International Journal of Child, Youth and Family Studies

STRESS AND COPING AMONG PARENTS WITH CHILDREN ENROLLED IN REMOTE SCHOOLING DURING COVID-19

Jocy-Anna Chevalier, Johanna Andrews Adlam, Melva Thompson-Robinson, Carolee Dodge Francis, Eboni Anderson and Daryl O. Traylor

Volume 15, Number 3, 2024

URI: https://id.erudit.org/iderudit/1114818ar
DOI: https://doi.org/10.18357/ijcyfs153202422163

See table of contents

Publisher(s)

University of Victoria

ISSN

1920-7298 (digital)

Explore this journal

Cite this article

Chevalier, J.-A., Andrews Adlam, J., Thompson-Robinson, M., Dodge Francis, C., Anderson, E. & Traylor, D. (2024). STRESS AND COPING AMONG PARENTS WITH CHILDREN ENROLLED IN REMOTE SCHOOLING DURING COVID-19. *International Journal of Child, Youth and Family Studies*, *15*(3), 50–68. https://doi.org/10.18357/ijcyfs153202422163

Article abstract

The COVID-19 pandemic necessitated the closure of schools, prompting 93% of U.S. households with children to transition to remote schooling. This study investigates coping mechanisms used by parents and the emotional impact of remote schooling on their well-being. A cross-sectional online survey, grounded in the Transactional Model of Stress and Coping, was conducted among 133 U.S. parents with children engaged in remote schooling from May to October 2020. Pearson correlations and paired sample t-tests were calculated. Multiple regression was performed to determine how well stress, resilience, and gender predict depressive symptoms. The study participants had an average of 1.96 children. Most commonly used coping mechanisms included planful problem-solving, seeking social support, and escape/avoidance. A statistically significant positive association was found between stress and depressive symptoms. Stress and depressive symptoms increased during the pandemic, while resilience decreased. The resulting statistically significant regression model of stress, resilience, and gender accounted for 75.4% of the variability in depressive symptoms. These results underscore the importance of addressing parental well-being and mental health during times of crisis, particularly when children are engaged in remote schooling.

International Journal of Child, Youth and Family Studies (2024) 15(3): 50–68
DOI: 10.18357/ijcyfs153202422163

STRESS AND COPING AMONG PARENTS WITH CHILDREN ENROLLED IN REMOTE SCHOOLING DURING COVID-19

Jocy-Anna Chevalier, Johanna Andrews Adlam, Melva Thompson-Robinson, Carolee Dodge Francis, Eboni Anderson, and Daryl O. Traylor

Abstract: The COVID-19 pandemic necessitated the closure of schools, prompting 93% of U.S. households with children to transition to remote schooling. This study investigates coping mechanisms used by parents and the emotional impact of remote schooling on their well-being. A cross-sectional online survey, grounded in the Transactional Model of Stress and Coping, was conducted among 133 U.S. parents with children engaged in remote schooling from May to October 2020. Pearson correlations and paired sample *t*-tests were calculated. Multiple regression was performed to determine how well stress, resilience, and gender predict depressive symptoms. The study participants had an average of 1.96 children. Most commonly used coping mechanisms included planful problem-solving, seeking social support, and escape/avoidance. A statistically significant positive association was found between stress and depressive symptoms. Stress and depressive symptoms increased during the pandemic, while resilience decreased. The resulting statistically significant regression model of stress, resilience, and gender accounted for 75.4% of the variability in depressive symptoms. These results underscore the importance of addressing parental well-being and mental health during times of crisis, particularly when children are engaged in remote schooling.

Keywords: COVID-19, children, parenting, stress, coping

Jocy-Anna Chevalier PhD is a graduate of the School of Public Health at the University of Nevada Las Vegas, 4505 S. Maryland Pkwy, M/S 3063, Las Vegas, NV 89154-3063.
Email: chevali3@unlv.nevada.edu

Johanna Andrews Adlam PhD is the founder and Chief Executive Officer, Premier Excellence LLC, 380 Sunrise Highway #1020, Patchogue, NY 11772.
Email: Johanna@premexcellence.com

Melva Thompson-Robinson DrPH (corresponding author) is a professor in the School of Nursing at the University of Nevada Las Vegas, 4505 S. Maryland Pkwy, M/S 3018, Las Vegas, NV 89154-3018. Email: melva.thompson-robinson@unlv.edu

Carolee Dodge Francis EdD is department chair and professor of Civil Society & Community Studies, School of Human Ecology, University of Wisconsin-Madison, 4151 Nancy Nicholas Hall, 1300 Linden Drive, Madison, 53706. Email: dodgefrancis@wisc.edu

Eboni Anderson DHEd is an associate professor at the A.T. Still University School of Osteopathic Medicine, 5850 E. Still Cir., Mesa, AZ 85206. Email: ebonianderson@atsu.edu

Daryl O. Traylor PhD is a lecturer at Eastern Washington University, 601 E Riverside Ave., Set. 400, Spokane, WA 99202. Email: dtraylor1@ewu.edu

In 2020, the World Health Organization declared a worldwide pandemic of the coronavirus disease known as COVID-19, caused by the SARS-CoV-2 coronavirus discovered in Wuhan, China in December 2019 (World Health Organization [WHO], 2020). The declaration had widespread effects, leading many primary and secondary schools across the United States to transition to remote learning. For purposes of this study, remote schooling encompasses distance education, online schooling, and asynchronous learning for K–12 students (Kosiyaporn et al., 2023). Many parents had to take on new responsibilities as learning facilitators for their children, while managing one or more daily pandemic-related obstacles, such as food insecurity, underemployment/unemployment, employment via remote mechanisms, taking on the role of an essential worker outside of the home, and difficulties with paying for housing. These obstacles affected stress levels and the type of support parents could provide to their children to help them succeed academically (de Jong et al., 2022). For example, Fontenelle-Tereshchuk (2021) conducted a qualitative case study investigating parents' perspectives on and challenges with remote schooling, and reported that parents felt overwhelmed by the effort of managing their own responsibilities as well as the school-related responsibilities of their children. Furthermore, while controlling for other stressful life events, parents having difficulty managing children's remote schooling was a statistically significant predictor of perceived parental stress. Thus, it is imperative to investigate the impact of remote schooling during the COVID-19 pandemic on parental stress, resilience, coping processes, and emotional well-being.

