

Trajectories of adherence to home-based exercise programs among people with knee osteoarthritis.

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The aim of this study was to investigate the presence of groups showing different trajectories of self-reported adherence to home exercise programs among people with knee OA, and to compare baseline characteristics across identified groups.

We performed a pooled analysis of data from three randomised controlled trials involving exercise interventions for people aged ≥ 50 years with clinical knee osteoarthritis ($n=331$) in Australia. Exercise adherence was self-reported on an 11-point numerical rating scale (NRS, 0=not at all, 10=completely as instructed). Latent class growth analysis was used to identify groups of participants with distinct trajectories of adherence, at intervals from 12 weeks up to 78 weeks from baseline. Baseline characteristics of these groups were compared using chi-squared tests, t-tests and Wilcoxon rank-sum tests where appropriate.

Two groups with different adherence trajectories were identified: a “Rapidly declining adherence” group ($n=167$, 50.4%) whose adherence was 7.2 ± 2.3 (out of 10) at 12 weeks, declining to 3.8 ± 2.4 by 22 weeks and remaining low thereafter; and a “Gradually declining adherence” group ($n=164$, 49.6%) whose adherence declined from 8.3 ± 1.7 to 7.6 ± 1.6 over the same period, and continued to decline slowly to 78 weeks. The “Rapidly declining adherence” group was younger ($p=0.03$), reported lower baseline WOMAC pain ($p=0.01$), better WOMAC function ($p<0.00$), higher quality-of-life ($p<0.00$) and higher self-efficacy ($p=0.04$) than the “Gradually declining adherence” group.

Two distinct trajectories of self-reported adherence to prescribed home exercise among people with knee osteoarthritis were found. Identification of patients within these groups on the basis of characteristic differences may enable adherence interventions to be better targeted to those who may benefit most.