Stress and Health Disparities in Adolescents During COVID-19

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Overview
1. Background
2. Stress and Family Processes
3. Stress and Mental Health
1. Background

In Spring 2020, the daily lives of the US population had been profoundly changed by the pandemic.

- Increased parental depression, anxiety, and stress (Fong et al., 2020)
- Increased parenting stress & child abuse potential (Brown et al., 2020; Lee et al., 2020)
- Increased child internalizing & externalizing problems (Feinberg et al., 2021)
- Yet, some parents have reported remote schooling & work to be positive experiences (Thorell et al., 2021)
2. Stress and Family Processes

- Test Family Stress Model of effects of economic hardship on family processes

What are the financial, relationship and psychological factors that predict parents’ mental health and child-rearing during the quarantine, and what are the implications for their and their children’s well-being?
May 26 – June 17, 2020

Parenting during the COVID-19 Pandemic: Implications for Parent and Child Mental Health and Well-Being

UC Davis Health

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I'm Interested in this study

Age: 18 years or older
Gender: Any
Healthy Volunteers: Yes
Keywords: COVID-19, coronavirus, parenting, parent, stress, mental health, well-being
Type: Online Survey
Target: 400 Participants

Investigator:
Paul Hastings, PhD, Professor
UC Davis Center for Mind and Brain
View profile
Sample

493 parents of children aged 2-18 years in the U.S.

- $M = 38.18$ years, $SD = 6.35$, range 22 - 66y
- 89.9% female; 69% White, 10.9% AAPI, 10.1% Latino/a; 89.7% California
- 92.29% two-parent families, 1-6 children per household ($M = 2.00$, $SD = .92$)
- 12% < $50k; 28.1% $50-$100k; 25.6% $100-159k; 30.6% > $150k

- 39.40% with essential worker in home (11.2% healthcare)
- 93.71% experienced some kind of job change, reduction or loss (remote)
- 91.68% experienced some kind of change to children’s schooling (remote)

For some measures, parents selected one child to report on

Focal child: 227 (46.0%) female; $M = 7.11$ years, $SD = 4.11$, range 2.0 – 18.0y
2. Testing the Family Stress Model of the effects of economic hardship on family processes

- Economic Hardship
  - Economic Pressure
  - Parent Psychological Distress
  - Interparental Relationship Problems
  - Disrupted Parenting
  - Child Adjustment Problems

Conger & Conger, 2002; Masarik & Conger, 2017

- Fewer financial resources
- More economic difficulty
- Parent mental health
- Spousal conflict
- Parent-child conflict
- Child mental health

Was this cascade evident in families as the pandemic persisted into late spring 2020?
Negative Work Changes

2019 Low Per Capita Income

Perceived Worse Finances

Marital Problems

Parent Emotional Distress

Disrupted Parenting

Financial Difficulties

Child Difficulties

Fit Indices:
\[ \chi^2 (7) = 10.20, \ p = 0.18 \]
RMSEA = .032, 90% CI [0, 0.071]
CFI = .997; TLI = .968; SRMR = .015
AIC = 17191.849; BIC = 17591.517
Adjusted BIC = 17283.672

Covariates:
Child’s Age
Child’s Gender
Parent’s Age
Parent’s Gender
Number of Children

.17** .17*** .35*** .34*** .23*** .10* .16*** .21*** .60*** .27***
Several significant indirect effects (mediation) supported the predicted cascading effects of the FSM.

Most families were not chronically economically disadvantaged. Acute pandemic-related economic changes impacted breadth of families.
2. Stress and Mental Health
What are the impacts of COVID-19-related financial stress on parent and adolescent mental health?

Does financial stress impact executive function performance of youth and parents after a year of the pandemic?

Executive function
- Set of cognitive skills that promote goal-directed behavior:
  - Working memory
  - Cognitive flexibility
  - Inhibitory control
- Play key roles in
  - Successful social interactions
  - Academic achievement
  - Self-regulation and mental health
  - Physical health
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Stress and Executive Function

- Studies show reduced EF under acute stress (Shields et al., 2016) and in populations experiencing chronic stress (Lawson et al., 2018) and trauma (Op den Kelder et al., 2018)
- A few studies from Italy and Turkey showed impaired EF in adults during COVID-19, using self-report data (Fiorenzato et al., 2021; Kira et al., 2021)
- Did financial stress during COVID-19 impair cognitive functioning in parents and adolescents?
Stress and Executive Function

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Sample

- 83 adolescent-parent pairs
- Youth age 9-17 years old, M = 13.01 years, SD = 2.27 years
- Current youth gender identification: 52.4% male, 37.8% female, 6.1% non-binary, 2.4% transgender, and 1.2% other identification.
- Mean total annual household income was $129,479.61, ranging from $2,500 to more than $200,000.
- 37.8% experienced at least one parent losing their job or wages due to the COVID-19 pandemic, whereas 62.2% experienced no parental job loss or wage loss.
Executive Function Tasks
Online digit span (working memory), cued switching (cognitive flexibility) & flanker (inhibitory control) tasks, plus questionnaires

Use the keyboard to type in the numbers in the opposite order that they were presented.
Press enter when you are done.

Let's look at an example of what you would do when you see this blue rectangle based on the instructions that you got.
When you are ready to practice, press the Continue button below.

If the instructions said COLOR then you would press F
If the instructions said SHAPE, then you would press J

Press F for Left
Press J for Right

You should pay attention to the fish in the middle.
Press J if the fish is swimming to the Right

Press the matching key
Results – mental health

• Parental job loss was associated with greater parental financial stress ($r = .342$, $p = .002$)
Results – mental health

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• Greater financial stress was associated with more parental mental health symptoms ($r = .288, p = .009$), but not with increased adolescent symptoms ($p < .05$)
Results – mental health

- Older adolescents experienced worse mental health during the pandemic than younger adolescents ($r = .228, p = .047$)
Results – mental health

- Older adolescents experienced worse mental health during the pandemic than younger adolescents ($r = .228$, $p = .047$)
- Significant impact of gender on mental health symptoms during pandemic, $F(2,72) = 10.98$, $p < .001$, with adolescent girls and trans/nonbinary/other youth reporting more mental health symptoms than adolescent boys

![Graph showing youth age vs anxiety and depression symptoms](image_url)

![Bar chart showing gender and mental health symptoms](image_url)
Results – executive function

• Financial stress reported by parents was correlated with worse child inhibitory control ($r = -.232$, $p = .036$), but no impact on child working memory or child cognitive flexibility.
Results – executive function

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• Surprisingly, financial stress was associated with better parental working memory ($r = 0.261, p = 0.018$) and no differences in parent inhibitory control and cognitive flexibility
Results – executive function

• Financial stress reported by parents was correlated with worse child inhibitory control ($r = -0.232, p = 0.036$), but no impact on child working memory or child cognitive flexibility.

• Surprisingly, financial stress was associated with better parental working memory ($r = 0.261, p = 0.018$) and no differences in parent inhibitory control and cognitive flexibility.

• However, these results did not survive correction for the number of statistical tests conducted, suggesting these are weak effects that require further replication with large representative samples.
Conclusions

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• Financial stress was significantly related to worse parent mental health and disruptions in family processes, but less clear that youth mental health was impacted → children’s mental health may have been buffered from some of the impacts of the pandemic.
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• Older adolescents (age 13-17) experienced worse mental health than younger adolescents (age 9-12).

• Understanding resilience processes remains an ongoing goal as we extract lessons from this pandemic to help youth and parents recover.
Thank you!
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