**Table, Supplemental Digital Content 2. Adherence and dropout rates for the technology-based and traditional exercise groups**

| **Study Author** | **Exercise adherence a**  **(% sessions attended)** | | **Total dropout or loss to follow-up (%, n)** | | | **Dropout or loss to follow-up for reasons related to the intervention (%, n)** | | | **Reported dropout or loss to follow-up (n)**  (Reasons that related to the intervention are highlighted in bold. This excludes health related reasons) |
| --- | --- | --- | --- | --- | --- | --- | --- | --- | --- |
| **Technology based exercise** | **Traditional exercise** | **Technology based exercise (IG)** | **Traditional exercise (CG)** | **Other (UC/NI)** | **Technology based exercise (IG)** | **Traditional exercise (CG)** | **Other (UC/NI)** |  |
| Bieryla et al20 | 100% (9/9) | NA | 33% (n=2) | NA | 16.6% (n=1) | IG: 17%(n=1) | NA | NI: 16.6% (n=1) | IG: **Discontinued during training due to personal reasons** (n=1); unable to attend second follow-up session (n=1). NI: **Discontinued due to scheduling** (n=1). |
| Chao et al33 | 91.25% (7.3/8)b | NA | 6.2% (n=1) | NA | 6.25% (n=1) | IG: 0% (n=0) | NA | UC: 0% (n=0) | IG: Health reasons (n=1). UC: Health reasons (n=1). |
| Daniel et al21 | 87.62% (18.4±1.9/21) | 88.57% (18.6±2.3/21; SD 2.3) | 13% (n=1) | 13% (n=1) | 29% (n=2) | IG: 13% (n=1) | CG: 13% (n=1) | NI: 0% (n=0) | IG: Loss to follow up, **reason not provided** (n=1) CG: Loss to follow up, **reason not provided** (n=1) NI: Personal crises unrelated to the study (n=2) |
| de Bruin et al32 | 96% (23.04/24) | 65%b(7.8/12) | 15% (n=3) | 27% (n=4) | NA | IG:0% (n=0) | CG: 0% (n=0) | NA | IG: Back pain (n=2); eye operation (n=1). CG: Fall event outside training (n=2); hip operation (n=1); pneumonia (n=1). |
| Duque et al22 | 100% (12/12) | NA | 7% (n=2) | NA | UC: 0% (n=0)b | IG: 7% (n=2) | NA | UC: 0% (n=0)b | IG: **Logistics problems to attend the sessions** (n=2). |
| Franco et al23 | 100% (6/6)  Supplemental exercise:  95% (53/56) | 100% (6/6) | 21% (n=3) Supplemental exercise: 27% (n=3) | 15% (n=2) | 11% (n=1) | IG: 18% (n=2) | CG: 8% (n=1) | NI: 1% (n=11%) | IG: **Withdrew from the study following pre-testing due to time limitations (**n=2**)**; excluded due to difference in pre-and post-testing conditions (n=1).  CG: **Participant moved to the control group, as only pre- and post-test data was obtained** (n=1); excluded due to age (n=1)  NI: **Lost interest** on the study (n=1) |
| Hagedorn et al24 | 72.92%e (17.5/24)e | 67.92%(16.3/24)e | 21% (n=4)b | 25% (n=4)b | NA | IG+CG: 17% (n=6) | | NA | IG+CG: **Did not attend training** (n=2); hospitalization (n=2); **attended less than 12/24 training sessions** (n=4) e.Did not specify group allocation. |
| Janssen et al25 | Total: 90.63% IG1: 93.75% (22.5/24) IG2: 87.50%  (21/24) | NA | IG1: 0 % (n=0) IG2: 25% (n=2) | NA | 0% (n=0) | IG1: 0% (n=0)  IG2: 0% (n=0) | NA | NI: 0% (n=0) | IG2: Complaints related to osteoarthritis (n=1); hip fracture (n=1). |
| Jorgensen et al16 | 76.70% (15.34/20) | NA | 18% (n=5) | NA | 3% (n=1) | IG: 11% (n=3) | NA | UC: 3% (n=1) | IG: **Too far to travel** (n=2); **did not have time** (n=1); cancer (n=1); had to go on vacations (n=1). UC/insoles: **Did not fit the insoles** (n=1). |
| Keogh et al35 | 30 ± 24 (range 1–105) min/ weekc | NA | 32% (n=6) | NA | 13% (n=2) | IG: 16% (n=3) | NA | NI: 13% (n=2) | IG: Deterioration in health (n=2); **social and family commitments** (n=1); death (n=1); **no reasons provided** (n=2).  NI: **No reasons provided** (n=2). |
| Kim et al17 | 100% (24/24) | NA | 0% (n=0) | NA | 22% (n=4) | IG: 0% (n=0) | NA | NI: 11% (n=2) | NI: Illness (n=2); **loss of interest** (n=2). |
| Lai et al25 | 100% (18/18) | NA | 0% (n=0) | NA | 0% (n=0) | IG: 0% (n=0) | NA | UC: 0% (n=0) | None |
