



BACKGROUND

- Research has shown that people who have experienced traumatic events like natural disasters may be psychologically impacted with increased stress levels (that may be uncontrollable), anxiety, post-traumatic stress disorder, substance dependence, depression, and more.^{6 9}
- Previous studies from the SIP Study showed that hardships during natural disasters affected babies in terms of distress, fear and sadness at 6 months of age, and that this was higher for children born before the storm.¹ Mother's objective exposure during Sandy was associated with higher levels of fearfulness in children ages 6-24 months.¹⁰
- Affectionless control parenting is a risk factor for depression⁷ and children with anxiety tend to have parents with high controlling behavior.² Protective-demanding and authoritarian parenting styles were also able to predict anxiety sensitivity in adolescence.³
- Literature states children and adolescents in the pandemic had increased stress responses, along with depressive symptoms and anxiety.^{4 5} A self-selected sample of parents reported increased levels of mental health issues in children aged 4-11 during the March-May 2020 lockdown.⁸
- **Hypothesis:** Mothers with a higher level of objective hardships during Superstorm Sandy and with an affectionless control parenting style will have children with higher levels of fear during the Covid-19 pandemic.

MEASURES

Sample Population: 97 mothers and their child(ren) were recruited at Queens College and NY Presbyterian who experienced Superstorm Sandy and participated in the PBI and SIP's COVID-19 survey.

Measures: Sandy Questionnaire: measures the mother's exposure and impact of the superstorm. This includes objective hardship composed of four other variables: level of threat, scope of impact, level of loss, and changes caused by the storm.

Parental Bonding Instrument (PBI): An assessment of the participant's parenting along with the parenting styles of their own parents. Four Parenting Categories: affectionless control, affectionate constraint, neglectful, and optimal parenting.

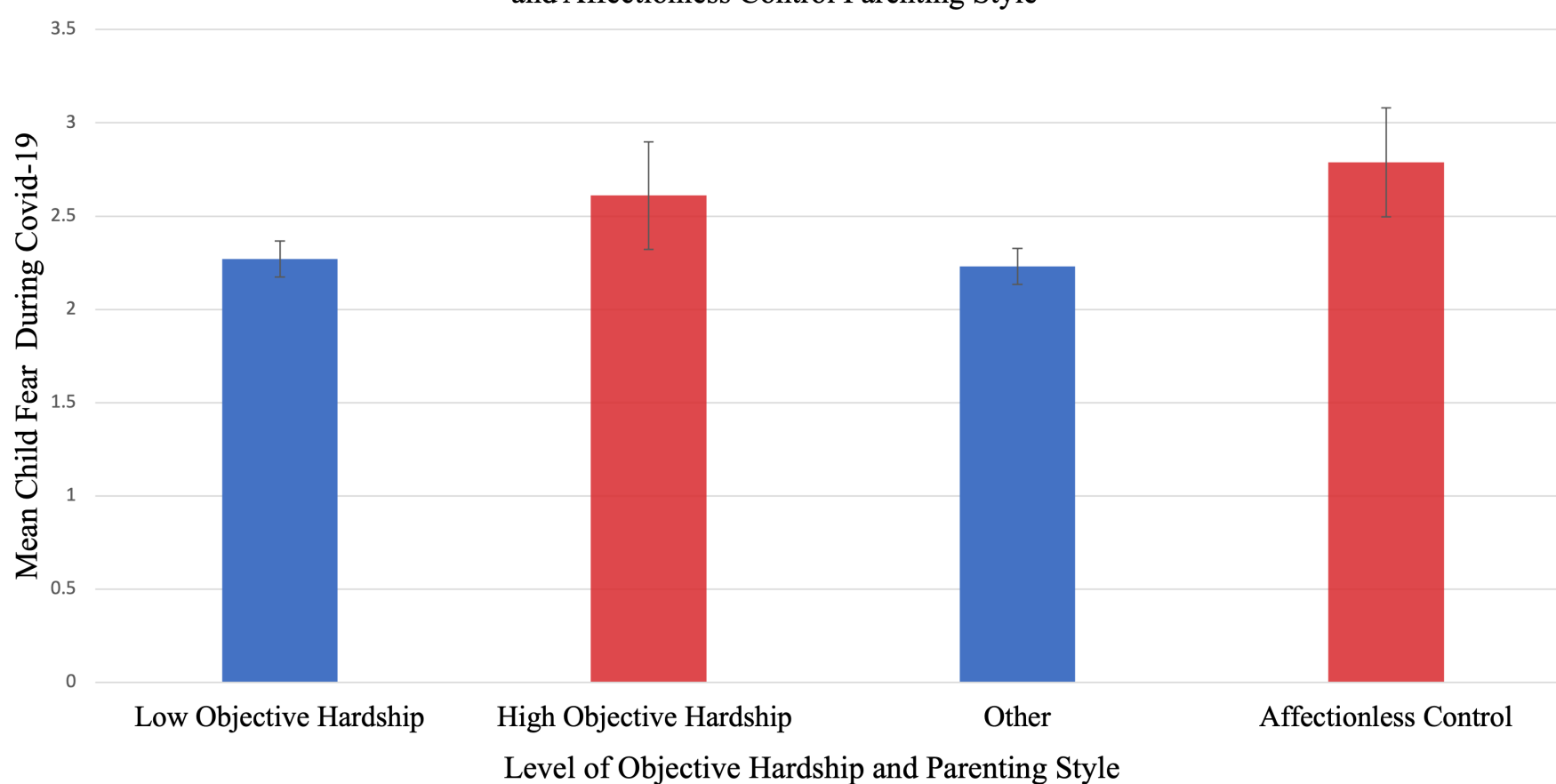
Covid-19 Survey: measures Covid's impact on mother and child's behavior, feelings, environment, and stress levels during the pandemic. Child fear measures the child's fears and worries towards Covid-19.

