Editorial


Changes in sedentary behaviours across the retirement transition: a systematic review

In the physical activity literature, ‘sedentary’ was once a term used interchangeably with ‘inactive’ to describe those who did not undertake regular exercise. Since the 1990s, however, there has been increasing research interest in the role of sedentary behaviour (SB) on health, and there is now a recognition that SB is not defined simply as a lack of physical activity but is instead a separate behaviour in its own right [1]. Uninterrupted periods of sedentary time have been shown to be detrimental to health with strong evidence of an association between sedentary behaviour and all-cause and cardiovascular disease mortality and moderate evidence for risk of type 2 diabetes [2]. Moreover, it appears that this effect is independent of physical activity behaviour such that even those who undertake sufficient physical activity to meet public health guidelines but spend large proportions of the their time sitting carry an increased health risk compared with those who are both physically active and spend less time being sedentary. Older adults are the most sedentary group in our society with sedentary time accounting for ∼65–80% of their waking day [3]. Over 70% of older adults spend in excess of 8.5 h per day sitting [4].

Many 21st century occupations require individuals to spend considerable periods of the 7–8 hour working day sitting (working on computers, in meetings, etc.). Intuitively, it would seem that retirement might reduce the time spent sitting by bringing an opportunity for greater self-determination of how time is spent and perhaps lower overall levels of sedentary behaviour. However, many sedentary leisure pursuits, including TV viewing, may increase in retirement replacing sedentary occupational time with sedentary leisure time and indeed could result in higher levels of sedentary behaviour. A recent review suggests employment status is associated sedentary behaviour with those not in full-time employment more likely to be sedentary [5]. These differences are likely to be confounded by the ageing process and associated alterations or limitations in health (e.g. musculoskeletal decline) reducing the amount of standing or physical activity an individual can undertake. Increased life expectancy means that people are likely to be retired for longer. If it is established that sedentary behaviour increases in the transition to retirement, it might be worthwhile using the point of retirement to deliver guidance on sedentary behaviour to older adults. Given that transition points such as retirement may be ‘teachable moments’ or opportunities for changing health behaviours [6], interventions designed to reduce sedentary behaviour, delivered at the point of retirement may be an effective way of establishing healthy lifestyle habits during older adulthood.

Studies examining the change in physical activity behaviour resulting from the transition to retirement have been systematically reviewed [7] and suggest that physical activity may increase in retirement. In this issue, Sprod and colleagues review the small number of studies that have looked at sedentary behaviour in this transition period. This systematic review synthesises the findings of 12 studies from 6 countries that have attempted to determine the direction and magnitude of changes in sedentary behaviour occurring after
retirement. The review suggests that while retirement may result in greater leisure time SB such as television viewing and reading, total sitting time is reduced. It seems therefore that the reduction in occupational sedentary behaviour made possible by retirement is replaced by some sedentary leisure pursuits but on balance, retirees use the additional disposable time for more active pursuits.

In the studies included in the review, reason for retirement and the context in which an individual retires is not always clearly defined and likely to be a confounder. Retirement on the grounds of ill-health, caring responsibilities for a family member or a transition to part-time work are difficult to control for and likely to confound the changes in sedentary behaviour. In addition, the heterogeneous and often imprecise sedentary behaviour measures used in the studies may limit the reliability of the conclusions. A total of 10 of the 12 studies included in the review used some form of self-reported measures of sedentary time. Self-reported behaviours are subject to both recall and social desirability bias and tend to underestimate time spent sitting with the scale of the underestimation being greater with increases in reported sitting time [8]. The authors acknowledge the low quality of studies included in the review with 6 of the 12 studies scoring below 50% in their critical appraisal and assessed as having high risk of bias. High-quality longitudinal studies that track objectively measured sedentary behaviour across the retirement transition are still required.

In addition to study quality, the location of studies included in the review may limit the application of the findings to future health promotion policy. Eleven of the 12 studies were undertaken in high-income countries where work and retirement practices are undergoing considerable change. Traditional patterns of work, where adults worked Monday to Friday 9 am to 5 pm from 18 to 65 years of age and then retired, have given way to more flexible work arrangements. In many countries, age discrimination legislation has eliminated mandatory retirement ages, and many people move from full-time employment to part-time work or take up other paid or unpaid work when they retire from their main job—such that there may no longer be a clear boundary between work and retirement. The implications of these changes in work culture and practice may make retirement less of a sharp transition and more of a gradual change process. Moreover, an increased awareness of the hazards of prolonged periods of sedentary time in the workplace, combined with initiatives such as the availability of sit-stand workstation options and office culture shifts that make standing or varying between sitting and standing more acceptable, may alter the contribution that the workplace makes to sedentary behaviour and reduce the impact of retirement on total sedentary time.

This review attempts to explain how older adults divide waking time between sedentary and non-sedentary activities once the demands of working life subside. Further high-quality research is required to determine whether changes in patterns of time use warrant interventions to reduce sedentary behaviour directed at those preparing for retirement.

Key points

• Many occupations require individuals to spend considerable periods of the 7–8 h working day sitting. Retirement might reduce the time spent sitting by bringing an opportunity for greater self-determination of how time is spent.
• The review by Sprod et al. suggests that while retirement may result in greater leisure time SB such as television viewing and reading, total sitting time is reduced.
• The quality of existing studies, imprecise measurement SB used and confounders such as reasons for retirement may limit the reliability of the conclusions.
• Further high-quality research is required to determine whether changes in patterns of time use warrant interventions to reduce SB directed at those preparing for retirement.

Conflicts of interest

None declared.

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References