

Influencing factors of short-term affect trajectories in the daily lives of youths

preliminary results of the READY-study

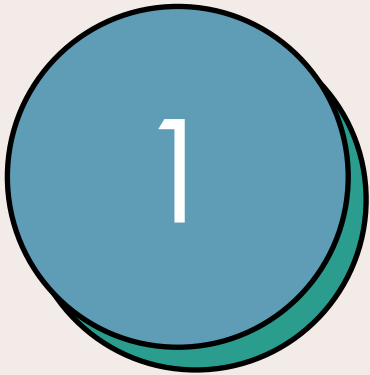
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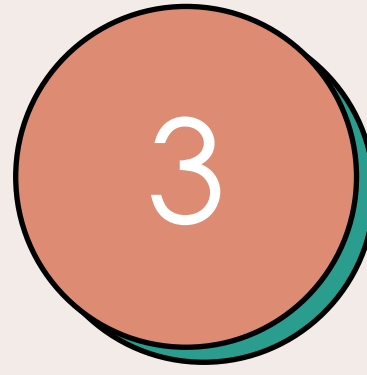
Agenda



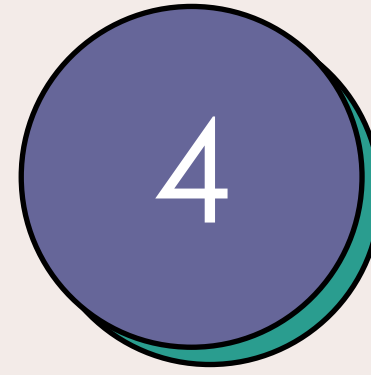
Introduction



Study design



Methods &
Results



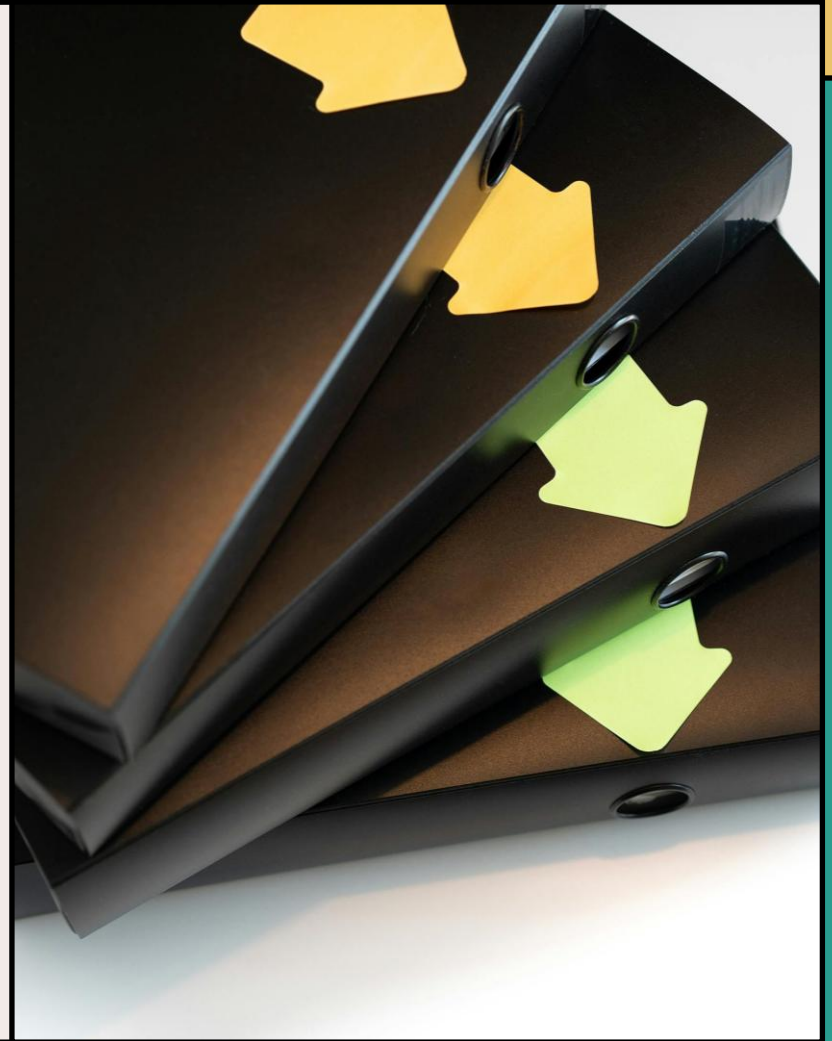
Conclusion

- **Developmental** biological, social, and hormonal **changes** increase stress sensitivity and susceptibility to psychopathology in **adolescence** ^{1,2,3,4,5}
- Maladaptive stress regulation is a **transdiagnostic risk factor** ^{2,6}
- **Understanding stress reactions** in daily life is important for the **identification of risk and resilience factors** ⁷
- **High temporal resolution** necessary to map dynamic stress-related/affective processes in daily life ^{8,9}
- **Ambulatory Assessment (AA) + microbursts**



AA-study with ultra-dense follow-up assessments (microbursts) after stressful events in the daily life of adolescents.