Literature Review

Stress has long been viewed as a universal mechanism existing across times and cultures (Hutmacher, 2021). It is recognized as a typical physiological response to emotional, physical, and mental pressures or challenges encountered in daily life (American Psychological Association, 2022; National Center for Complementary and Integrative Health, 2022). The U.S. Centers for Disease Control and Prevention (CDC; 2024) reported that stress can cause negative emotions (e.g., anger, sadness, frustration), unhealthy changes in diet (e.g., eating the wrong foods, increased/decreased food intake), and irregular sleeping patterns (e.g., insomnia). Stress often dissipates once the triggering situation is resolved (National Institute of Mental Health, 2022); however, it can also worsen, leading to other health consequences such as anxiety, depression, and chronic cardiovascular diseases, including hypertension, stroke, and heart attack (Mayo Clinic, 2021).

Parental stress stems from the various roles parents play within the household and beyond (Deater-Deckard, 2004). Furthermore, Coulacoglou and Saklofske (2017) noted that parental stress can arise from the disparity between the demands of parenting and the resources at hand. Other compounding factors that contribute to parental stress include concerns related to job security, housing, and access to resources (Deater-Deckard, 2004; Neece et al., 2012). Neece et al.

(2012) proposed that elevated parental stress levels serve as an environmental factor that can lead to adverse outcomes like anxiety and depression. The repercussions of parental stress become a public health issue when they negatively impact children's well-being or development. Although there are healthy responses to stress, coping with stress can also result in unhealthy stress responses, such as increased use of alcohol, illicit drug use (e.g., fentanyl, heroin), and medication misuse (e.g., opioids; CDC, 2024). These unhealthy coping mechanisms can worsen in the long-term, leading to chronic physical and mental health problems (CDC, 2024).

While parenthood in general can be difficult at times, the impact of the COVID-19 pandemic further heightened levels of stress as well as constraining parents' enjoyment of and effectiveness in their roles (Miller et al., 2020). COVID-19-related school closures and lockdowns forced parents of K–12 children to take on the responsibility of facilitating remote learning at home. According to the U.S. Census Bureau's Household Pulse Survey (2020), between April and May 2020, educational changes were experienced by 99.5% of households with children enrolled in public or private K–12 schools; for example, classes switched to distance learning or underwent other modifications. Remote schooling requires substantial parental involvement in and responsibility for the children's education, such as organizing school lessons, creating a learning climate, collaborating with teachers, and providing overall parental guidance (Borup et al., 2015; Hong et al., 2021; Liu et al., 2010). Parents experienced stress as a result of the disruptions to their child's schooling and schedule that were due to the COVID-19 pandemic (American Psychological Association, 2022; Connell & Strambler, 2021; Gassman-Pines et al., 2022; Sonnenschein et al., 2021; van Tilburg et al., 2022).

Garbe et al. (2020) explored remote schooling and parental stress qualitatively and found the causes of this stress included: (a) difficulty with balancing responsibilities between working and parenting, (b) keeping their children motivated to learn, and (c) the significant toll from dealing with their children all day every day, especially in the case of children living with disabilities. Moreland-Russell et al. (2022) investigated the mental health challenges U.S. parents faced during the pandemic. The research highlighted that parents, especially mothers and those with younger children, experienced heightened stress, anxiety, and depression. Contributing factors included juggling work-from-home duties, school closures, and financial instability. Parents with higher education, private schooling options, and stable income reported better mental health outcomes. These findings underscore the need for mental health support and flexible policies to alleviate the burdens on families.

Parental stress was positively associated with children's higher anxiety levels (Lee et al., 2020) and with parental perception of children's higher stress levels (Russell et al., 2020). Both Lee et al. (2020) and Russell et al. (2020) concluded that having resources or opportunities for academic success in the home and in school helped reduce the incidence of poor health outcomes among caregivers or parents who had experienced a job loss. Additionally, these studies indicate that providing mental health support for parents fosters a healthy relationship with their children and contributes to the children's academic success.

A study by McGoron et al. (2022) involving families living in a large urban area in the United States with high rates of COVID-19 investigated the associations between three factors — school support, household chaos, and family routines — and the mental health of parents. The study found that "parents who reported more support from schools during remote schooling reported less depression and anxiety; however, this association was not significant for parents most impacted by the pandemic" (p. 173). The authors concluded that depression and anxiety could be reduced in parents with school-aged children who have been impacted by the COVID-19 pandemic by giving them additional support in terms of resources or services from school institutions.

Research examining the marital status of parents with children enrolled in remote schooling during COVID-19 is limited. However, Goldberg et al. (2021) conducted a mixed methods study among 296 divorced and separated parents. They found that 31.8% of divorced and separated parents indicated that issues concerning remote schooling were the second highest source of conflict for co-parenting during COVID-19. Through content analysis from qualitative interviews, they found that parents who shared custody of their child were more likely to indicate that remote schooling was a source of conflict. Finally, women who were partnered with men noted that they were solely responsible for remote schooling for their child.