| Lee et al26 | 71.21%b, f | 66.52%, b, f | 0% (n=0)b | 0% (n=0)b | NA | IG:0% (n=0)b | CG:0% (n=0)b | NA | Noneb  Study omitted participants with poor adherence (<70%) from adherence calculation, and instead calculated adherence on: IG: n=39: 73%(24/33 sessions)b; CG: n=39: 70% (23/33 sessions)b  Categorized as **poor adherence**:(data used to recalculate adherence)  IG: n=1: 12% (4/33 sessions)b,f  CG: n=1: 25% (8/33 sessions); n=1: 32% (11/33 sessions); n=1: 18% (3/33 sessions)b,f. |
| Maillot et al27 | 97.50% (23.4/24) | NA | 6% (n=1) | NA | 6% (n=1) | IG: 6% (n=1) | NA | NI: 0% (n=0) | IG: **Gave up on the 3rd session reporting that it was physically too difficult** (n=1). NI: Lost to follow-up due to medical reasons (n=1). |
| Pichierri et al28 | 81.99% f | NA | 36% (n=5) | NA | 45% (n=5) | IG: 21% (n=3) | NA | UC: 27% (n=3) | IG: Injury due to a fall (n=2); **ashamed of playing computer game** (n=1).  Study omitted participants with poor adherence due to permanent sickness and low motivation from adherence calculation.  Categorized as **poor adherence:** (data used to recalculate adherence)  IG: n=1: 71% (17/24 sessions); n=1: 42% (10/24sessions)f  UC: Too frail (n=1); injury due to a fall (n=1); **personal obligations** (n=3). |
| Pichierri et al29 | 89.61% f | 83.58% f | 27% (n=4) | 31% (n=5) | NA | IG: 27% (n=4) | CG: 12.5% (n=2) | NA | IG: **Low motivation** (n=2)  CG: Death (n=1); dizziness (n=1); relocation (n=1)  Study omitted participants with poor adherence (<75%) from adherence calculation, and instead calculated adherence on: IG: n=11: 94.7%(22.7/24 sessions) e; CG: n=11: 86.9% (20.8/24 sessions) e  Categorized as **poor adherence**:(data used to recalculate adherence)  IG: n=1: 58.3% (14/24 sessions); n=1 65.2% (15/23 sessions)b,f  CG: n=1: 62.5% (15/24 sessions); n=1: 70.8% (17/24 sessions)b,f. |
| Rendon et al30 | 83.33% (15/18) | NA | 20% (n=4) | NA | 10% (n=2) | IG: 20% (n=4) | NA | NI: 10% (n=2) | IG: **Loss of interest and/or arthritic discomfort** (n=4). NI: **Did not show to re-assessment** (n=2). |
| Schoene et al18 | 100% (15 min-2.75 days per week/ 15 min-2 days per week) | NA | 17% (n=3) | NA | 11% (n=2) | IG: 11% (n=2) | NA | NI: 0% (n=0) | IG: **Limited space in the home** (n=1); did not attend re-assessment due to health reason (n=1); **unable to use the system** (n=1). NI: Did not attend re-assessment due to health reasons (n=2). |
| Silveira et al36 | Total IG1 and IG2: 70.25% IG1: 67.78% (54.9/81) IG2: 72.72% (58.9/81) | 54.32% (44/81) | Total 15% IG1 21% (n=3) IG2 8%(n=1) | 41% (n=7) | NA | IG1: 0% (n=0)  IG2: 0% (n=0) | CG: 35% (n=6) | NA | IG1 Side effect of chemotherapy (n=1); scheduled for hip operation (n=1); broken toe (n=1). IG2 Broken shoulder (n=1). CG: **Lack of motivation** (n=6); health problem (n=1). |
| Szturm et al 19 | 100% (16/16)b | 100% (16/16)b | 13% (n=2) | 7% (n=1) | NA | IG: 7% (n=1) | CG: 7% (n=1) | NA | IG: **Opted not to continue with program** (n=1); medical reason (n=1). CG: **Opted not to continue with assessment** (n=1). |
| Toulotte et al 31 | IG1: 100% (20/20)  IG2: 100% (20/20) | 100% (20/20) | IG1: 0% (n=0) IG2: 0% (n=0) | 0% (n=0) | 0% (n=0) | IG1: 0% (n=0)  IG2: 0% (n=0) | CG: 0% (n=0) | NI: 0% (n=0) | None |
| Williams et al15 | 79.17% (mean 19 (range 3-24)/24) | Not reported | 13.3% (n=2 ) | 33.3% (n=2 ) | NA | IG: 0% (n=0) | CG: 0% (n=0) | NA | IG: Pain (n=1); death of spouse (n=1). CG: Admitted to hospital (n=2). |
| Abbreviations: NA, not applicable; IG, technology-based exercise group; CG, traditional exercise group; UC, usual care; NI, no intervention.  aAverage number of sessions attended, out of the total number of sessions prescribed. Calculation is based on participants that completed the intervention (this excludes dropouts).  bData provided by authors upon request.  cAs dose was self-selected, average number of minutes per week is reported.  dTotal number of sessions varied depending on length of hospital stay.  eStudies did not include participants with poor adherence when reporting adherence rates.  fAdherence rates were recalculated to include participants with low adherence (n=2).Therefore average number of sessions attended is reported. | | | | | | | | | |