provided for learning from each other. This was either learning related to preventing health difficulties in themselves, or for practical advice on healthier eating. They generally reported the knowledge as having increased their sense of personal responsibility and willingness to engage with both the scheme and a healthier lifestyle.

'The course has proved helpful in explaining: 'the reason you've got high blood pressure is because you overate, didn't exercise enough etc.*'*... (this) hands me the choice and tools necessary to *make any changes.'*

(Participant number 1)

Others felt that knowledge helped them overcome physical barriers to activity.

'...normally when I got gout I don't want to do anything, it's painful...The advice were brilliant: 'just 'cos you can't use your feet, you can use your arms'.'

(Participant number 6)

Perceptions of content varied, and may have influenced attendance. Whilst previous-regulars understood that the repetition of facts was necessary in order to accommodate newcomers, they also said it meant they no longer felt they gained anything and so stopped attending. In contrast, one current-regular felt each session was different which they enjoyed.

'...seemed to be going on about the same thing over and over.'

(Participant number 5)

Previous-regulars also spoke of difficulties in accessing and using gym equipment due to it being busy, which they said meant the Health and Physical Activity Co-ordinators were

unable to supervise their use of the equipment as intended, or to provide instruction. Both factors led them to stop attending.

'You were just left to your own devices till he (a Health and Physical Activity Co-ordinator) came in (and said) 'you've all had ten minutes - change'. Well, if he hadn't shown you what to *do in the beginning, you didn't know whether you'd been doing it right or wrong.'*

(Participant number 5)

Lifestyle modification.

Improvements to levels of physical activity and diet were described by current-regulars in particular.

'I do more exercise at home...I wouldn't have done that, I wouldn't have gone walking...I'd have thought ' ooh, Coronation Street's on...'

(Participant number 7)

'Before, I'd eat anything that was there in front of me, but now... I do watch what I eat.'

(Participant number 8)

Physical and psycho-social outcomes.

Physical benefits such as weight loss or maintenance, feeling healthier and reduced blood pressure, were attributed to engagement.

'When I first come here I was fourteen stone nine, and I'm down to twelve stone three...it's been a slowish thing..., but if it comes off slower it'll go on slower...'

(Participant number 7)

Psychological benefits were also reported. For example, current-regulars attributed

engagement with the group to improved mood, and spoke of a *'more positive outlook'* (Participant number 6) and *'healthier mind'* (Participant number 7). Regardless of categorisation, several spoke of the pleasure and enjoyment they got from attending, and of the impact on their beliefs.

Social and relational benefits, including a sense of community (with the centre itself being described as like a *'church without God'* (Participant number 1)) were reported by current-regulars in particular.

'We have got to know them all, you know, and we're friends.'

(Participant number 6)

One participant said the social aspect was the main factor affecting their intentions to continue.

'(I'll keep coming back because) it's a fantastic social...*I enjoy the company.'*

(Participant number 8)

Support offered to or received from other participants, or staff, was also referred to, regardless of categorisation.

'...talking to everybody...gets a lot out of it for me...it's like being with a family.'

(Participant number 7)

He (a Health and Physical Activity Co-ordinator) put my mind to rest; he said everything's *gradual, everybody's in the same boat. He's* the personality that keeps it all together...*'*

(Participant number 6)

Age and health.

An increased awareness of personal health problems with advancing age, related to an expectation that this was normal due to an increasing number of physical health difficulties, was commonly reported.

*'Since I've g*ot older, I've got two new knees...my friends, they're more or less in the same *group, they have bad backs or bad knees.'*

(Participant number 8)

Negative age-related health and lifestyle attitudes included previously held beliefs that it was *'too late'* to change, and that they'd noticed those around them with attitudes such as *'I'm old now...I've just got to sit here and...wait for death coming.'* (Participant number 7). Participants also thought some health professionals portrayed negative age-related attitudes.

'You get a lot of that, 'oh well, how old are you?'...and once you say you are over 70, 'oh right well you can expect your body to start deteriorating'.'

(Participant number 8)

Contrarily, others spoke of the value of having a doctor, or other professionals, with positive attitudes towards age.

'Everything has fallen into place...because of the attitude of the doctor...How many people effectively are being sentenced to death by walking into a doctors' (and being told) 'oh well, what do you expec*t at your age?''*

(Participant number 1)

The reported impact of the scheme on their age-related beliefs was also marked.

'I think they've put into us mind, 'yes you can go on living older, and you can be healthier older.'

(Participant number 7)

Discussion

The aim of the current study was to conduct a preliminary investigation of factors influencing attendance at a community based active lifestyle programme, and experiences and perceptions of any related benefits.

The majority of participants referred to the programme reported making some effort to improve their health. Continued engagement was related to how participants evaluated the knowledge and resources provided by the scheme. All who engaged attributed increased knowledge about risk factors, healthier lifestyles and age-related capabilities, as well as a sense of personal responsibility for behavioural change, to their attendance. Attenders also appreciated the relational benefits such as support, encouragement and opportunities to learn from each other, though to differing degrees. Similarly, psychological benefits were commonly reported, including mood or challenging age-related expectations and beliefs.

Beliefs about health difficulties, contributing factors and lifestyles were related to participants' sense of responsibility for change. Such beliefs are known to influence the uptake and maintenance of behavioural changes that can reduce risk of a cardio-vascular event (Murrayet al. 2012a, Murrayet al. 2013, Murrayet al. 2012b). Beliefs about how risk can be modified through lifestyle change are also important (Murray, Fenton, Honey, Bara, Hill and House 2013) as are those relating to age. For example, potential participants used 'age' as a reason to decline our invitation to interview, and actual participants perceived some

health professionals as believing older adults incapable of change.

