

GOLF ON PRESCRIPTION FOR FRAIL OLDER PEOPLE: A PILOT STUDY

David Hewson¹, Lesley-Anne Tanhamira¹, and Nimra Khan¹

¹Institute for Health Research, University of Bedfordshire
email: david.hewson@beds.ac.uk

Introduction

There is a growing body of evidence regarding both the benefits of physical activity and the risks of physical inactivity, which has been identified as the fourth-largest cause of mortality worldwide (Kohl et al., 2012). The benefits of physical activity include reduced rates of many conditions such as stroke, type 2 diabetes, depression and falls (Lee et al., 2012). Like many other physical activities, golf has been studied in terms of the health benefits of participating. A recent scoping review identified the health benefits of playing golf, as well as noting the lack of evidence concerning the health effects of playing golf on specific conditions (Murray et al., 2017). One common age-related condition in which golf might be beneficial is frailty, which makes older people are more vulnerable to additional stressors and increases the risk of adverse outcomes such as falls (Abellan van Kan *et al.*, 2008). Frailty can be classified into different severity levels, with a greater likelihood of recovery occurring at lower frailty levels, such as mild frailty (Frost *et al.*, 2017). In a recent opinion piece, it was recommended that community-embedded exercise should be prescribed for frail older people (Merchant, Morley and Izquierdo, 2021). Given the prevalence of mild frailty in England is estimated at 32% (Fogg *et al.*, 2022), this would equate to more than three million older people who could benefit from exercise prescription. The current policy of the National Health Service (NHS) in England requires all older people aged 65 and above to be routinely screened for frailty using their electronic health records, with mildly frail older people recommended to increase their physical activity. In Luton, rather than offer recommendations, a pilot study has begun in which physical activity sessions are offered free of charge to mildly frail older people. Golf has been included as one of the activities provided in the 2022 version of the program. Accordingly, the aim of this study is to evaluate whether golf has an effect on physical function and quality of life in mildly frail older people.

Methods

This pilot study used a quasi-experimental study design with no control group. Participating general practices in Luton used the electronic Frailty Index (eFI) to screen all older people aged 65 years as robust or with mild, moderate or severe frailty (Clegg *et al.*, 2016). People identified as mildly frail were sent an invitation letter in which they were offered free participation in an exercise program, with golf one of the options available. People who responded to the invitation were given details about the exercise programs available and if they agreed to participate, were asked to give their informed consent. Ethical approval for the study was obtained from the Institute for Health Research Ethics Committee of the University of Bedfordshire (IHREC956).

The golf intervention was designed in consultation with a PGA Professional, with participants given two one-hour sessions of golf each week over a 16-week period. In addition to the PGA Professional, who delivered the sessions, physiotherapy and occupational therapy students assisted at each session of 12 participants. The golf training began with a two-week focus on putting, then chipping, before pitching was introduced by the fifth week of exercise. Participants transitioned from the short-game practice area onto a short-course from the seventh week of activity. This gradual introduction was used to minimize the risk of injury in this mildly frail population. Each exercise session finished with a competition for all participants, followed by a social activity session in the clubhouse.

Data was collected at baseline for physical activity levels, physical function, as well as for golf-specific balance and performance measures. Follow-up tests were undertaken after 8 and 16 weeks of the intervention.

Results and Discussion

Data collection is currently ongoing. Results will be presented on the attractiveness of golf in comparison to the other physical activities offered, the adherence of participants to the program, as well as the changes observed in both physical function and quality of life.

Significance

This study is the first time frail older people have been prescribed golf. This study could provide evidence of the increasing potential for golf clubs to position themselves in the healthcare sector as a way of generating additional revenue streams as well as providing support to their local community.

References

- Abellan van Kan, G. et al. (2008) 'Frailty: Toward a Clinical Definition', *J Am Med Dir Assoc*, 9, pp. 71-72.
- Clegg, A. et al. (2016) 'Development and validation of an electronic frailty index using routine primary care electronic health record data', *Age Ageing*, 45, pp. 353-360.
- Fogg, C. et al. (2022) 'The dynamics of frailty development and progression in older adults in primary care in England (2006–2017): a retrospective cohort profile', *BMC Geriatrics*, 22, 30.
- Frost, R. et al. (2017) 'Health promotion interventions for community-dwelling older people with mild or pre-frailty: a systematic review and meta-analysis', *BMC Geriatrics*, 17, 157.
- Kohl, H. W. et al. (2012) 'The pandemic of physical inactivity: global action for public health', *Lancet*, 380, pp. 294-305.
- Lee, I. M. et al. (2012) 'Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy', *Lancet*, 380, pp. 219-229.
- Merchant, R. A. et al. (2021) 'Exercise, Aging and Frailty: Guidelines for Increasing Function', *J Nutr Health Aging*, 25, pp. 405-409.
- Murray, A. D. et al. (2017) 'The relationships between golf and health: a scoping review', *Br J Sports Med*, 51, pp. 12-19.