Study design





12 – 21 years old



14 days, 8x daily
7:30am – 9:00pm /
9:00am – 11:00pm



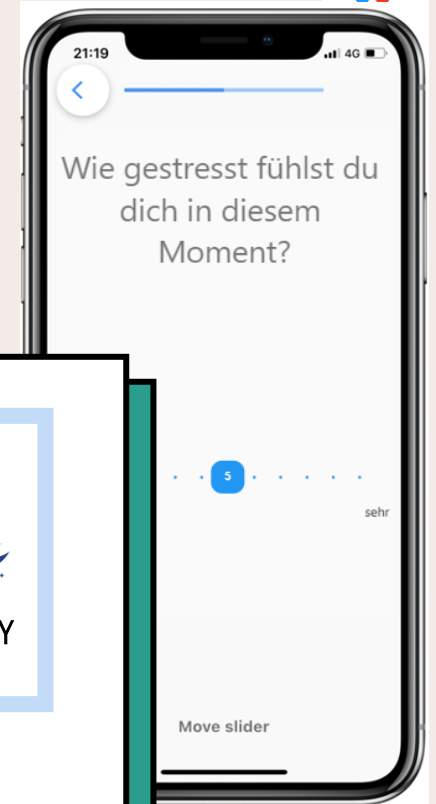
60 min time to
respond



up to €125

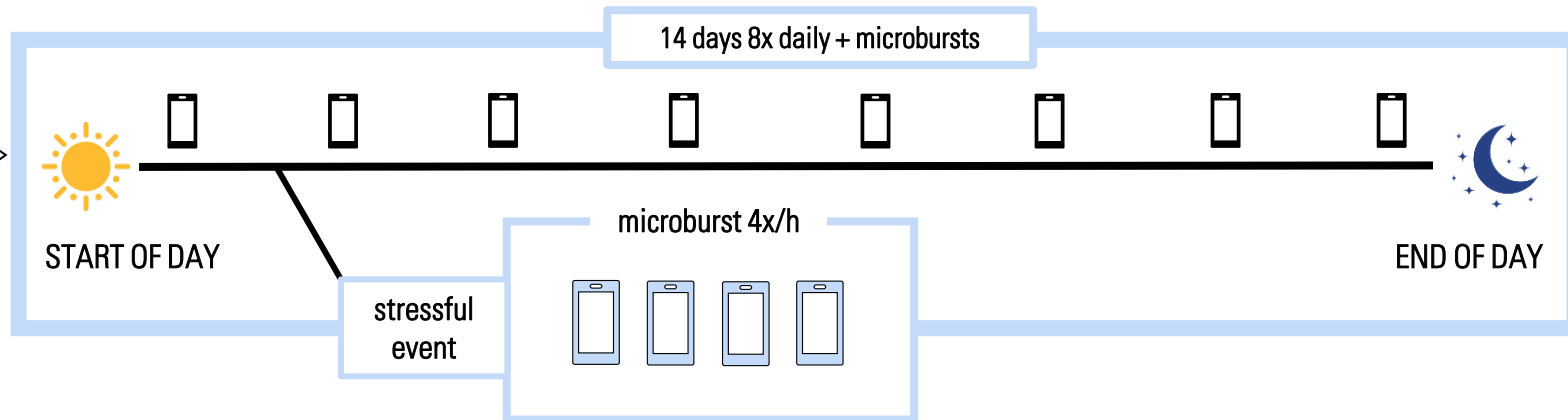


- Experience of stressful event
- Intensity of the event
- Type of event
- Company



Baseline-Assessment

- Accompaniment by legal guardian/ custodian ($\leq 16y$) or friend ($>16y$)
- Informed consent
- Questionnaires
- AA-Training



Aims

1

Feasibility of protocol

- How is the protocol-**compliance**
 - in total?
 - in the microbursts?

2

Trajectory of stress reaction

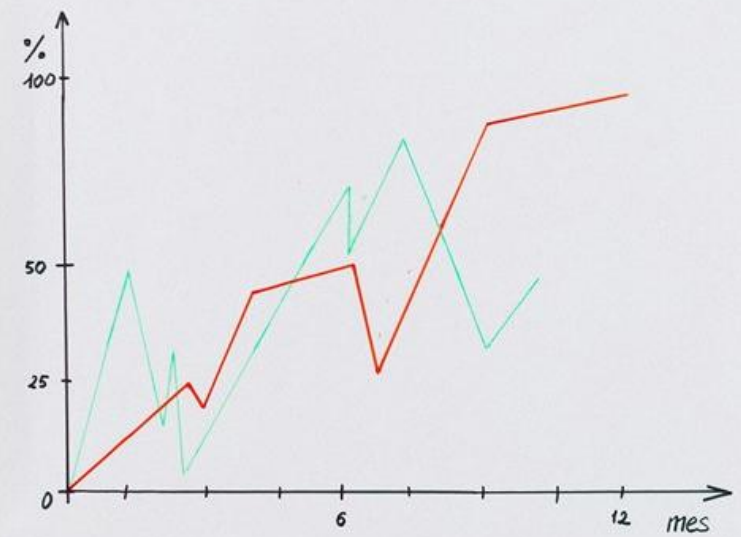
- Through which shape and sections can the stress reaction be modeled using Multilevel Growth Curve Models?

3

Influencing factors of stress reaction

- Which situational and interindividual factors influence the stress reaction?

preliminary
Results



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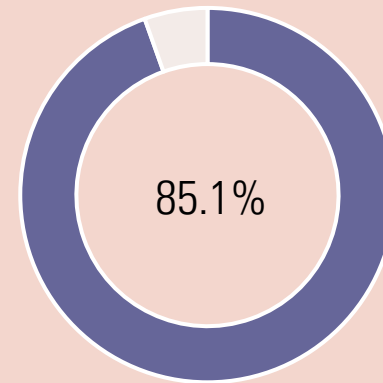
Influencing factors of stress reaction

- Which situational and interindividual factors influence the stress reaction?

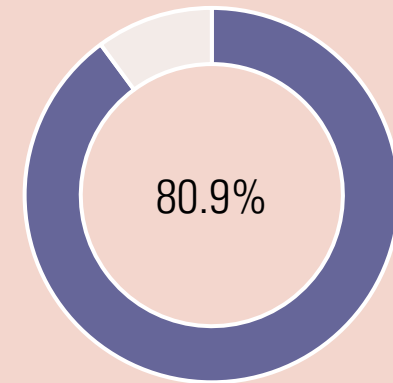
Descriptive statistics of the analysis sample

N = 289	M (SD) / N (%)
Gender	
Female	170 (58.9%)
Male	118 (40.8%)
No answer	1 (0.3%)
Age	17.5 (2.62)
Internalizing symptoms	9.51 (7.03)
Externalizing symptoms	9.78 (7.31)
Number of stressful events	10.9 (11.1)
Compliance in total	84.1 (12.1)
Compliance AA	85.1 (12.9)
Compliance microbursts	80.9 (14.9)

Compliance Standard AA



Compliance microbursts



1

Protocol with microbursts is feasible with adolescents.

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Stress reactions of 3 participants

