



Maternal depression mediates the relationship between household chaos and maternal stress

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Introduction

Household chaos refers to a family environment characterized by disorder, high levels of noise, and instability in daily routines. Many studies point to chaos negatively affecting parental functioning, child well-being, and elevated stress levels among parents (Dumas et al., 2005). A chaotic household environment has been found to increase fatigue and stress among parents, thereby hindering their effective parental functioning (Vaschina et al., 2025).

Parental depression and parenting stress are critical factors that influence not only parents' psychological well-being but also children's development and family dynamics. Elevated levels of parental depression and stress have been linked to negative outcomes such as impaired parent-child interactions, increased risk of child behavioral problems, and poorer family cohesion (Goodman et al., 2011). Therefore, understanding the predictors and mechanisms underlying parental depression and stress is essential for designing effective interventions to support families.

Household chaos has been shown to predict parental stress and is related to child behavior and an increase in parent's mental health difficulties (Yalcintas, Pike & Oliver, 2021). Household chaos also predicted child behaviour problems even when controlling its effect on the parent (Deater-Deckard et al., 2009). Mothers who perceive more chaos and disorganization in the home, are more at risk of having depression, stress symptoms and anxiety (Yalcintas et al., 2021).

Hypothesis

Hypothesis 1: Higher household chaos will correlate with higher maternal stress.

Hypothesis 2: Higher depressive symptoms will correlate with higher maternal stress.

Hypothesis 3: Depression will mediate the relationship between household chaos and maternal stress.

Method

Participants

131 pregnant mothers, each with one firstborn child. All mothers lived in southern Israel, were married and most received academic education. Mothers age was 19–39 years ($M=29.14$ years, $SD=3.27$) and their first born children (68 boys and 58 girls) were 10–45 months old ($M=24.6$ months, $SD=7.42$).

Measures

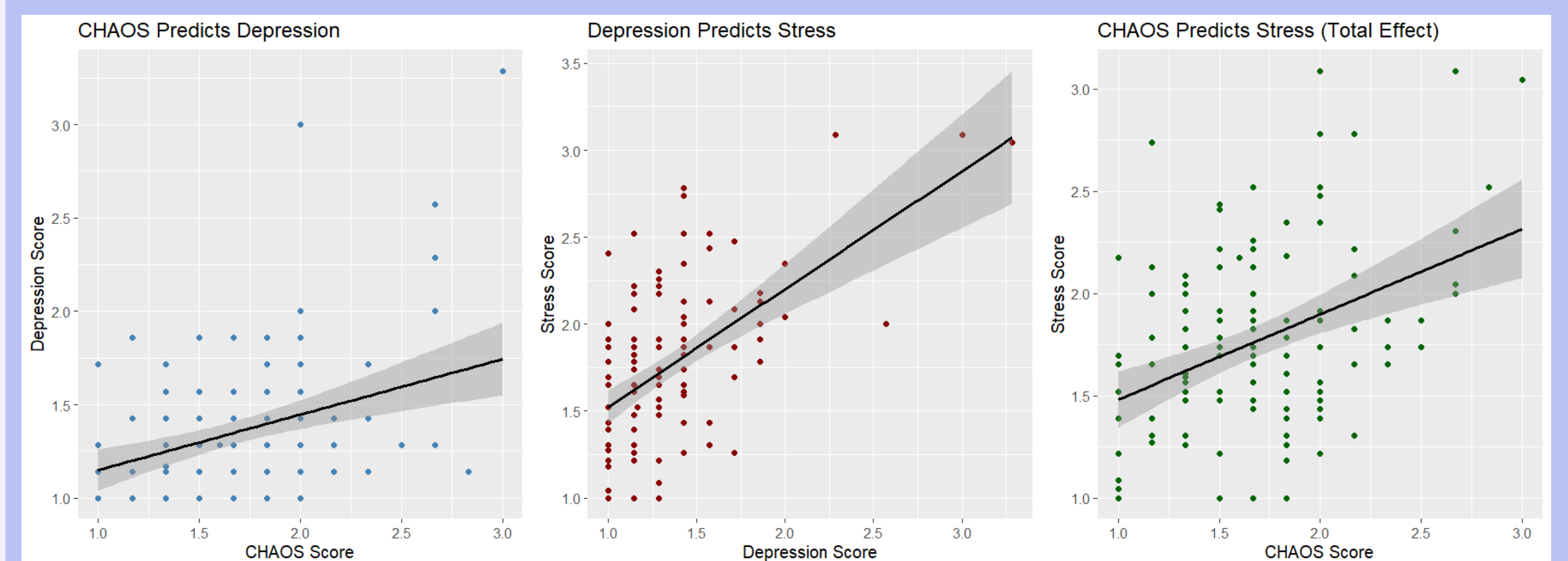
- Household Chaos was assessed using the Shortened CHAOS Scale (Matheny et al., 1995), a parent-reported measure of environmental confusion and disorganization (e.g., noise, unpredictability).
- Parenting Stress was measured with the Parenting Stress Index (Abidin, 1976), a self-report scale assessing stress related to the parenting role.
- Maternal Depression was measured using the depression subscale of the DASS-21 (Depression Anxiety Stress Scales – Short Form), a brief self-report instrument assessing emotional distress.
- Internal consistency was assessed using Cronbach's alpha. The CHAOS scale showed modest reliability ($\alpha = .45$), the Parenting Stress Index demonstrated excellent reliability ($\alpha = .86$), and the Depression subscale of the DASS-21 showed good reliability ($\alpha = .80$).

