

# Exploring The Benefits of Regular Exercise on Frailty Syndrome in The Elderly

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## Abstract

**Purpose:** We aimed to investigate the impact of regular exercise on frailty syndrome in elderly adults, by comparing those who engage in physical activity at least twice a week for 30-45 minutes with those who do not.

**Methodology:** This study was conducted in a rural area of West Sumatra Province, Indonesia, in September 2022. This research involved 22 participants aged  $68.09 \pm 4.76$  years. The participants were equally divided into two groups: those who engaged in specific exercises such as brisk walking, light aerobics, and stretching at least twice a week for 30-45 minutes ( $n=11$ ), and those who did not engage in any structured physical activity ( $n=11$ ). Frailty syndrome was assessed using the FRAIL questionnaire in Bahasa, a validated tool for evaluating frailty in the Indonesian elderly. Statistical analyses were conducted using STATA Ver.16 software.

**Results/findings:** The results indicated that elderly individuals participating in regular exercise exhibited a significantly lower prevalence of frail syndrome compared to sedentary individuals (0% vs 36.36%,  $p=0.027$ ), suggesting that physical activity may mitigate frailty risk.

**Limitations:** Our study was limited by its small sample size and the specific demographic of a rural setting, potentially affecting generalizability. Additionally, the cross-sectional design restricted causal inferences about exercise and frailty.

**Contribution:** Our study emphasized the significance of regular exercise in mitigating frailty syndrome among elderly adults. Healthcare practitioners should recommend physical activity as a preventive measure, while policymakers should prioritize developing exercise interventions, including community-based programs, to improve the quality of life for the elderly.

**Novelty:** The novelty of this study lies in its focus on a rural elderly population in West Sumatra, using a culturally validated frailty assessment and demonstrating that regular exercise significantly reduces frailty risk.

**Keywords:** *aging, exercise, frail, physical activity, rural population*