

Interventions to promote or maintain physical activity during and after the transition to retirement: an evidence synthesis

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Scientific summary

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Background

It has been argued that transition points in life, such as the approach towards and early years of retirement, present key opportunities for interventions to improve the health of the population. With the increase in the numbers of retired adults within the population and the established link between exercise and health, interventions that may change or preserve activity levels around the time of retirement have the potential to provide benefits in terms of increased health and well-being for people in later life.

Research has highlighted health inequalities with regard to interventions and health status in the retired population. Socioeconomic status (SES) may moderate the impact of retirement on physical activity levels (with only higher social classes associated with increases in physical activity at retirement). There is the potential for appropriately targeted interventions to encourage physical activity and to ensure that inequalities in health and well-being are not widened as a result of behaviour change at retirement.

Therefore, there was a need to examine interventions that aimed to increase or maintain physical activity in older people during and shortly after the transition to retirement, and to identify how positive changes in activity levels at this key transition point can be effectively encouraged without exacerbating health inequalities in later life.

Aims and objectives

We aimed to conduct a systematic review and meta-synthesis of UK and international evidence on the types and effectiveness of interventions to increase physical activity among people around the time of retirement. The results of the review would inform the development and delivery of interventions to promote physical activity in the transition from paid work to retirement. Specific research aims were:

1. to systematically identify, appraise and synthesise UK and international evidence that reports outcomes resulting from interventions to maintain or increase physical activity in adults in the period immediately before or after their retirement from paid employment
2. to determine how applicable this evidence might be to the UK context
3. to identify factors that may underpin the effectiveness or acceptability of interventions, by exploring qualitative literature reporting the perceptions of older people and service providers regarding facilitators of or obstacles to successful outcomes
4. to explore how interventions may address issues of health inequalities.

The specific objectives to meet these aims were:

1. to identify the most effective interventions to maintain and/or increase physical activity in older people during and shortly after the transition to retirement by conducting comprehensive and systematic searches for published and unpublished effectiveness evidence (including grey literature)
2. to determine the principles of best practice for effective physical activity interventions in this population by considering the qualitative evidence to provide context for and an examination of social and cultural issues surrounding intervention effectiveness and acceptability
3. to examine any evidence regarding the impact of interventions in different populations and/or the potential for retirement to increase health inequalities
4. to generate a critical meta-synthesis of the evidence suitable to inform policy decisions and to be disseminate to relevant audiences.

Methods

A systematic review of the literature relating to the effectiveness of interventions for increasing or maintaining physical activity in adults around the period of retirement was carried out. The review also included qualitative studies (which report the views or perceptions of people rather than numbers) and the perceptions of older adults and service providers regarding physical activity and interventions around the period of retirement. The population under consideration was adults who were due to retire or who had recently retired. Any intervention that was described as having the purpose of increasing physical activity delivered in any setting and by any agent was within the scope of the work. Studies reporting any outcome relating to an effect on physical activity or the well-being of people around the transition to retirement were eligible for inclusion.

Comprehensive literature searches were undertaken from March 2014 to December 2014 to retrieve studies that met the review inclusion criteria. Searches were not limited by language or location but were restricted by date to studies published from 1990 onwards. Methods for the identification of relevant studies included electronic database searching, reference list checking and citation searching.

Data were extracted by two reviewers using a data extraction form devised for the purpose. Extracted data were checked by the team and disagreement was resolved by discussion. The appraisal of study quality was performed using tools based on established criteria for considering risk of bias, with separate tools for the intervention studies and the qualitative papers. Results are presented by narrative synthesis of the effectiveness studies, thematic synthesis of the qualitative data and a meta-synthesis of the two review components. A meta-analysis of intervention effectiveness across the body of literature was not possible owing to the heterogeneity of intervention content and outcome measurement. Following completion of the review, a series of public involvement sessions with people who had retired and staff providing services to older adults were carried out in order to explore the applicability of the findings.

Results

The review of effectiveness literature included 103 papers that reported findings following interventions. We identified a large volume of papers that described study populations as being older adults. However, we found only one paper that specifically referred to its participants as being recently retired. Apart from this one paper, all other intervention literature that we identified provided only age bands or average ages for study populations, with a minority including references to numbers of people in employment/not in employment and a smaller number still including references to retirement. We therefore adopted an approach to selecting papers for review based on age as a proxy for the period of retirement transition where this was not specifically reported.

We developed a grading system of applicability for the papers, with A1 papers having populations described as recently retired or about to retire, A2 papers having a population mean or median of age 55–69 years, A3i papers having a population mean/median in the age range 70–75 years, and A3ii papers having a population mean/median of 49–54 years of age. Owing to the large volume of literature identified, we took the decision to exclude papers that had study participants with an average age of > 75 years or < 49 years of age, as these adults were furthest from retirement age and the data may have had limited applicability to our research questions. The review therefore included 64 papers reporting interventions in populations of older adults in our proxy retirement transition period of mean age 55–69 years and a further 39 papers reporting interventions in those with an average age of 49–54 or 70–75 years.

The included effectiveness literature was of a reasonably high quality in terms of study design, with a large proportion (35) of the A1/A2 papers reporting studies using a randomised controlled design, and 18 papers reporting studies using a cluster randomised design. The greatest proportion of this work was reported by authors based in the USA (32 papers), followed by those based in the Netherlands and then Australia/New Zealand. We considered international variation in laws and retirement ages during the review. Three of the A1/A2 papers were from the UK. We identified only one study that described participants as being of predominantly low SES and one paper with participants from a minority ethnic population. The majority of studies either were unclear regarding education/SES or included diverse participants.

