

# Moderating Effect of Sensory Processing Sensitivity on Daily Parent-Adolescent Relationship and Rumination



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## Introduction

**Sensory Processing Sensitivity (SPS)** is a personality trait reflecting inter-individual differences in sensitivity to both negative and positive environmental factors, including parent-child relationships (Greven et al., 2019). Research has shown that SPS moderates the effect of parent-child relationships on children's internalizing problems (Davies et al., 2024; Lionetti et al., 2022).

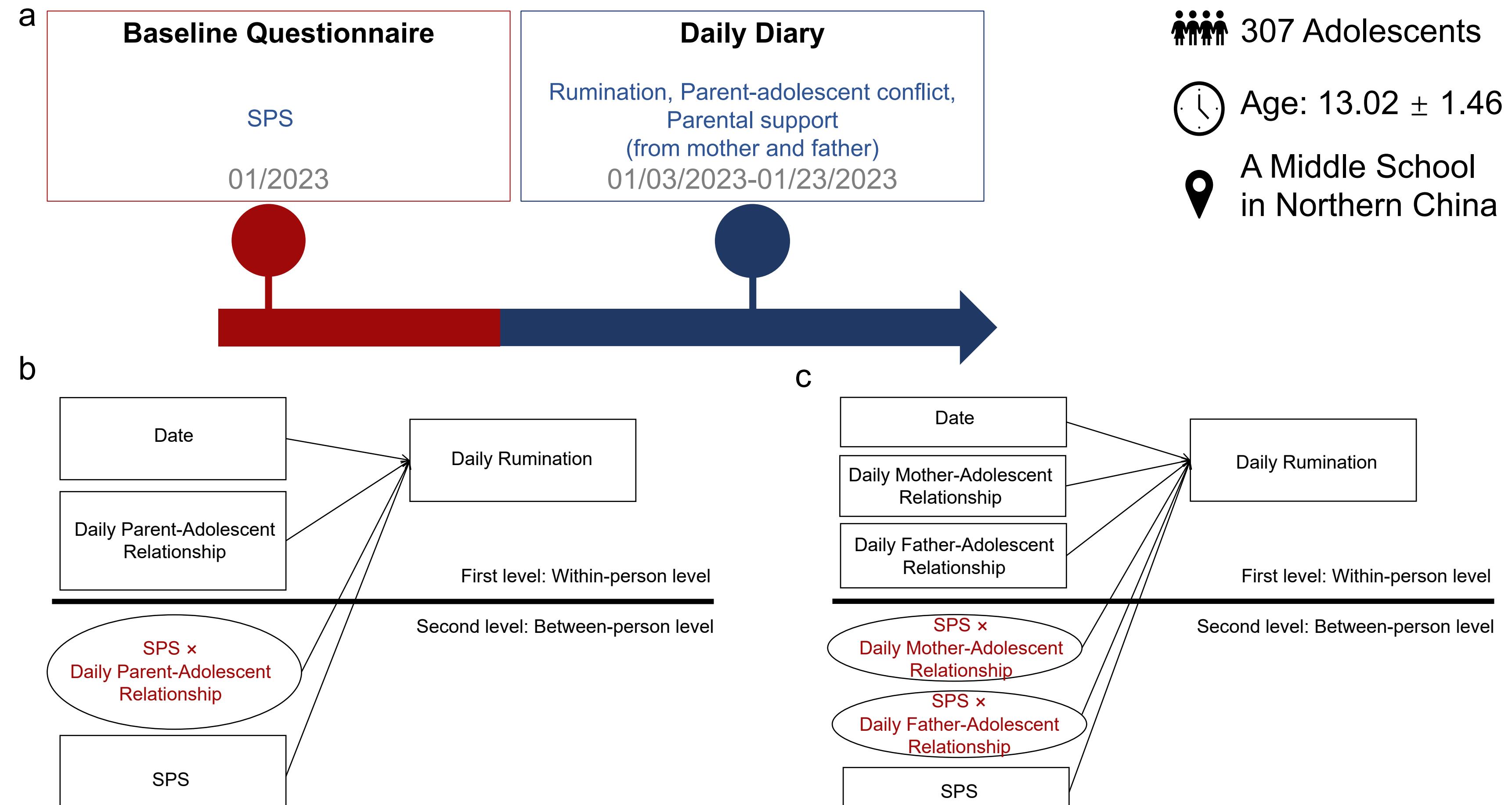
### Research gap:

Despite cross-sectional or longitudinal evidence, no studies to date have explored this issue within dynamic daily processes or the context of parent-adolescent relationships.