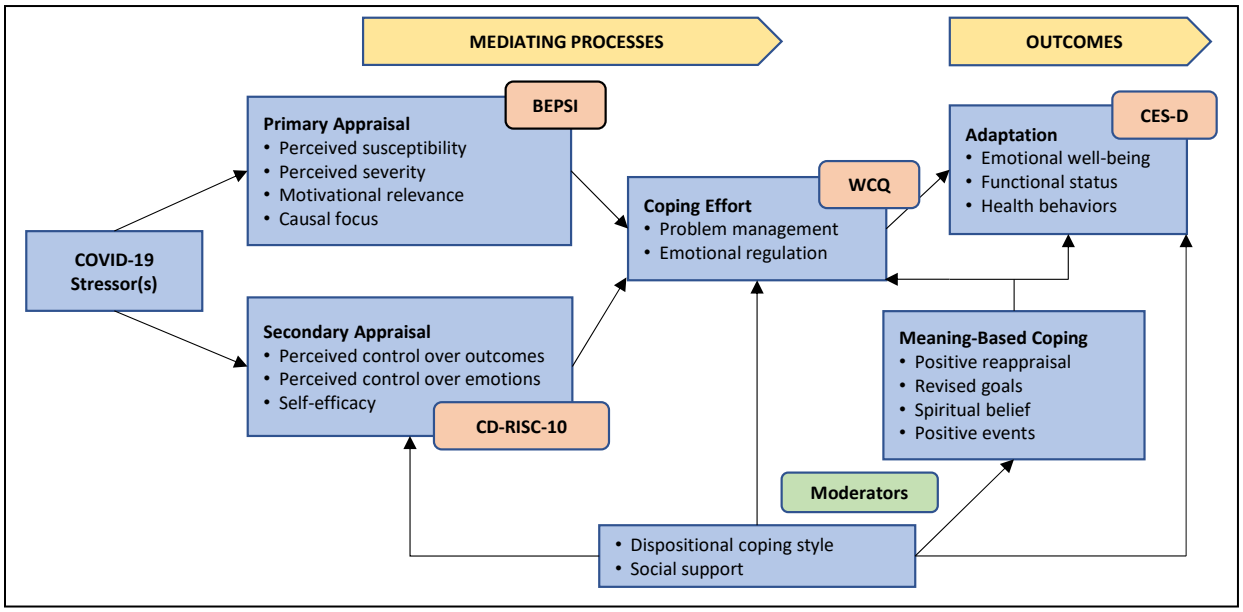
Transactional Model of Stress and Coping

The transactional model of stress and coping (TMSC), depicted in Figure 1, is a classic framework investigating stress and coping processes during stressful life events (Lazarus & Folkman, 1984). This model is considered transactional because the relationship between the person and the environment is viewed as dynamic, mutually reciprocal, and bidirectional (Folkman et al., 1986). As noted in Burton et al., (2020, p. 52), " 'Stress' is conceptualized as a relationship between the person and the environment, where the person assesses the environment as demanding or a threat to their well-being due to a lack of sufficient resources to address those demands". "Coping" can be defined as the constantly changing cognitive and behavioral efforts a person makes to manage external or internal demands that may exceed their resources (Folkman et al., 1986; Lazarus & Folkman, 1984).

In the TMSC, the response to stressors begins with a two-part cognitive appraisal process. In the primary appraisal, a person evaluates the relevance of a stressful encounter or environment in an attempt to determine whether and in what ways it will impact their well-being (Folkman et al., 1986). In the secondary appraisal, the person evaluates whether resources are available to overcome the situation, or at least prevent it from becoming worse; that is, whether the stressor is a significant threat or just a challenge (Folkman et al., 1986). The coping process, the next step in the TMSC, focuses on how the person reacts in the stressful encounter or environment, and how their reactions change as it continues to unfold (Folkman et al., 1986). Finally, the immediate outcome of the encounter depends upon the person's judgement of their ability to resolve the encounter successfully, which affects their emotional well-being (Folkman et al., 1986).

Primary appraisal is measured by the Brief Encounter Psychosocial Instrument (BEPSI; Frank & Zyzanski, 1988); secondary appraisal is measured by the Ten-Item Connor-Davidson Resilience Scale (CD-RISC-10; Campbell-Sills & Stein, 2007); coping is measured by the Ways of Coping questionnaire (WCQ; Folkman et al., 1988); and the outcome (emotional well-being) is measured by the Center for Epidemiological Studies-Depression scale (CES-D; Radloff, 1977).

Figure 1. *Diagram of the Lazarus and Folkman (1984) Transactional Model of Stress and Coping and the Measures Used in This Study*



Note. Adapted from Lazarus, R. S., & Folkman, S. (1988). Transactional theory and research on emotions and coping, *European Journal of Personality, 1*(3), 151–155.

There is limited literature documenting the use of a theory-based approach to assess parental stress and remote schooling during the COVID-19 pandemic. Previous studies evaluated the levels of stress and challenges parents faced during the pandemic; however, a gap in the literature remains regarding how parents coped with the stress of facilitating remote schooling during the pandemic. Based on the TMSC, the research questions for this study are:

1. What types of coping are predominantly utilized by parents with children enrolled in remote schooling during the COVID-19 pandemic in the United States?
2. What is the relationship between stress and depressive symptoms for parents with children enrolled in remote schooling during the COVID-19 pandemic in the United States?
3. Does COVID-19 have an impact on stress, resilience, and depressive symptoms for parents with children enrolled in remote schooling during the COVID-19 pandemic in the United States?

4. Does marital status have an impact on stress for parents with children enrolled in remote schooling during the COVID-19 pandemic in the United States?
5. How well do stress, resilience, and gender predict depressive symptoms for parents with children enrolled in remote schooling during the COVID-19 pandemic?

Methods

Study Design and Participants

The data used in this study were collected from a larger study that examined stress and coping processes during the COVID-19 pandemic. A diverse group of U.S. researchers, who collaborated virtually during the COVID-19 pandemic, used the TMSC to guide the development of a cross-sectional, online survey. Between May and October 2020, the survey was disseminated to 891 adults across the United States through the survey platform, Qualtrics. Participants were invited to complete the survey through different communication channels, such as social media (e.g., Facebook, Twitter [now X], and LinkedIn), email, and text messages. In addition, participants were asked to share the survey link with others in their network groups.