Timepoints

T-1 = last prompt before stress event

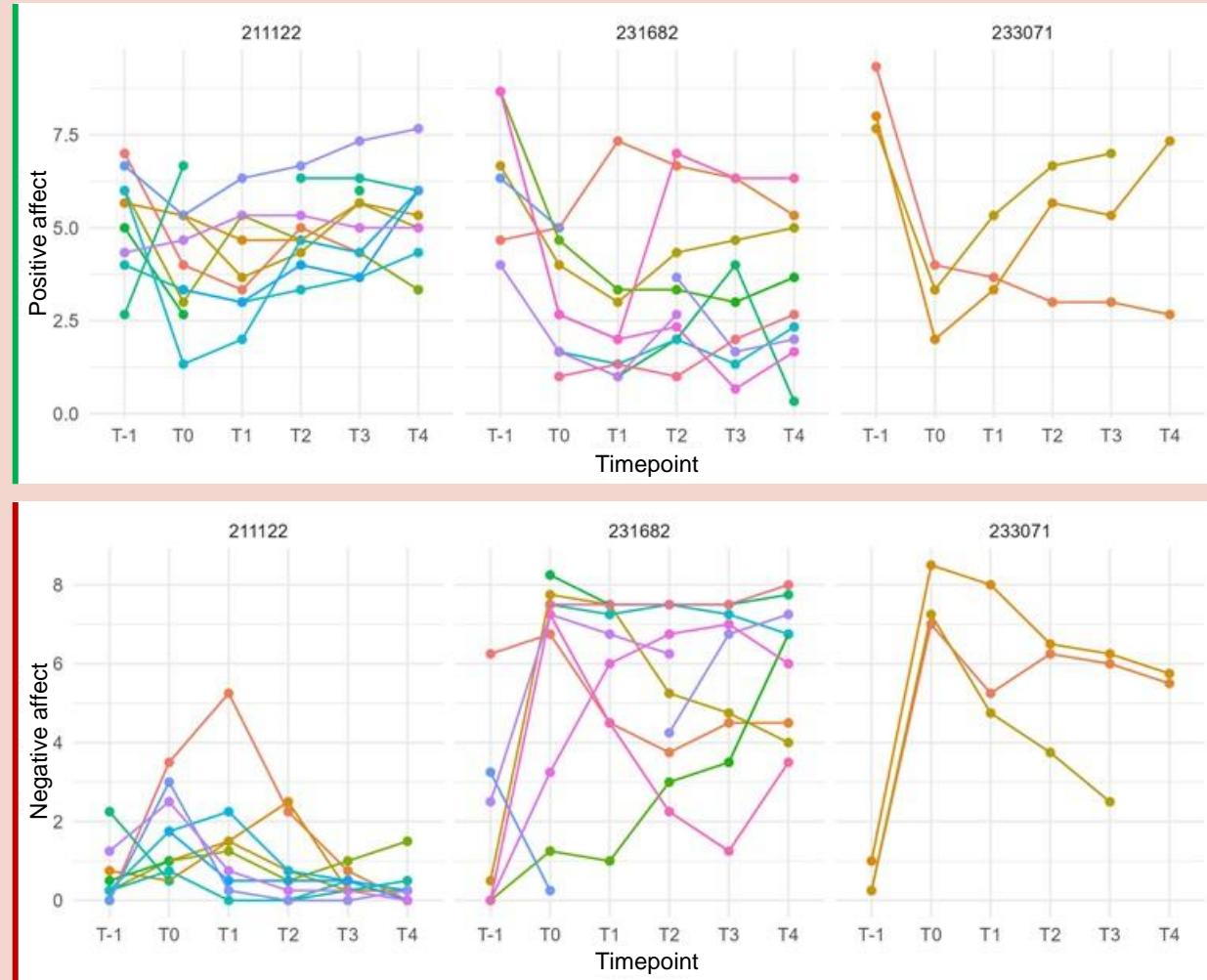
T0 = report of stress event

T1 = +15 min since event

T2 = +30 min since event

T3 = +45 min since event

T4 = +60 min since event

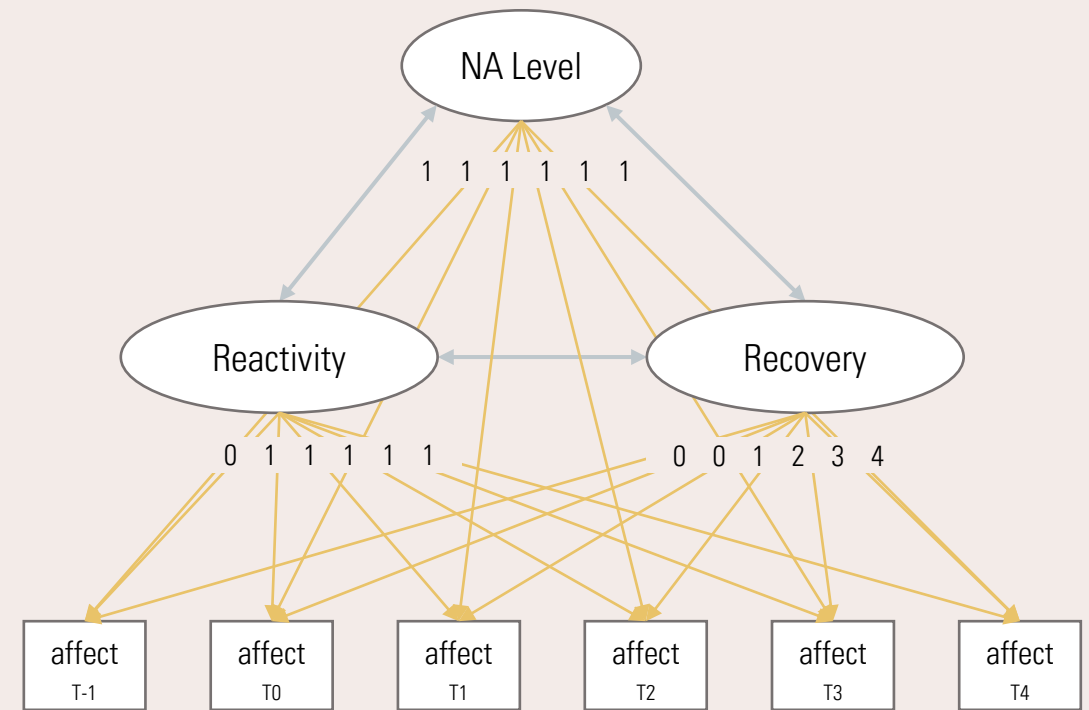
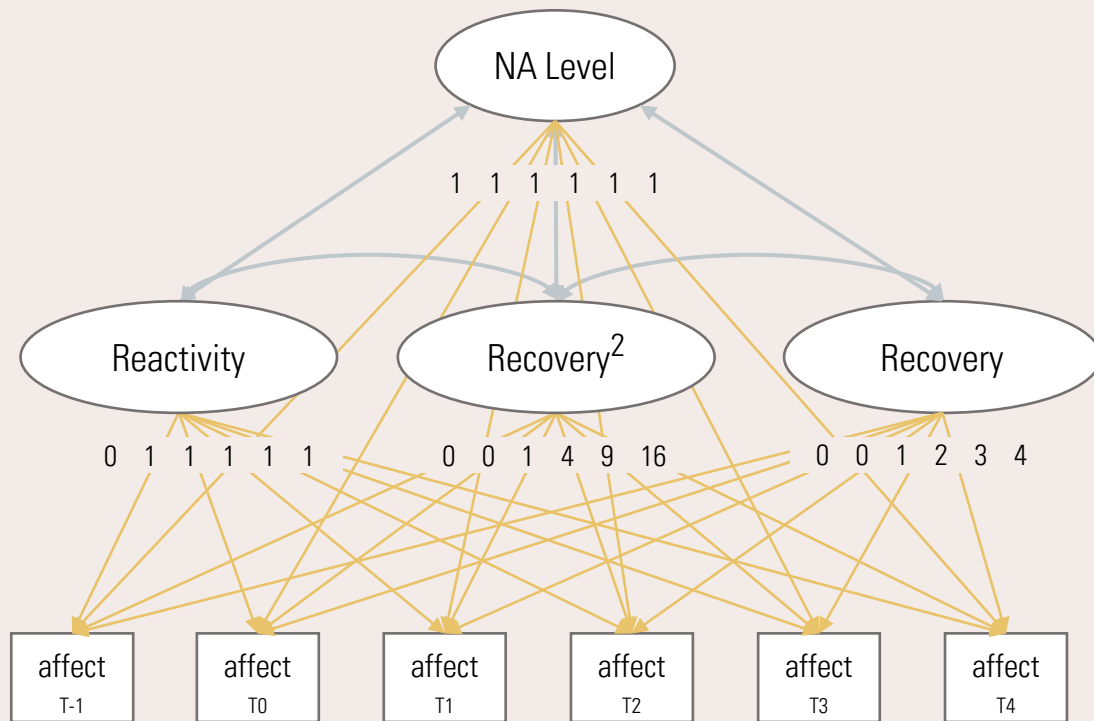