Data analysis

Following data preparation and scoring, Pearson correlations were conducted to examine direct relationships between variables.

Next, a mediation analysis was performed to test whether maternal depression mediates the relationship between household chaos and parenting stress. The analysis used nonparametric bootstrapping with 1,000 simulations to compute confidence intervals for direct and indirect effects.

Results

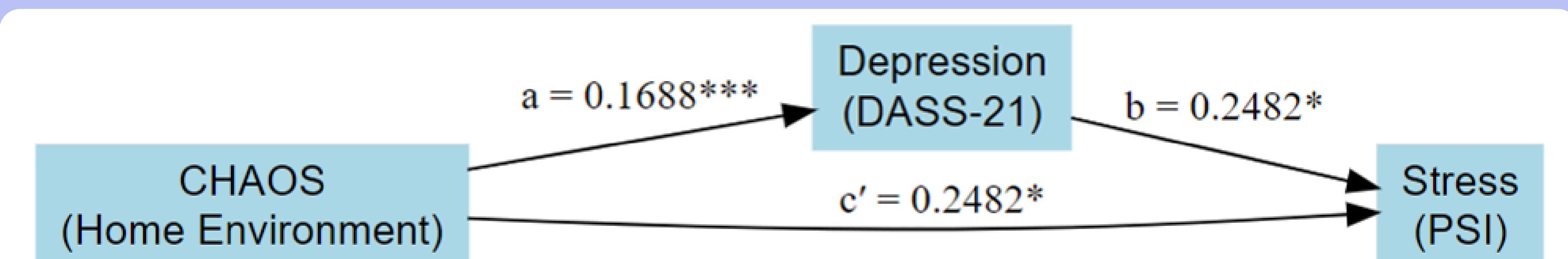


Total Effect (c-path) (H1): The total effect of household chaos on parenting stress was significant, $\beta = 0.42$, 95% CI [0.24, 0.59], $p < .001$, indicating that higher levels of household chaos were associated with increased parenting stress.

Indirect Effect (ACME) (H3): The indirect effect through maternal depression was significant, $\beta = 0.17$, 95% CI [0.05, 0.32], $p = .002$, demonstrating that household chaos influences parenting stress through its impact on maternal depression.

Direct Effect (ADE): After accounting for the mediating role of depression, the direct effect of household chaos on parenting stress remained significant, $\beta = 0.25$, 95% CI [0.08, 0.39], $p = .002$, suggesting partial mediation.

Proportion Mediated (H2): Approximately 40% of the total effect of household chaos on parenting stress was mediated through maternal depression, $\beta = 0.40$, 95% CI [0.13, 0.75], $p = .002$.



discussion

- The results support a partial mediation model where maternal depression partially mediated the link between household chaos and parenting stress. Both direct and indirect effects were statistically significant, indicating that household chaos affects parenting stress both directly and through its impact on maternal psychological well-being.
- These findings align with prior studies, linking household chaos to higher stress, increased negativity, and reduced warmth (Deater & Deckard, 2009). It has also been associated with caregiver-rated anxiety and depression during the COVID-19 pandemic (Zhang, 2022).
- These findings suggest that the CHAOS scale could serve as an efficient screening tool for identifying at-risk families, given its brevity and strong relationship with maternal depression and parenting stress.
- Results provide further evidence that environmental stressors significantly impact maternal psychological well-being and parenting outcomes, supporting ecological models of family functioning.
- Research and implementation of interventions targeting household organization and environmental structure, particularly for mothers with depressive symptoms, may yield significant benefits for reducing parenting stress and improving family functioning.
- Future research should explore whether social economy status moderates the relationship between household chaos and maternal depression. Identifying protective factors, such as education, extended family support, or community resources, could buffer the impact of chaos on maternal mental health.