Optimism and emotion dynamics: an attempt to better understand the advantages of optimism in daily life

Charlotte Vrijen[1], Lucie A. Ostendorf[1], Anne Margit Reitsema[2], Bertus F. Jeronimus[1], Eeske van Roekel[3,4]

[1]University of Groningen [2]Utrecht University [3]Tilburg University [4]Tilburg Experience Sampling Center

Background

There is ample evidence that, on a group level, optimists are happier and healthier than pessimists. Knowledge is still lacking on ***why*** optimists generally do better in life.

Can the advantage of optimism be attributed to more adaptive emotion dynamics?

We already know that optimists report higher mean levels of positive affect (**PA**) and lower levels of negative affect (**NA**), but their emotion dynamics have not been studied.

Wellbeing more in general seems to be characterized by higher stability, lower variability and lower inertia of PA and NA. (Houben et al. 2015)

Main aim & hypotheses

Investigate whether optimism and pessimism are associated with daily life emotion dynamics

Hypotheses:

People higher in trait optimism show higher stability (lower MSSD), lower variability and lower inertia (autocorrelation) of PA and NA.

Explorative research questions:

1) Different effects for **PA and NA**?

2) Different effects for **high and low arousal** PA and NA?

Method

Secondary data analysis

Sample 1: 185 Dutch participants (age 18-61) who completed EMA 5 times per day for 14 days

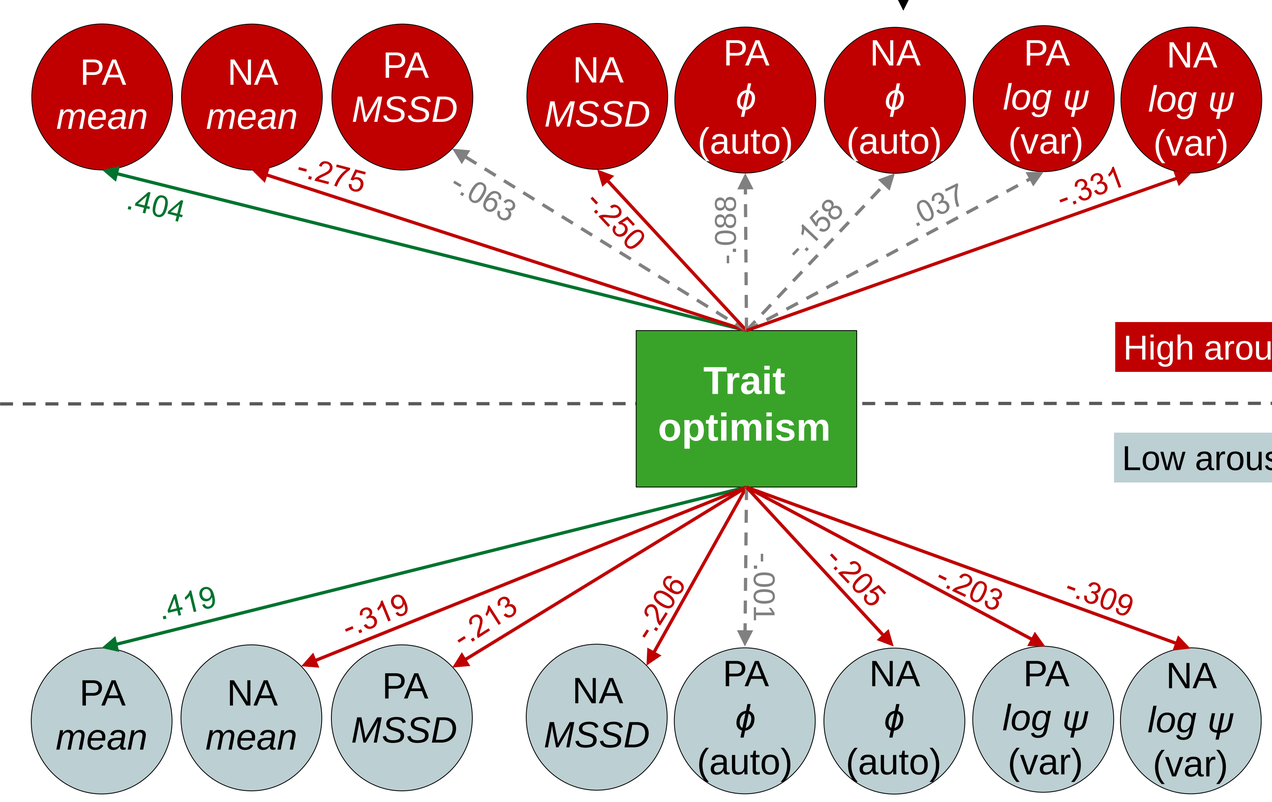
Sample 2: 390 Dutch participants (age 18-74) who completed EMA 3 times per day for 30 days

Measures: trait optimism (LOT-R) and EMA data on PA and NA

Dynamic Structural Equation Modeling (Mplus 8)