The participants in the larger study were predominantly people of color. This study analyzed data from a subset of 133 participants who indicated being parents with children living in the home who were enrolled in remote schooling. Participants were aged 18 and older, resided in the United States, and completed the informed consent on the first page of the survey.

Survey Instrument

The quantitative survey developed to measure the TMSC constructs comprised 60 questions that were either developed by the research team or adapted from four validated questionnaires examining stressors associated with COVID-19, psychosocial health, and demographics. For this study, demographics were collected and the following four measures were analyzed to examine stress and coping during COVID-19 school closures for U.S. parents:

- Brief Encounter Psychosocial Instrument (BEPSI; 6 items), measuring subjective stress and fatigue at two time points;
- 10-item Connor-Davidson Resilience Scale (CD-RISC-10), exploring resilience to health-related stressors at two time points;
- Ways of Coping Questionnaire (WCQ; 24 items), assessing coping behaviors through eight subscales; and
- Center for Epidemiologic Studies Depression Scale (CES-D; 20 items), measuring emotional well-being and depressive symptomatology at two time points.

These instruments are based on previously used instrumentation (Andrews Adlam et al., 2022; Burton et al., 2020). The use of the instruments in this study follows the description in Andrews Adlam et al. (2022).

Demographics

Demographic information for parents collected in this study included age, gender, race/ethnicity, marital status, education, employment status, and household size at the time the respondent completed the survey. Additional demographic information collected included student status and whether the participant had filed for or intended to file for unemployment benefits. Questions related to remote schooling included household size, the number of children under 18 living in the home, and whether children were participating in remote schooling.

Data Analysis

Descriptive statistics were gathered and frequencies were calculated to assess the primary coping processes used by parents with children enrolled in remote schooling during the COVID-19 pandemic. Pearson's correlation was used to explore the relationship between stress and depressive symptoms as well as marital status and stress. Additionally, paired sample *t*-tests were conducted to evaluate the impact of COVID-19 on stress, resilience, and depressive symptoms before and since COVID-19. Finally, a multiple regression was performed to determine how well stress, resilience, and gender predict depressive symptoms for parents with children enrolled in remote schooling during the COVID-19 pandemic. The data collected via the Qualtrics platform were exported into the Statistical Package for the Social Sciences (SPSS version 28) for data analysis; p-values $< .05$ were considered statistically significant.

Results

Descriptive Statistics

Table 1 presents the demographic characteristics of the 133 participants who were parents with children under the age of 18 living at home and enrolled in remote schooling. The mean age of the parents was 41.3 ($SD = 9.7$), ranging from 18 to 83 years. Parents identified themselves as either female (85.7%, 114) or male (14.3%, 19). The respondents self-identified their race as Black or African American (42.9%, 57), American Indian/Alaska Native (25.6%, 34), White (15.0%, 20), multiracial (7.5%, 10), Asian (4.5%, 6), other (3.8%, 5), and Pacific Islander (0.8%, 1). Additionally, about 14% (18) of respondents self-identified their ethnicity as being Hispanic, Latino/a, or of any Spanish origin.

The majority of respondents were married (55.6%, 74), and had completed graduate or professional studies (49.5%, 66). At the time of COVID-19, 45% (60) of participants were employed full-time as non-essential workers, and 23.3% (31) were students. More than a third were living in a household of more than 4 people (36.1%, 48), and had a current monthly income of $4,000 or more (38.3%, 51).

Table 1. *Demographic Characteristics of Research Participants*

Descriptive characteristic	*n*	%
Gender		
Female	114	85.7
Male	19	14.3
Age in years (*M, SD*)	41.3	9.7
Hispanic, Latino/a, or Spanish origin	18	13.5
Race		
Black or African American	57	42.9
White	20	15.0
American Indian/Alaska Native	34	25.6
Asian	6	4.5
Pacific Islander	1	0.8
Other	5	3.8
Multiracial	10	7.5
Education		
8th–12th grade	1	0.8
Completed high school/GED	4	3.0
Some college or technical school	30	22.6
Completed college	31	23.3
Graduate or professional degree	66	49.6
Marital status		
Married	74	55.6
Divorced	16	12.0
Widowed	3	2.6
Separated	2	1.5
Never married	28	21.1
Member of an unmarried couple	10	7.5
Employment status		
Unemployed	8	6.0
Unemployed due to COVID-19	18	13.5
Furloughed due to COVID-19	5	3.8
Full-time essential worker	29	21.8
Part-time essential worker	6	4.5
Full-time non-essential worker	60	45.1
Part-time non-essential worker	6	4.5
Retired	1	0.8
Filed/planning to file for unemployment benefits	19	14.3
Student	31	23.3
Monthly income before COVID-19		
$500 or less	1	0.8
$501–$1,000	2	1.5
$1,001–$2,000	17	12.8
$2,001–$3,000	25	18.8

Descriptive characteristic	*n*	%
$3,001–$4,000	23	17.3
More than $4,000	61	45.9
Missing	4	3.0
Current monthly income		
$500 or less	5	3.8
$501–$,1000	11	8.3
$1,001–$2,000	19	14.3
$2,001–$3,000	22	16.5
$3,001–4,000	22	16.5
More than $4,000	51	38.3
Missing	3	2.3
Household size		
2 people	10	7.5
3 people	35	26.3
4 people	40	30.1
More than 4 people	48	36.1
Children under age 18 in household	180	29.4
Average number of children under age 18 in household (*M*, *SD*)	1.88	1.07
Child participation in remote school instruction	133	73.9

Characteristics of Study Measures

The characteristics of the four study measures included in the survey are displayed in Table 2. The BEPSI, which measured stress, yielded a mean score of 4.93 (*SD* = 2.63) before the COVID-19 pandemic, and an increased mean score of 6.00 (*SD* = 10.00) since then, out of a possible range of 0 to 10. The CD-RISC-10, which measured resilience, generated a mean score of 28.76 (*SD* = 5.88) before the pandemic, and a decreased mean score of 26.02 (*SD* = 8.09) afterwards, out of a possible range of 0 to 40. The CES-D, which measured depressive symptoms, produced a mean score of 13.52 (*SD* = 10.79) before the pandemic, out of a possible range of 0 to 56. Since COVID-19, the mean score increased to 19.49 (*SD* = 13.58), which is indicative of depressive symptoms.

