The influence of recreational gymnastics at 4 to 6 years of age on physical activity levels at 8 to 10 years of age.

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Introduction

- Physical activity (PA) has known health benefits for children and adults.4, 6, 7, 13
- Studies suggest that habitual childhood PA may influence adult levels of PA2, 10 and fitness12, 14 in adulthood.
- Early involvement in sport has shown significant tracking across childhood9, adolescence and into early adulthood.8
- What is unknown is whether early childhood involvement in specific sports benefits PA levels in later childhood.

Purpose

To examine if early involvement in recreational gymnastics influences levels of PA in later childhood

Methods

Participants
- 91 gymnasts and 72 non-gymnasts from the University of Saskatchewan’s Young Recreational Gymnastics Study (YRGs) studied between 2006 and 2012

Measures
- Participants were assessed annually.
- PA was assessed using the Netherlands Physical Activity Questionnaire; response range from 7 (low physical activity) to 35 (high physical activity).

Statistical method
- Average PA scores were compared between groups and time points (independent t-test and repeated measures ANOVA) (α = 0.05).

Results

- No significant difference were found in PA scores between gymnasts (25.0 ± 3.0) and non-gymnasts (24.5 ± 3.4) (p>0.05).
- Weak correlation between age and PA (r=0.12, p>0.05).
- PA increased in both groups across the four year measurement period (p<0.05), however; there was no significant time by group interaction (p>0.05).

Discussion

- In contrast to previous studies1,3,5 our data found no decrease in PA with age.
- Absence of a PA decline may be due to the young age of participants. We have previously shown PA declines between 10 and 17 years in Saskatchewan youth.11
- Differences between gymnasts and non-gymnasts may not be salient until the adolescent decline in PA begins.
- PA levels reported for this study are inclusive and therefore total levels of PA in late childhood reflect the influence of participation in other sports and activities for both gymnasts and non-gymnasts.
- The nature of the relationship between early childhood involvement in gymnastics and later childhood PA remains unclear. In order to clarify this relationship, further follow-up of this cohort is warranted.

Conclusions

This study found no difference in PA scores between young gymnasts and non-gymnasts suggesting that early involvement in gymnastics does not improve later childhood levels of PA. This does not discount the possibility of differences occurring during adolescence.

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References