### Research questions:

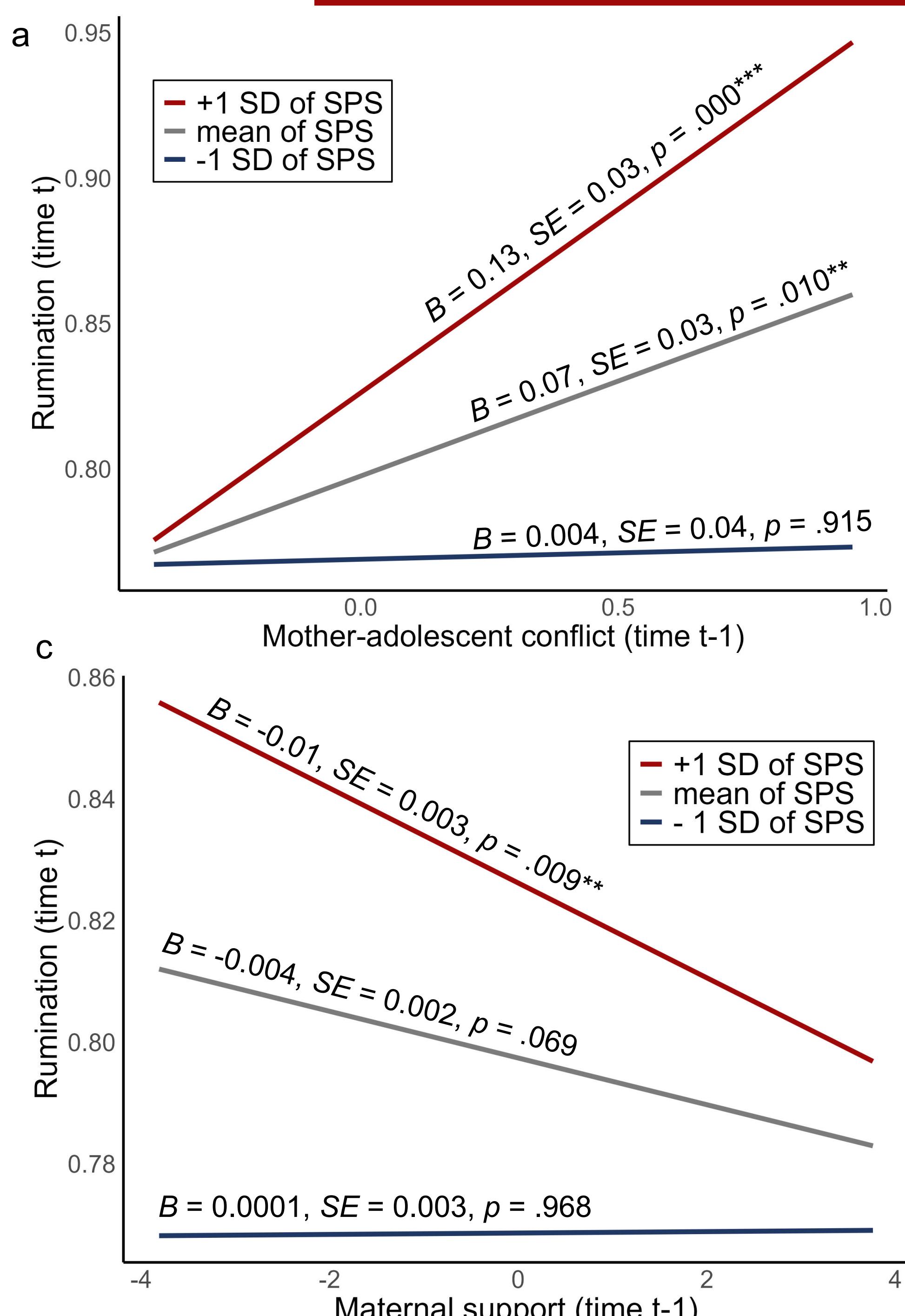
- How does SPS moderate the link between parent-adolescent relationship and adolescent rumination in daily life?
- Do these dynamics differ between mother-adolescent and father-adolescent relationships?

