



# Income, health-related behavior, and self-rated health

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## Background

- Morbidity and mortality rates have continued to fall in recent decades<sup>1</sup>
- However, this development is slowest in the lowest income brackets<sup>2,3</sup>, which means that social inequality is increasing despite a healthier society
- 25% of the connection between income and health can be explained by factors such as living and working conditions, which is why it is worth taking a look at health behaviour<sup>3</sup>
- The aim of this study was therefore to examine the effect of the following health-related behaviours on the relationship between income and health:
  - Fruit and vegetable consumption
  - Social participation
  - Physical activities
  - Cognitive activities

## Methods

- The analyses were conducted using baseline data from the AgeWell.de study, a multicentre, cluster-randomised, controlled, multicomponent intervention study in primary care to preserve cognitive function<sup>4</sup>
- The sample consisted of 843 people aged between 60 and 78, 52.6 % female, with an increased risk of developing dementia (CAIDE score of at least 9 points)
- A linear regression and four mediation analyses with bootstrapping were calculated

### Variables:

- Self-rated health was determined using the EQ-5D-VAS<sup>5</sup>, on a scale of 0 to 100 points
- Income was measured using household income, values are given in 100-euro increments
- The questions on fruit and vegetable consumption were taken from the DEGS nutrition questionnaire<sup>6</sup>, consumption is measured in kilograms
- Social participation was measured using a standardized questionnaire consisting of 9 questions, which was already used in the Quality of Life in the Elderly study, the highest achievable score was 9 points
- The variables for the physical and cognitive activities were taken from a standardized questionnaire consisting of 22 questions, which was already used in the AgeCoDe and AgeQualiDe study. 70 points were achievable in physical activities and 114 in cognitive activities.
- Sociodemographic: The analyses were controlled for age (measured in years), sex (male gender as reference category), education (CASMIN<sup>7</sup>) and household size

