

Active Movement Evaluation Report

Below are the findings from the independent evaluation of the Active Movement School initiative. Two schools were recruited into the evaluation, St Anthony's (intervention school) and Khalsa (control school). Children were fitted with an actigraph accelerometer that they wore for seven consecutive days. Waist circumference and handgrip strength were recorded. All children were also asked to complete the GEMS physical activity survey and the Active Movement survey. All measures were taken at baseline and 12-month follow-up.

RESULTS

This study included a total of 103 children mean age 9 years. A total of 57 children studied at Khalsa school (control group) and 46 children studied at St Anthony's school (intervention group). Figure 1 shows that sedentary time increased 225.62 minutes/week in Khalsa and 153.57 minutes/week in St Anthony's. Regarding physical activity levels, light physical activity decreased 80.87 minutes/week in Khalsa and 127.73 minutes/week in St Anthony's (Figure 2), moderate physical activity increased 70.08 minutes/week in Khalsa and 138.52 minutes/week in St Anthony's (Figure 3), and vigorous physical activity increased 0.45 minutes/week in Khalsa and 2.7 minutes/week in St Anthony's (Figure 4). In the case of step counts, it was observed that step counts decreased 646.28 steps/week in Khalsa and increased 67.42 steps/week in St Anthony's (Figure 5). With regard to waist circumference (Figure 6), it decreased in the intervention group (baseline 65.24 cm; follow up 63.41 cm), while it increased in the control group (baseline 59.23 cm; follow up 63.13 cm). Finally, the hand grip strength (Figure 7) increased in the intervention group (baseline 12.91 kg; follow up 16.22 kg), but it increased also in the control group (baseline 13.82 kg; follow up 15.29 kg), although to a lesser extent. One would expect to see an increase here owing to a natural increase in grip strength that

occurs with age. The additional increase in grip strength observed in St Anthony's is likely owing to intervention effects.

A total score from the GEMS physical activity survey was derived and this showed a similar pattern of change in physical activity behaviour as the Actigraph accelerometer. Strengthening the validity of the present study. The GEMS survey provided additional contextual data, however, ultimately St Anthony's showed a greater increase or a lesser decrease in all areas of physical activity (school, sport, leisure).

