Appendix1. Comparison of post-exercise changes in the Kihon Checklist, the Senior Fitness Test, and musculoskeletal discomfort between the non-frail participants of two groups

|  |  |  |  |
| --- | --- | --- | --- |
|  | Flexi-Bar group(n = 24) | Multi-Component Exercise group(n = 24) | *p*-value |
| Outcome variable | Mean (SD) | Median value (IR) | Mean (SD) | Median value (IR) | Mann-Whitney U test |
| KCL  | -0.75 ± 1.29 | -0.50 (-1.00-0.00) | 1.33 ± 2.96 | 0.00 (0.00-1.00) | 0.01\* |
| SFT  |  |  |  |  |  |
| BMI | -0.54 ± 1.11 | -0.15 (-1.08-0.33) | -0.17 ± 0.78 | 0.00 (-0.23-0.00) | 0.48 |
| Chair stand up for 30 seconds (repetitions) | 2.33 ± 3.94 | 2.50 (-1.75-5.50) | -0.25 ± 3.98 | 0.00 (-2.75-0.00) | 0.13 |
| Arm curl (repetitions) | 0.42 ± 3.78 | 0.00 (-2.75-3.00) | -0.75 ± 2.60 | 0.00 (-1.75-1.00) | 0.67 |
| 2-minute step test (repetitions) | 13.00 ± 17.75 | 11.50 (0.25-26.00) | 2.92 ± 12.11 | 0.00 (0.00-9.25) | 0.13 |
| Chair sit and reach (cm) | 2.83 ± 11.02 | -1.00 (-6.25-7.50) | 1.75 ± 5.29 | 0.50 (0.00-5.00) | 0.51 |
| Back scratch (cm) | 5.17 ± 6.46 | 4.00 (0.25-9.75) | 1.17 ± 5.10 | 0.00 (0.00-2.25) | 0.09 |
| 8-foot up and go (seconds) | 0.49 ± 2.90 | -0.58 (-1.15--2.17) | -0.07 ± 0.84 | -0.03 (-0.48-0.43) | 0.76 |
| The number of body parts with discomfort  | -2.25 ± 1.96 | -1.50 (-3.75- -1.00) | -0.58 ± 0.79 | -1.00 (-1.00- 0.00) | 0.03\* |

KCL: Kihon Checklist; SFT: Senior Fitness Test; SD: standard deviation; IR: interquartile range

\*: *p*<0.05

Appendix 2. Comparison of post-exercise changes in the Kihon Checklist, the Senior Fitness Test, and musculoskeletal discomfort between the frail participants of two groups

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|  | Flexi-Bar group(n = 16) | Multi-Component Exercise group(n = 16) | *p*-value |
| Outcome variable | Mean (SD) | Median value (IR) | Mean (SD) | Median value (IR) | Mann-Whitney U test |
| KCL  | 0.13 ± 0.64 | 0.00 (0.00-0.75) | -1.13 ± 2.47 | 0.00 (-4.00-0.75) | 0.51 |
| SFT  |  |  |  |  |  |
| BMI | -0.20 ± 2.78 | -0.75 (-1.70-0.65) | 0.24 ± 0.45 | 0.00 (0.00-0.48) | 0.28 |
| Chair stand up for 30 seconds (repetitions) | 0.38 ± 2.07 | 1.00 (-0.75-2.00) | -0.25 ± 3.06 | 0.00 (-1.50-0.75) | 0.38 |
| Arm curl (repetitions) | -2.50 ± 6.32 | -1.50 (-4.50--1.00) | 0.75 ± 4.20 | 0.00 (-0.75-1.00) | 0.07 |
| 2-minute step test (repetitions) | 14.88 ± 23.25 | 13.50 (0.25-35.00) | -7.13 ± 6.81 | -8.50 (-13.75-0.00) | 0.02\* |
| Chair sit and reach (cm) | 10.50 ± 6.48 | 12.00 (6.50-14.75) | 4.75 ± 5.70 | 3.00 (0.25-8.75) | 0.11 |
| Back scratch (cm) | 6.13 ± 14.80 | 2.50 (-2.25-8.50) | -2.38 ± 6.72 | 0.00 (0.00-0.00) | 0.13 |
| 8-foot up and go (seconds) | -1.61 ± 2.83 | -0.85 (-4.61-0.36) | -0.96 ± 2.19 | -0.10 (-0.83-0.03) | 1.00 |
| The number of body parts with discomfort  | -1.38 ± 1.30 | -1.00 (-2.00- -0.25) | -0.75 ± 1.04 | -1.00 (-1.75- 0.00) | 0.44 |

KCL: Kihon Checklist; SFT: Senior Fitness Test; SD: standard deviation; IR: interquartile range

\*: *p*<0.05