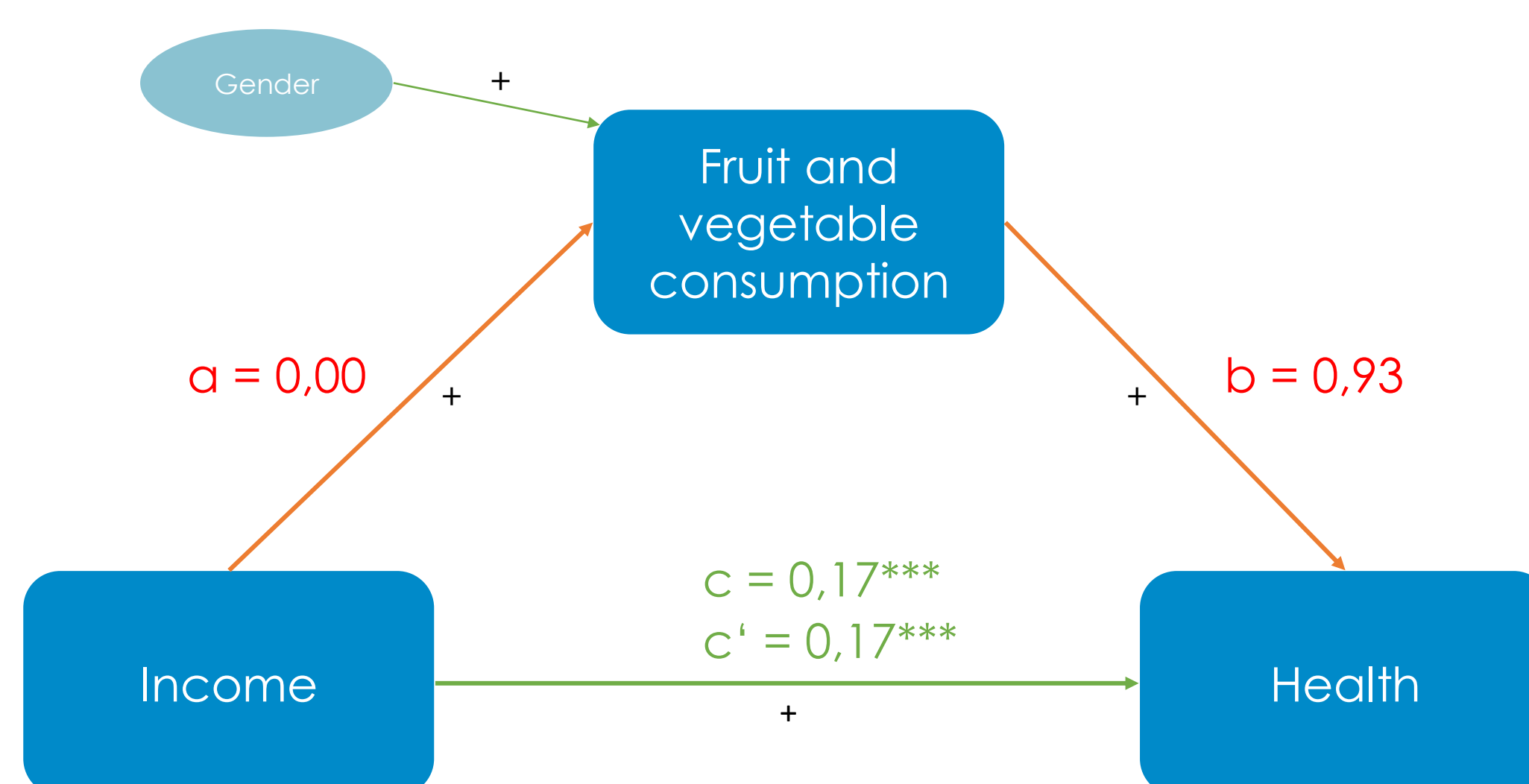
## Results

### Income and health

- Income has a small effect on health: if income increases by 100 euros, self-rated health increases by 0.17 points on average,  $p < 0.001$

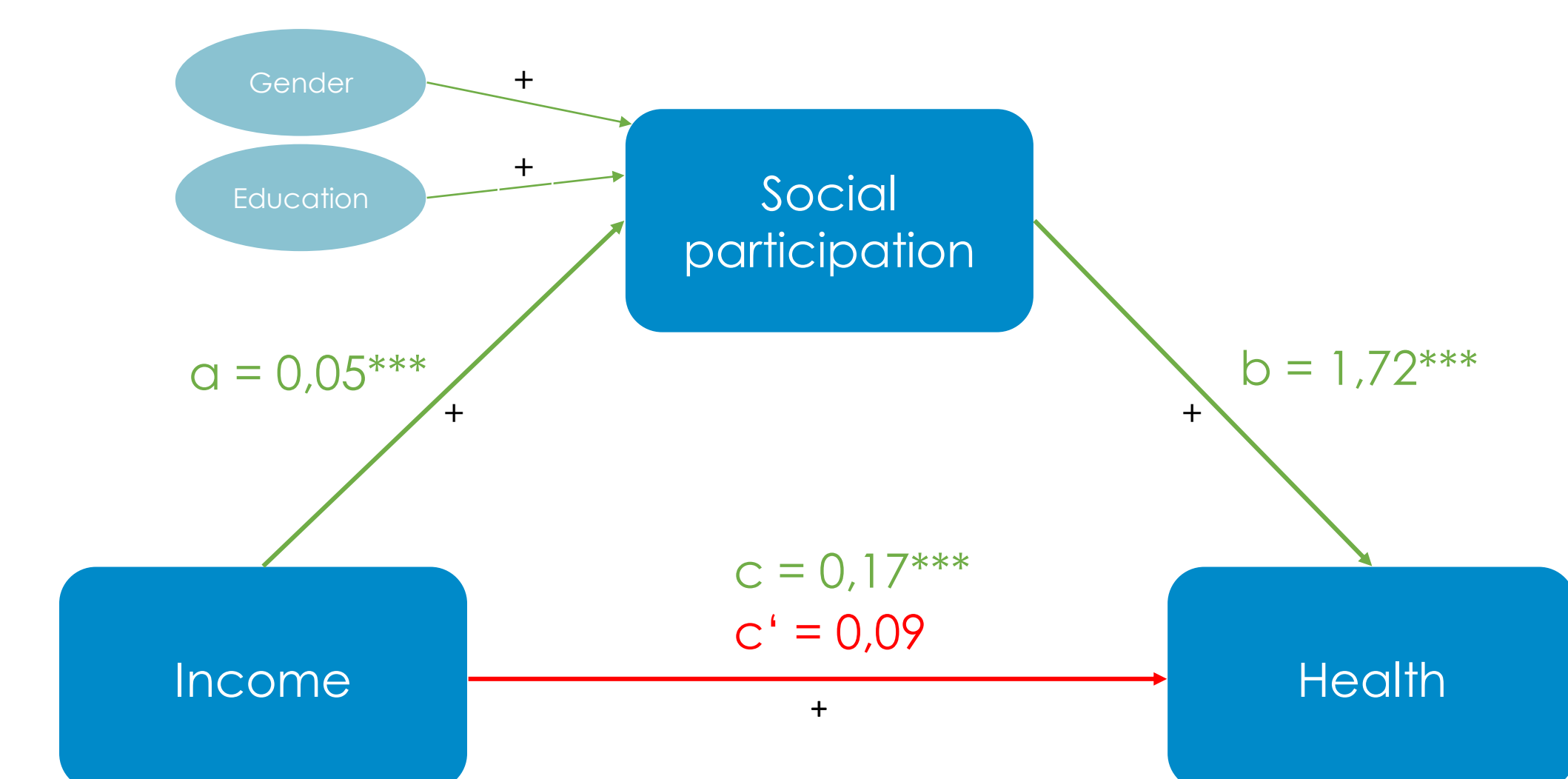
### Fruit and vegetable consumption:

