Associations between childcare physical activity and sedentary time and early childhood developmental outcomes: A compositional and isotemporal substitution analysis [1]

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Background

Physical activity and sedentary time are independently associated with health and developmental outcomes in preschool children. However, the integrated nature of these behaviours on early life outcomes, particularly during childcare hours, is currently understudied. As such, the aim of this study was to examine the association between preschool children's physical activity and sedentary time during childcare and various developmental outcomes (psychosocial, cognitive and fundamental movement skills).

Results

Engaging in more MVPA relative to LPA and sedentary time was associated with fewer internalising symptoms and better total fundamental movement skills and object control skills, whilst spending more time in LPA relative to MVPA and sedentary time was associated with more internalising symptoms and worse object control skills. Isotemporal substitution models suggested that theoretically increasing sedentary time or engaging in MVPA at the expense of time engaging in LPA during childcare is associated with lower internalising symptoms.

Conclusion

The findings of this study provide preliminary evidence that engaging in MVPA during childcare, at the expense of time in LPA or sedentary time, is associated with children's fundamental movement skills and psychosocial development.

Related link: Researchers develop course to boost physical activity at childcare centers [4]

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