The intervention approaches encompassed: training of health-care professionals; counselling and advice giving; group sessions; individual training sessions; in-home exercise programmes; in-home computer-delivered programmes; in-home telephone support; in-home diet and exercise programmes; and community-wide initiatives. The majority of papers reported some intervention effect, with evidence of positive outcomes for all types of programmes. As described above, there was a dearth of evidence specifically referring to the retirement transition period. There was no indication that the interventions in our included papers would be unsuitable or not effective for our target population.

We were unable to find any evidence within the included papers that the transition to retirement period was or was not a significant point for intervention. The only observation regarding differences in outcome between population subgroups mentioned by some authors related to the potential for older participants to achieve less improvement in physical activity than younger participants.

The review of qualitative studies included 55 papers. The data provide detailed descriptions of factors that may influence physical activity in retirement and the uptake of interventions. The importance of a social element to exercise, differing views of exercise versus physical activity and the influence of social and environmental factors are outlined. The review highlighted that the value of physical activity relates not only to its positive physical effects and weight-control effects but also to its importance as a source of increased self-worth, self-efficacy, self-esteem and independence.

We completed a meta-synthesis across the two forms of data by examining features reported as positive elements in the qualitative papers and comparing these with the content and delivery of the interventions. There were eight key aspects identified: ease of accessibility; affordability; daytime provision; appropriateness of timing in terms of point in life; the inclusion of social elements; the inclusion of challenges or goal-setting; whether the intervention is modified for sex/gender or culture; and whether or not the programme is tailored for the individual. The aspects that appeared to be included in interventions the least were the provision of interventions at an appropriate point in time for the individual and the provision of a social element. The aspects most often included were daytime provision and individual tailoring.

Following completion of the review, we presented and discussed the findings at a series of sessions with groups of retired people and staff providing services to older adults. Data from both groups echoed the main findings that social elements and paying attention to individual preferences are important.

Limitations

The most substantial limitation to the review was the lack of intervention studies that identified their population as being about to retire or recently retired. Instead, the primary studies used age bands or average age to define populations, with few studies including any reference to employment/retirement characteristics. Even in those studies that did include this, the information was frequently unclear.

Conclusions

Studies of physical activity interventions in older adults indicate that a range of interventions might be effective for maintaining or increasing physical activity in people around the time of retirement. There is currently a raft of different measures in use, with many self-reported measures and few studies including an evaluation of sedentary time. Although the retirement transition is considered a significant point of life change, little literature has reported interventions during this period. Any interventions developed in the future should take account of the views and preferences of the target population and should evaluate effectiveness by measuring meaningful outcomes and a control group design.

Recommendations for research

1. Studies are needed that are carried out specifically in adults in the period immediately before or shortly after retirement. It is not currently known whether or not the transition to retirement provides a key opportunity for interventions to effect change in physical activity levels throughout older life.
2. Studies that are carried out in older adults should include specific references to the retirement status of participants when reporting characteristics of participants.
3. Future studies should include objective measures of activity and should not be reliant on self-reported data.
4. In addition to including measured as well as self-reported evaluation, there is a need for studies to include no-intervention rather than comparator intervention control arms. There was the risk of a Hawthorne effect during some studies that had a no-intervention rather than a comparator intervention, and this potential threat needs to be fully considered in the analysis and reporting of results.
5. There is currently a diverse range of outcome measures in use, including those that relate to levels of activity, levels of fitness, psychosocial elements and correlates of physical activity, which reflects a lack of consensus about the aims of physical activity interventions. If the effectiveness of different interventions is to be compared, there needs to be greater consistency regarding the choice of primary and secondary outcome measures.
6. Future research should consider both the meaningfulness of the outcome measures used and the inclusion of measures of sedentary behaviour in order to further investigate where time spent on other aspects of life is being reduced in order to increase physical activity time.
7. Future research should consider the views and perceptions of the target population in the development and introduction of interventions. Although social elements were described as important, few studies outlined this as a core aspect of interventions. A key theme in the qualitative data was the need for interventions to be viewed as attractive to potential participants, with the need also for programmes to be perceived as enjoyable, although few interventions described these aspects as being important in their design.
8. A large proportion of studies were carried out with predominantly female participants. There is an evidence gap regarding interventions for males. There was evidence that the different sexes may benefit from interventions tailored to them; for example, women enjoyed the social aspects of physical activity, whereas men may prefer individual programmes. Again, future interventions should explore the potential importance of tailoring interventions by sex or culture.

Implications for health care

1. There are currently few data available regarding the effectiveness of interventions that aim to maintain or enhance physical activity in adults around the time of retirement. It is not possible, therefore, to make conclusive recommendations to underpin policy and practice beyond indicating that a range of interventions including individual and group programmes may be effective in this population.
2. Interventions that do exist for older adults require robust evaluation in order to determine their suitability for use in those around retirement transition.
3. Factors that may be associated with enhanced outcomes following intervention are: inclusion of a social element; free or low cost; and being perceived as attractive to an individual. There was variation in individual preferences for type of activity, and there is a need to offer a range of options for individuals to select from rather than a 'one size fits all' approach.
4. There is currently a dearth of evidence to inform the selection and implementation of interventions that may reduce differences in levels of physical activity following retirement, as well as a dearth of evidence on the impact on health inequalities. Qualitative evidence suggests the importance of interventions being perceived as appropriate for sex/gender and culture. This aspect was examined only rarely in the identified literature.

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