



Rumination links Negative Family Interactions to Poor Sleep Quality among Older African American Adults

Jacqueline Rodriguez-Stanley, B.S.¹, Russell Houpt, B. A.¹, & Samuele Zilioli, Ph.D.^{1,2}

¹Department of Psychology, Wayne State University

²Department of Family Medicine and Public Health Sciences, Wayne State University

Family Issues, Rumination, and Sleep

- Conflictual interactions among family members can lead to a variety of psychological and physical implications.
- One health behavior that is disrupted by family issues is sleep quality (Gregory, Caspi, Moffitt, & Poulton, 2006).
- However, less understood are the mechanisms by which negative family interactions impact sleep.
- We draw from the Perseverative Cognition hypothesis (Brosschot, Gerin, & Thayer, 2006), which states that repeated cognitive representations of a stressor perpetuates physiological responses to that stressor.
- One of these processes is daily rumination (i.e., repetitive and intrusive negative thoughts).
- Rumination may be an important preservative cognition in identifying how family issues impair sleep quality.
- This is especially necessary for older adults for whom family is their primary source of social interaction.

Engaging in daily rumination will link family issues to reports of worse overall and daily sleep among older African American adults.

Participants

Participants were recruited from the Institute of Gerontology Healthy Black Elders Center Participant Research Pool from Wayne State University.

The sample was obtained from Health among Older Adults Living in Detroit (HOLD), an ongoing project on healthy aging among older African American adults.

- *N* = 109
- *M* = 69.6 years, *SD* = 8.22, range 50 – 89
- 85.5% female
- **Income.** *Mdn* = \$20,000- \$29,999
- **Education.** *Mdn* = Graduated from 2-year college, vocational school, or have associate's degree
- **Chronic Health Conditions.** *M* = 10.5, *SD* = 4.47, min = 0, max = 24

Procedure

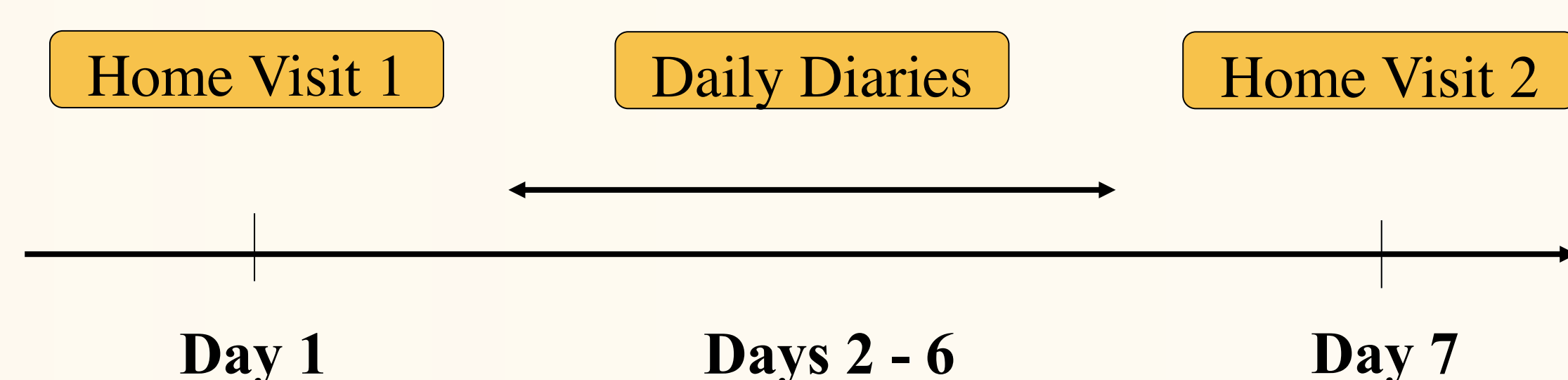


Fig. 1. Timeline of study procedure.

Measures

Negative Family Interactions.

- Negative Interactions Items (NII; Krause, 1995)
- 5 item questionnaire
- 1 (*never*) to 4 (*very often*)
- e.g., “In the past month, how often have any of your family members been critical of you?”
- *M* = 1.55, *SD* = 0.54

Daily Rumination.

- 3 items from daily diaries
- 1 (*never*) to 5 (*very often*)
- e.g., “Did you find it hard to stop thinking about the problem afterward?”
- *M* = 1.94, *SD* = 0.80

Global Sleep.

- Pittsburgh Sleep Quality Index (PSQI; Buysse et al., 1989)
- 19-item self-report
- 1 (*Not during the past month*) to 3 (*Three or more times a week*)
- e.g., sleep latency, sleep duration, habitual sleep efficiency
- *M* = 0.94, *SD* = 0.56

Daily Sleep Quality.

