

Is Curriculum-Based Outdoor Education Associated With Physical Activity Among School-Aged Children?

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Purpose: Physical activity (PA) among children has decreased in recent decades, raising serious health concerns. Integrating more movement into the school day has been suggested as a method of promoting PA. In this study we investigated the association between curriculum-based outdoor education (OE) and PA among school-aged children, focusing on total PA (TPA) and time spent in different intensities of PA on weekdays, weekend days, during schooltime, leisure time on weekdays, and as daily average.

Methods: This cross-sectional study is part of the LärMiljö (Learning Environment) study, conducted in Swedish-language primary schools (grades 3–6, ages 9–13 years) in seven municipalities in Finland. Data were collected in 2021–2023 from 260 children, their caregivers, and class teachers. Children's PA was measured for seven consecutive days using hip-worn accelerometers (*ActiGraph*). The use of OE was reported by the class teacher in an electronic logbook on the same days as the children wore accelerometers. Sociodemographic characteristics were reported by children and caregivers in questionnaires. Linear regression analyses were conducted adjusting for gender, grade, accelerometer wear days, physical education during study period, season of participation, and socioeconomic status.

Results: Of the children participating in the study, 200 (77%) met the criteria for valid device-based PA data and teacher-reported OE data and were included in the analyses. Approximately half (52%) of them had no OE during the study period, whereas the other half had 25–335 minutes of OE. The fully adjusted regression models showed that a higher amount of OE was associated with more moderate-to-vigorous PA (MVPA) as daily average and during schooltime, lighter PA (LPA) and TPA on weekend days, but less LPA during schooltime. In girls, a higher amount of OE was also associated with more TPA during schooltime, and more MVPA and TPA on weekdays.

Conclusion: The findings highlight the potential of integrating OE into teaching to promote PA in school-aged children. In addition, our results suggest that girls may benefit even more than boys from participating in OE in terms of PA.

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