

Analytic Framework for Home-based Exercise Interventions for Adults 65 Years and Older—Narrative Description

The analytic framework depicts postulated pathways through which home-based exercise interventions for adults 65 years and older might improve physical fitness and related outcomes. The diagram begins with the interventions considered in the systematic review. Home-based exercise interventions can include instruction or training on muscle strengthening exercises, balance exercises, or both. Interventions can be delivered to recruited adults 65 years and older. Interventions may increase physical activity, reduce physical inactivity, and improve flexibility among adults 65 years and older who engage in the exercises. Intervention engagement may lead to improvements in measures of physical fitness including muscle strength, muscle power, muscle endurance, and balance. Improved physical fitness may contribute to positive mental health and a reduction in falls. Both improvements in mental health and reductions in falls may contribute to reductions in morbidity and mortality. The combination of improvements in physical fitness and mental health with reductions in morbidity and mortality may contribute to improved quality of life.

Potential harms of home-based exercise interventions for adults 65 years and older include the possibility of exercise-associated injuries. No potential additional benefits are postulated.

Potential effect modifiers of intervention effectiveness include focus of intervention exercises (e.g., muscle strength exercises only, balance exercises only, or strength and balance exercises), differences in the frequency and duration of exercise sessions, and differences in demographic characteristics of study participants (e.g., age; gender; race and ethnicity; income and educational attainment).