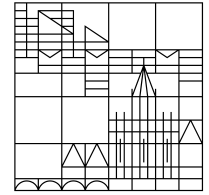


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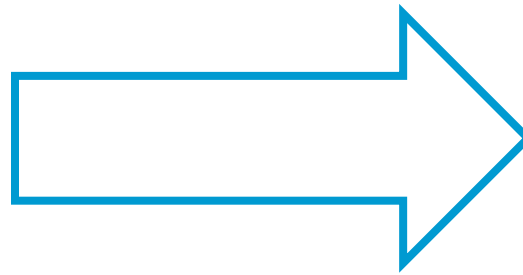
**Real-life correlates of physical activity:
An ecological momentary assessment study
examining the association between affect
and subsequent physical activity**



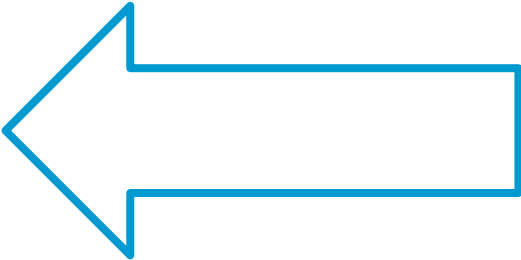
Christina Niermann, Christian Herrmann, Birte von Haaren-Mack, Dave van Kann,
Martina Kanning

Annual Meeting ISBNPA, Prague, 06.06.2019

Physical Activity and Affect



Affect and Physical Activity



Affect and Physical Activity – Why is it important to study this relationship?

Traditionally,

- motivational and volitional determinants/correlates have been used to explain and predict health behavior
- assumption that health behavior is regulated via conscious/controlled processes



prediction of behavior is modest



Physical Activity and Affect



In daily life, health behaviors are not exclusively regulated by conscious processes

→ there are conscious AND unconscious pathways to action

Affects regulate human behavior and influence motivational processes (Russell, 2003) → internal cue that might trigger health related actions without conscious awareness

Habit is a „process by which a cue automatically generates an impulse towards action“ (Gardner, 2015)

How are affects associated with subsequent behavior and which role does habit play?

LifeLog Study – Hypotheses



positive
affective state

+



subsequent MVPA



negative
affective state

-



subsequent MVPA



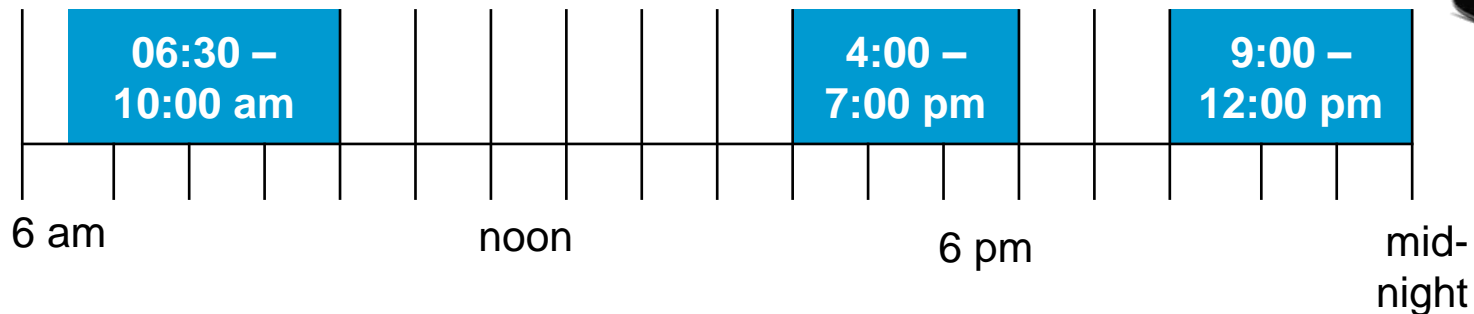
habit strength

LifeLog Study – Design



Ambulatory Assessment

- 5 weekdays
- hip-worn accelerometer (Move3, movisens)
- 3 prompts per day via Smartphone

