Additional File 7

Findings: Quasi-experimental study - Does participation in Walking Netball (WN) improve extremity function and gait Function

Overall physical function

Analysis indicates a meaningful improvement in SPPB scores (p=.001, n^2_p=.18) (see Table 6). However, analysis post-hoc identified non-meaningful differences. Indeed, post-hoc indicated a non-significant decrease of .36 (t=2.33, p=.15, d=.34) (95% CI -.79-.07) in the control group and a non-significant increase of .31 in the WN group (t=2.14, p=.22, d=.31) (95% CI -.09-.70). At baseline neither the intervention nor control group presented scores reflecting physical dysfunction.

Gait speed

Participation in the WN programme contributed to meaningful improvements in gait speed (p=.012, n^2_p=.13) when compared to the control group (see Table 6). Post-hoc paired samples t-tests demonstrated a meaningful reduction of -.57 seconds (t=5.98, p=.001, d=.86) (95% CI .309-.839) in the intervention group, while a non-significant reduction of .20 (t=1.939, p=.352, d=.28) (95% CI .085-.490) was observed in the control group (see Figure 1).

Sit-Stand Ability

Participation in WN resulted in meaningful changes in the ability to sit and stand from a chair 5-times (p=.001, n^2_p=.59) when compared to the control group (see Table 6). A meaningful reduction in time to complete the test of 2.48 seconds was observed in the WN group (t=7.51, p=.001, d=1.10) (95% CI 1.57-3.39). While an increase of 1.40 seconds was observed in the control group (t=7.51, p=.001, d=1.10) (95% CI 1.57-3.39) (see Figure 2).

Balance

Participation in the WN programme contributed to small but meaningful improvements in balance scores (p=.009, n^2_p=.04) when compared to the control group (see Table 6). The WN group improved significantly by .27 points (t=2.68, p=.06, d=.39) (95% CI -.07-.55), while a non-significant decrease of .05 was observed in the control group (t=.42, p=1.00, d=.06) (95% CI -.35-.26).

Functional Ability

Participation in WN contributed to improvements in functional ability as measured through the TUG (p=.012, n^2_p=.13) when compared to the control group (see Table 6). Post-hoc paired samples t-tests demonstrated a meaningful reduction of .53 seconds (t=3.92, p=.001, d=.57) (95% CI -.90--.16) in the intervention group and a significant increase of .37 seconds (t=2.57, p=.008, d=.37) (95% CI -.03-.78) was observed in the control group (see Figure 3).

Does Participation in Walking Netball Improve Muscular Strength

Participation in the WN group did not contribute to meaningful adaptions in grip strength (p=.87, n^2_p=.00). Upon eliminating the group interaction effect, there were small observable differences between time points (p=.001, n^2_p=.20) and groups (p=.01, n^2_p=.14)

Does Participation in Walking Netball Improve Physical Fitness

Participation in WN contributed to meaningful differences in physical fitness (measured with the 6MWT) (p=.001, n^2_p=.63) when compared to the control group (see Table 6). Post-hoc analysis indicates meaningful differences in both groups. More specifically, the control group improved significantly by 22.01 meters (t=3.59, p=.001, d=.50) (95% CI 5.17-38.85), while the WN group improved to a greater extent by 52.26 meters (t=9.96, p=.001, d=1.38) (95% CI 37.84-66.68) (see Figure 4).