Multilevel Growth Curve Model

↔
correlation
→
loading

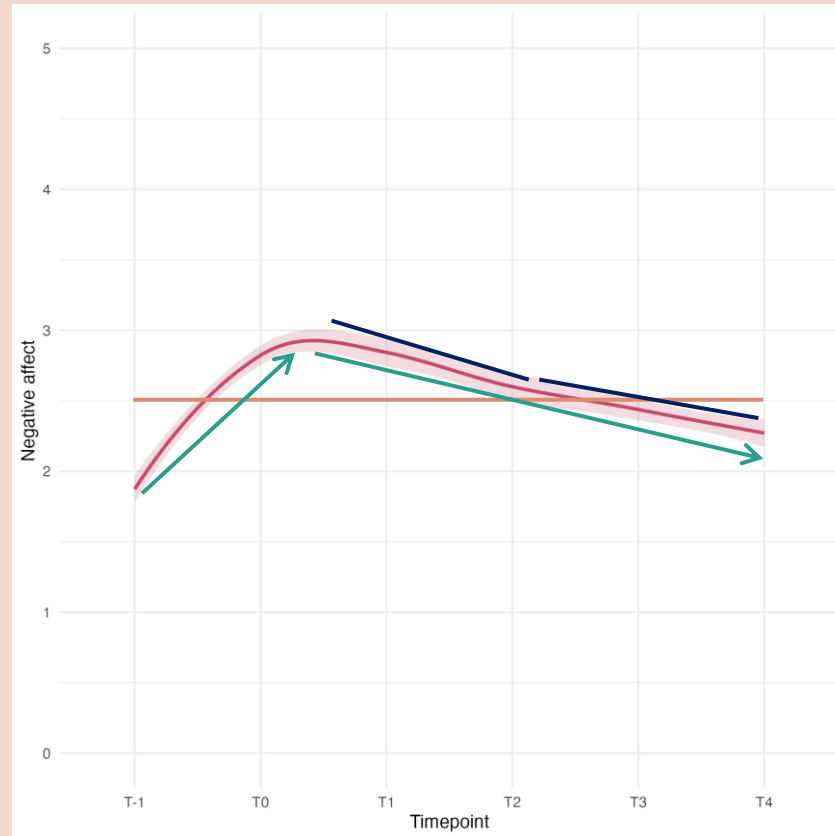
within-person/
situational

between-person/
on average

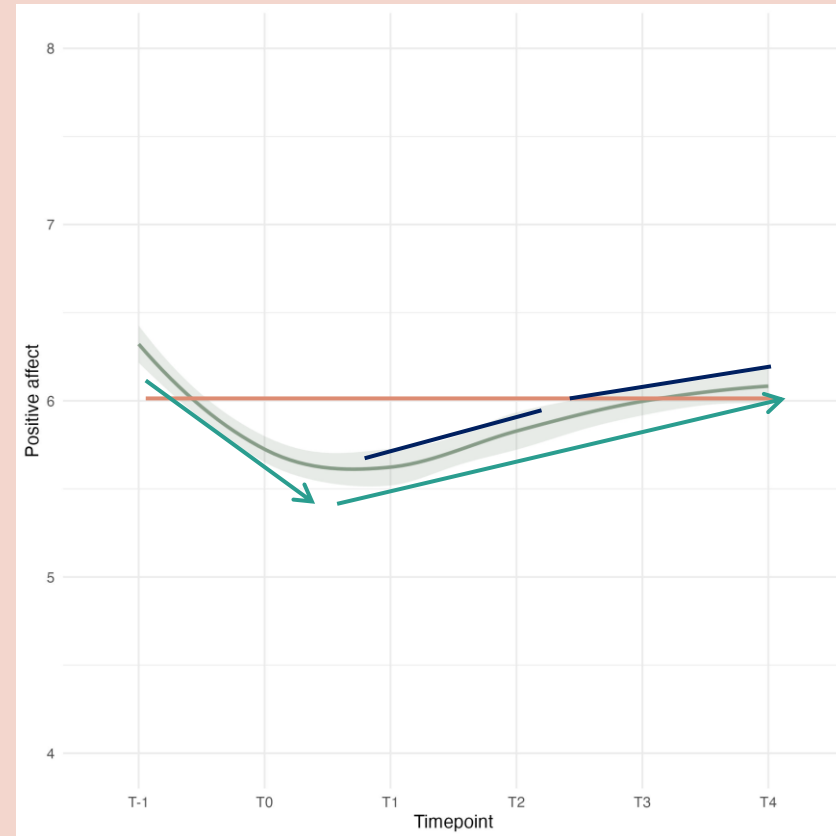


Stress reactions on average

Negative affect



Positive affect



Timepoints: T-1 = last prompt before stress event | T0 = report of stress event | T1 - T4 = +15 min since stress event

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Trajectory of stress reaction

