**Participant Flow**

# Enrollment

Assessed for eligibility (n=90)

Ineligible (n=12)

* Not meeting inclusion criteria (n=8)
* Refuse to participate (n=4)

Randomization (n=68)

Allocated to retro walking group (n=23)

Allocated to control group (n=22)

Allocated to forward walking group (n=23)

Baseline assessment (n=68)

Baseline assessment (n=68)

Baseline assessment (n=68)

**Allocation**

**Intervention**

**(6 weeks)**

3 days/week for 6 weeks of standard physiotherapy (n=22)

3 days/week for 6 weeks of forward walking training + standard physiotherapy (n=23)

3 days/week for 6 weeks of retro walking training + standard physiotherapy

(n=23)

**Follow-up**

Posttest assessment at 6-week (n=21)

Posttest assessment at 6-week (18)

Posttest assessment at 6-week (n=20)

# Analysis

Intention-to-treat analysis (n=68)

**Baseline Characteristics**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | All  | Retro walking group | Forward walking group | Control group |
| Mean age (min - max), years | 55.6 (45 - 66) | 54.6 (45 - 66) | 55.3 (47 - 65) | 56. 8 (46 - 66) |
| Gender (male/female), n | 30/38 | 12/11 | 9/14 | 9/13 |
| Mean weight (min - max), kg | 62.8 (40 – 100) | 63.4 (40 – 100) | 62.6 (49 - 78) | 62.3 (46 - 78) |
| Mean height (min - max), m | 1.5 (1.4 – 1.7) | 1.5 (1.4 – 1.7) | 1.5 (1.4 – 1.7) | 1.5 (1.4 – 1.7) |
| Mean BMI (min - max), kg/m2 | 26.1 (14.7 – 33.3) | 26.2 (14.7 – 33.3) | 26.1 (18.1 – 30.5) | 26.1 (20.4 – 30.1) |
| Mean (SD) NRS | 5.9 (0.8) | 5.7 (0.8) | 6.1 (0.7) | 5.8 (0.8) |
| Mean (SD) WOMAC, % | 53.3 (3.2) | 52.9 (3.3) | 53.3 (3.1) | 53.8 (3.3) |
| Mean (SD) TUG, Sec | 9.4 (0.3) | 9.4 (0.4) | 9.3 (0.3) | 9.3 (0.3) |
| Mean (SD) Quadriceps Strength, kg | 10.8 (1.9) | 11.1 (2.2) | 11.04 (1.6) | 10.2 (1.9) |

NRS: Numerical rating scale; WOMAC: Western Ontario and McMaster Universities Osteoarthritis Index; n: number of participants; TUG: Timed up and go test

**Outcome measures**

Completion rate of primary and secondary outcome measures at week 6 (posttest assessment)

|  |  |
| --- | --- |
| Completion rates (x/N) (%) of total (N) participantsx= number of completed participantsN= total participants  | Completion rate at week-6 |
| Retro walking group | Forward walking group | Control group |
| NRS | 21/23 (91) | 20/23 (87) | 18/22 (82) |
| WOMAC | 21/23 (91) | 20/23 (87) | 18/22 (82) |
| TUG | 21/23 (91) | 20/23 (87) | 18/22 (82) |
| Quadriceps muscle strength  | 21/23 (91) | 20/23 (87) | 18/22 (82) |

NRS: Numerical rating scale; WOMAC:

Western Ontario and McMaster Universities Osteoarthritis Index;

TUG: Timed up and go test

Outcome measures at six weeks after completion of trial in retro walking, forward walking and control groups.

|  |  |  |  |
| --- | --- | --- | --- |
|  | Retro walking groupMean (SD) | Forward walking groupMean (SD) | Control groupMean (SD) |
| NRS | 3.7 (0.8) | 4.3 (1.3) | 4.7 (0.8) |
| WOMAC | 47.6 (3.3) | 49.5 (4.1) | 51.2 (3.7) |
| TUG | 8.7 (0.4) | 9.1 (0.3) | 9.2 (0.3) |
| Quadriceps muscle strength  | 12.8 (1.9) | 12.1 (1.6) | 11.1 (2.4) |

NRS: Numerical rating scale; WOMAC: Western Ontario and McMaster Universities Osteoarthritis Index; TUG: Timed up and go test

**Adverse events**

There were no adverse events reported for this trial.