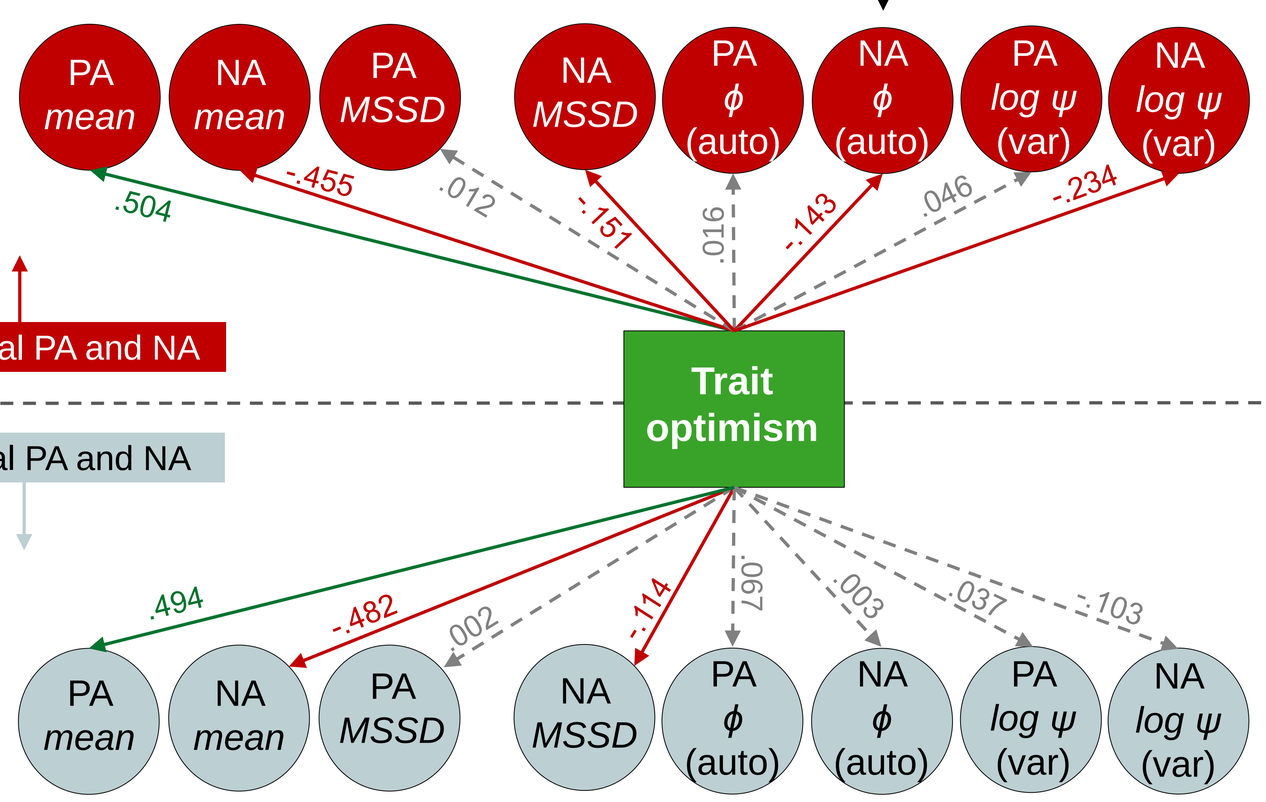
Model
The model consists of a between and a within-part. Only the between part is depicted below. In the within-part of the model, random effects of autocorrelation and variability of PA and NA were estimated.

Preliminary results sample 1



Due to nonconvergence of the model in which residuals of **all DVs** were allowed to be correlated at the between level, in the simplified model presented here for sample 1, residuals of log ψ (var) were not allowed to correlate with the other DVs (similar results if residuals of ϕ (auto) are not allowed to be correlated with the other DVs).

Results sample 2



Residuals of all DVs were allowed to be correlated at the between level for sample 2

Main findings

1. All effects in expected direction: People higher in trait optimism showed higher stability (lower MSSD), lower variability and lower inertia (autocorrelation).

2. For **high arousal affect**, trait optimists showed higher stability, lower variability and lower inertia **of NA but not of PA**.

3. For **low arousal affect**, results were more heterogeneous between the two samples: for **sample 1** all links with high arousal NA were also found for low arousal NA and 2 additional links were found with low arousal PA; for **sample 2** only 1 of the high arousal NA effects was also found for low arousal NA and no low arousal links with PA were found.

Discussion

Differences in results between the two samples may be due to:

- Power (high arousal NA autocorrelation)
- Simplified model used for sample 1
- Different time scales

Future plans (part 2 of this study)
Do more optimistic people use different and more diverse strategies to regulate their emotions?

This study was funded by a Veni Grant (VI.Veni.211G.033) from the Dutch Research Council (NWO), awarded to Dr. Charlotte Vrijen.

Scan me!

Scan for the preregistration of this study

https://bit.ly/Optidyn

Contact: Charlotte Vrijen, University of Groningen, Netherlands, c.vrijen@rug.nl, www.charlottevrijen.com