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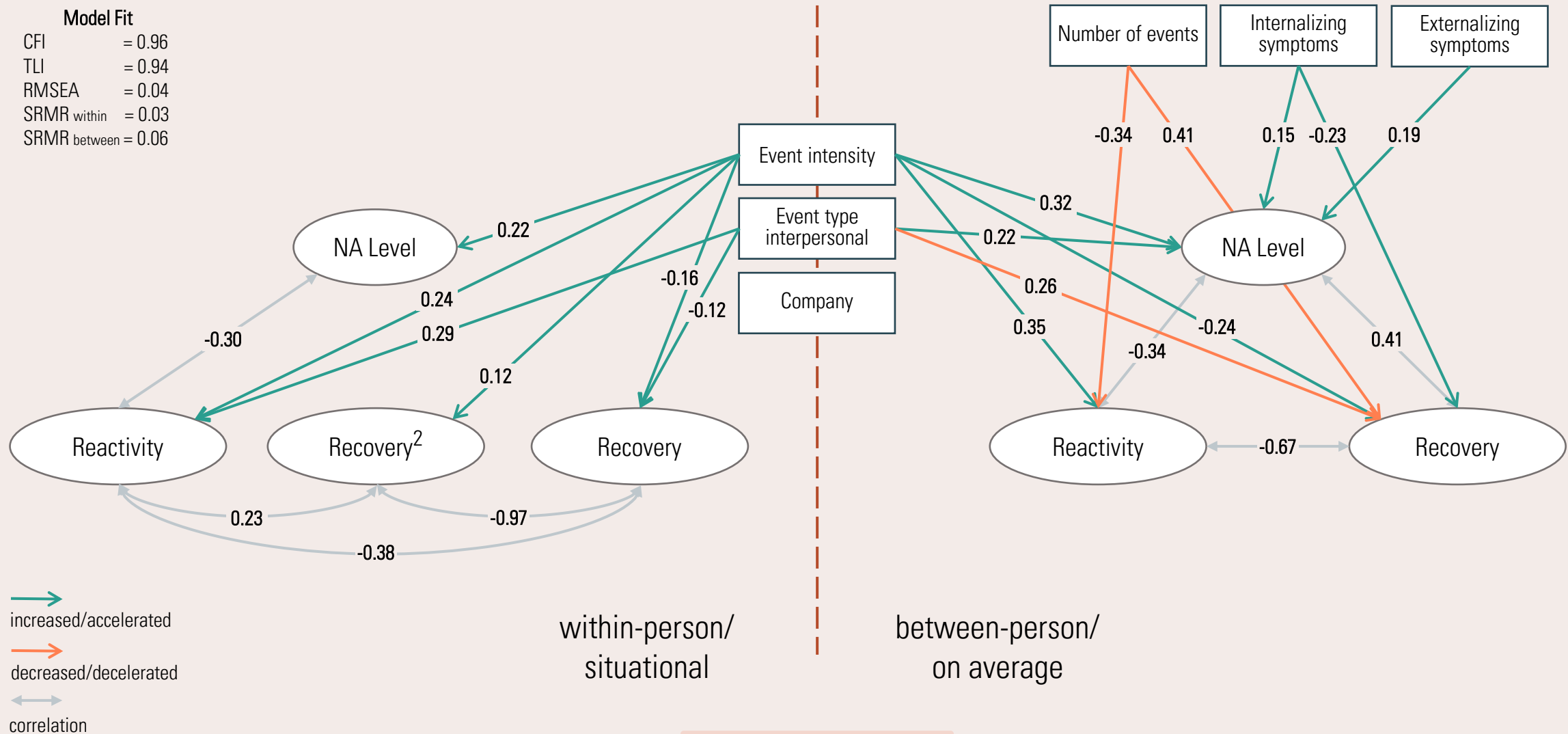
Influencing factors of stress reaction

- Which situational and interindividual factors influence the stress reaction?

Multilevel Growth Curve Model


Model Fit


CFI = 0.96
 TLI = 0.94
 RMSEA = 0.04
 SRMR within = 0.03
 SRMR between = 0.06



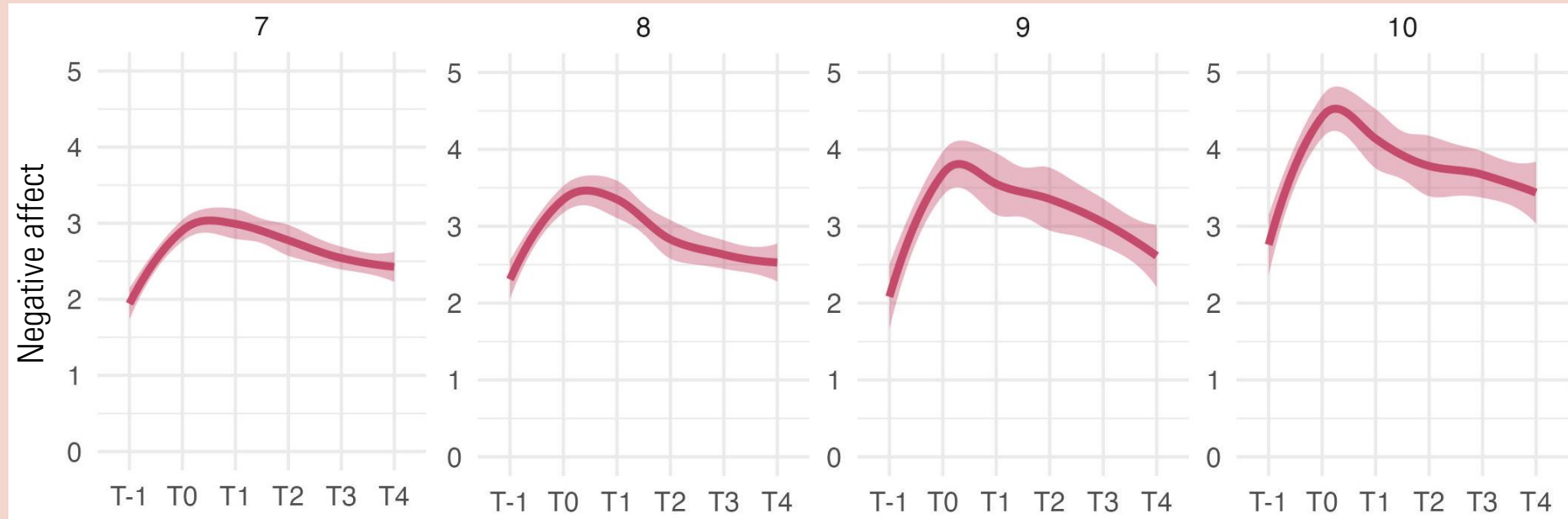
Trajectory of negative affect - overview

- Higher event intensity  situational deceleration of recovery after an initially strong recovery (within)

 increased/accelerated

 decreased/decelerated

Event intensity (scores 7-10)



Timepoints: T-1 = last prompt before stress event | T0 = report of stress event | T1 - T4 = +15 min since event

Trajectory of negative affect - overview

- Higher event intensity → situational deceleration of recovery after an initially strong recovery (within)
- Interpersonal event type → situationally with stronger recovery and stronger reactivity (within)
→ on average with weaker recovery associated (between)
- Company vs. being alone → no influence on components of trajectory
- Higher number of events → weaker reactivity and recovery (between – flattening/habituation?)
- Internalizing symptoms → higher NA level and stronger recovery (between – lability/habituation?)
- Externalizing symptoms → higher NA level, no influence on trajectory (between)