Coping With the Stress of COVID-19

Mean scores for the eight coping scales of the WCQ are displayed in Table 2. The three primary types of coping process utilized by parents with children enrolled in remote schooling during the COVID-19 pandemic were: planful problem-solving (*M* = 4.88, *SD* = 2.56), seeking social support (*M* = 4.11, *SD* = 2.43), and escape/avoidance (*M* = 4.05, *SD* = 3.15).

Table 2. *Characteristics of Study Measures*

Measure	Items	Potential range	*n*	*M*	*SD*	Observed range
BEPSI						
Before COVID-19	6	0–10	119	4.93	2.63	0.6–10
Since COVID-19	6	0–10	118	6.0	2.69	0.6–10
CD-RISC-10						
Before COVID-19	10	0–40	133	28.76	5.88	10–40
Since COVID-19	10	0–40	131	26.02	8.09	0–40
CES-D						
Before COVID-19	20	0–60	128	13.52	10.79	0–56
Since COVID-19	20	0–60	122	19.49	13.58	0–59
WCQ subscales						
Confrontive coping	3	0–9	132	3.36	2.25	0–9
Distancing	3	0–9	132	3.36	2.25	0–9
Self-controlling	3	0–9	132	3.08	2.25	0–9
Seeking social support	3	0–9	131	4.11	2.43	0–9
Accepting responsibility	3	0–9	130	2.86	2.46	0–9
Escape/avoidance	3	0–9	130	4.05	3.15	0–9
Planful problem-solving	3	0–9	130	4.88	2.56	0–9
Positive reappraisal	3	0–9	130	3.95	2.80	0–9

Relationship Between Stress and Depressive Symptoms

A Pearson correlation was performed to examine the relationship between stress and depressive symptoms for parents with children in remote schooling during the COVID-19 pandemic in the United States and who had fully completed both scales. A large, positive correlation existed between stress and depressive symptoms ($r = 0.61$, $n = 118$, $p < .001$). The coefficient of determination or shared variance is 0.37.

The Impact of COVID-19 on Stress, Resilience, and Depressive Symptoms

A paired-sample *t*-test was utilized to evaluate stress, resilience, and depressive symptoms before and since COVID-19. The BEPSI was used to measure stress, the CD-RISC-10 scale was used to assess resilience, and the CES-D scale was used to evaluate depressive symptoms. COVID-19 had a significant impact, with stress ($MI = 0.60$, $p < .033$) and depressive symptoms ($MI = 5.95$, $p < .001$) increasing, and resilience decreasing ($MI = 2.95$, $p < .001$).

A significant increase in the BEPSI scores was found from before COVID-19 ($M = 5.15$, $SD = 2.54$) to since COVID-19 ($M = 5.75$, $SD = 2.72$), with $t(110) = -3.07$, and $p < .003$ (two-tailed). The mean increase in BEPSI scores was -0.60 with a 95% CI ranging from -0.98 to -0.21. A statistically significant increase was also found in CD-RISC-10 scores from before COVID-19 ($M = 13.18$, $SD = 10.78$) to since COVID-19 ($M = 19.13$, $SD = 13.35$), with $t(119) = -6.10$, and $p <$

.001 (two-tailed). The mean decrease in CD-RISC-10 scores was -5.95 with a 95% CI ranging from -7.88 to -4.02. Finally, a statistically significant decrease was found in CES-D scores from before COVID-19 ($M = 28.87$, $SD = 5.83$) to since COVID-19 ($M = 25.92$, $SD = 8.10$), with $t(130) = 5.17$, and $p < .001$ (two-tailed). The mean increase in CES-D scores was 2.95 with a 95% CI ranging from 1.82 to 4.07.

The Relationship Between Marital Status and Stress

A Pearson's correlation was performed to examine the relationship between marital status and stress for parents with children enrolled in remote schooling during the COVID-19 pandemic in the United States. A negative correlation was found between stress and marital status ($r = -.177$, $n = 132$, $p < .057$), which was not statistically significant. The coefficient of determination or shared variance is 0.03.

Regression Analysis of Stress, Resilience, and Gender on Depressive Symptoms

A multiple regression was performed to determine how well stress, resilience, and gender predict depressive symptoms for parents with children enrolled in remote schooling during the COVID-19 pandemic (Table 3). As noted earlier, the cognitive appraisal process in the TMSC includes both primary and secondary appraisal. Primary appraisal was measured with stress (BEPSI), secondary appraisal with resilience (CD-RISC-10), and depressive symptoms with CES-D. The independent variables of the sum scores of BEPSI, the sum scores of CD-RISC-10, and gender were entered to predict the dependent variable of emotional well-being (depressive symptoms); the total variance explained by the model as a whole was 75.4%, with $F(3, 104) = 45.54$ and $p < .001$. Further, only two independent measures were statistically significant, with stress recording a higher beta value ($\beta = .502$, $p < .001$) than resilience ($\beta = -.452$, $p < .001$). This study's model (which includes stress, resilience, and gender) explains 56.8% of the variance in depression symptoms. In this case, stress makes the strongest unique contribution to explaining the dependent variable when the variance explained by all other variables in the model is controlled for.

