TESTING THE LOGISTICS OF THE ACCELEROMETRY PROJECT IN SHARE

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What is SHARE?

- Survey of Health, Ageing and Retirement in Europe
- Population ageing is one of the challenges of the 21st century
- Representative samples of individuals age 50+ (and partner) in 28 countries
- Panel survey (every 2 years since 2004): >297k interviews from >120k respondents
- Face-to-face interviews (CAPI) by trained interviewers
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What is SHARE?

Socio-economic status:
labor force participation, education, retirement, income, wealth

Social participation:
Living arrangements, partnership, family, social networks, social support

Health:
Physical and mental health, subjective health, cognition, health care, physical performance, morbidity, health behaviors

Physical activity
New: accelerometry

- So far self report of activity level
  - BUT: social desirability issues; differential item functioning (DIF)
  - Harmonization between respondents, countries, studies:

→ objective measurement of physical activity needed

→ Axivity ax3 at upper thigh
  - Triaxial accelerometer, 25 Hz, 8 days
Who and how?

- 10 countries
- Subsample: 200 respondents/country
- 50 devices per country

- Less in pretest: ~ 5 devices/country
  → Test of logistics
Survey setting

• Limited number of devices
  → Sent around when available, several cycles
  – Attached by respondents themselves
  – Illustrated Instruction brochure
    • Translation in several languages
    • Material has to be similar in all countries
  – „Respondent Information Card“
    • Information on wearing period
    • Possibility for feedback
  
• Multinational survey → multiple survey agencies
Outcome

• Expected: ~ 50 % willingness to participate
  – Experience from LISS panel and others
• 47 % actually willing to participate (artificially
  low rate because of data export issues)
• 293 respondents agreed; 85 randomly chosen
to test turnaround procedure
Reasons for refusal

- Too burdensome: 124
- Not active: 34
- Longer absence of R: 34
- R too old: 32
- Work, hobbies: 26
- Privacy concerns: 25
- Skin issues: 19
- Other: 72
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Willingness to participate

Adapted interviewer training

REPORTED ACTIVITY LEVEL

WILLINGNESS TO PARTICIPATE

No willingness to participate

Willingness to participate

Age

50-64
55-74
75+

Very low or no activity
Moderate activity level
High activity level
> 17 000 000 rows per respondent
Data aggregation

- **Release of data**
  - Account for gravity: ENMO, HFEN, BFEN (VAN HEES ET AL 2013) …
  - Average/person, …/day, …/time of day, …
  - Cut points for intensity levels
  - MVPA, L5M5 (e.g. R PACKAGE GGIR)…

- **Adaptation of available aggregation tools:**
  - Ax3
    - worn at thigh, not wrist

- **Our own research questions**
  - Self-reported vs. accelerometry derived physical activity levels
  - Determinants of physical activity (retired vs. working)
  - Relation of sitting time to health outcomes during ageing
THANK YOU FOR YOUR ATTENTION!

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• https://cran.r-project.org/web/packages/GGIR/vignettes/GGIR.html