ALOUD biological: 
Adult Learning Open University Determinants study

Association of biological determinants with study success in formal lifelong learners

Jérôme Gijselaers, Renate de Groot, Paul Kirschner
CELTEC, Open University, the Netherlands
Overview

- Problem definition
- Research questions
- Factors & Variables
  - Biological factors
  - Other variables
  - Covariates
  - Dependent variables
- Methods
- Ultimate goal
Problem definition

- Previous research focused on:
  - Children & adolescents
  - Academic achievement
  - Traditional education
  - Single factors or even specific variables

- Research in adults is lacking!
Research questions

- What characterizes persons participating in formal lifelong learning?
- Which differences are apparent between successful and non-successful students?
- Which factors determine study success?
- Which factors are age and sex dependent?
  - What are the associations between the respective variables?
ALOUD (full project)

- Biological variables
- Psychological variables
- Cognition
- Lifelong learning
- Study success
ALOUD (biological part)

Physical activity → Cognition → Lifelong learning → Study success

Nutrition

Sleep
Physical activity

- Different domains:
  - Sport
  - Leisure
  - Transport
  - Work-related
  - Domestic
  - Sitting
Physical activity in children

(Hillman, Erickson & Kramer, 2008)
Physical activity in older adults

(Hillman, Erickson & Kramer, 2008)
Nutrition

- Breakfast
- Fish consumption
- B-vitamins
  - Folic acid & folate
  - B6 & B12
- Caffeine
Breakfast in adolescents

(Trockel, Barnes & Egget, 2000)
Breakfast in adolescents

(Trockel, Barnes & Egget, 2000)
Sleep

- Duration
- Wake-up time and bedtime
- Quality of sleep
- Chronotype
  - Morning type
  - Evening type
- Amplitude
- Fatigue
Sleep in first-year students

(Trockel, Barnes & Egget, 2000)
Sleep in first-year students

(Trockel, Barnes & Egget, 2000)
Other variables

- BMI
- Vitality
- Health status
- Covariates
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Other variables

- BMI
- Vitality
- Health status
- Covariates
  - Age
  - Sex
  - Mood
  - Job information
  - Computer skills
  - Composition household
  - Educational level
  - Mother tongue
Dependent variables

- Cognitive performance
- Study success
  - Successful vs. non-successful
  - Study pace
  - Grades

- Additional subjective measure
  - Life satisfaction
Methods & procedures

- 2000 OU students
- Observational study
- Computer-based questionnaires
- Computer-based neuropsychological tests
- Accelerometers in a subsample
- Exam registration system
- Multiple regression analyses
Ultimate goal

- Creating a knowledge base for the development of an intervention which leads to better study success and overall long-term efficacy
Thank you for your attention!
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Contact information

- H.J.M. (Jérôme) Gijselaers
  - jgy@ou.nl
- R.H.M. (Renate) de Groot
  - rgt@ou.nl
- P.A. (Paul) Kirschner
  - pki@ou.nl