## Methods

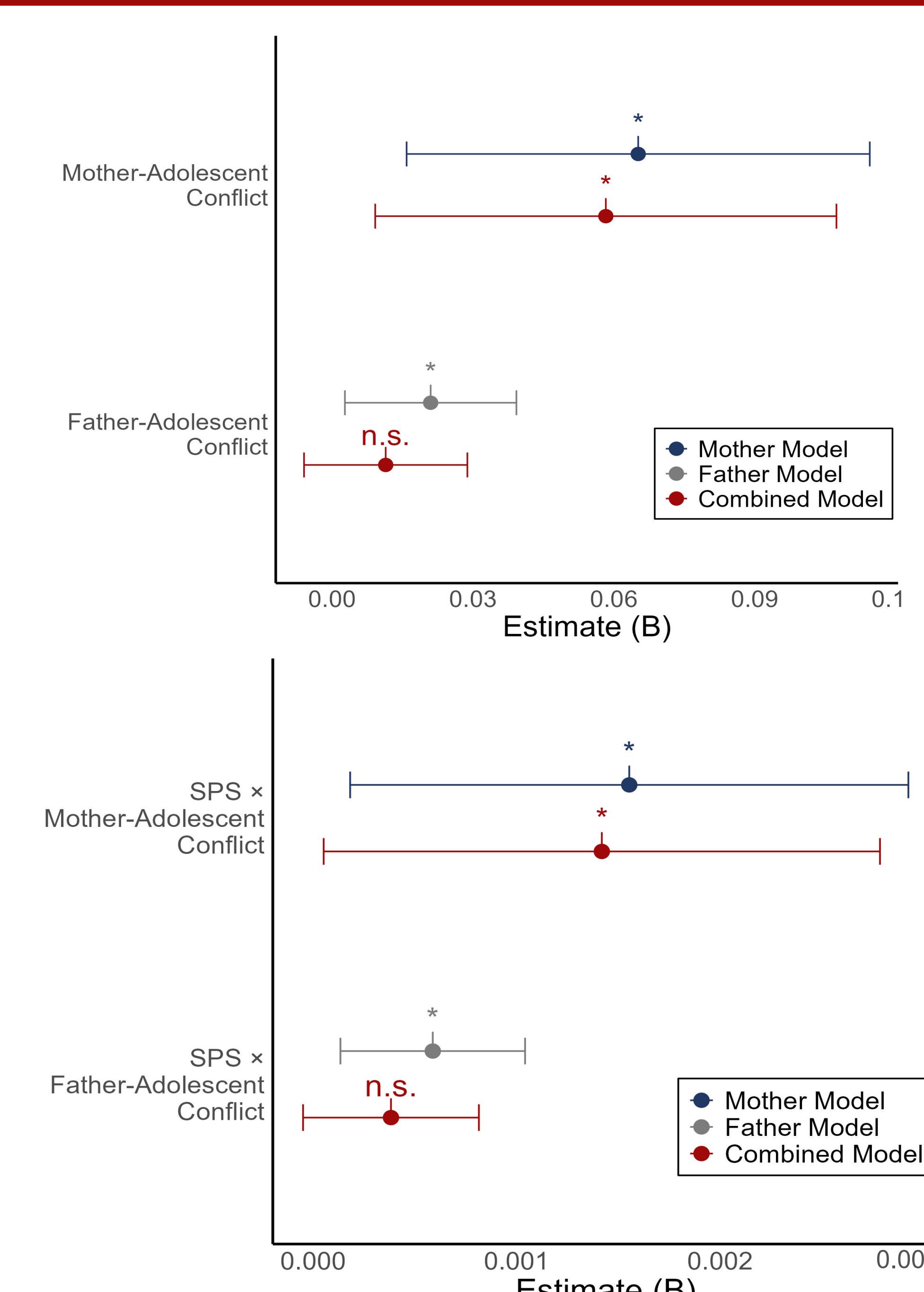


**Fig2.** **a**, Overview of the study design. **b**, Multilevel model illustration: On within-person level, daily rumination was predicted by an intercept, time, parent-adolescent relationship (within-person centered conflicts or supports) and a residual. On between-person level, SPS level was included as a moderator of the slope of rumination. Random slopes of time, relationship and random intercept were allowed. Model was tested separately for mother and father. **c**, Model comparing mother and father effect simultaneously.

## Results



**Fig3.** Simple slopes depicting the effects of **a**, mother-adolescent conflict, **b**, father-adolescent conflict, **c**, maternal support and **d**, paternal support on adolescent rumination at high (+1 SD), mean, and low (-1 SD) levels of SPS. The interaction between SPS and paternal support was nonsignificant ( $B = -0.003, p = .132$ ).



**Fig. 4.** Comparison of coefficients in separate models vs. the combined model. **a**, Fixed effect of mother- or father-adolescent conflict. **b**, Interaction term between SPS and mother- or father-adolescent conflict.

## Conclusion

- Findings partially support the differential susceptibility role of SPS on daily rumination in response to parent-adolescent conflict (i.e., for worse) and parental support (i.e., for better).
- When parents' effects were jointly modeled, only **mothers** maintained a strong effect, contrasting with **fathers** who exhibited null effects.

## References

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- Greven, C. U., Lionetti, F., Booth, C., Aron, E. N., Fox, E., Schendan, H. E., Pluess, M., Bruining, H., Acevedo, B., Blijlevens, P., & Homberg, J. (2019). Sensory Processing Sensitivity in the context of Environmental Sensitivity: A critical review and development of research agenda. *Neuroscience & Biobehavioral Reviews*, 98, 287–305.
- Lionetti, F., Klein, D. N., Pastore, M., Aron, E. N., Aron, A., & Pluess, M. (2022). The role of environmental sensitivity in the development of rumination and depressive symptoms in childhood: A longitudinal study. *European Child & Adolescent Psychiatry*, 31(11), 1815–1825.