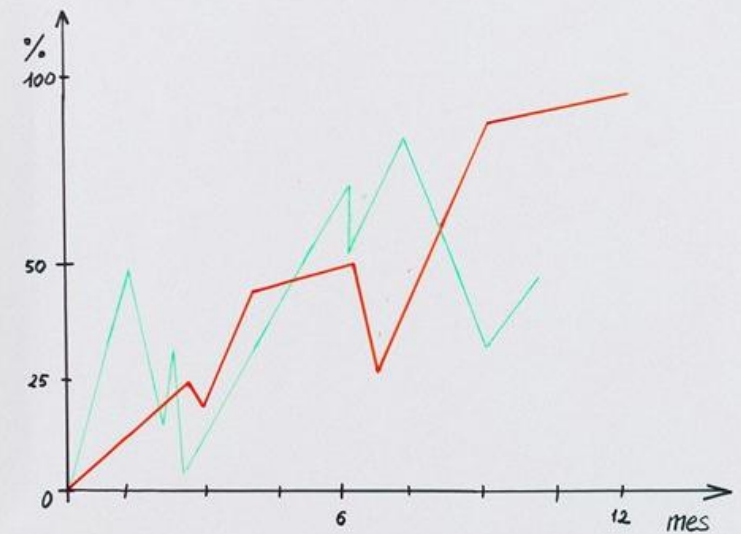


increased/accelerated



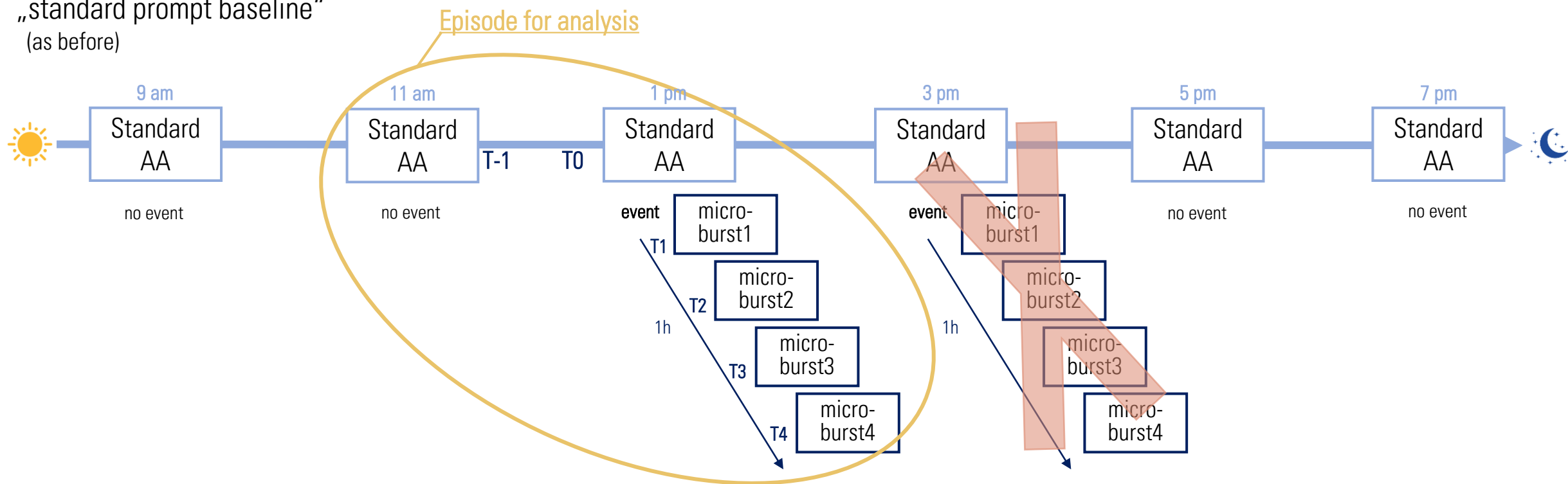
decreased/decelerated

Method-Digression Baseline Selection



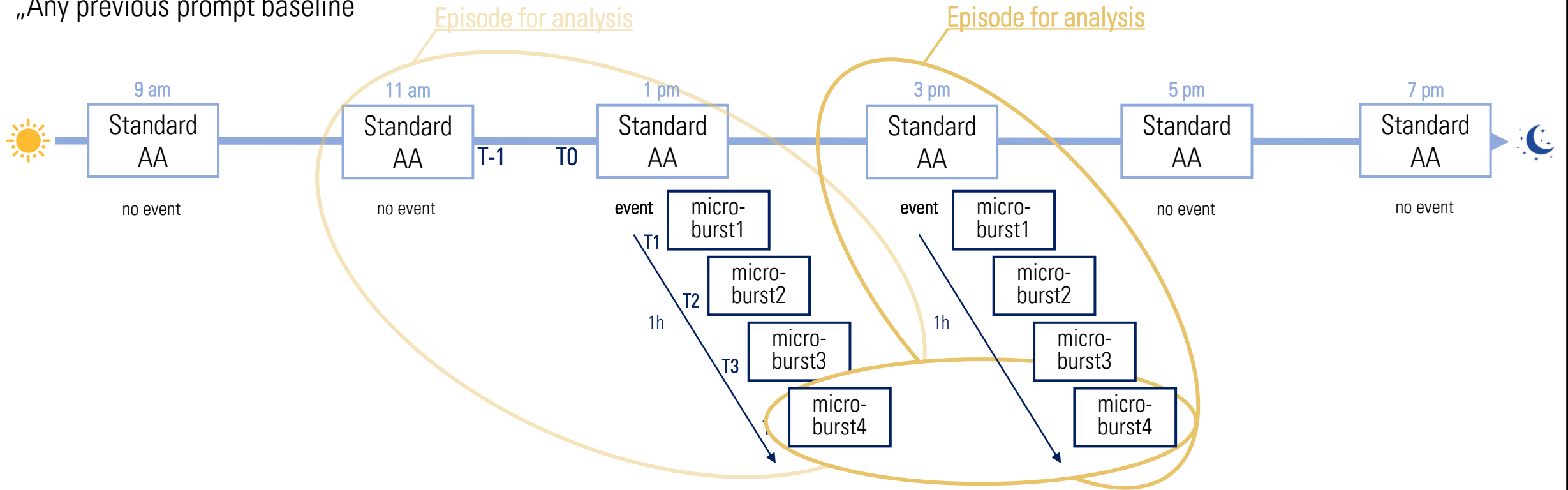
Extraction of stress reaction

„standard prompt baseline“
(as before)