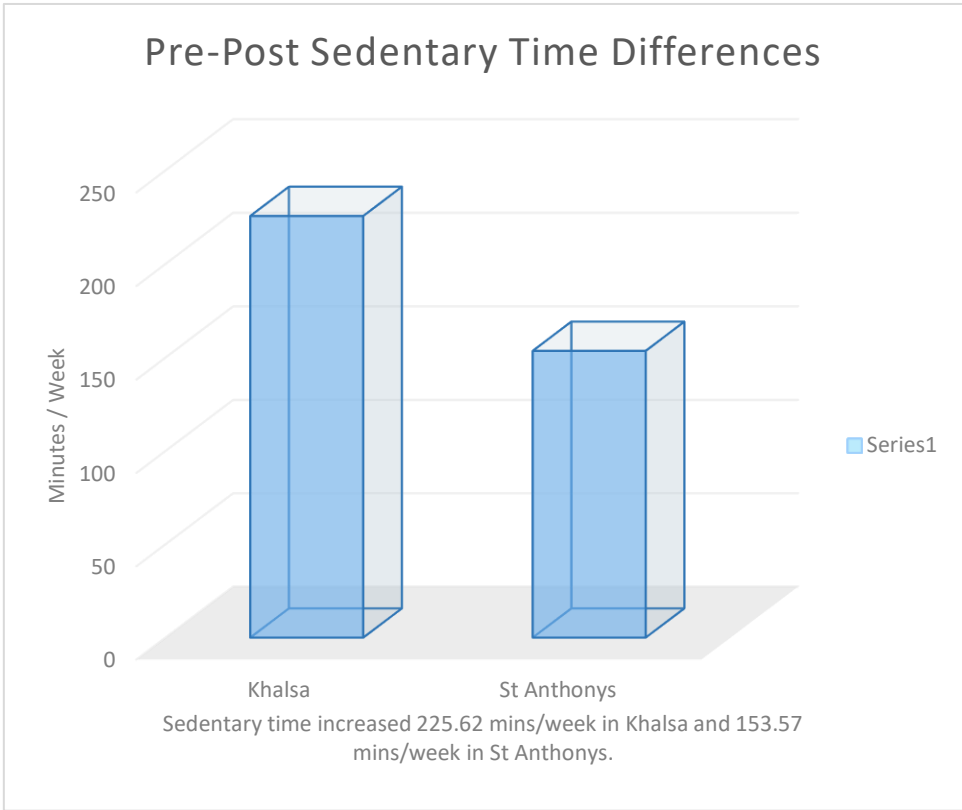


Figure 1. Pre-Post Sedentary Time Differences

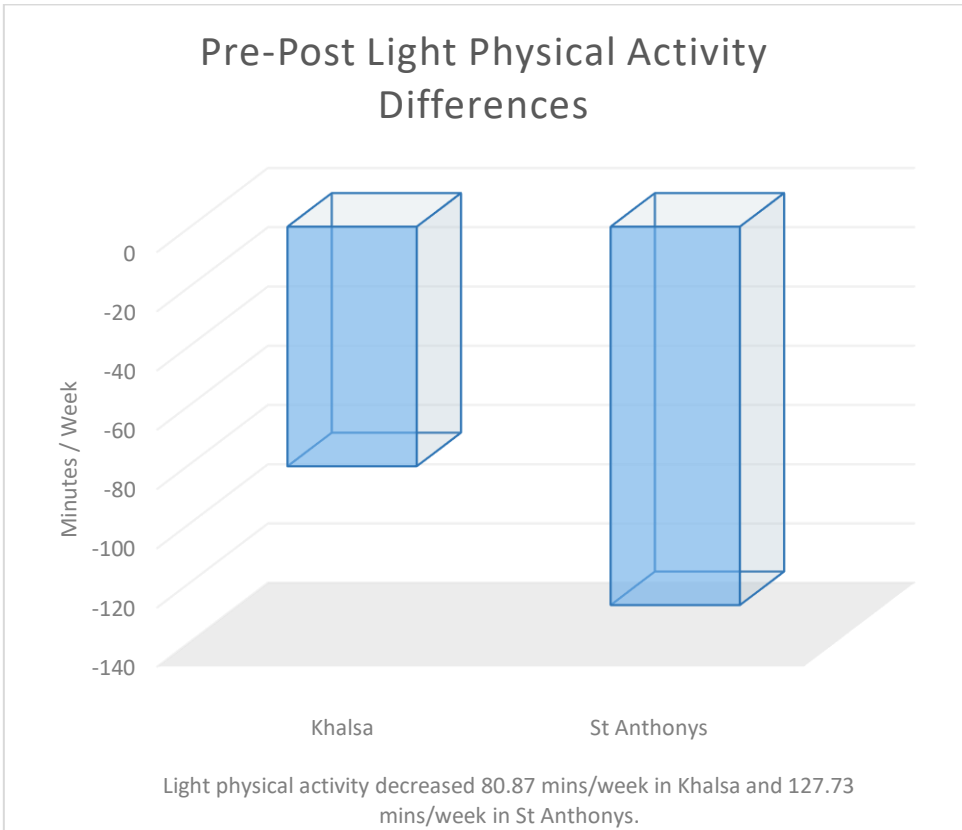


Figure 2. Pre-Post Light Physical Activity Differences

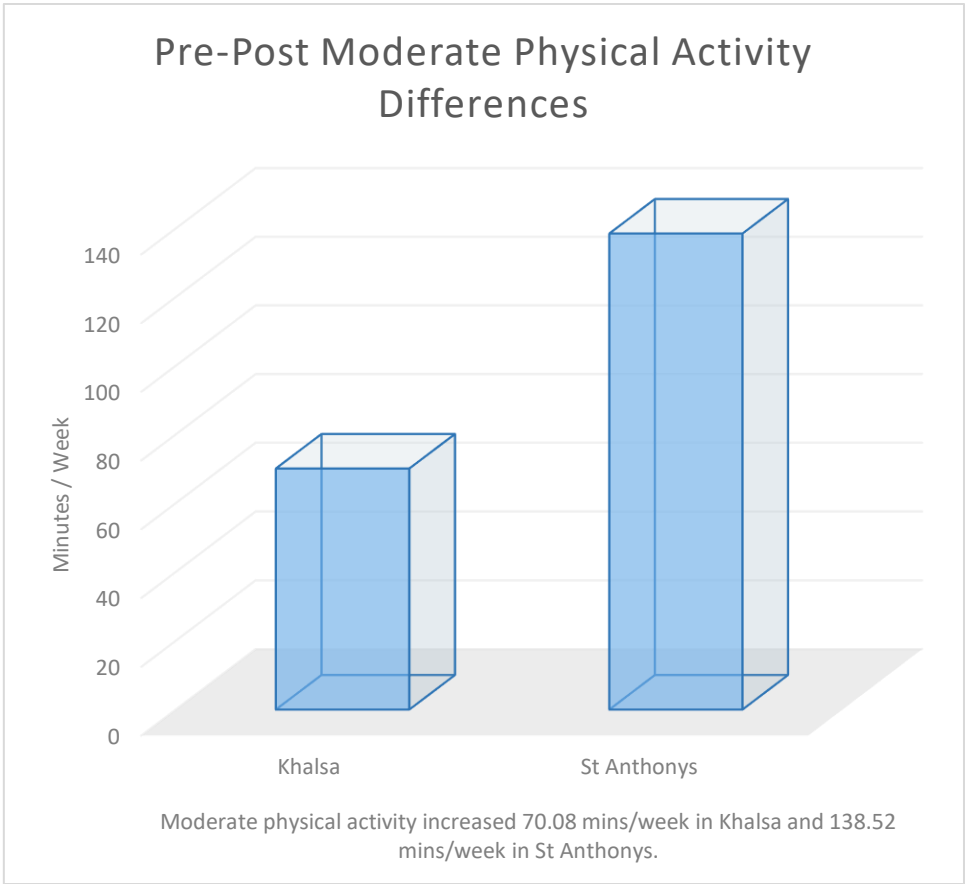


Figure 3. Pre-Post Moderate Physical Activity Differences

