Unique sources of variability in individual caregivers' day-to-day affect during the COVID-19 pandemic.

Monica E. Ellwood-Lowe[1], Ruthe Foushee[2], Jon Wehry[1], Grace Horton[1], & Mahesh Srinivasan[1]

[1]University of California, Berkeley
[2]University of Chicago

Introduction

- The first few years of life are critical for both children's development[1] and their caregivers' wellbeing.[2]
- Caregivers were uniquely affected by the onset of the COVID-19 pandemic[3]
- Studies examining caregivers' wellbeing have primarily focused on effects at the group level, which risks mischaracterizing effects at the individual level
- Examining caregivers' affect over time during the first year of the pandemic allows us distinguish between factors affecting caregivers' wellbeing for each individual caregiver
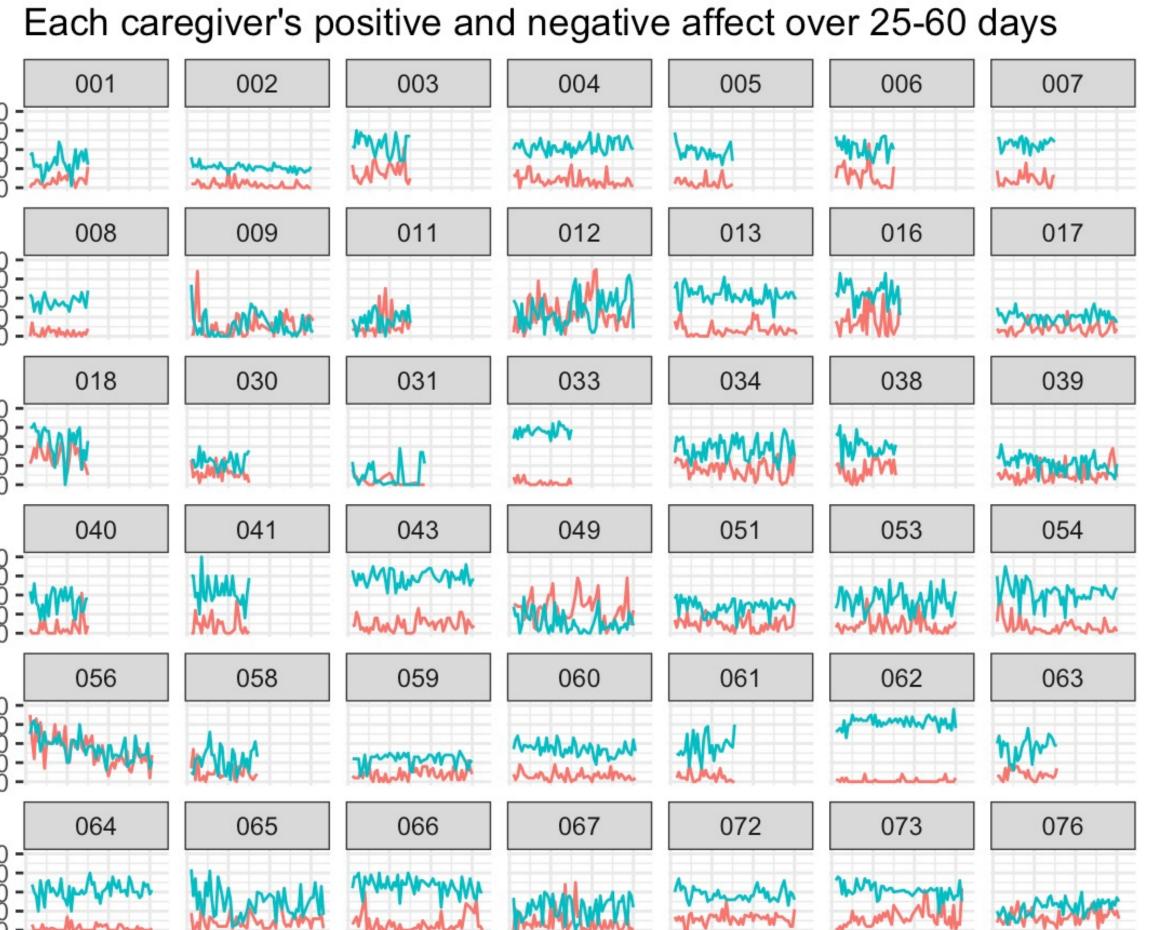
Questions

1) What experiences are related to caregivers' day-to-day positive and negative affect at the group level?
2) Are effects at the group level consistent with models trained on each individual separately?
3) Are there subsets of caregivers with more similar experiences to one another? Can a model trained on one caregiver's data predict another caregiver's data?

