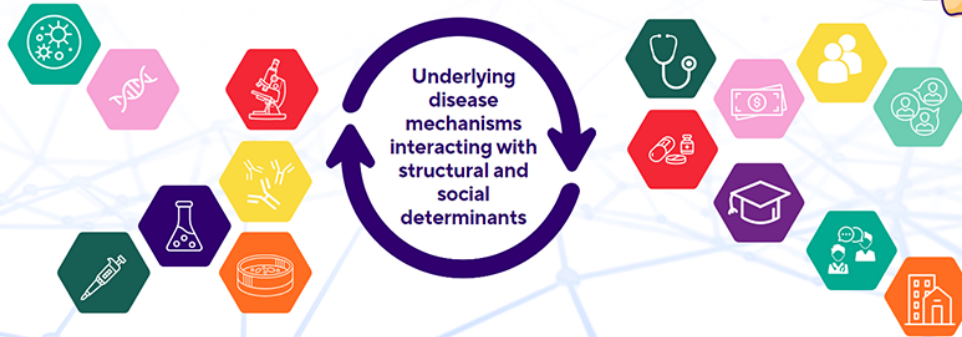




19TH ANNUAL CHILD HEALTH RESEARCH DAYS
Outcomes in Child Health



October 25 + 26, 2023 | RBC Convention Centre, Winnipeg, Manitoba

Abstract Submission Form

CHR D 2023: Abstract Submission Form

Submitter Name

Chhavvy Narendra

Presenter Name

Chhavvy Narendra

Presenter Status

PhD Student

Research Category

Basic Science

Role in the project

Design
Perform Experiments
Analyze Data
Write Abstract
Project coordinator/Team lead (responsible for overseeing training of research assistants, recruitment, and data collection)

Title

The Impacts of Social Buffering on Parents' Self-Reported and Cardiac Responsivity to a Remote Stress Induction

Background

Canadian parents of young children reported significant elevations in stress levels during the COVID-19 pandemic, which highlighted a need to identify reliable methods of inducing and buffering stress remotely in this population.

Objective

The primary objectives of the present study were (1) to assess whether a novel, internet-delivered version of the Trier Social Stress Test (iTSSST) could induce acute psychosocial stress in a sample of parents, and (2) to examine the impact of social buffering on parents' perceived and cardiac reactivity following exposure to the iTSSST.

Methods

Parents (N = 60; n = 16, control; n = 24, stressor only; n = 20, stressor plus social buffering; 60.0% non-White) of children under 48 months old completed a one hour Zoom assessment during which the iTSSST/placebo protocol was administered. Participants randomized to the stressor plus social buffering condition interacted with an acquaintance for five minutes post-iTSSST. Self-reports of stress and anxiety,

along with smartphone measures of photoplethysmography, were collected throughout the experiment to assess responsivity to the iTSST. General linear model repeated measures procedures were used to examine the primary hypotheses.

Results

Parents who completed the iTSST exhibited significant elevations in stress and anxiety relative to parents who completed the placebo procedures (see Table 1; Figure 1a). Significant heart rate reactivity to the iTSST was not observed (see Table 2; Figure 1b). No evidence of a significant buffering effect emerged (see Tables 3, 4; Figure 2); however, it is notable that parents in the social buffering condition showed a non-significant trend of lower self-reported stress and anxiety relative to parents in the stressor only condition.

Conclusion

Results of the present study validate the efficacy of the iTSST in eliciting significant self-reported reactivity in a sample of exclusively parents. Findings have implications for future studies involving remote stress induction and buffering in parents and racially diverse samples.

Table/Figure File

CHRD2023_CNarendra_tables_figures.pdf

Authors

Name	Email	Role	Profession
Chhavvy Narendra	narendgc@myumanitoba.ca	Presenting Author	Graduate Student
Leslie Roos	leslie.roos@umanitoba.ca	Co Author	Assistant Professor
Ryan Giuliano	ryan.giuliano@umanitoba.ca	Co Author	Assistant Professor

Table 1.

