A balance-training exercise programme for community-dwelling rural older people: Evaluation by a mixed methods design

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Karyn Blackman
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Abstract

Specifically designed exercise programmes are recognised as an effective intervention to prevent accidental falls among older adults. Because the challenges of providing fall prevention interventions are greater in rural areas, it is likely that rural programmes will require special consideration with respect to design and implementation. Although many studies have investigated fall prevention exercise programmes, relatively few have investigated programmes delivered in a rural context.

This mixed methods study aimed to investigate the effects of a balance-training exercise programme on fall risk factors in 147 community-dwelling rural older adults from five locations across northern New South Wales. The study’s secondary purpose was to explore programme processes and outcomes. To achieve these aims, a randomised controlled trial compared the impact of the exercise programme with that of a usual care control group. An embedded qualitative study used semi-structured interviews and a modified grounded theory approach to explore participant and provider experiences and views of the programme.

There were significant improvements in the two primary outcome measures, composite falls risk score (measured by the Physiological Profile Assessment, p= 0.012) and balance (measured by the Berg Balance Scale, p=0.043). There were also significant improvements for the intervention group compared with the control group, in several secondary outcome measures; knee extensor strength, hand reaction time, sway on foam with eyes closed, choice stepping reaction time, and timed stand on one foot.

Qualitative analysis and interpretation indicated that program delivery format, type of exercise and exercising in a group, together with a range of biopsychosocial outcomes had contributed to enhanced quality of life. A starting grounded theory is presented to explain programme processes and outcomes. Despite several identified barriers, specific implementation strategies facilitated the delivery of an effective, feasible and acceptable exercise intervention in Northern New South Wales. It is anticipated that the findings of this study will inform policy, research and clinical practice.