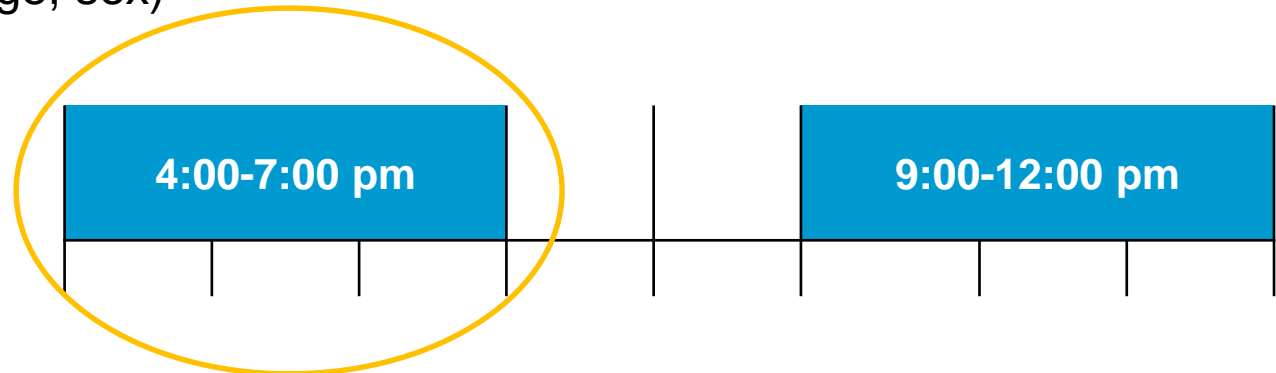


LifeLog Study – Design



Independent Variables

- prompts
 - Affective state after work (2 subscales of POMS-15)
 - vigor (positive affective state): vigorous, cheerful, lively
 - fatigue (negative affective state): fatigued, worn out, exhausted
- paper-pencil questionnaire
 - Habit strength (Self-Report Habit Index)
 - Demographics (age, sex)