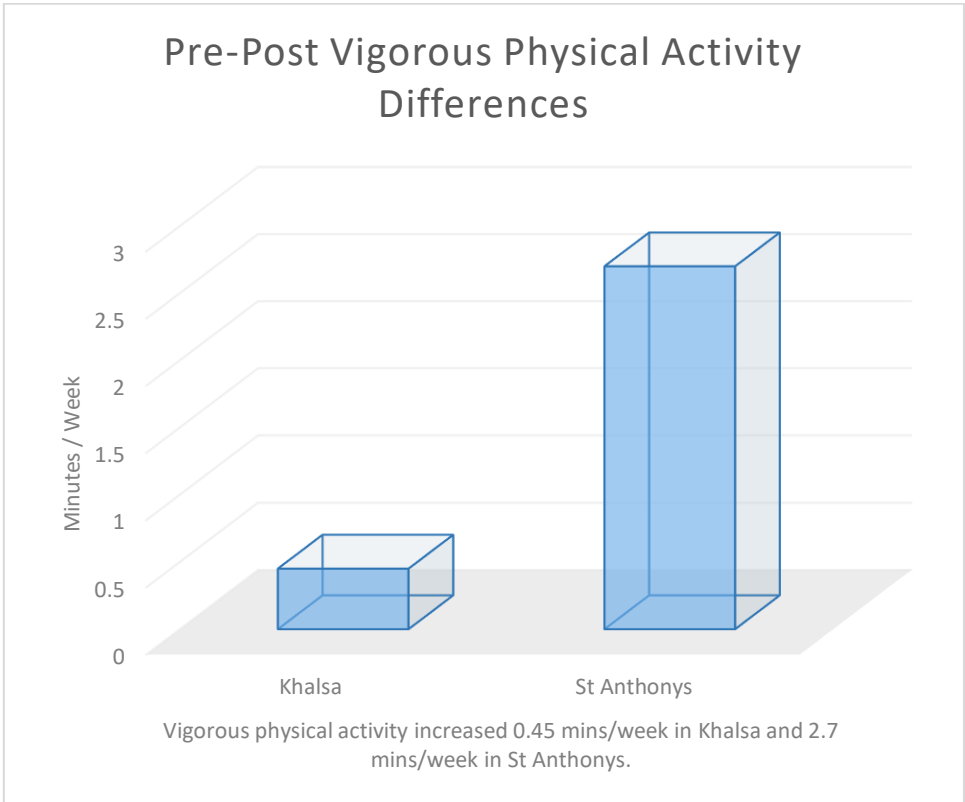


Figure 4. Pre-Post Vigorous Physical Activity Differences

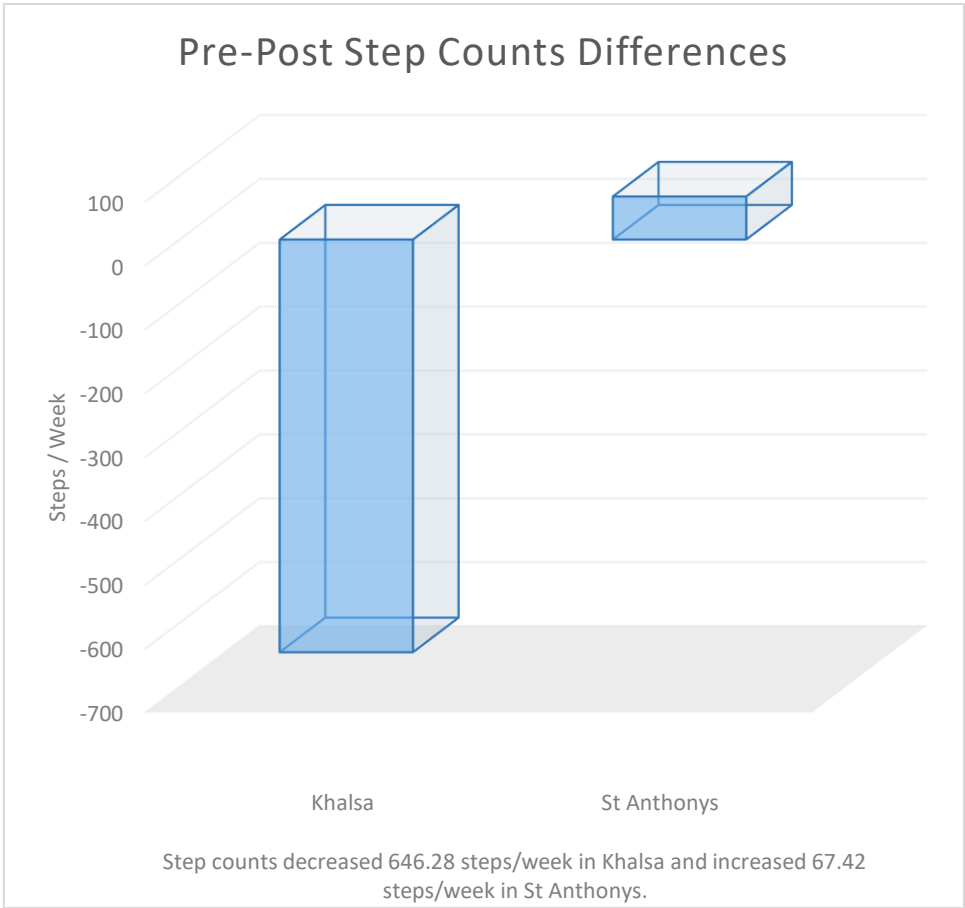


Figure 5. Pre-Post Step Counts Differences

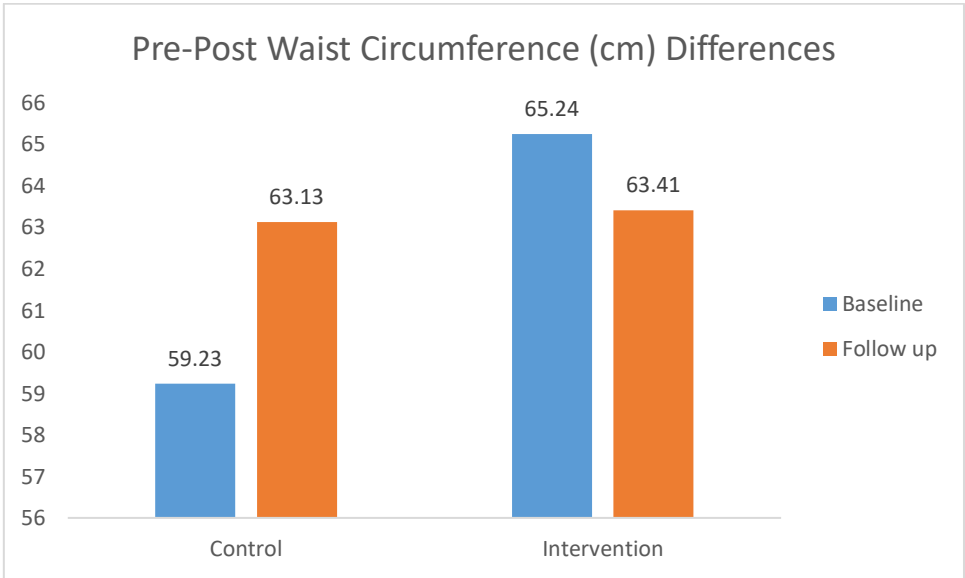


