



The Ecological Momentary Assessment of Well-being

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BEING

Well-being








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VS



Smartphone-Based Ecological Momentary Assessment of Well-Being: A Systematic Review and Recommendations for Future Studies

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1. N= 53 studies → heterogeneous in designs, context, and measures
 - Average study duration → 12.8 days
 - 2-12 prompts per day
 - Objective data included in 58.5%
 - Only 47.2% reported compliance, indicating a mean of 71.6%
 2. Results:
 - Well-being fluctuated daily and weekly: ↑ WB in evenings and weekends
 - Fluctuations disappeared when location and activity were accounted for.
 - On average
 - Being in nature and physical activity → ↑ WB.
 - Working → ↓ WB, but workplace and company (i.e. colleagues, customers..)
 3. Recommendations :
 - Measure of well-being: affective vs cognitive well-being
 - Objective data
 - Schedule: depends on the time-scale of variation in the context of interest
 - Analyses: focus on fluctuations, patterns of well-being, and individual differences instead of the average/sum
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Research plan

Participants:

- N=1500: a large sample of (partly genotyped) monozygotic and dizygotic twin pairs of the Netherlands Twin Register (NTR)

Design:

- Asked to participate 4 times a year (each season) for 7 days.
- Smartphone based Ecological Momentary Assessment (EMA):
 - 8 prompts per day
 - well-being, location, activity etc...
- Passive mobile sensing of the environment

Simpel 2G 3G 4G 5G 6G 7G 8G 9G 10G 11G 12G 13G 14G 15G 16G 17G 18G 19G 20G 21G 22G 23G 24G 25G 26G 27G 28G 29G 30G 31G 32G 33G 34G 35G 36G 37G 38G 39G 40G 41G 42G 43G 44G 45G 46G 47G 48G 49G 50G 51G 52G 53G 54G 55G 56G 57G 58G 59G 60G 61G 62G 63G 64G 65G 66G 67G 68G 69G 70G 71G 72G 73G 74G 75G 76G 77G 78G 79G 80G 81G 82G 83G 84G 85G 86G 87G 88G 89G 90G 91G 92G 93G 94G 95G 96G 97G 98G 99G 100G

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Beantwoordt u alstublieft de volgende vragen:

Hoe gelukkig voelt u zich op dit moment?

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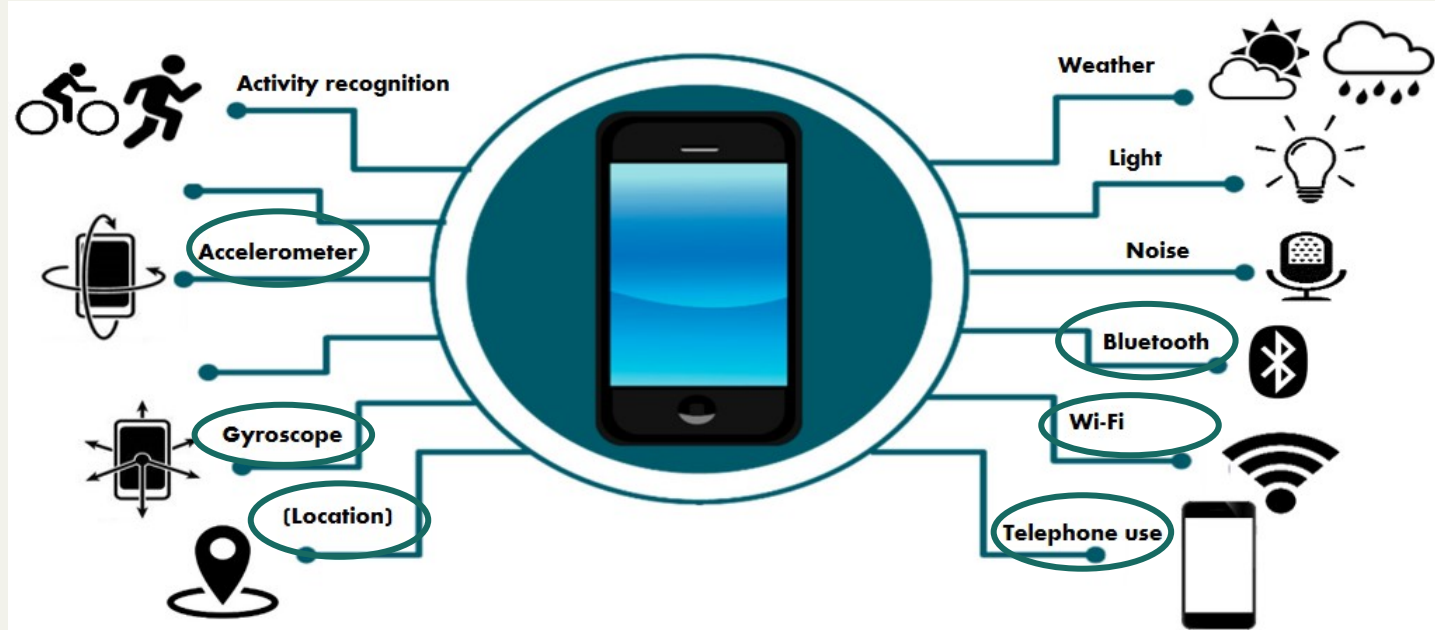
Heel ongelukkig Heel gelukkig