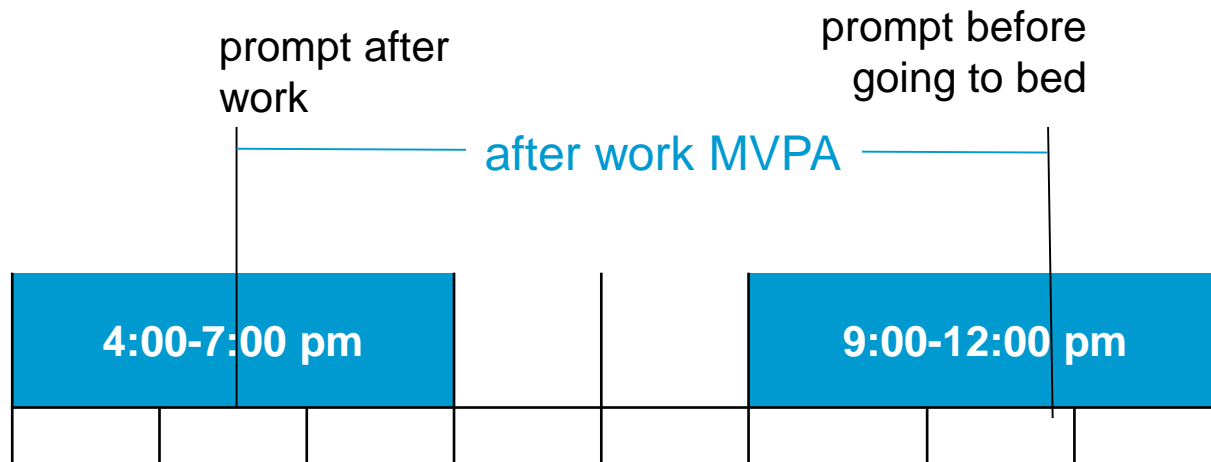


LifeLog Study – Design



Dependent Variable

- accelerometer
 - after work MVPA



LifeLog Study – Descriptives



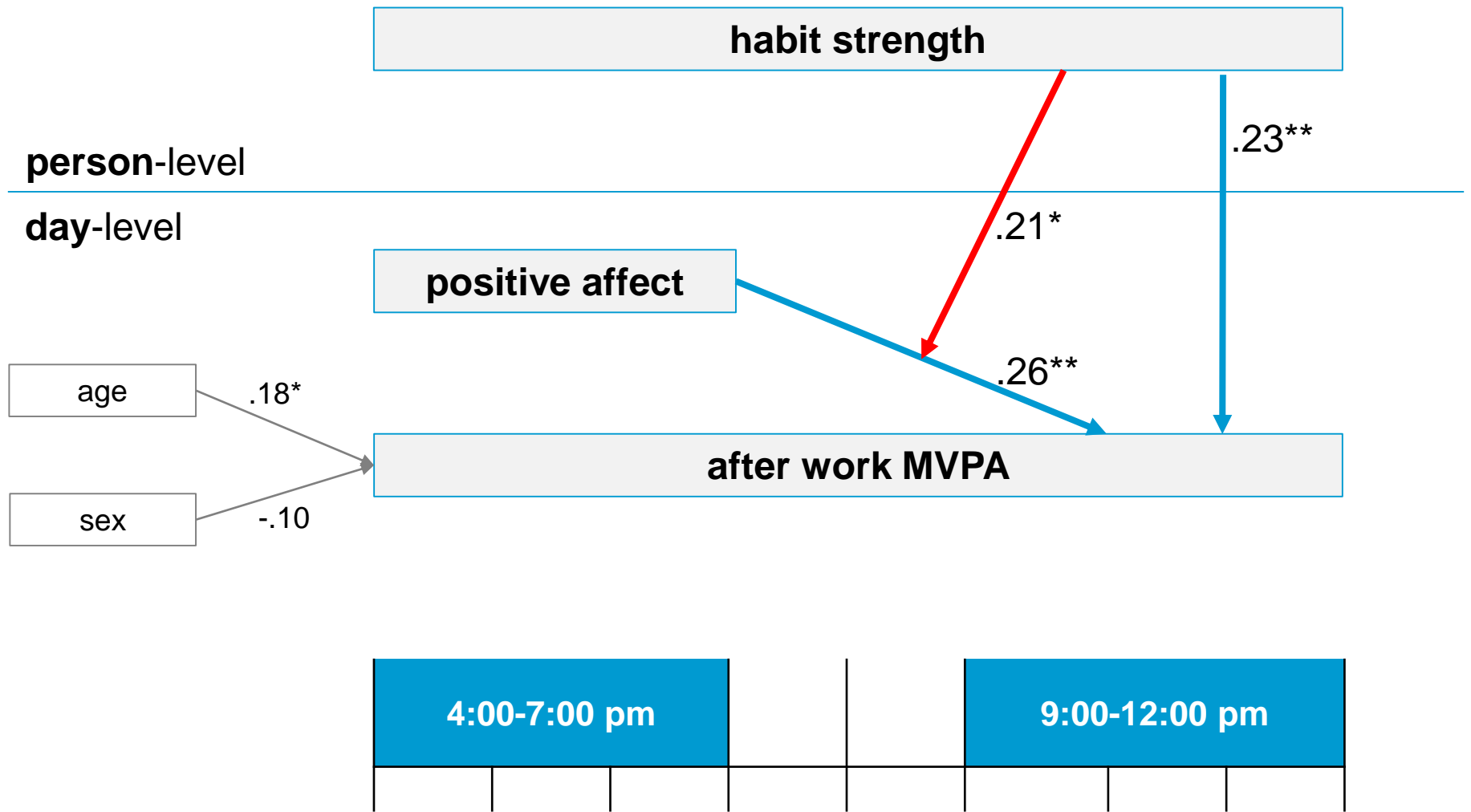
Participants

- N = 89 (33,7% male)
- 25 to 65 years, M = 45.2 years (SD = 8.1)

