

ACTIV – AGE @home, exercise-program for community dwelling frail older adults: effects on physical fitness, Activities of Daily Living, Participation and Health related Quality of Life

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Aim: This study investigated the effectiveness of a ‘functional-exercise@home’ program’ for frail community living older adults. The exercises were derived from daily activities and trained according evidence-based training-principles. It was hypothesized that this program could be effective in improving physical fitness, Activities of Daily Living, Participation and Health Related Quality of Life.

Method: This study was a single-blind pragmatic randomized trial with two intervention- and 1 control-group (n= 16) (pre-test-post-test, intention-to-treat analysis) including 71 participants (mean age 80y, range 70-97; sd 6.40 and mean Groninger-Frailty-Index- score 6.80; range 4-12; sd 2.22). ACTIV-AGE @home¹ (n=29) and ACTIV-AGE@home² (n=24) varied in training intensity with the latest more approaching the ideal workload of 80% of 1Repetition Maximum and thus being more intensive. Analysis of covariance was used to compare the outcomes across groups with post-tests as outcome and baseline-values as covariates. In addition, qualitative self-report data were collected.

Results: There were (borderline) significant differences between the intervention- and the control-group on the arm-curl test(p 0.03), Tinetti (p 0.052), participation (IPA)(p >0.000), subjective health (SF-36) (p 0.095) in favor for AA@home² compared to both AA@home¹ and the control condition. The qualitative data, in addition, revealed that the participants experienced positive effects: 90% felt healthier, stronger (70%), more stable (80%), more agile (70%), more confident (n=17/27), more mentally vital (90%) and had less fear of falling (60%).

Conclusion: Follow-up study is now being conducted to determine long term effectiveness, but these results can already be seen as promising for further research (e.g. increasing sample size) and development of the program.