Participants & Design

- 42 caregivers of 18-26-month old children recruited between May 2020-Novemeber 2021
- middle-SES, highly educated, 52% white
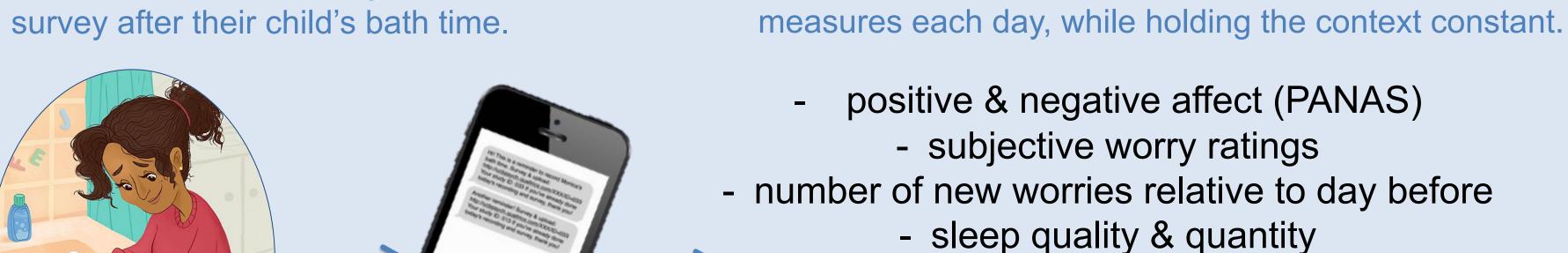- completed surveys immediately after their child's bath time over a series of 30-60 days

Results

Caregivers' positive and negative affect vary considerably each day.

Each caregiver's positive and negative affect over 25-60 days

Caregiver positive and negative affect

Survey number

— Negative affect
— Positive affect

The pandemic presents a case study for understanding how stressors affect caregivers' emotional wellbeing.

caregivers received a text reminding them to fill out their survey after their child's bath time.

this allowed us to capture their ratings on a number of measures each day, while holding the context constant.

- positive & negative affect (PANAS)
- subjective worry ratings
- number of new worries relative to day before
- sleep quality & quantity
- changes in covid-19 cases
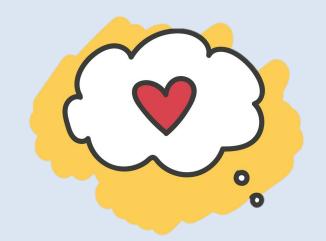- changes in covid-19 vaccinations
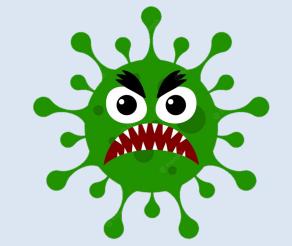- government stringency with respect to covid-19
- structural changes (e.g., receiving a stimulus check)

Rapidly changing circumstances meant that we captured changes to both internal (e.g., increasing worries) and external (e.g., financial support) factors over a few months.