Results of a 2 (Group) by 4 (Time) Repeated Measures ANOVA Examining Self-Reported Stress and Anxiety for the Control and Stressor Groups

Source	<i>df</i>	<i>F</i>	<i>p</i>	η^2_{partial}
Between-subjects effects				
Group	1	< .001	.983	< .001
Error (Group)	51			
Within-subjects effects				
Time	2.031	13.407	< .001***	.208
Time x Group	2.031	6.826	.002**	.118
Error (Time)	103.572			

Note. $N = 53$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 2.

Results of a 2 (Group) by 4 (Time) Repeated Measures ANOVA Examining Heart Rate for the Control and Stressor Groups

Source	<i>df</i>	<i>F</i>	<i>p</i>	η^2_{partial}
Between-subjects effects				
Group	1	.143	.707	.003
Error (Group)	53			
Within-subjects effects				
Time	2.508	2.157	.107	.039
Time x Group	2.508	.733	.511	.014
Error (Time)	132.916			

Note. $N = 55$. * $p < .05$, ** $p < .01$, *** $p < .001$. Units are beats per minute for heart rate.

Table 3.

Results of a 2 (Group) by 4 (Time) Repeated Measures ANOVA Examining Self-Reported Stress and Anxiety for the Stressor Only and Stressor Plus Social Buffering Groups

Source	<i>df</i>	<i>F</i>	<i>p</i>	η^2 partial
Between-subjects effects				
Group	1	.452	.506	.012
Error (Group)	37			
Within-subjects effects				
Time	1.886	31.358	< .001***	.459
Time x Group	1.886	.421	.646	.011
Error (Time)	69.792			

Note. $N = 39$. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 4.

Results of a 2 (Group) by 4 (Time) Repeated Measures ANOVA Examining Heart Rate for the Stressor Only and Stressor Plus Social Buffering Groups

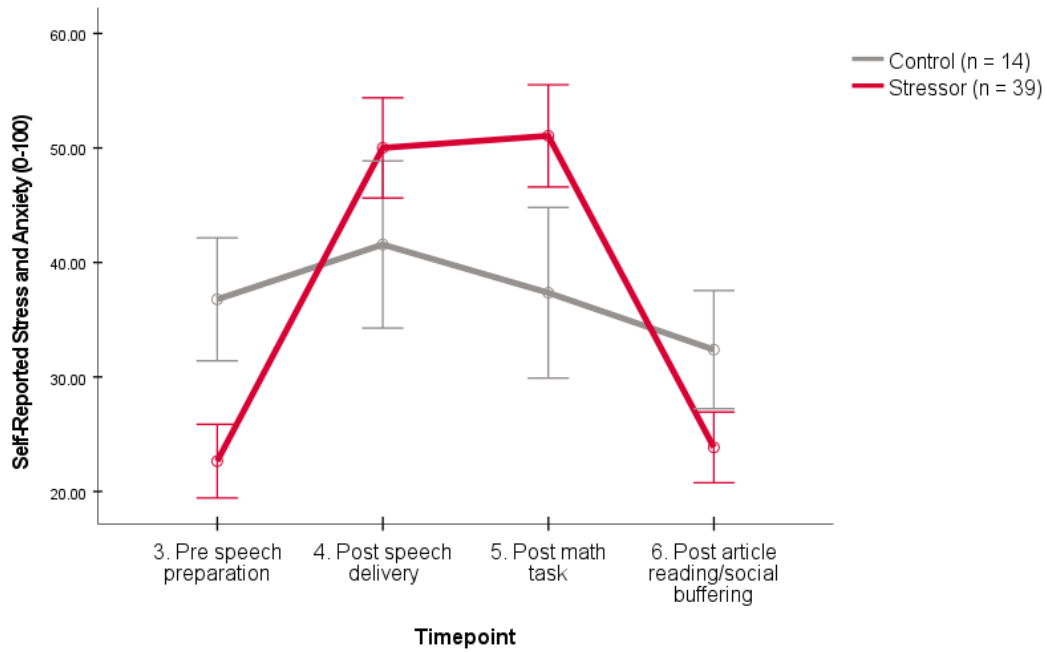
Source	<i>df</i>	<i>F</i>	<i>p</i>	η^2 partial
Between-subjects effects				
Group	1	.077	.783	.002
Error (Group)	39			
Within-subjects effects				
Time	2.185	1.459	.237	.036
Time x Group	2.185	.533	.604	.013
Error (Time)	85.224			

Note. $N = 41$. * $p < .05$, ** $p < .01$, *** $p < .001$. Units are beats per minute for heart rate.