- Fruit and vegetable consumption has no effect on the relationship between income and health, indirect effect  $ab = 0.00$ ; 95% CI[-0.004; 0.011]



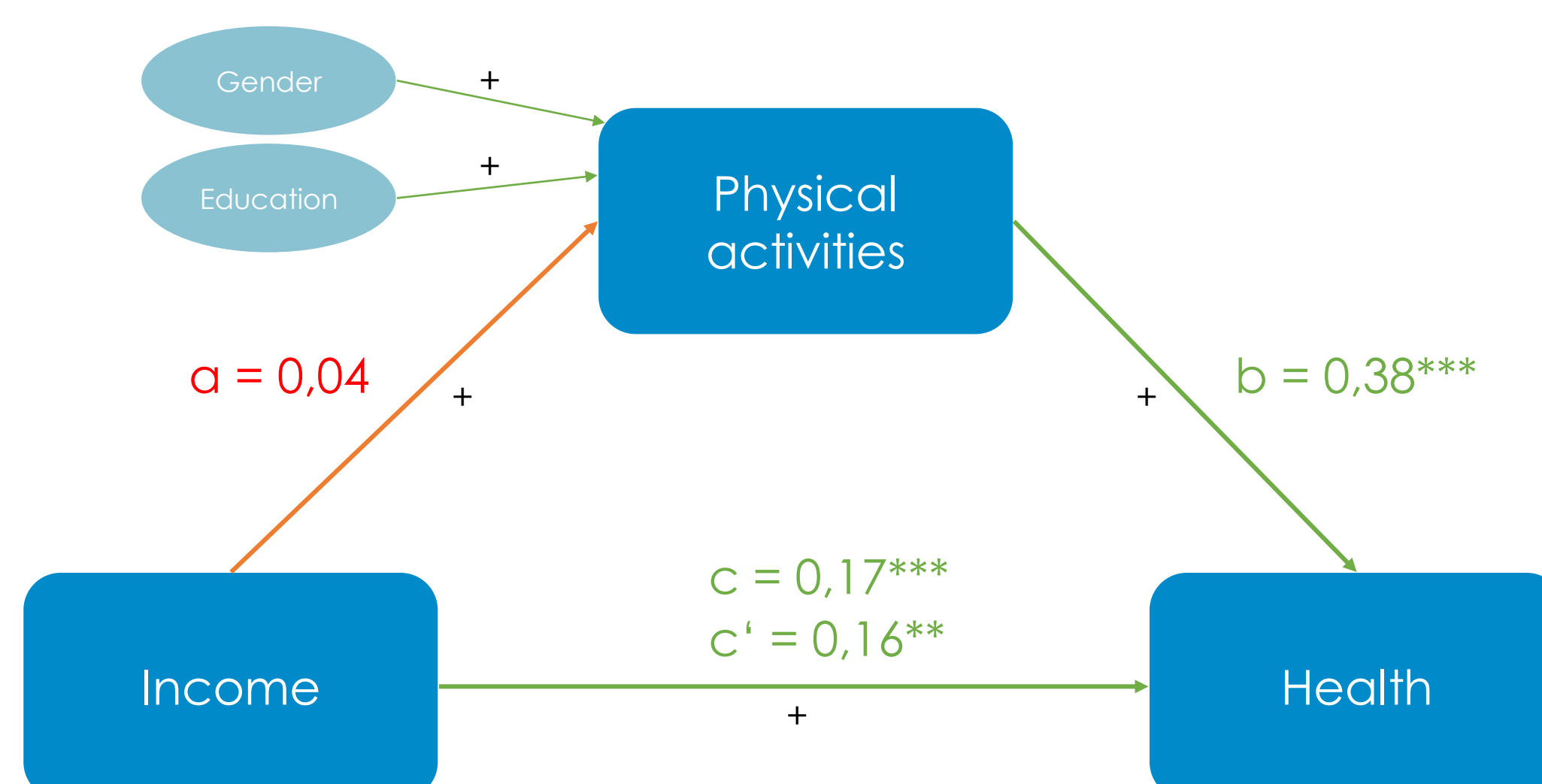
### Social participation:

- Social participation **fully** mediates the association between income and health, indirect effect  $ab = 0.10$ ; 95% CI[0.048; 0.114]