Across the group, caregivers felt less negative and more positive as…

they spent more time on leisure activities

they had lower subjective worry levels

they had fewer new worries

covid-19 vaccination rates went up

they slept better the night before

they slept more the night before

Caregivers who received financial support from the government also felt more positive and less negative the week after receiving financial support.
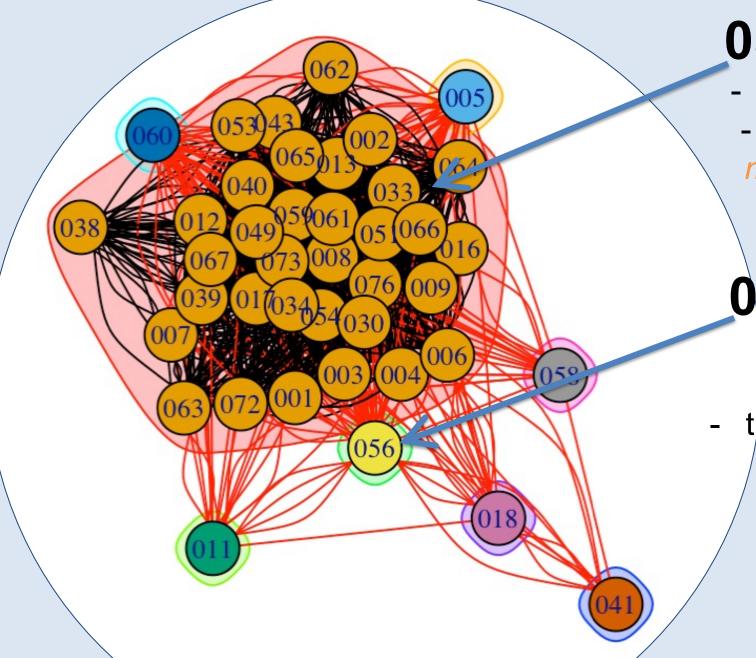
Most caregivers' affect dynamics followed these general patterns, but some had dynamics that were more idiosyncratic.

Orange circles: Data-driven cluster of families whose individualized models predict one another well.

Other colored circles: Families whose data were not well predicted by most other families, each forming their own cluster.

Lines: Predictive relationships among individuals.

033: Less negative as:
- their subjective worries decreased
- they spent less time on childcare
more predictable at the group level

both highly predictable at the individual level

056: Less negative as:
- the pandemic progressed
- vaccinations rates increased
- the government stringency decreased
- COVID-19 rates decreased
- they had fewer new worries
less predictable at the group level

These results highlight the importance of analyzing effects at the individual level.

Summary & Discussion

- A model trained on the first 70% of all participants' data was able to predict the held-out 30% of data well. Thus, data trained on the group's data could predict future positive and negative affect at the group level.
- Caregivers' affect dynamics were affected by both internal (worries, sleep) and external (covid-19 vaccination rates, financial support) factors.
- The majority of caregivers followed these general patterns, but there were important individual differences, with one-third of families having idiosyncratic affect dynamics.
- These results point toward areas to better support caregivers at a critical period for both parenting and child development.
- They also highlight intra-individual variability in predictors of positive and negative affect that is not captured by group-level analyses.
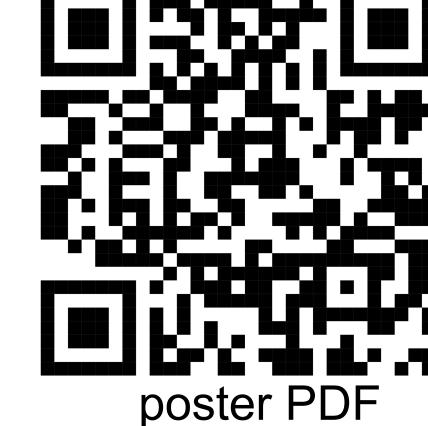
Future Directions

- Further analyses have been conducted to unpack differences in caregivers' specific worries.
- Future research will link these day-to-day changes in caregivers' experiences with their changes in parenting—specifically, their speech to their child during bath time.
- Ultimately, it will be important to conduct this research with a more nationally-representative sample of caregivers.

References

1. Fox (2014), *Human Development.* DOI: http://dx.doi.org/10.1159/000363663
2. Kerr et al. (2020), *Emotion.* DOI: http://dx.doi.org/10.1037/emo0000719
3. McLaughlin et al. (2022), *Behavior Research and Therapy.* DOI: https://doi.org/10.1016/j.brat.2022.104121

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