

Propositions accompanying the thesis

**Physical Activity and Mental Health in Middle-aged and Older Adults**

*A population-based perspective*

1. Physical inactivity is a major public health concern which has further increased during the Covid-19 pandemic. (this thesis)
2. More moderate-to-vigorous physical activity is associated with less depressive symptoms in middle-aged and older adults, in particular when replacing sleep or sedentary behavior. (this thesis)
3. Symptoms of depression, anxiety and poor sleep cluster across clinical diagnoses. (this thesis)
4. Polygenic risk scores of psychiatric phenotypes are applicable to assess genetic risk for depression in a population-based setting. (this thesis)
5. Middle-aged and older adults with advanced brain aging are at higher risk of physical inactivity over time. (this thesis)
6. Despite the large amounts of data on lifestyle, we still cannot accurately capture its complex and multidimensional phenotypes.
7. Because researchers cannot resist to attribute a direction to effects of cross-sectional studies, they increase the problem of reversed causation.
8. We should shift away from the focus on quantity of research: it does not help science to be disruptive or innovative nor does it help the wellbeing of researchers. (inspired by: Park et al. (2023). *Papers and patents are becoming less disruptive over time*)
9. *The outcome of any serious research can only be to make two questions grow where only one grew before.* (Thorstein Veblen)
10. *When mental health is ultimately recognized as essential to physical health, not an extraneous element of it, then we will have access to true, complete, modern medicine.* (John Campo)
11. It is challenging to stay physically active while writing a thesis on physical activity.

Amy Hofman, March 15, 2023