

# Physical activity and sedentary time associated with learning outcomes in adult distance learners

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## **Physical activity and sedentary time associated with learning outcomes in adult distance learners**

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Research on physical activity and sedentary time with regard to learning outcomes focuses on children and adolescents mainly, while this relationship in adults is unclear. We investigated this relationship. An observational cross-sectional design was used. Starting Open University (NL) students were invited to participate (N=4945), of which 2037 participated (41.19%). Independent factors were measured using an online survey and learning outcomes were measured via the exam registration system of the university.

A multiple linear regression model was made with the covariates expected study hours, sex, age, educational level, mother tongue, study motive, and body mass index (model A) after which physical activity and sedentary time were added separately (model B and C, respectively) and then together (model D). Model B showed physical activity, contrary to the hypothesis, to be negatively related to study progress. Model C showed sedentary time, contrary to the hypothesis, to be positively related to study progress. Time spent on physical activity could detract from time spent on learning, as it is likely that spare time is limited. Possibly, time spent learning adds to the time spent sitting, as it is highly likely that most students sit down while studying. Model D showed both factors to explain unique variance, indicating they are independent.

Physical activity and sedentary time in this specific group shows reversed relations with learning outcomes, in contrast to findings in children and adolescents. This could mean age plays an important role in these relationships, however more research is warranted to elaborate on this.