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Association of Childhood Residential Environment and Family Socioeconomic Status With Physical Activity in Early Adulthood – A Population-Based Northern Finland Birth Cohort 1986 Study

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Purpose: Low childhood family socioeconomic status (SES) predicts less healthy lifestyles in adulthood. Differences in socio-economic lifestyle factors are already evident in childhood and continue into adulthood. Although much research has been conducted on the relationship between childhood family SES and physical activity (PA), there is little evidence of how the childhood family SES in urban and rural environments affects PA in adulthood. The aim of this study was to determine how family SES of urban and rural children is related to adult PA by answering the research question how family SES of rural and urban children is associated with adult PA.

Methods: We used population-based cohort data from the Northern Finland Birth Cohort 1986. Participants' (n = 9,432) parents reported residential environment and family SES when the participants were seven years old (n = 8,370). At age 35, participants underwent clinical measurements (n = 1,807) and completed questionnaires (n = 3,322) about health, health behaviours, and SES. PA data were collected with the Oura ring (n = 1,578). The final data consisted of 813 participants. We used linear models to study the associations of the childhood residential environment and SES with PA in adulthood.

Results: Difference in total daily PA minutes was 40.99 min greater in the unadjusted model for male participants living in rural environment during childhood and whose family had high SES ($p < 0.001$). After adjusting with BMI, work strenuousness, and adulthood residential environment the difference was 26.73 min ($p = 0.043$) greater. Difference in male participants' daily light PA minutes was 40.38 min greater in the unadjusted model ($p < 0.001$) and 27.64 min greater in the adjusted model ($p = 0.023$).

Conclusion: High SES children who have lived in a rural environment during childhood had more PA in adulthood than high SES children who have lived in urban environment. According to our results, efforts to promote an active lifestyle should consider family SES and residential environment during childhood.

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