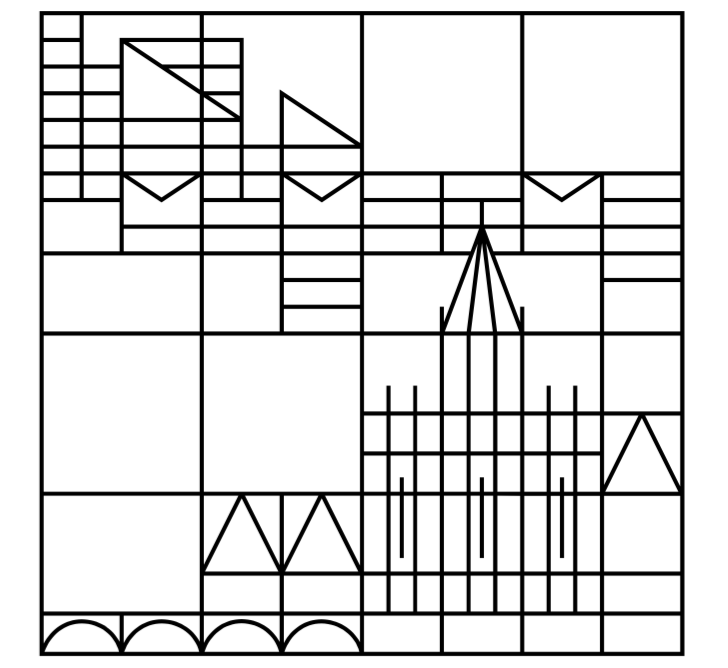


I sit at work, because it's what I always do!

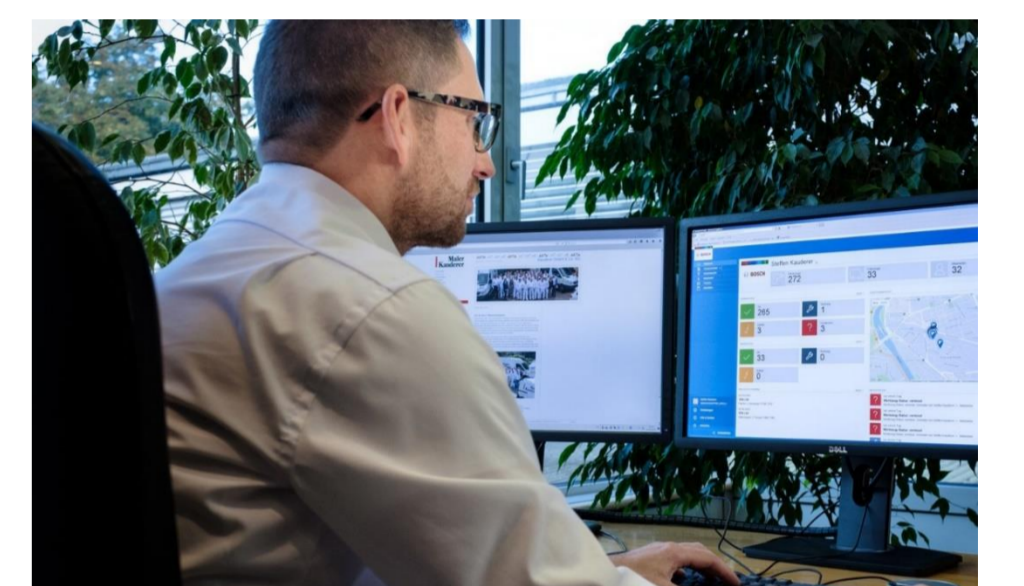
Ambulatory Assessment to examine contexts and habit strength of prolonged sitting bouts



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Background

- Sedentary time and especially prolonged sitting (≥ 20 min) is a health risk factor distinct from physical inactivity.
- There was an exponential growth of research in the last decade, *but* due to methodological and measurement issues we still know too little about the characteristics of sedentary behavior in daily life.



Characteristics of sedentary behavior

- Sedentary behavior is omnipresent and occurs in varying contexts
- Context-specific sedentary behavior may have distinct environmental, social and psychological correlates
- Sedentary behavior is often “invisible” and is to a large extent regulated automatically
- Habit, which implies an automatically triggered (behavioral) impulse, might be an important psychological correlate of sitting