Hoe tevreden bent u met uw leven op dit moment?

VOLGENDE

Passive sensing

- ▶ Environmental variables
- ▶ Phone use
- ▶ Physical activity/movement
- ▶ Bluetooth beacons



Analyses

Explain individual differences

- Fluctuations in well-being
- Classical twin models: genetic and environmental factors



Well-being → ← environment

- Predict WB based on environmental variables
- Machine learning
- Time series
- Gene x Environment analyses



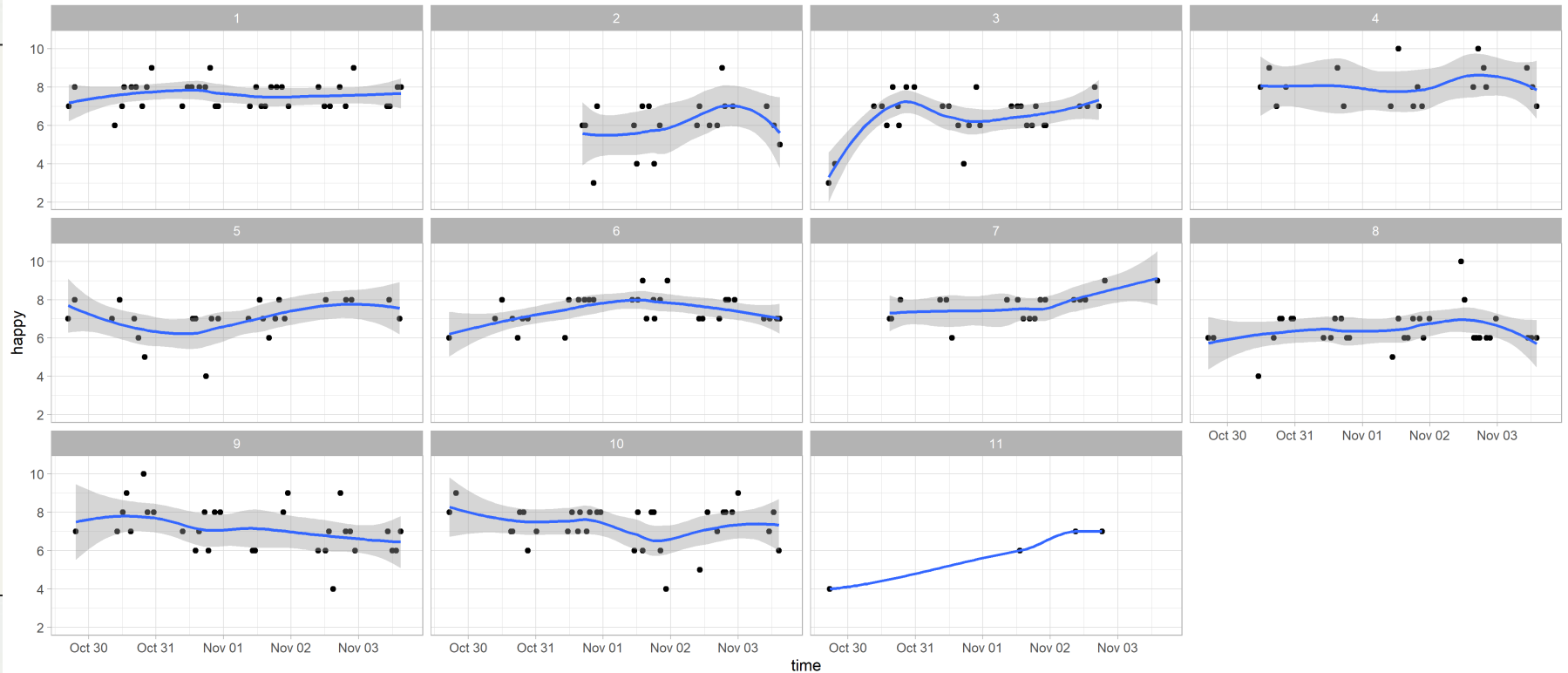
1. N= 11 students
2. 4 days
3. 8 prompts per day: timing depends on waking hour
4. Passive data collection
5. Questionnaire about experiences and feasibility

