

## Open Access Research

### Three Year follow-up of an early childhood intervention: is movement skill sustained?

#### Background

Movement skill competence (e.g. the ability to throw, run and kick) is a potentially important physical activity determinant. However, little is known about the long-term impact of interventions to improve movement skills in early childhood. This study aimed to determine whether intervention preschool children were still more skill proficient than controls three years after a 10 month movement skill focused intervention.

#### Methods

In 2006/07, children from 18 intervention and 13 control preschools in NSW, Australia participated in an obesity prevention ten month intervention with a movement skill focus ('FunMoves'). The program consisted of two terms of 10 sessions with each session repeated twice per week.

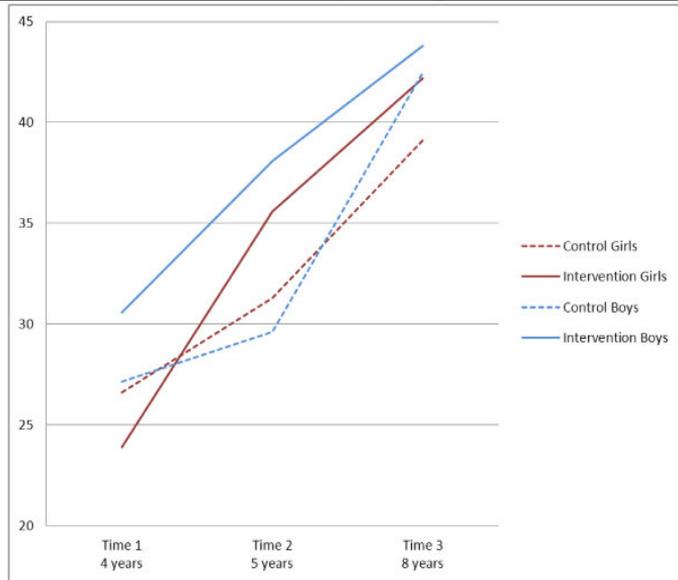
They were assessed at ages four, five and eight years for locomotor (run, gallop, hop, leap, horizontal jump, slide) and object control proficiency (strike, bounce, catch, kick, overhand throw, underhand roll).

#### Results

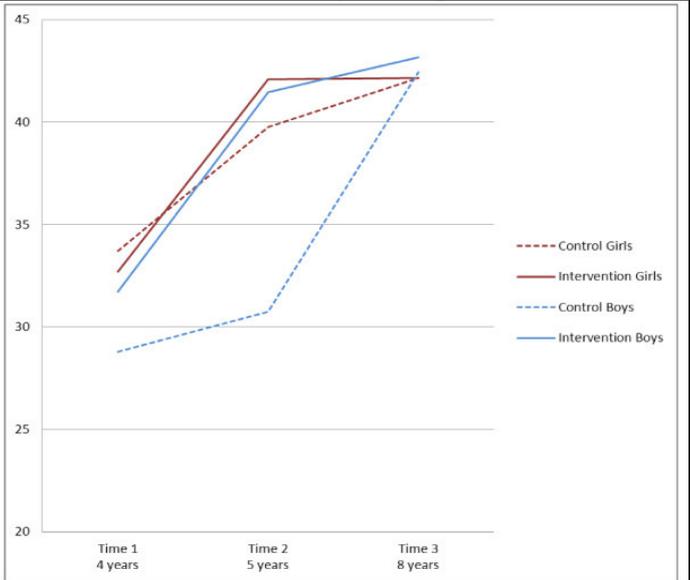
When we looked at the influence of sex, it was clear that intervention girls had maintained their object control skill advantage in comparison to control girls, but that control boys appeared to have 'caught up' to the intervention boys. Thus it seems that boys who have not gained object control skills prior to school, may be likely to develop these skills through environmental opportunities provided during early elementary school and/or from home and community life.

There were no longer any differences between intervention and control children in locomotor skill ability three years after the TFV intervention. In the years following the intervention, control boys and girls both 'caught up' to intervention children in locomotor skill ability. This finding indicates that whilst locomotor skill ability can be increased in an intervention setting, that these skills may be subsequently gained through the environmental influences children are exposed to in early elementary school and in their home and community, e.g. school physical education, opportunities to exercise and enrolment in out of school activities and sports.

Object control skills - Adjusted mean scores over time for boys and girls.



Locomotor skills - Adjusted mean scores over time for boys and girls.



## Conclusion

A key implication of our study is that early childhood settings should target movement skills and that girls should be targeted more intensively.

A further recommendation is that object control skills be more specifically targeted than locomotor skills, as it seems children in this study gained these skills anyway. However it must be noted that the acceleration of locomotor skills may have helped children in other ways that this study did not assess, for instance to have higher perceived sports competence.

<http://www.ijbnpa.org/content/9/1/127>