Table 3. *Multiple Regression Analyses on Predicting Depressive Symptoms for Parents With Children Enrolled in School During the COVID-19 Pandemic*

Independent variable	*B*	SE_B	β	*t*	*p*	*LL*	*UL*
Stress (BEPSI_DC)	20.46	6.35	.502	7.49	<.001	1.86	3.21
Resilience (CD-RISC-10_DC)	-0.758	0.338	-.452	-6.79	<.001	-0.98	-0.54
Gender	2.13	0.112	.055	0.850	.397	-2.84	7.10

Note. BEPSI_DC = total stress scores since COVID-19; CD-RISC-10_DC = total resilience scores since COVID-19.

Discussion

The impact of the COVID-19 pandemic on stress and coping remains the subject of ongoing global investigation. For this study, five research questions based on TMSC were developed to understand the relationship between stress, depression, resilience, and coping processes among parents who had children living at home and participating in remote schooling. The findings from this study can inform the design of future interventions and resources to help support the well-being of parents and their children during times of stressful life events, such as pandemics and natural disasters.

Results of the WCQ revealed three main coping mechanisms utilized by parents with children enrolled in remote schooling during the COVID-19 pandemic (see Table 2). The commonest was planful problem-solving, a problem-focused coping strategy that participants used in an attempt to directly change the elements of their stressful events (Folkman & Lazarus, 1985). This type of coping reflects the main challenge these parents face — that of balancing responsibilities, of trying to meet the demands of both their employment and their children's schooling, especially if there are multiple levels of learners in the home (Garbe et al., 2020).

Seeking social support — informational, tangible, and emotional — was another main coping mechanism used by parents with children enrolled in remote schooling. This aligns with Garbe et al.'s (2020) research, in which the majority of parents (60%) with children enrolled in remote schooling indicated that they had just the right number of educational resources available, and 44% were very satisfied with the level of support provided by the school while their children were enrolled. Having virtual or in-person social support groups could improve parents' well-being by helping them find others experiencing the same situations and challenges with their own children enrolled in remote schooling.

Finally, escape/avoidance was the third most used coping mechanism in this study. Escape/avoidance describes wishful thinking and behavioral efforts towards managing emotional stress and changing the meaning of the situation, or interpreting the stressful event differently (Folkman & Lazarus, 1985). Depending on the type of stressful encounter, using escape/avoidance can be beneficial when individuals partake in positive avoidance activities, such as exercising or meditation, rather than engaging in a negative lifestyle that may lead to adverse health consequences, such as depression and alcohol and substance use disorders, and may heighten the stress caused by the original problem (Melodia, 2015; van Tilburg et al., 2022; Warma, 2015). However, it is unclear whether the parents in this study were utilizing positive or negative escape/avoidance behaviors.

Another significant finding was the relationship between stress and depressive symptoms for parents with children in remote schooling during the COVID-19 pandemic. A large, positive correlation existed between stress and depressive symptoms, implying that parents were more likely to be depressed when levels of stress increased during the COVID-19 school closures when

their children transitioned to remote schooling. This finding is consistent with Russell et al.'s (2020) findings that the burden that parents experienced with children enrolled in remote schooling was positively associated with generalized anxiety, depression, and parent-perceived child stress.

This study also revealed that the COVID-19 pandemic not only had a significant impact on the increase of stress and depressive symptoms, but also on the decrease of resilience ($MI = 2.95$, $p < .001$). For comparison, another study found that parental stress was correlated with depressive symptoms ($p < .001$), stress due to remote schooling ($p = .004$), and anxiety ($p < .001$), which was not accounted for in this study (Maggio et al., 2021). Additionally, in the present study, marital status was not significantly directly associated with stress, depression, and resilience among parents with children in remote schooling. In contrast, Goldberg et al. (2021) discovered that handling remote schooling was one of the highest sources of conflict among divorced and separated parents during COVID-19. Given the small sample size for the current study, future research is needed to better understand the impact of marital status on stress, depression, and resilience among parents with children in remote schooling.

Finally, stress and resilience made a statistically significant contribution to predicting depressive symptoms of the parents participating in our study. However, Silverman et al.'s (2022) study revealed that the parental risk factors for parents of children with and without attention deficit hyperactivity disorder (ADHD) enrolled in remote schooling were internalizing symptoms, stress, and implementation of maladaptive parenting styles. These risk factors significantly predicted poorer outcomes across all three domains: difficulties with remote learning, internalizing symptoms, and externalizing symptoms. Further, parents' symptoms of anxiety, depression, and stress as well as maladaptive parenting styles (including poor supervision, inconsistent discipline, and corporal punishment) were risk factors for child outcomes. Three separate resilience factors were identified: parents' confidence about helping their children with remote learning, positive parenting, and an involved parenting style (Silverman et al., 2022). This is consistent with the present study's findings regarding parents with children enrolled in remote schooling and their experiences of stress, resilience, and depressive symptoms that, ultimately, can be harmful to both parent and child.

Limitations of the Current Study

Some limitations can be noted for this study. Because convenience sampling was used to recruit participants, only those interested in participating in the study completed the survey; they may not be representative of the larger population. The survey was only available in English and online, and so the results do not necessarily apply to parents for whom English is not a primary language or those who do not have internet access. Moreover, most participants were highly educated, so the results may not be representative of less educated parents; also, most were persons of color. The small sample size and distribution of demographic characteristics, such as gender, race, and marital status, did not allow for the exploration of the impact of these factors on the study outcomes.

This study was embedded in a larger study examining stress and coping among adults in the United States during the COVID-19 pandemic. As such, this survey did not explore the details of the remote schooling experience and the practices it entailed. For example, the survey did not explore daily schedule disruptions, resources to educate at home, use of technology, or child–parent behavior changes, as well as other issues relevant to a parent during a pandemic. Consequently, this study is not able to speak to the fine details of remote schooling as it occurred during the pandemic.