Note: this data is from last October/November → lockdown due to corona.

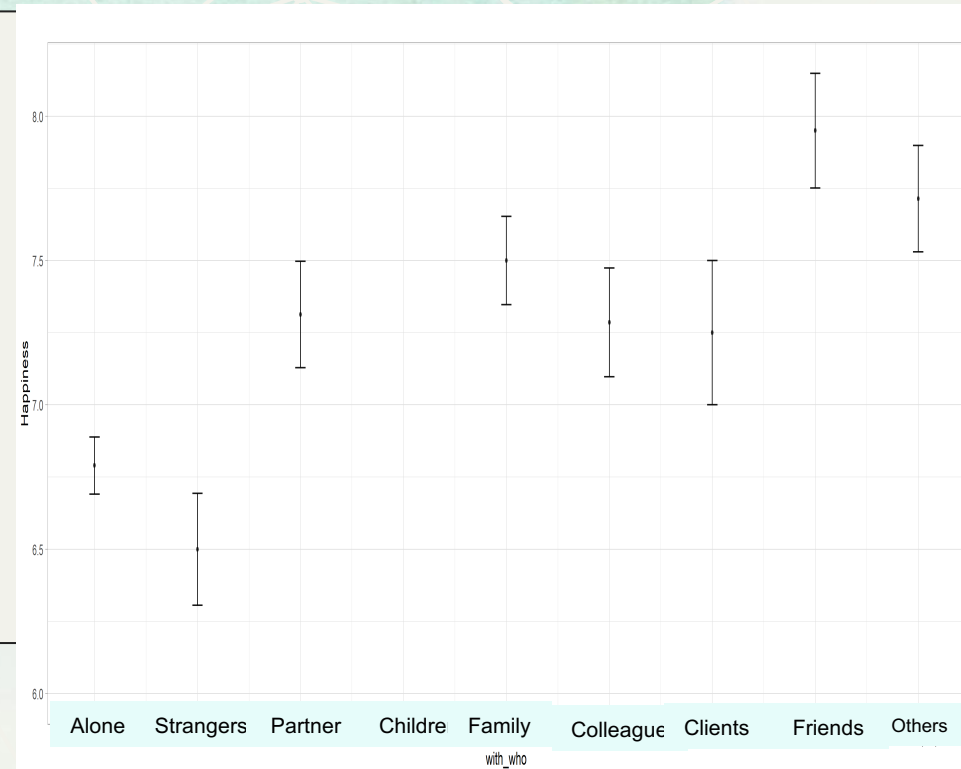
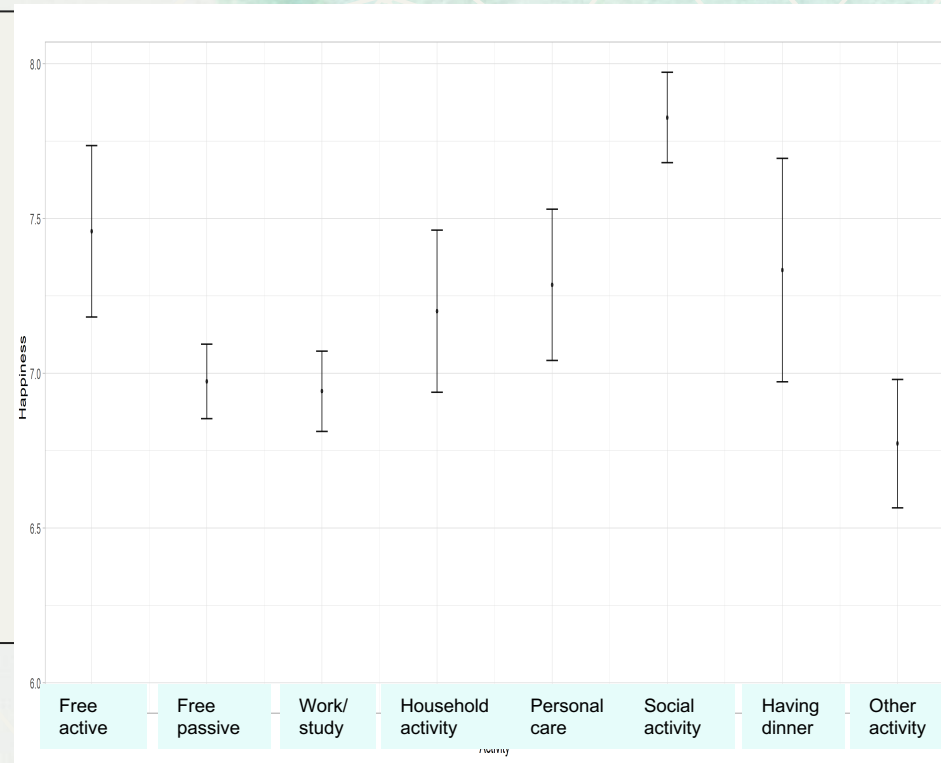


