Is having difficulty meeting the recommended physical activity guidelines associated with cognitive difficulties in US adults?

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Abstract

Objective: To evaluate whether having difficulty meeting the recommended aerobic and strength physical activity guidelines is associated with cognitive difficulties.

Methods: This cross-sectional study used secondary data from the 2020 NHIS survey database. Adults 18+ living in the US were included. Those who were unable to follow the guidelines, those with a history of brain injury, and those with preexisting health conditions other than heart disease were excluded. The main outcome was whether individuals experienced dementia symptoms/cognitive difficulties. The main exposure was following physical activity guidelines (none, strength only, aerobic only, both). Confounders included age, sex, region, heart disease, smoking, drinking, and depression. Logistic regression analysis was used to calculate odds ratios (OR) and their 95% confidence interval (CI).

Results: The association between having difficulty following physical activity guidelines and cognitive difficulties was statistically significant. Those who met aerobic only increased the odds of cognitive difficulty by 52% (OR 1.52; 95% CI: 1.34-1.74) compared with those who met both. Those who met strength only had 1.7-fold higher odds of cognitive difficulties (OR 1.70; 95% CI: 1.42-2.02) compared with those who met both. Those who met neither guideline increased their odds of cognitive difficulties by almost threefold (OR 2.64; 95% CI: 2.36-2.96) compared with those who met both.

Conclusions: Researchers and healthcare providers should collaborate to encourage meeting these guidelines and addressing barriers preventing people from being physically active such as physical limitations and access to safe recreational spaces. Future studies should address the health disparities regarding physical activity.

Keywords: Dementia; memory loss; concentration; physical activity; adults