- Item from daily diaries
- 1 (*terrible*) to 8 (*great*)
- “Overall, how did you sleep last night?”
- *M* = 5.69, *SD* = 0.80

Results

Daily rumination was associated with both daily sleep quality ($r = -.267, p < .01$) and global sleep quality ($r = .190, p = .04$). Daily and global sleep quality were also strongly associated ($r = -.614, p < .001$).

Negative family interactions did not directly predict daily sleep quality, $b = .09, SE = .22, t(106) = 0.42, p = .672$, or global sleep quality $b = .11, SE = .10, t(106) = 1.08, p = .285$.

There was a significant indirect association between negative family interactions and daily sleep quality ($b = -.19, SE = .11, 95\% \text{ CI } [-.436, -.021]$), but not global sleep quality ($b = .05, SE = .04, 95\% \text{ CI } [-.010, .132]$) through daily rumination.

Results held for daily sleep quality after controlling for yearly income, education, and chronic health conditions, $b = -.19, SE = .11, 95\% \text{ CI } [-.436, -.021]$.

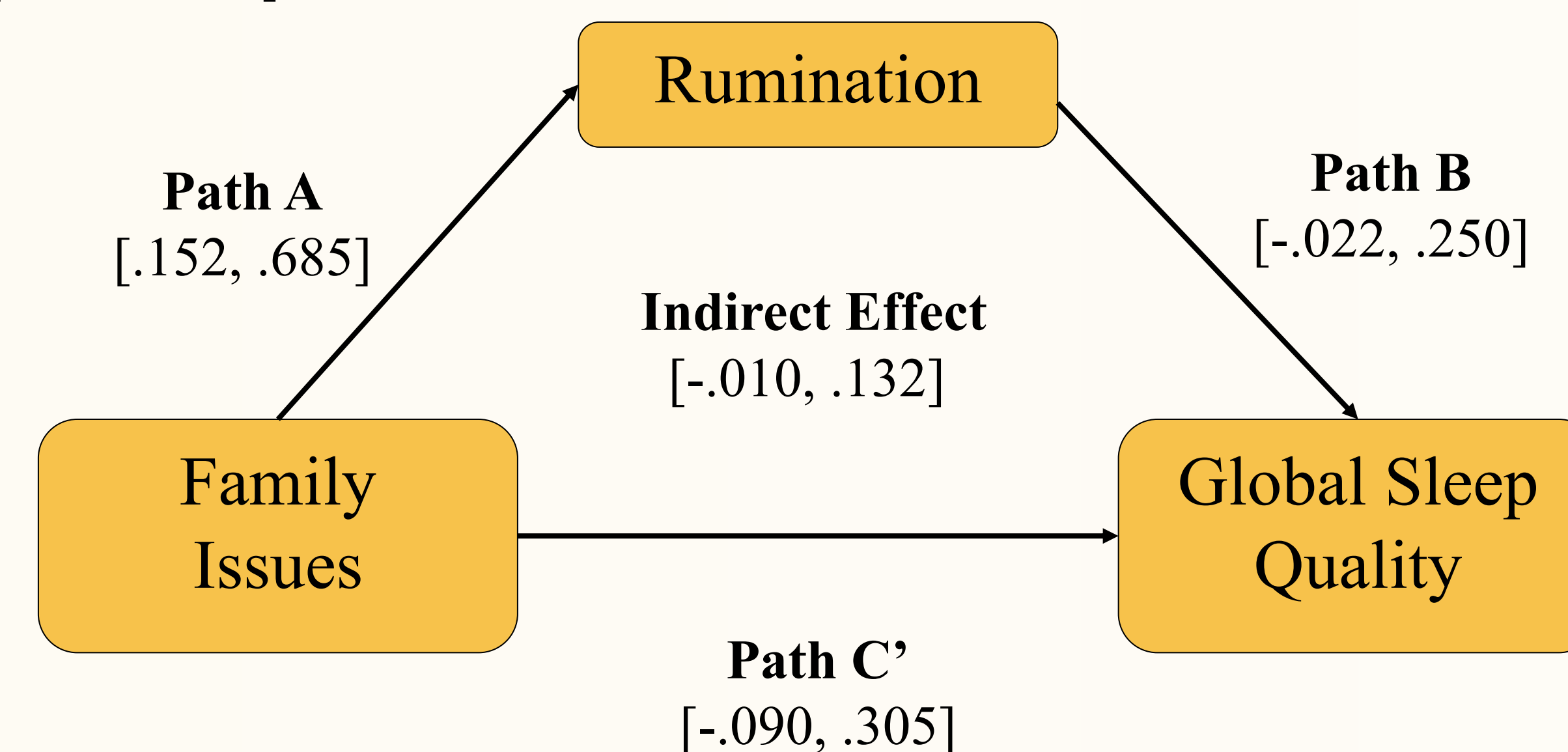


Fig. 2. 95% confidence intervals (CI) of direct and indirect effects of the association between negative family interactions and global sleep quality via daily rumination.

