



Social Buffering Within Sibling Relationships



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Background

- Social buffering is a phenomenon in which the presence of a supportive relationship figure buffers against the physiological stress response
- One major gap in the social buffering literature is examining whether siblings can buffer the hypothalamic-pituitary-adrenal axis from acute stress
- While some research has investigated siblings as potential buffers of stress (Gass et al., 2007; Milevsky & Levitt, 2005), the majority of these investigations lack physiological measures and laboratory experiments inducing acute stress
- The goal of this study is to examine whether the support of a sibling buffers the physiological response to a social evaluative stressor in children and adolescents

Proposed Study

Research Questions:

- Does the presence and support of a sibling buffer the physiological response to a social evaluative stressor in children and adolescents?
- Does the buffering affect change with pubertal status (children vs. adolescents)?
- Does sibling relationships quality impact the effectiveness of sibling social buffering?

Hypotheses:

- Sibling support will be associated with lower levels of cortisol reactivity and quicker returns to baseline than stranger support
- Buffering effects will be greater for children than adolescents
- Higher levels of sibling warmth or relationship quality will be associated with greater buffering effects

The findings from this study will increase our understanding about social buffering in sibling relationships, which will inform intervention strategies aimed at promoting healthy development.

Methods

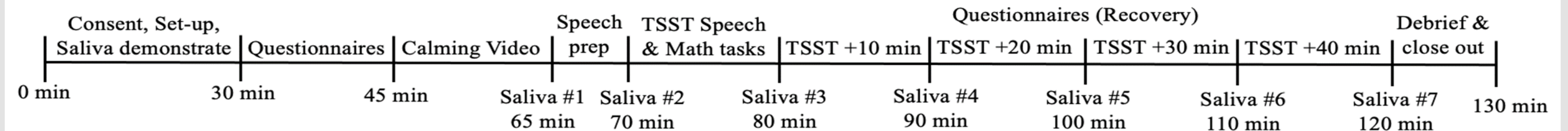
Sample

	9-10 years	15-16 years	Total
Male	40	40	80
Female	40	40	80
Total	80	80	160

+ siblings (same age or up to 3 years older) + parents = **480 total**

- 1 two-hour Zoom session
- Two conditions – Stranger vs. Sibling
- Trier Social Stress Test-Online Version (TSST-OL, Gunnar et al., 2020)
- 7 saliva samples throughout the session

Session Timeline



Measures & Outcomes

- Change in salivary cortisol (assessing baseline, reactivity, and recovery levels)
- Observational coding of sibling interactions during speech preparation period
- Observational coding of participants affect during TSST

Child/Adolescent	Parent	Sibling
<ul style="list-style-type: none"> • Daily diary for lab saliva collection • Daily hassles • Positive childhood experiences • Social support (Risky Families Questionnaire) • The Child PTSD Symptom Scale (CPSS) • Trauma History Questionnaire • Everyday Discrimination Scale • SCARED- Child version • UCLA Loneliness 3-item scale • Center for Epidemiological Studies Depression Scale for Children (CES-DC) • Attitudinal Familism Scale • Physical development scale • Inventory of Parent and Peer Attachment (IPPA) • Sibling Relationship Questionnaire • Sibling Attachment Inventory • Self Assessment Manikin (SAM) 	<ul style="list-style-type: none"> • Daily diary for lab saliva collection (parent version) • Demographics • Education services • Family level questions • Your child's physical health • Life Events Checklist (LEC) • When you were growing up... checklist • Benevolent Childhood Experiences Scale (BCES) • Questionnaire of Unpredictability in Childhood (QUIC) • Child Life Events and Circumstances Checklist • Violence Exposure Scale for Children • Multidimensional Scale of Perceived Social Support • Family Chaos Scale • Self-Report Family Inventory (Family Climate) • Sibling Relationship Questionnaire – parent version 	<ul style="list-style-type: none"> • Inventory of Parent and Peer Attachment (IPPA) – parent questions only • Sibling Relationship Questionnaire • Events of the day short questionnaire

References

- Gass, K., Jenkins, J., & Dunn, J. (2007). Are sibling relationships protective? A longitudinal study. *Journal of Child Psychology and Psychiatry*, 48(2), 167-175.
- Gunnar, M.R., Reid, B.M., Donzella, B., Miller, Z.R., Gardow, S., Tsakonas, N.C., Thomas, K.M., DeJoseph, M., & Bendezú, J.J. (2020). Validation of an Online Version of The Trier Social Stress Test in a Study of Adolescents. *Psychoneuroendocrinology*, 125.
- Milevsky, A., & Levitt, M. J. (2005). Sibling support in early adolescence: Buffering and compensation across relationships. *European Journal of Developmental Psychology*, 2(3), 299-320.