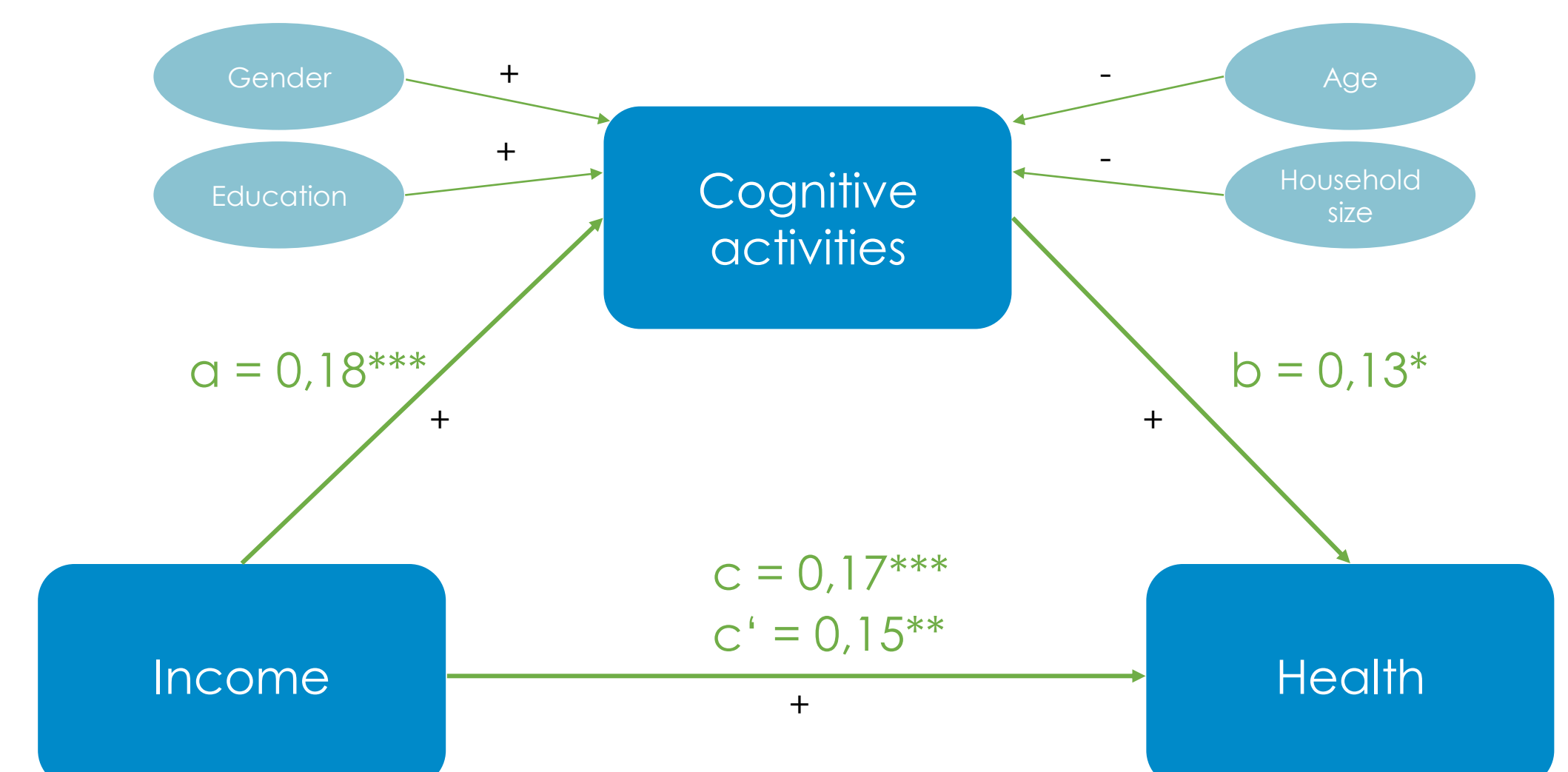
### Physical activity:

- Physical activities cannot explain the relationship between income and health, indirect effect  $ab = 0.01$ ; 95% CI[-0.003; 0.035]
- Physical activities are not influenced by income
- However, they have a positive effect on health



### Cognitive activities:

- Cognitive activities **partially** mediate the relationship between income and health, indirect effect  $ab = 0.01$ ; 95% CI[0.005; 0.045]



Note. Significance: \*:  $p < 0.5$ , \*\*:  $p < 0.1$ , \*\*\*  $p < 0.001$ ; significant effects are marked in green, non-significant in red; only control variables that had a significant effect on the mediator variable were included in the figure; + represents a positive effect, - a negative effect; health measured by self-rated health; income values are given in 100-euro increments, based on household income; male gender was used as the reference category

## Conclusion

- Social participation and the performance of cognitive activities have emerged as important explanatory factors for the link between income and health in older people
- The results can inspire consideration of strategies to make participation in social, cultural and intellectual events and courses more accessible to a wider public

### References

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