- average workday MVPA
 - M = 31.2 minutes per day (SD = 42.1)
 - ICC = .22
- after work MVPA
 - M = 17.4 minutes per day (SD = 21.2)
 - ICC = .24

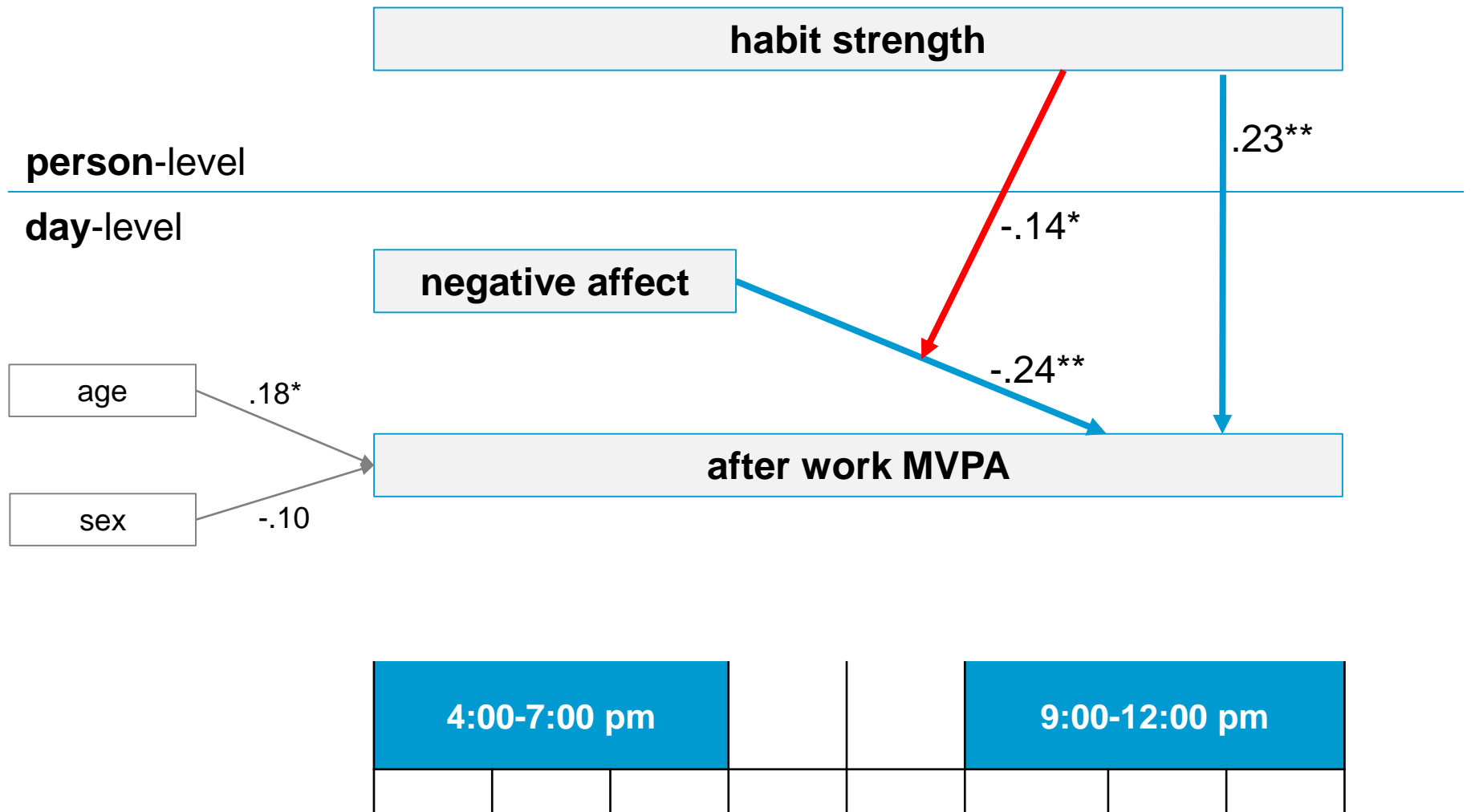
LifeLog Study – Results

Random-Intercept-Model



LifeLog Study – Results

Random-Intercept-Model



Summary

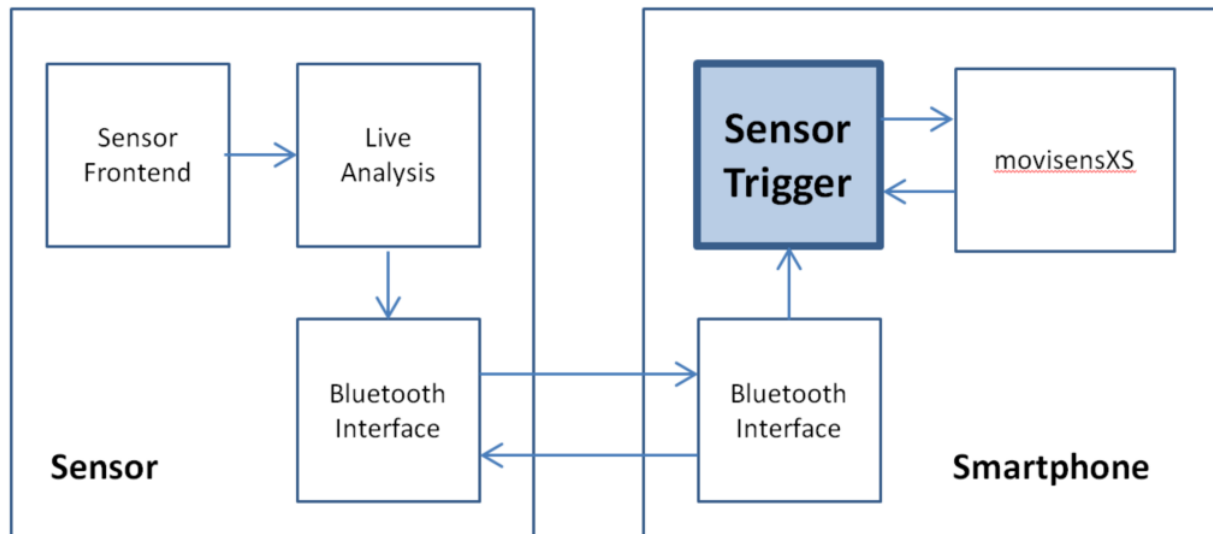
- positive affective state → increase in after work MVPA
consistent with results from other studies
 - negative affective state → decrease in after work MVPA
results are inconsistent
 - habit strength moderates the association between affect and MVPA
→ strengthens the effect for positive AND negative affect
- Affective states influences the regulation of behaviors in daily life
- Taking into account affects and other internal or external cues that automatically trigger health related actions might enhance the prediction of health behavior

Outlook

Friday
Poster 3.238

Interactive Ambulatory Assessment

- Measurement of sedentary behavior: triggered on Move3 accelerometers (4 days)
- Sensor trigger: after 20 minutes of sedentary behavior
- Prompts
 - affect: valence, energetic arousal, calmness
 - context: Where?, What?, With whom?, Option to stand up?
 - habit strength: “I sat down automatically”; “I sat down because it’s what I always do”

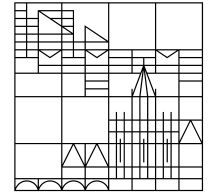


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