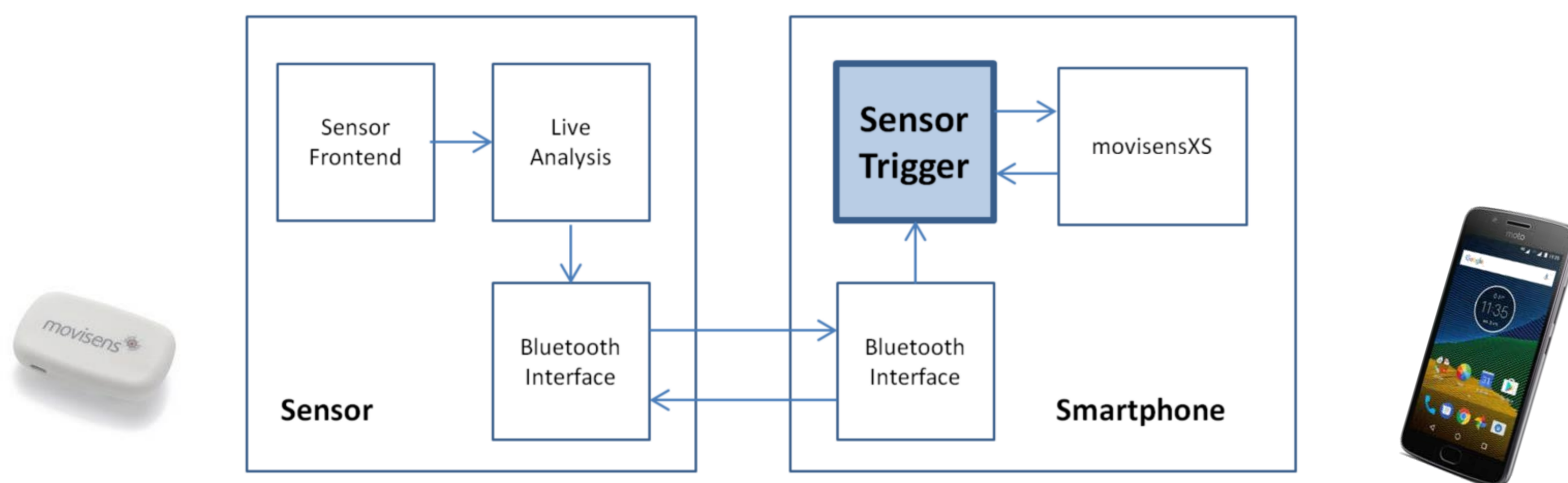
Aims

Applying an interactive ambulatory assessment design to

- examine contexts and environmental and psychological correlates (habit strength) of prolonged sitting bouts (≥ 20 min)
- explore differences in habit strength between context-specific sitting bouts