Pilot study

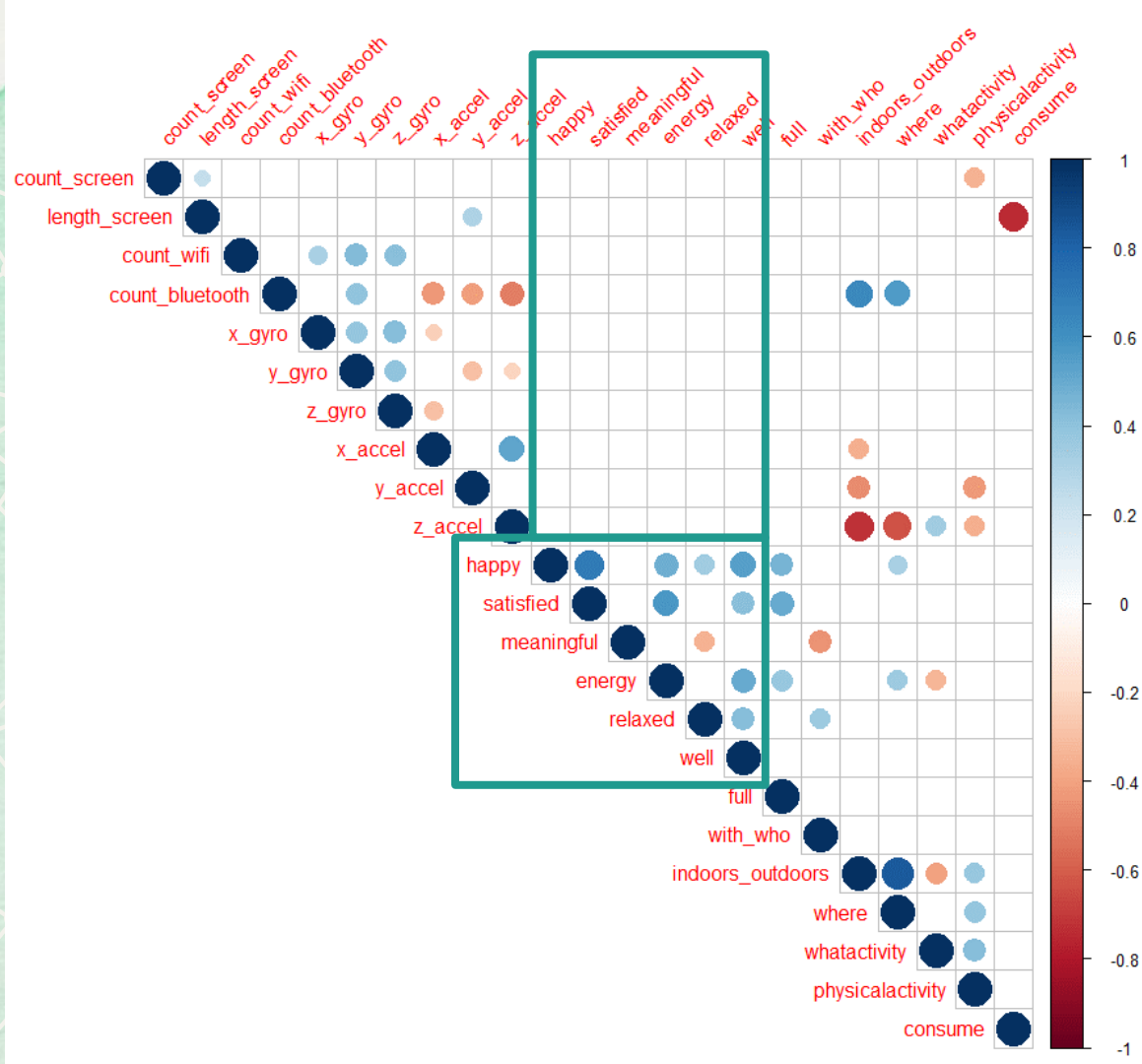
Happiness patterns



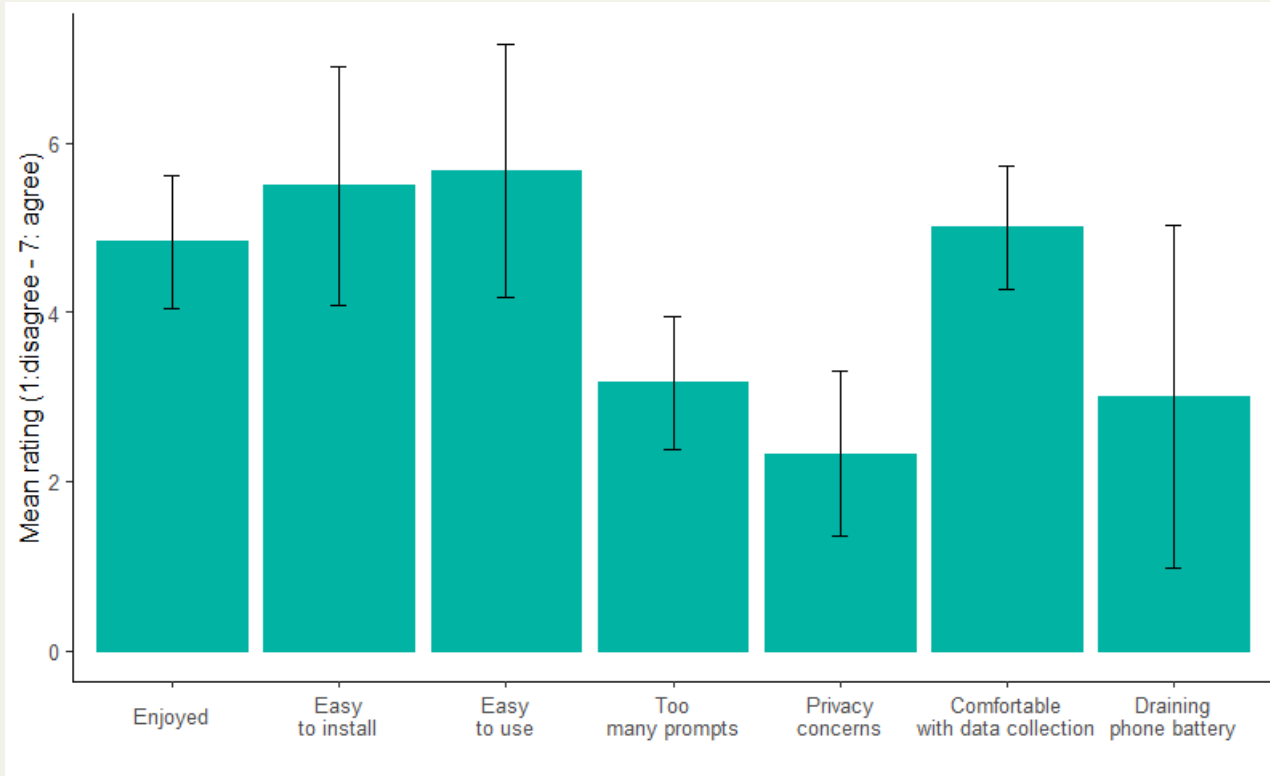
Happiness → activity / company



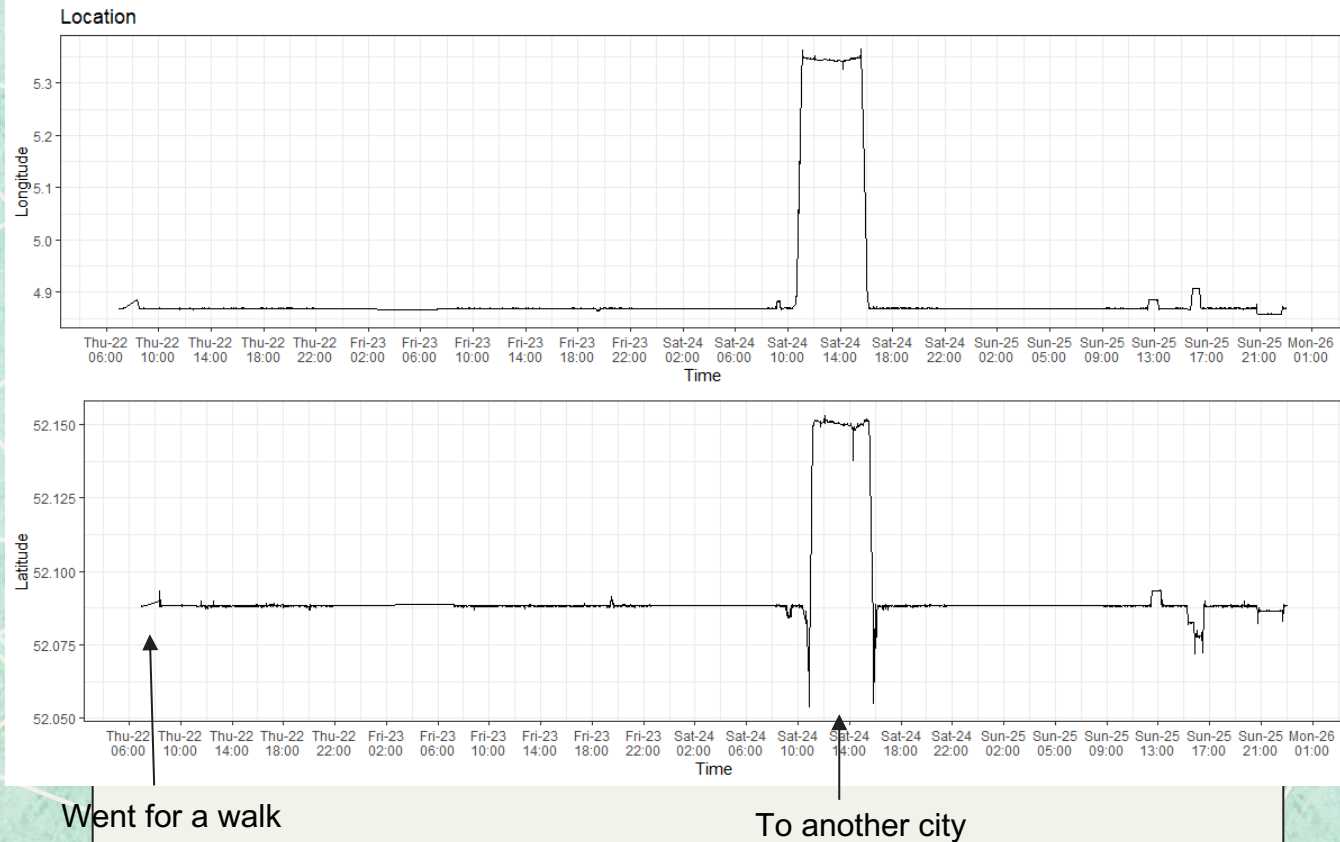
Happiness + EMA and passive data correlates



Questionnaire: acceptability and feasibility



Why we postponed data collection: i.e. location data



Conclusion

The combination of active and passive data collection using smartphone applications can lead to new insights and more specific knowledge about the fluctuations of well-being and what makes people happy.



Thank you!

Questions, comments?



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