Conclusion

This study provides foundational insight into, and understanding of, the stress and coping processes of parents who had children enrolled in remote schooling during COVID-19. The findings emphasize the importance of having resources and interventions geared toward parents experiencing hardship and adversity during the pandemic while they are also supporting their children's participation in remote schooling. Given the increasing diversity of the United States, future research and efforts should also focus on the adaptability of these resources and interventions to suit the unique situations of various populations. Such resources and interventions are needed to decrease parental stress and thus support children's success in remote learning.

Unfortunately, imagining a future without pandemics and other natural disasters that could necessitate remote schooling is not realistic. Preparation will be key for all persons involved to successfully navigate such events. This study provides a foundation for future research to explore how the promotion of healthy ways of coping can reduce stress for parents whose children have been thrust into remote schooling.

References

Andrews Adlam, J., Murphy-Belcaster, M., Thompson-Robinson, M., Dodge Francis, C., Ricker-Boles, K., Traylor, D., & Anderson, E. (2022). Understanding stress and coping among women of color in the United States in the age of COVID-19. *Journal of Humanistic Psychology*, *0*(0). https://doi.org/10.1177/00221678221123111

American Psychological Association. (2022, October). Stress in American 2022 [Press release]. https://www.apa.org/news/press/releases/stress/2022/concerned-future-inflation

Borup, J., Stevens, M. A., & Waters, L. H. (2015). Parent and student perceptions of parent engagement at a cyber charter high school. *Journal of Asynchronous Learning Networks, 19*(5), 69–91. http://files.eric.ed.gov/fulltext/EJ1085792.pdf

Burton, T., Adlam, J. E., Murphy-Belcaster, M., Thompson-Robinson, M., Francis, C. D., Traylor, D., Anderson, E., Ricker-Boles, K., & King, S. (2020). Stress and coping among American Indian and Alaska Natives in the age of COVID-19. *American Indian Culture And Research Journal, 44*(2), 49–70. https://doi.org/10.17953/aicrj.44.2.burton

Campbell-Sills, L., & Stein, M. B. (2007). Psychometric analysis and refinement of the Connor-Davidson resilience scale (CD-RISC): Validation of a 10-item measure of resilience. *Journal of Traumatic Stress*, *20*, 1019–1028. https://doi.org/10.1002/jts.20271

Centers for Disease Control and Prevention. (2024). *Mental health: Coping with stress*. https://www.cdc.gov/mentalhealth/stress-coping/cope-with-stress/index.html

Connell, C. M., & Strambler, M. J. (2021). Experiences with COVID-19 stressors and parents' use of neglectful, harsh, and positive parenting practices in the Northeastern United States. *Child Maltreatment, 26*(3), 255–266. https://doi.org/10.1177/10775595211006465

Coulacoglou, C., & Saklofske, D. H. (2017). The assessment of family, parenting, and child outcomes. In C. Coulacoglou & D. H. Saklofske, *Psychometrics and psychological assessment: Principles and applications* (pp. 187–222). Elsevier eBooks. https://doi.org/10.1016/b978-0-12-802219-1.00008-0

de Jong, P. F., Schreurs, B. G. M., & Zee, M. (2022). Parent–child conflict during homeschooling in times of the COVID-19 pandemic: A key role for mothers' self-efficacy in teaching. *Contemporary Educational Psychology, 70*, Article 102083. https://doi.org/10.1016/j.cedpsych.2022.102083

Deater-Deckard, K. (2004). *Parenting stress*. Yale University Press. https://doi.org/10.12987/yale/9780300103939.001.0001

Folkman, S., & Lazarus, R. S. (1985). If it changes it must be a process: Study of emotion and coping during three stages of a college examination. *Journal of Personality and Social Psychol*ogy, *48*(1), 150–170. https://doi.org/10.1037/0022-3514.48.1.150

Folkman, S., Lazarus, R. S., Gruen, R. J., & DeLongis, A. (1986). Appraisal, coping, health status, and psychological symptoms. *Journal of personality and social psychology, 50*, 571.

Folkman, S., Lazarus, R. S., Moore, A. D., & Stambrook, M. (1988). *Ways of coping questionnaire: Manual, instrument, scoring guide.* Consulting Psychologists Press.

Fontenelle-Tereshchuk, D. (2021). "Homeschooling" and the COVID-19 crisis: The insights of parents on curriculum and remote learning. *Interchange, 52*(2), 167–191. https://doi.org/10.1007/s10780-021-09420-w

Frank, S. H., & Zyzanski, S. J. (1988). Stress in the clinical setting: The Brief Encounter psychosocial instrument. *The Journal of Family Practice*. *5*, 533–539.

Garbe, A., Ogurlu, U., Logan, N., & Cook, P. (2020). COCID-19 and remote learning: Experiences of parents with children during the pandemic. *American Journal of Qualitative Research, 4*(3), 45–65. https://doi.org/10.29333/ajqr/8471

Gassman-Pines, A., Ananat, E. O., Fitz-Henley, J., & Leer, J. (2022). Effect of daily school and care disruptions during the COVID-19 pandemic on child behavior problems. *Developmental Psychology*, *58*(8). https://doi.org/10.1037/dev0001373

Goldberg, A. E., Allen, K. R., & Smith, J. Z. (2021). Divorced and separated parents during the COVID-19 pandemic. *Family Process, 60*(3), 866–887. https://doi.org/10.1111/famp.12693

Hong, J.-C., Liu, Y., Liu, Y., & Zhao, L. (2021). High school students' online learning ineffectiveness in experimental courses during the COVID-19 pandemic. *Frontiers in Psychology, 12*, Article 738695. https://doi.org/10.3389/fpsyg.2021.738695

Hutmacher, F. (2021). Putting stress in historical context: Why it is important that being stressed out was not a way to be a person 2,000 years ago. *Frontiers in Psychology, 12*, Article 539799. https://doi.org/10.3389/fpsyg.2021.539799

Kosiyaporn, H., Phaiyarom, M., Uansri, S., Kunpeuk, W., Julchoo, S., Sinam, P., Pudpong, N., & Suphanchaimat, R. (2023). Characteristics of distance education interventions and related outcomes in primary school children during COVID-19 pandemic: A systematic review. *PloS One, 18*(10), e0286674. https://doi.org/10.1371/journal.pone.0286674

Lazarus, R., & Folkman, S. (1984). Stress, coping and appraisal. In: New York: Springer.