Methods

Interactive ambulatory assessment

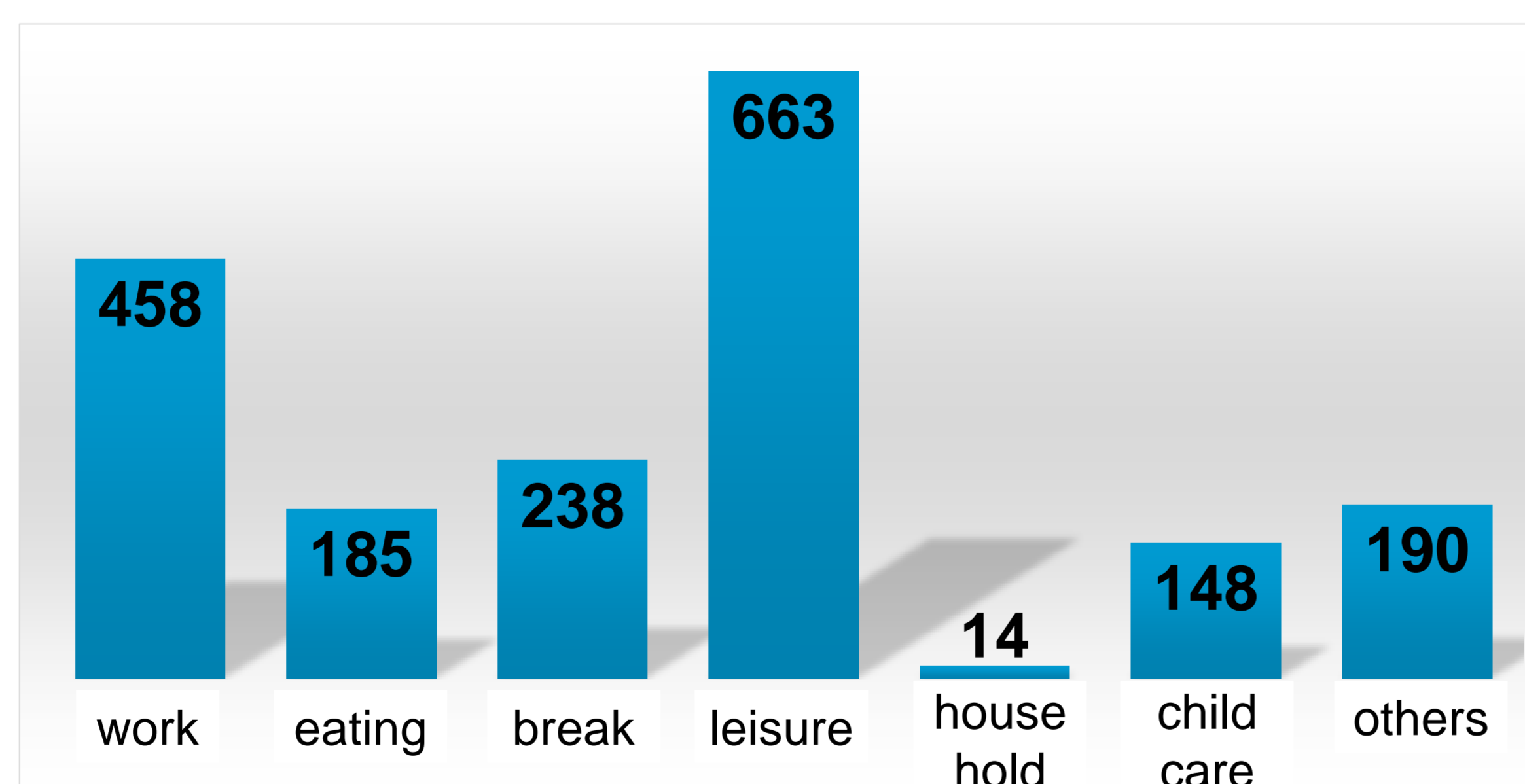


- Measurement of sedentary behavior: thigh-worn Move3 accelerometers (4 days)
- Sensor trigger: after 20 minutes of sedentary behavior
- Prompts
 - context: Where?, What?, With whom?, Option to stand up?
 - habit strength: “I sat down automatically” (habit1); “I sat down because it’s what I always do” (habit2)

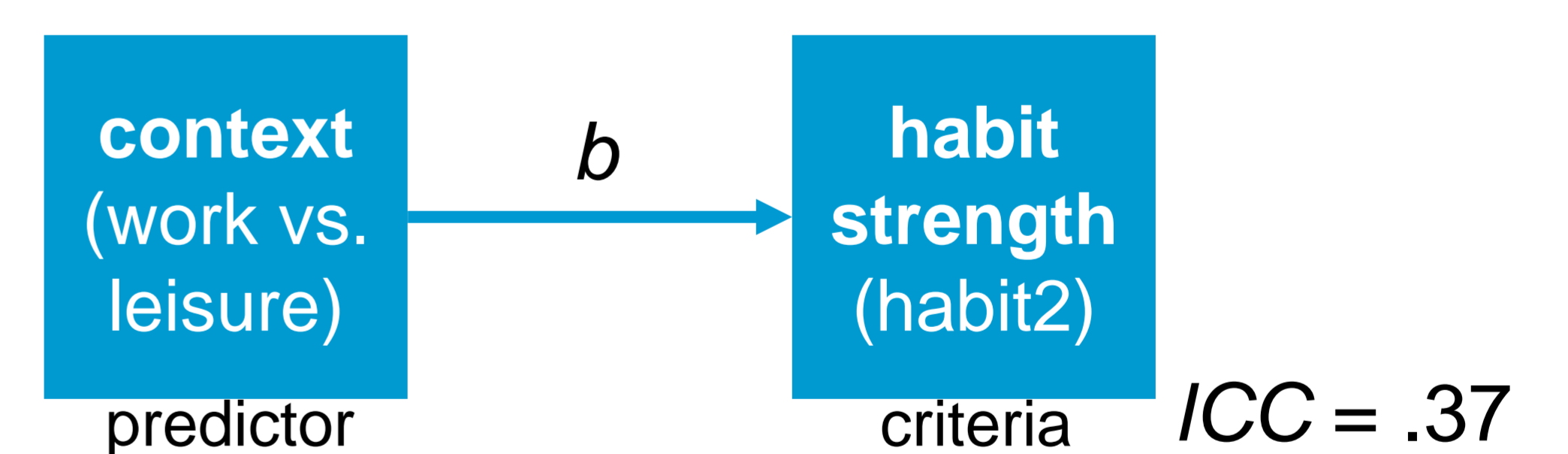
Results

- $N = 69$ (≥ 2 days ≥ 10 h wear-time); $M = 28.7$ years ($SD = 11.9$); 36 ♀
- Sedentary time per day: $M = 540$ minutes ($SD = 107$)
- Prompts in total: 3,011 (1,775 completed)

Contexts of prolonged sitting bouts



Differences in habit strength – Multilevel Models



- random intercept ($\chi^2(1) = 476.31, p < .001$)
within: $F(1, 1113.85) = 20.02, p < .001$;
 $b = -.27, t = -4.48, p < .001$
between: Intercepts $\text{var}(u_{0j}) = .38, p < .001$
- random intercept & random slope ($\chi^2(1) = 69.51, p < .001$)
within: $F(1, 1105.73) = 3.44, p < .001$
 $b = -.30, t = 3.21, p = .002$
between: Intercepts $\text{var}(u_{0j}) = 0.31, p < .001$
Slopes $\text{var}(u_{1j}) = .23, p = .009$

Discussion

- prolonged sitting bouts throughout the day occur in various contexts
- meaningful within-person variability of habit strength \rightarrow sedentary habit is not a stable construct and varies within persons depending on the context
- information about contexts of sitting and its environmental and psychological correlates is crucial to detect those contexts and sitting bouts that are susceptible to change via targeted interventions.

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