Extraction of stress reaction

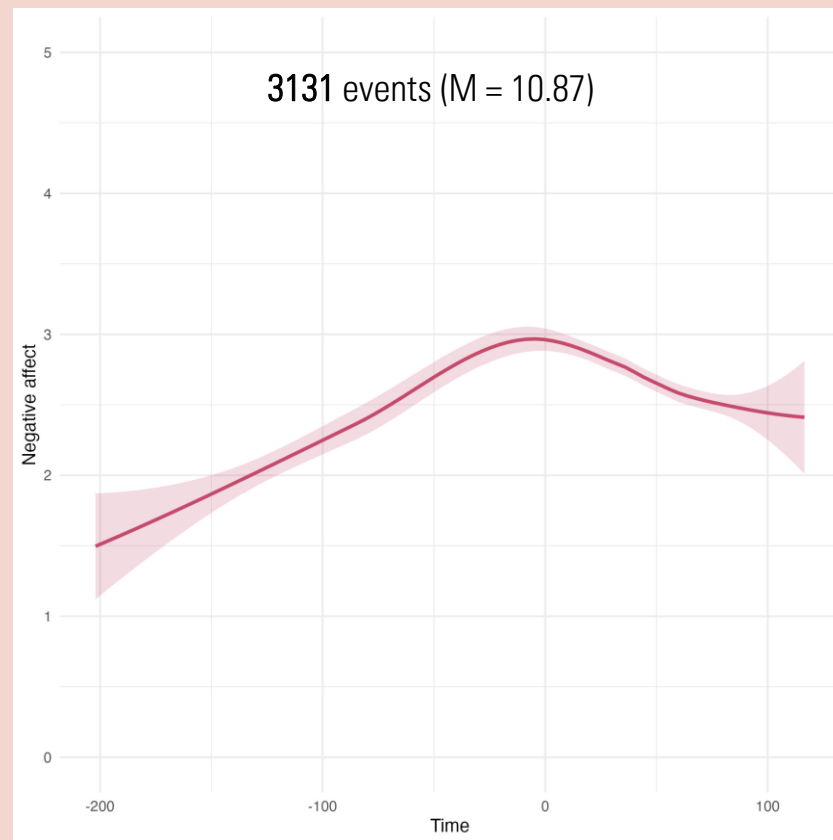
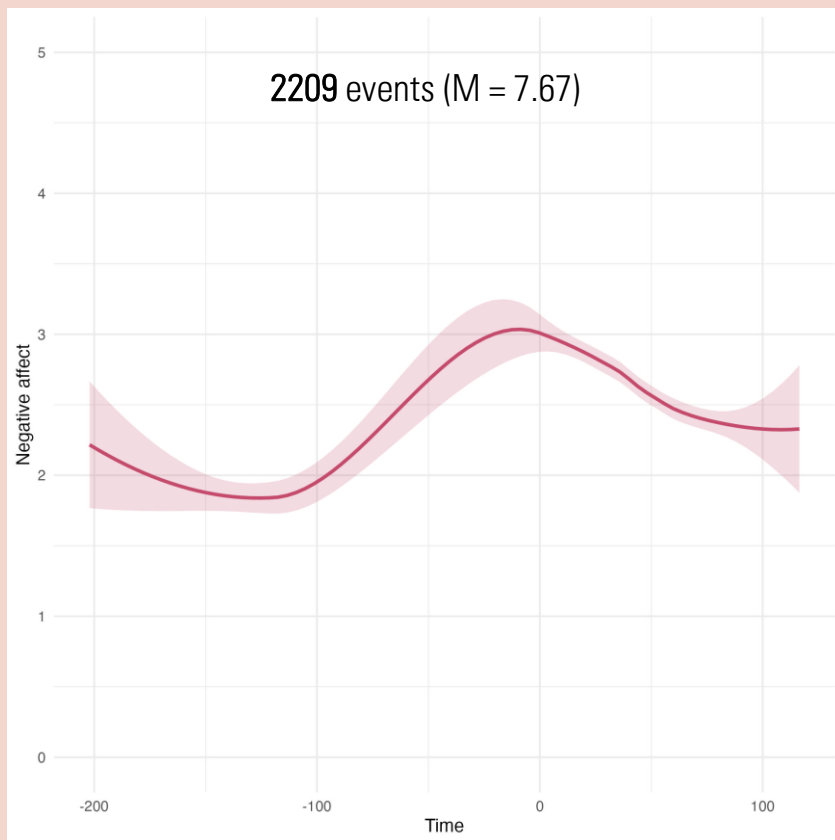
„Any previous prompt baseline“



„standard prompt baseline“

Does it make a difference?