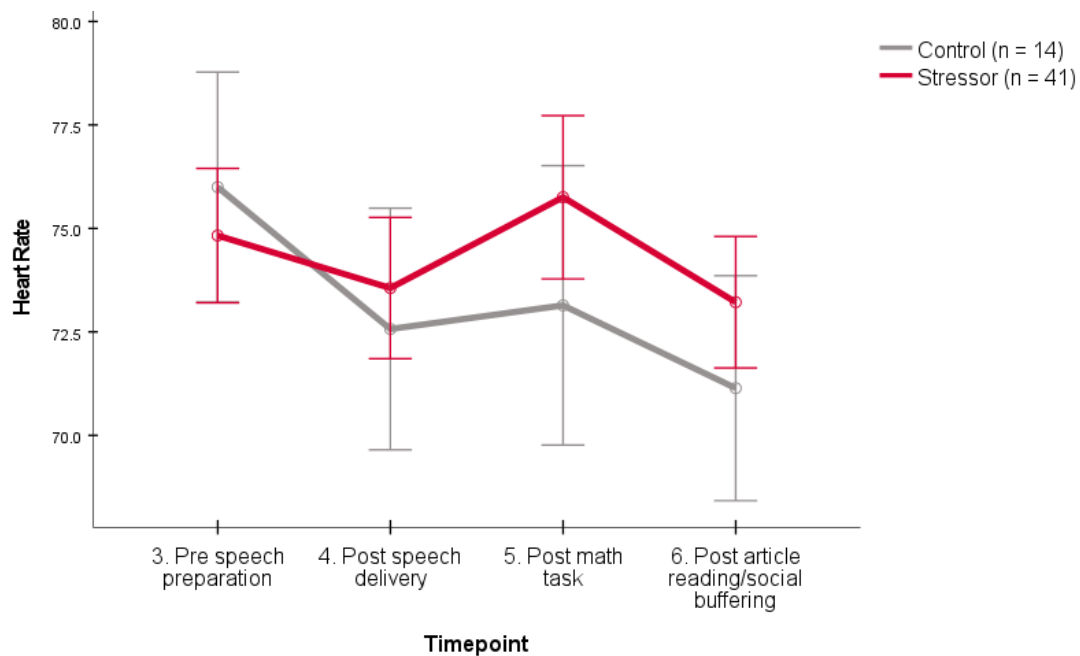
Figure 1.

Line Graphs Depicting Measured (A) Self-Reported Stress and Anxiety and (B) Heart Rate Between Timepoints 3 and 6 for the Control and Stressor Groups

A.



B.