Data Analysis: The interaction of mother's objective hardships during Sandy and their affectionless control parenting and how they can predict child fear in covid-19, measured using a two-by-two factorial anova

RESULTS

GRAPH 1

Average Child Fear Response When Considering Sandy Objective Hardship and Affectionless Control Parenting Style

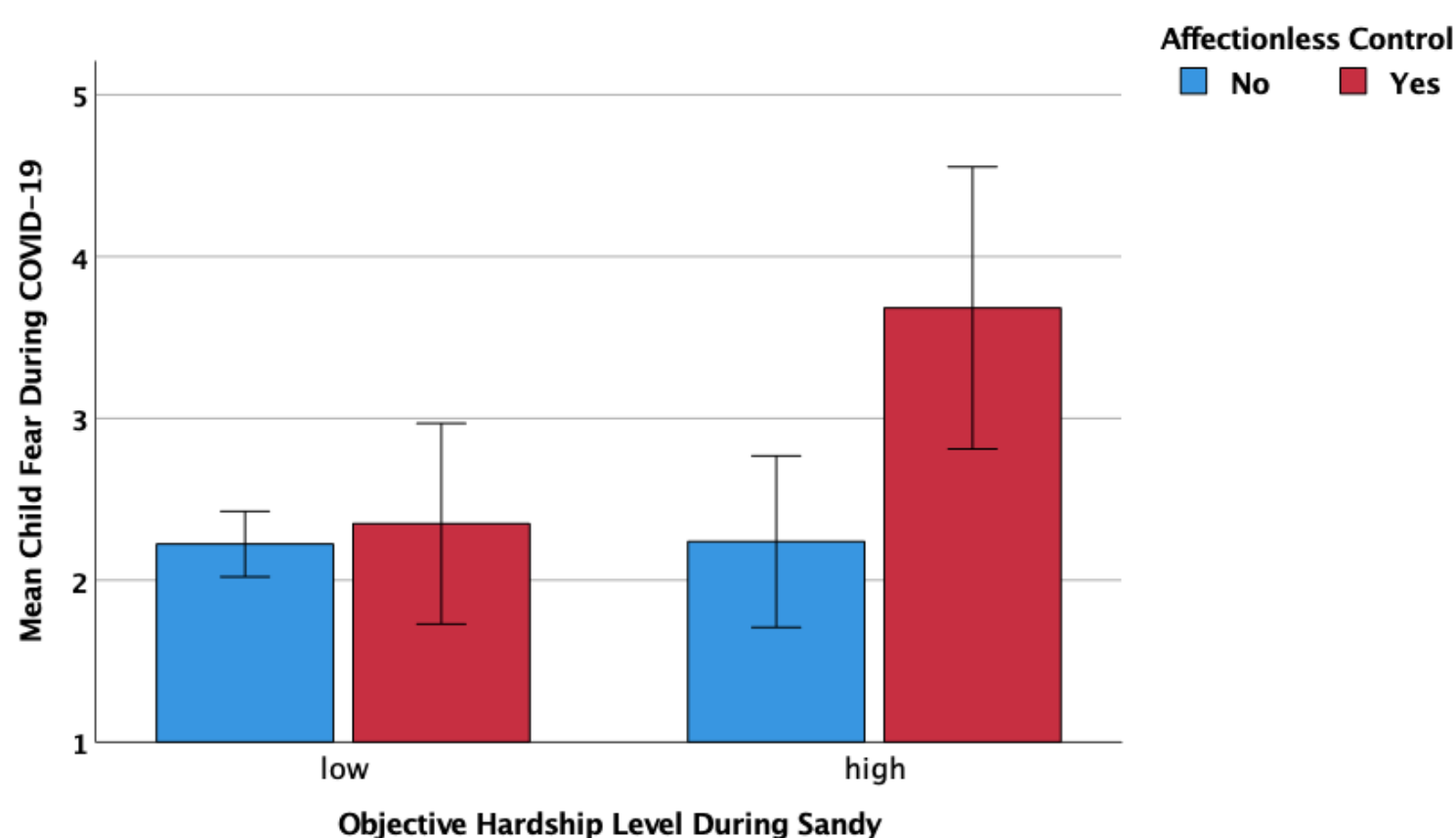


Objective Hardship, $p = 0.029$. Affectionless Control, $p = 0.012$

Significant increase in child fear (CF) during Covid-19 in mothers with high objective hardship (M= 2.615) compared to those with low obj hardship (M= 2.27). There's also a significant increase for CF in mothers with affectionless control parenting (M= 2.788) compared to those with other parenting styles (M= 2.231).

GRAPH 2

The Interaction of Parenting Style and Objective Hardship During Sandy on Child Fear During Covid-19



$p = 0.033$

The interaction of objective hardships during Sandy and affectionless control parenting impact children's stress response during the Covid-19 pandemic.

DISCUSSION/CONCLUSION

- Sex of the child was not significant as a covariate ($p=0.131$). A follow up study comparing stress responses in male and female children (with a larger population size) should be considered.
- Conditions such as climate change mean that natural disasters and their severity will continue to increase in amount and intensity.
 - Children are vulnerable to traumatic events (like natural disasters) in childhood, parental stress, and respond differently to certain parenting styles. I believe more research should be done on how these factors affect children, their stress responses, and their possibility of developing anxiety disorders.
- We must think about the factors that make some populations more vulnerable to natural disasters. The mental health of natural disaster survivors and mental health services as part of recovery efforts should also be considered.
- We must also understand the reasons (many of which are related to social inequities) why mental health services are not accessible to various populations such as low income and/or BIPOC communities and what changes need to be made in order to reach inclusive levels of care, services, and access.

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COMPARING CHILD FEAR MEANS

- Low Hardship + Other = 2.221
- Low Hardship + AFLC = 2.355
- High Hardship + Other = 2.3
- High Hardship + AFLC = 3.653