Lazarus, R. S., & Folkman, S. (1988). Transactional theory and research on emotions and coping. *European Journal of Personality, 1*(3), 151–155.

Lee, S. J., Ward, K. P., Chang, O. D., & Downing, K. M. (2020). Parenting activities and the transition to home-based education during the COVID-19 pandemic. *Children and Youth Services Review*, *122*, Article 105585. https://doi.org/10.1016/j.childyouth.2020.105585

Liu, F., Black, E., Algina, J., Cavanaugh, C., & Dawson, K. (2010). The validation of one parental involvement measurement in virtual schooling. *Journal of Interactive Online Learning, 9*(2), 105–132. https://www.ncolr.org/jiol/issues/pdf/9.2.2.pdf

Maggio, M. G., Stagnitti, M. C., Calatozzo, P., Cannavò, A., Bruschetta, D., Cuzzola, M. F., Manuli, A., Pioggia, G., & Calabrò, R. S. (2021). What about the consequences of the use of distance learning during the COVID-19 pandemic? A survey on the psychological effects in both children and parents. *International Journal of Environmental Research and Public Health, 18*(23), Article 12641. https://doi.org/10.3390/ijerph182312641

Mayo Clinic. (2021). *Chronic stress puts your health at risk.* https://www.mayoclinic.org/healthy-lifestyle/stress-management/in-depth/stress/art-20046037

McGoron, L., Wargo Aikins, J., Trentacosta, C. J., Gómez, J. M., & Beeghly, M. (2022). School support, chaos, routines, and parents' mental health during COVID-19 remote schooling. *School Psychology, 37*(2), 173–182. https://doi.org/10.1037/spq0000467

Melodia, F., Canale, N., & Griffiths, M. D. (2020). The role of avoidance coping and escape motives in problematic online gaming: A systematic literature review. *International Journal of Mental Health and Addiction*, *20*(2), 996–1022. https://doi.org/10.1007/s11469-020-00422-w

Miller, J. J., Cooley, M. E., & Mihalec-Adkins, B. P. (2020). Examining the impact of COVID-19 on parental stress: A study of foster parents. *Child & Adolescent Social Work Journal, 39*(2), 147–156. https://doi.org/10.1007/s10560-020-00725-w

Moreland-Russell, S., Jabbari, J., Ferris, D., & Roll, S. (2022). At home and on the brink: U.S. parents' mental health during COVID-19. *International Journal of Environmental Research and Public Health, 19*(9), Article 5586. https://doi.org/10.3390/ijerph19095586

National Center for Complementary and Integrative Health. (2022). *Stress*. https://www.nccih.nih.gov/health/stress

National Institute of Mental Health (NIMH). (2022) I'm so stressed out! Fact sheet. https://www.nimh.nih.gov/health/publications/so-stressed-out-fact-sheet

Neece, C. L., Green, S. A., & Baker, B. L. (2012). Parenting stress and child behavior problems: A transactional relationship across time. *American Journal on Intellectual and Developmental Disabilities, 117*(1), 48–66. https://doi.org/10.1352/1944-7558-117.1.48

Radloff, L. S. (1977). The CES-D scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement, 1*(3), 385–401. https://doi.org/10.1177/014662167700100306

Russell, B. S., Hutchison, M., Tambling, R., Tomkunas, A. J., & Horton, A. L. (2020). Initial challenges of caregiving during COVID-19: Caregiver burden, mental health, and the parent–child relationship. *Child Psychiatry & Human Development, 51*(5), 671–682. https://doi.org/10.1007/s10578-020-01037-x

Silverman, M. R., Stadterman, J., Lorenzi, D., Feuerstahler, L., Hirsch, E., & Roy, A. K. (2022). Parental factors that confer risk and resilience for remote learning outcomes during the COVID-19 pandemic among children with and without attention-deficit/hyperactivity disorder. *Journal of Attention Disorders, 26*(11), 1381–1393. https://doi.org/10.1177/10870547221084670

Sonnenschein, S., Grossman, E. R., & Grossman, J. A. (2021). U.S. parents' reports of assisting their children with distance learning during COVID-19. *Education Sciences, 11*(9), 501. https://doi.org/10.3390/educsci11090501

U.S. Census Bureau. (2020). *Household Pulse Survey public use file (PUF)*. Census.gov. Accessed September 12, 2024 at https://www.census.gov/programs-surveys/household-pulse-survey/data/datasets.2020.html#list-tab-1264157801

van Tilburg, M. A. L., Drossman, D. A., & Knowles, S. R. (2022). Psychogastroenterology: The brain-gut axis and its psychological applications. *Journal of Psychosomatic Research*, *152*, Article 110684. https://doi.org/10.1016/j.jpsychores.2021.110684

Warma, K., Acker, R. V., & Acker, E. V. (2015). *Moving beyond the function of behavior: Working with students who engage in escape/avoidance*. Pro-ACT & University of Illinois Chicago. Retrieved May 3, 2023 from http://www.proacttraining.com/wp-content/uploads/2015/10/Pro-ACT-Chicago-School-Research_Escape-and-Avoidance-Study.pdf

World Health Organization (WHO). (2020, March 11). Director-General's opening remarks at the media briefing on COVID-19 - 11 March 2020 [Speech]. https://www.who.int/director-general/speeches/detail/who-director-general-s-opening-remarks-at-the-media-briefing-on-covid-19---11-march-2020