Results

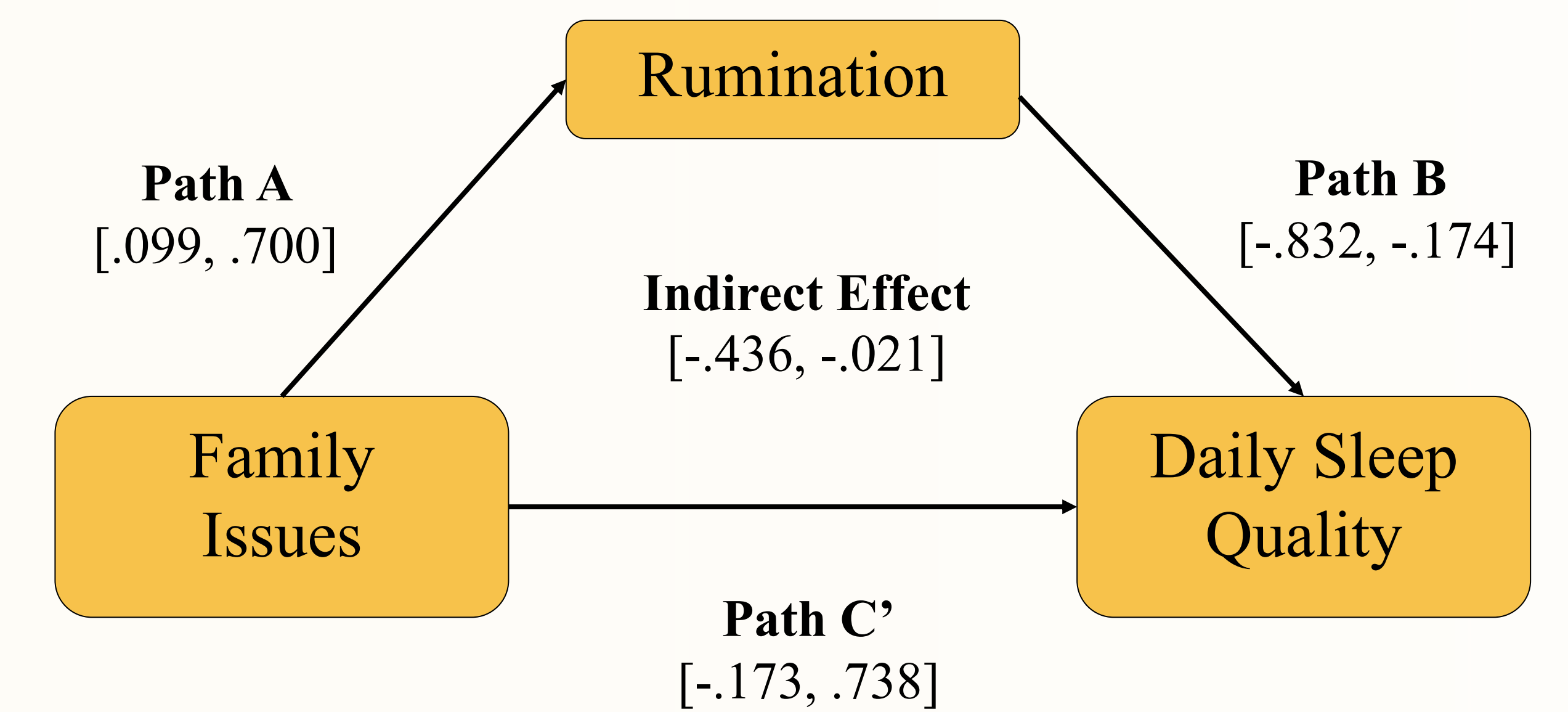


Fig. 3. 95% confidence intervals (CI) of the full mediation model between negative family interactions and daily sleep quality via daily rumination when controlling for income, education, and chronic health conditions.

Discussion

- In sum, greater daily rumination posed as a significant intermediary linking greater negative family interactions to worse daily sleep quality, but not global sleep quality.
- This pattern of results may be due to common method variance or the difference in temporal precedence between sleep variables.
- Current evidence enriches the growing literature suggesting that preservative cognition can be detrimental to healthy aging by prolonging stress responses and disrupting health behaviors.

Future Directions

- Rumination and other preservative cognitions should be considered among older African American adults as a pathway linking social stressors (e.g., conflict, discrimination) to physical health problems.
- Studies should also consider individual differences that buffer the effects of rumination (e.g., optimism, perceived control) on stress perpetuation.

References

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Acknowledgements

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