It seems reasonable to hypothesise that those who did not attend or complete the programme may have different beliefs to our participants, whether referral, health, lifestyle or age-related, and these are likely to have presented barriers to their engagement. Some participants felt that some health care professionals displayed ageist attitudes, which may preclude referral in the first instance (Cranneyet al. 2001).. Such attitudes and missed opportunities are of concern, not least because advancing age in itself does not prohibit increasing levels of activity (Burbanket al. 2002).

The impact of the scheme on lifestyle change and actual cardio-vascular risk reduction was less clear. Current-regulars reported a greater range of health difficulties and attributed physical improvements to scheme-initiated changes to activity levels and diets. However, questionnaire data suggest they were eating less healthily than previous-regulars, and were not significantly more active. This is counter-intuitive, and may reflect issues with the small data set. Alternatively, it may reflect that current-regulars had significantly more unhealthy diets or sedentary lifestyles prior to referral, and so reported improvements are relative to (unrecorded) baseline data. It also implies that current-regulars did not continue attending for the benefits of their health and diet. This was also implied by the differing group-level perspectives of the knowledge and resources provided, and current-regulars' more frequent reporting of positive mood and social benefits.

The scheme evolved from a twice-repeated six-week programme to a flexible, participant driven approach in an attempt to meet the needs of those referred. However, such flexibility has also allowed indefinite attendance, and may explain why previous-regulars perceived sessions as repetitive. Indefinite attendance also seems to have been problematic in

that current-regulars appeared to continue attending for social and support, over and above health related, factors. A lack of social support is a recognised barrier to the initiation and maintenance of lifestyle change in those at risk of a cardio-vascular event (Coghill and Cooper 2009, Murray, Craigs, Hill, Honey and House 2012a, Murray, Honey, Hill, Craigs and House 2012b, Williamset al. 2007), and the benefits of positive social experiences on health and ageing are clear (Boyes 2013).

Recommendations for future scheme delivery

Undoubtedly, active lifestyle schemes are associated with a number of benefits, particularly for those at risk of a cardio-vascular event. However, in spite of the myriad benefits reported by our participants, we cannot ignore the data on non-uptake and views of previous-regulars, and limited evidence on the reduction of risk of a cardio-vascular event, all of which suggest that the scheme may not be meeting the needs of all referred. We believe our results point to a number of ways in which this and other active lifestyle schemes could be re-organised to maximise attendance and potential benefit.

Address beliefs

Our results, alongside the published literature, demonstrate the significance of beliefs not only to the referral process but to the uptake and adherence to schemes in particular, and active lifestyles in general. It may be helpful to identify and address patients' beliefs about referral, health, lifestyle change and age, and health professional beliefs about age as soon as possible in the referral process and so do not become a barrier to referral or attendance. We do not believe the results would justify the development of a scheme specifically for older adults as some authors have suggested (Avers 2010). Our findings suggest that age-related

beliefs, whether on the part of referred participants or health professionals, may have a significant impact upon scheme engagement and ultimately risk reduction.

Deliver a structured, fixed-term, closed programme

Given that indefinite attendance may lead to social, but not necessarily health-related, benefits, feel repetitive to some and deter attendance in others, a structured, fixed-term rolling programme, closed to new members after starting, may address this barrier. Whilst referred patients might have to wait a number of weeks, a structured programme of sessions would be less likely to become repetitive, and commitment may seem more manageable. Fixed-term physical activity interventions, particularly of those less than six months duration, also tend to lead to better physical outcomes for attenders (Gourlan, Trouilloud and Sarrazin 2011). A closed group may encourage trust and the development of important supportive relationships which are known to impact upon health behaviours (Boyes 2013, Coghill and Cooper 2009, Murray, Craigs, Hill, Honey and House 2012a, Murray, Fenton, Honey, Bara, Hill and House 2013, Murray, Honey, Hill, Craigs and House 2012b, Williams, Hendry, France, Lewis and Wilkinson 2007). Facilitating gym access, particularly ensuring attendees have closed, personalised access times and sessions may overcome resource related barriers (Williams, Hendry, France, Lewis and Wilkinson 2007).

Increase accessibility by altering delivery times and following-up non-attenders

The fact that older adults with no commitments during the working day were most likely to complete the scheme suggests the need for flexible delivery times. Following-up non-attenders may provide opportunities to identify and address beliefs that may be barriers to attendance.

Improve data collection

Finally, reported outcomes could be enhanced by the systematic and regular collection of clinical and lifestyle data at all points of the process. This would allow conclusions to be drawn about the impact of schemes on lifestyles and reducing risk of a cardio-vascular event without an over-reliance on attendance and satisfaction data (Katikireddi, Higgins, Bond, Bonell and Macintyre 2011)..

Recommendations for future research

Our results illustrate the perspectives of a small sample of older adults referred to a UK community based active lifestyle scheme, enhancing the existing body of literature evaluating similar schemes. Obtaining larger samples of participants with varying degrees of contact with schemes would improve generalizability.

Ultimately the results of this study comprise practice-based evidence that supports the existing literature on healthy lifestyles amongst adults at risk of a cardio-vascular event, and provides further evidence for the importance of addressing health and lifestyle related beliefs before, during and after a UK active lifestyle scheme to ensure they meet their objectives of cardio-vascular disease risk reduction.

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