

The relationship between physical activity and depressive symptoms is domain-specific, age-dependent, and non-linear: An analysis of the Brazilian national health survey

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Abstract

Although there is consistent evidence of the beneficial effects of leisure physical activity (PA) on mental health, the role of PA in the domestic, transport, and occupational domains is inconclusive. This study aimed to analyze the relationship between domain-specific PA and depressive symptoms and examine whether the association is moderated by age in a representative sample of the Brazilian population. Cross-sectional data of 89,923 (52.4% female) individuals aged ≥ 15 years were analyzed. Depressive symptoms were assessed using the Patient Health Questionnaire-9. Physical activity (min/week) performed in different domains (domestic, transport, occupation, and leisure) was self-reported. Generalized additive models with penalized splines were used to explore associations. Lower leisure-time PA and higher levels of PA in the domestic, occupational, and transport domains at distinct PA thresholds were associated with higher depressive symptoms. Leisure PA, even at lower levels, was associated with lower depressive symptoms compared to no PA at all. The increase in depressive symptoms as a function of occupational PA was observed only at PA levels higher than 40 h/week. Although non-leisure PA levels were related to higher depressive symptoms among the total sample, higher domestic and transport PA levels were related to lower depressive symptoms among older adults. This study provides insights into the non-linearity and age-group dependence of the relationship between domain-specific PA and depressive symptoms in a middle-income country. The evidence suggests that care should be taken on recommending PA regardless of context or domain. © 2023 Elsevier Ltd

Author keywords

Depressive symptoms; Health surveys; Mental health; Motor activity