Figure 6. Pre-Post Waist Circumference (cm) Differences

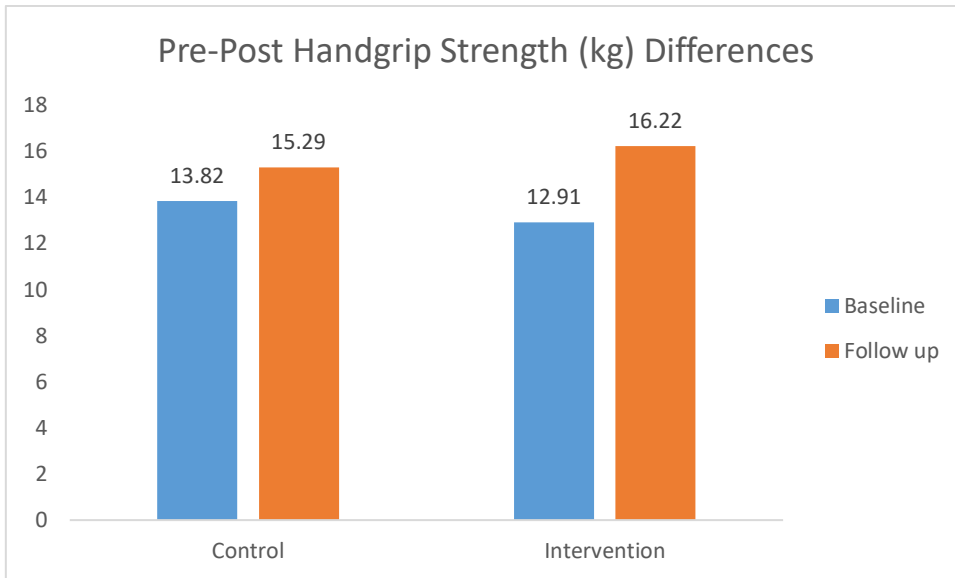


Figure 7. Pre-Post Handgrip Strength (kg) Differences

The Active Movement survey was validated against the actigraph accelerometer and showed good convergent validity. This was calculated using correlation analyses utilizing The Statistical Package for the Social Sciences. This is an important finding which shows that the Active Movement survey is a valid measure of physical activity behaviour yielding trustworthy data.