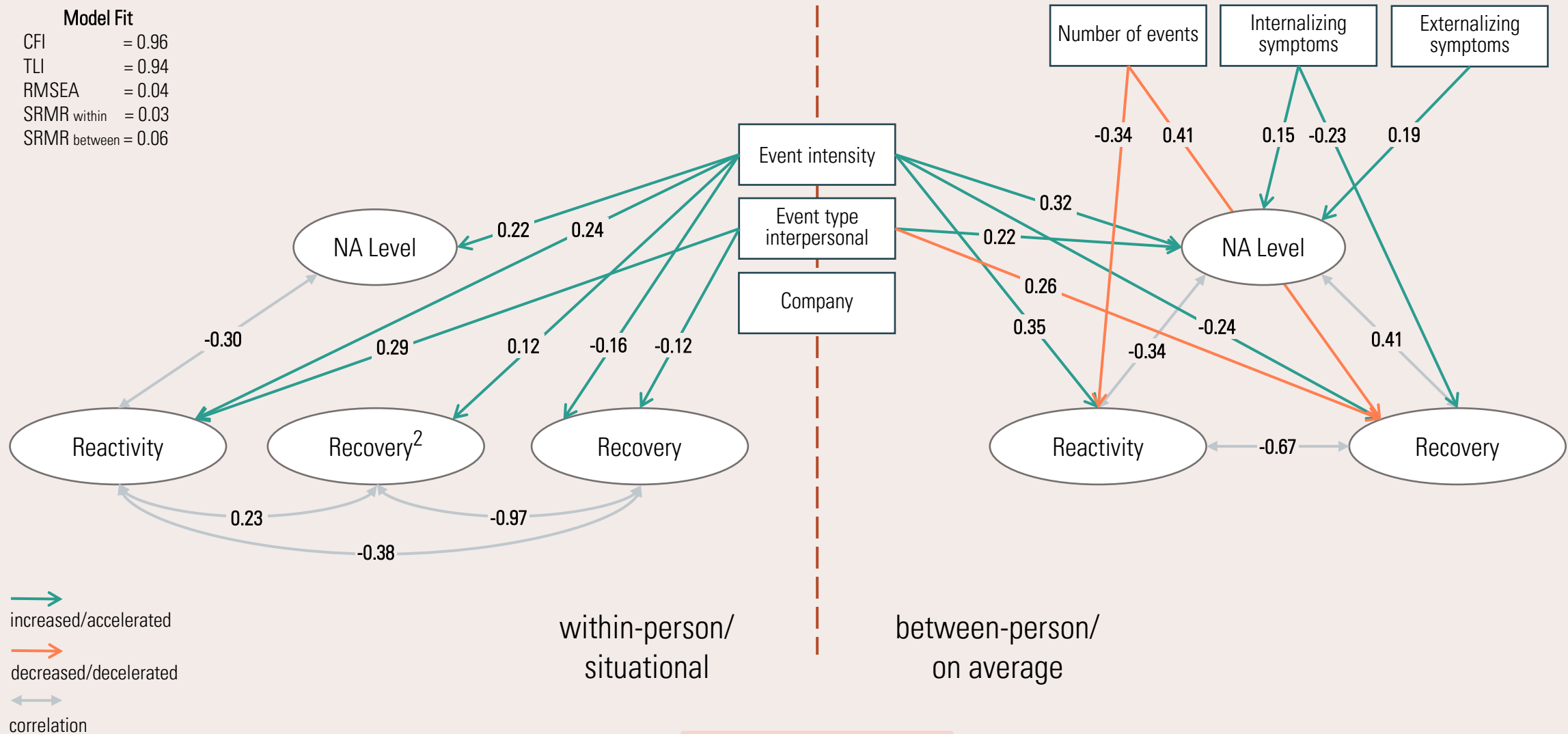
„any previous prompt baseline“



Multilevel Growth Curve Model

Model Fit

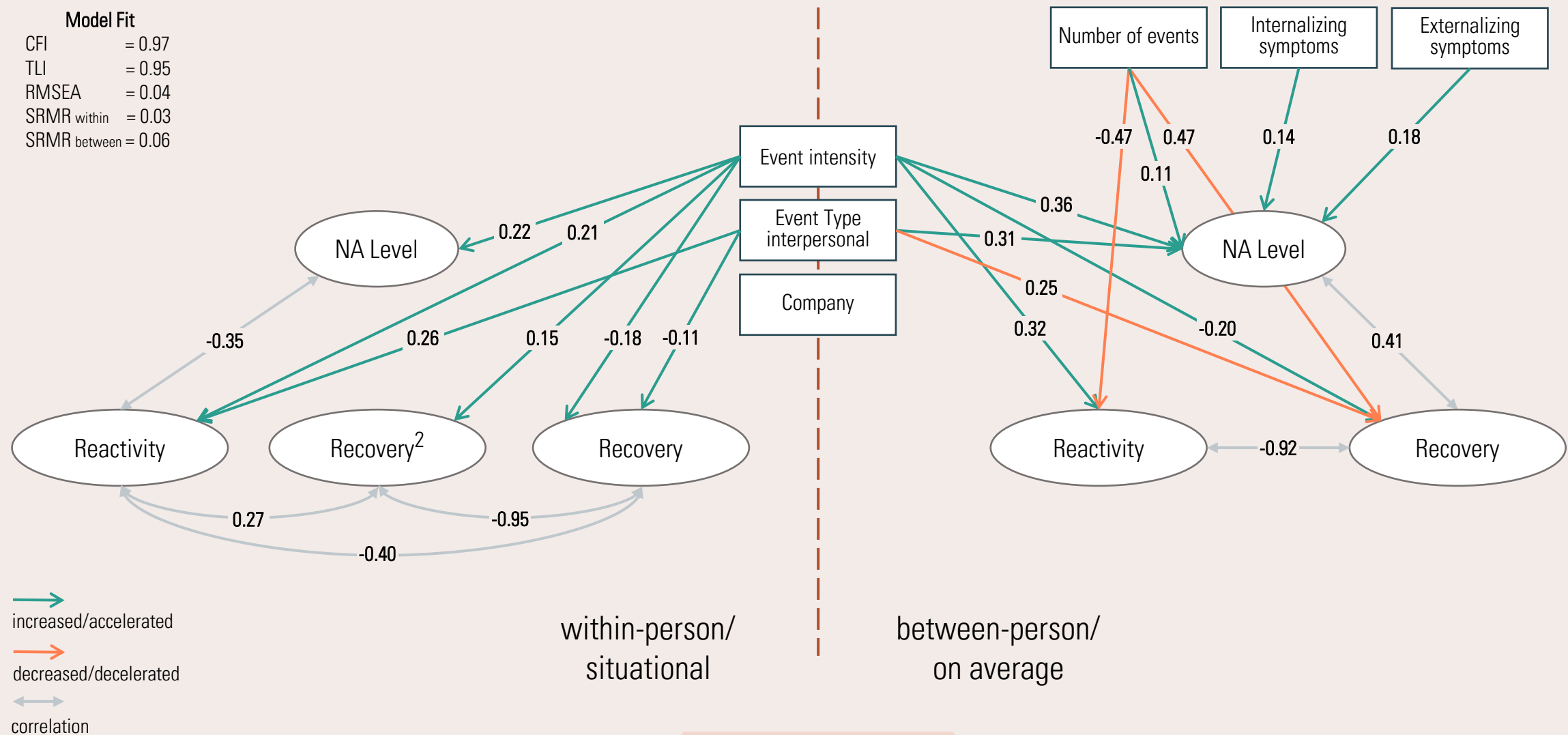
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Multilevel Growth Curve Model

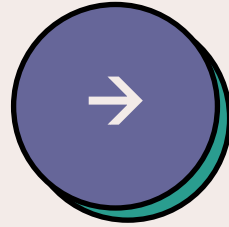
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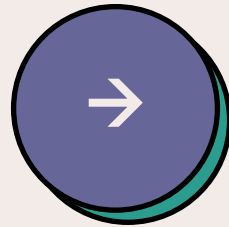




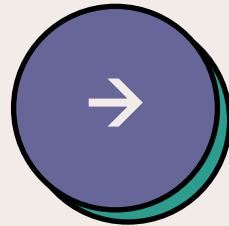
Conclusion



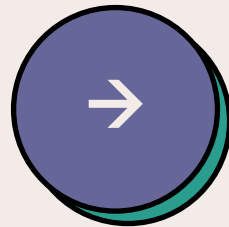
High-frequency assessments of affective processes are feasible with adolescents in their daily lives.



Multilevel growth curve models can model stress reactions with segments and influencing factors. Selection of beginning/baseline of stress reactions matters.



Such results can help identify risk and resilience factors and inform (just-in-time-adaptive-) interventions for mental health promotion and prevention.



Further higher-resolution analyses taking into account the time stamps to identify the best intervention time window are needed and planned.

Thank you!

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preregistration, slides &
contact



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