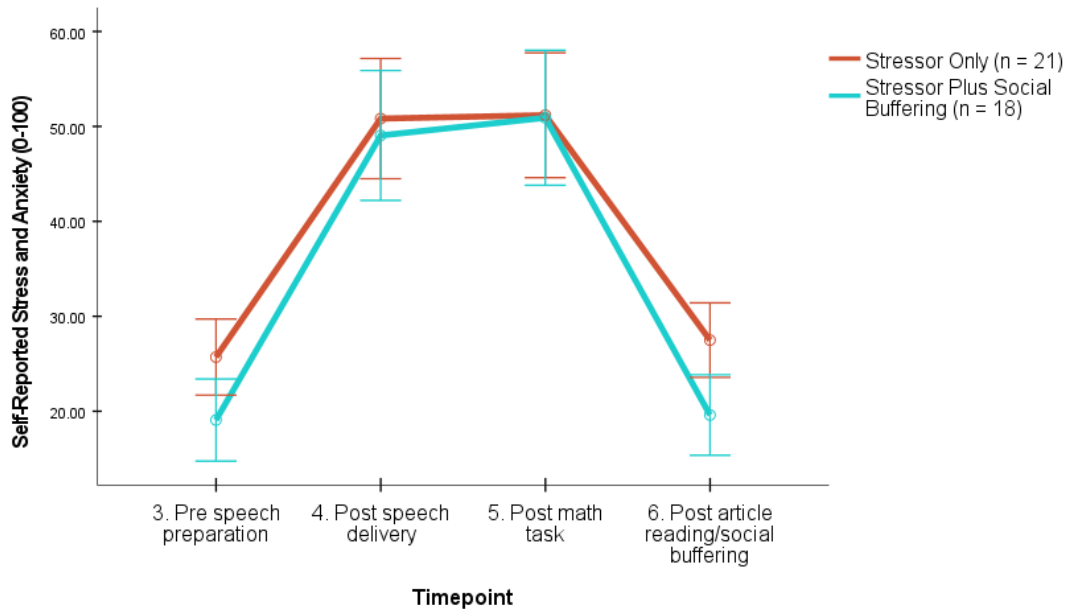


Note. Error bars reflect ± 1 standard error. Units are beats per minute for heart rate.

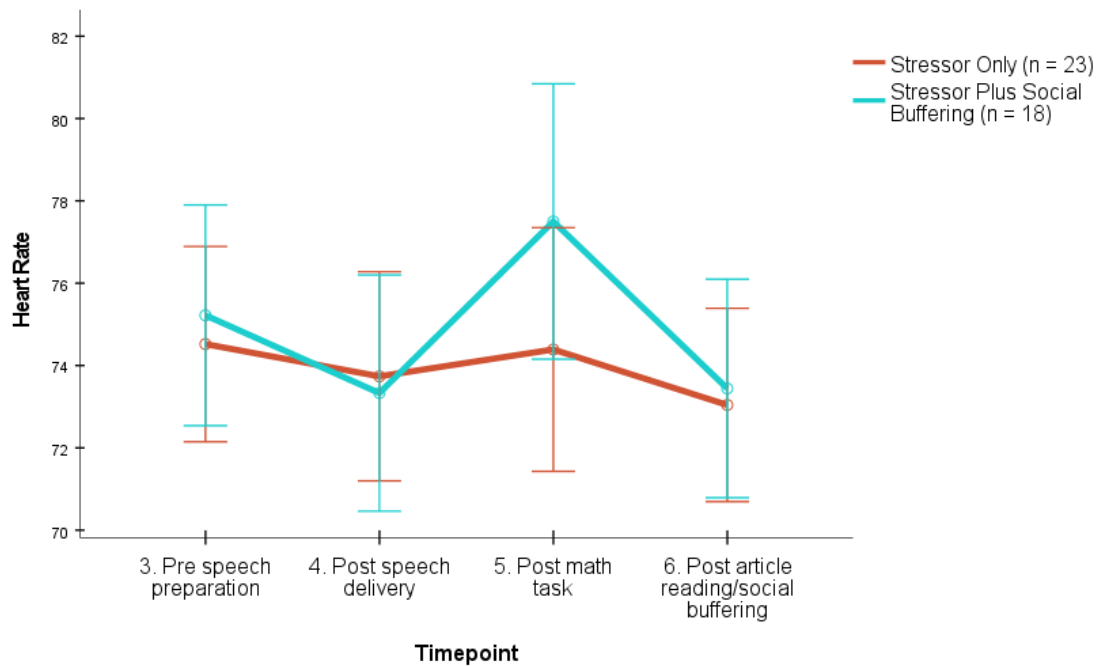
Figure 2.

Line Graphs Depicting Measured (A) Self-Reported Stress and Anxiety and (B) Heart Rate Between Timepoints 3 and 6 for the Stressor Only and Stressor Plus Social Buffering Groups

A.



B.



Note. Error bars reflect ± 1 standard error. Units are beats per minute for heart rate.