

RETURNING TO SCHOOL AFTER COVID-19:
RELATIONSHIPS BETWEEN PARENTAL STRESS AND RESILIENCE
WITH CHILDREN'S MENTAL HEALTH BEHAVIORS

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ABSTRACT

During the COVID-19 lockdowns, experts predicted an increase of children's mental health issues. However, not all children showed symptoms after lockdowns lifted. The study's purpose was to examine parental stress and resilience during COVID-19 lockdowns and their relationship to children's behaviors, specifically anxiety and aggression after lockdown. Participants included 61 parents of children currently aged 7-11 who did not have mental health disorders before COVID lockdowns. Most parents were white, non-Hispanic within middle to high income ranges. The quantitative study used a correlational design. Parents were recruited through school websites and social media sites which linked them to a 122-question survey that included demographic questions, and scales measuring parental COVID stress/resilience and children's anxiety/aggression. Research questions were written in couplets with the first couplet addressing parental COVID stress and the second couplet parental resilience as they both related to children's anxiety and aggression. The last couplet examined whether parental resilience mediated the effects of COVID stress on children's anxiety and aggression. The research questions regarding COVID stress both showed a significant relationship; however, parental resilience only showed relationships using the GAD and Self-Aggression subscales. The Self-Aggression subscale showed no relationship using Spearman's Rho. The final questions regarding resilience as a mediator had a non-significant relationship. Parental COVID stress was found to be related to children's mental health outcomes after returning to school, while resilience was related to GAD in children, and possibly to self-aggression. Parental education in stress reducing self-care might improve mental health behavior outcomes in children long-term.

Dedication

This manuscript is dedicated to my husband, Floyd.

I cannot express how much your love and support means to me.

Thank you for always encouraging me to pursue my dreams.

I am so thankful God put you in my life!

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TABLE OF CONTENTS

| | |
|---|-----------|
| ABSTRACT | ii |
| Dedication | iii |
| Acknowledgments | iv |
| List of Tables | viii |
| List of Figures | ix |
| CHAPTER 1: INTRODUCTION TO THE STUDY | 1 |
| Introduction | 1 |
| Background | 1 |
| Problem Statement | 5 |
| Purpose of the Study | 6 |
| Research Questions and Hypotheses | 6 |
| Assumptions and Limitations of the Study | 8 |
| Definition of Terms | 10 |
| Significance of the Study | 10 |
| Summary | 11 |
| CHAPTER 2: LITERATURE REVIEW | 13 |
| Overview | 13 |
| Description of Research Strategy | 14 |
| Review of Literature | 14 |
| Biblical Foundations of the Study | 25 |
| Summary | 27 |

| | |
|---|----|
| CHAPTER 3: RESEARCH METHOD | 29 |
| Overview | 29 |
| Research Questions and Hypotheses | 29 |
| Research Design | 31 |
| Participants | 31 |
| Study Procedures | 33 |
| Instrumentation and Measurement | 34 |
| Operationalization of Variables | 38 |
| Data Analysis | 39 |
| Delimitations, Assumptions, and Limitations | 40 |
| Summary | 41 |
| CHAPTER 4: RESULTS | 42 |
| Overview | 42 |
| Descriptive Results | 42 |
| Study Findings | 45 |
| Summary | 53 |
| CHAPTER 5: DISCUSSION | 55 |
| Overview | 55 |
| Summary of Findings | 55 |
| Discussion of Findings | 56 |
| Implications | 63 |
| Limitations | 64 |
| Recommendations for Future Research | 65 |

| | |
|---|----|
| Summary | 66 |
| REFERENCES | 68 |
| APPENDIX A: POPULATION DESCRIPTIVE STATISTICS | 89 |
| APPENDIX B: PARENT WORK STATUS AND JOBS | 90 |
| APPENDIX C: PARENT EDUCATION/INCOME | 91 |
| APPENDIX D: CORRELATIONS TABLES | 92 |
| APPENDIX E: MEDIATION MODEL COEFFICIENTS..... | 93 |

List of Tables

| | |
|----------------|----|
| Table 1 | 51 |
| Table 2 | 52 |
| Table A | 89 |
| Table B | 90 |
| Table C | 91 |
| Table D1 | 92 |
| Table D2 | 92 |
| Table E1 | 93 |
| Table E2 | 93 |

List of Figures

| | |
|----------------|----|
| Figure 1 | 50 |
| Figure 2 | 52 |

CHAPTER 1: INTRODUCTION TO THE STUDY

Introduction

During the lockdown phase of the Coronavirus pandemic, experts grimly predicted the inevitability of the next pandemic, namely mental health (Bartek et al., 2021; Browne et al., 2021; Fitzpatrick et al., 2020; Shuja et al., 2020; Vindegaard & Benros, 2020). It was feared that parental stress and uncertainty over finances, jobs, and COVID-19 itself, might increase the instances of domestic violence and child abuse (Li & Zhou, 2021; Teo & Griffiths, 2020). As countries reopened and children returned to in-person schools, the lockdowns were believed to be behind the rise in behavioral and mental health concerns in children (Adegboye et al., 2021; Munir, 2021; O’Sullivan et al., 2021). Conversely, other studies suggested that not all children were experiencing adverse effects, possibly due to the presence of caregiver coping and resilience skills (Bartlett & Vivrette, 2020; PeConga et al., 2020; Sonesson et al., 2023; Teo & Griffiths, 2020). These conflicting findings suggested that investigating the relationship of stress and resilience in parents during the lockdowns and the appearance of problem behaviors when children returned to in-person school should be a primary focus for researchers and other stakeholders (Anderson et al., 2021; Capurso et al., 2021; O’Toole & Simovska, 2021).

Background

Recent studies indicated that the COVID-19 lockdown and other restrictive mandates might have adverse effects on children and adolescents that could be long-lasting (Singh et al., 2020; Waters et al., 2021). Most studies did not address why some

children experienced significant mental health symptoms when they returned to school while other children exhibited no signs of distress at all from the pandemic lockdowns (Achterberg et al., 2021; Carney et al., 2022; Dabravolskaj et al., 2021; Luthar, 2020; Sonesson et al., 2023).

Throughout the lockdowns, young children were reminded daily about COVID-19, with the focus on mitigating transmission through measures such as handwashing, social distancing, masks, and quarantine. Lockdowns caused abrupt disruptions in children's daily activities of school, sports, and friends, to stay at home with their immediate family while having little to no contact from the outside world except through the internet (Ashworth et al., 2022; Idoiaga Mondragon et al., 2021; Munir, 2021; O'Sullivan et al., 2021; Singh et al., 2020).

The forced lockdown of children with their families caused child advocates to express concern over child well-being and the safety of vulnerable children due to the lack of oversight and community support for these families (Li & Zhou, 2021; Teo & Griffiths, 2020). However, some families thrived and, despite COVID-19 restrictions, built closer bonds. The close-knit family structure encouraged more meaningful interactions between parents and children. This is especially true since many parents were their children's *de facto* teachers due to the sporadic school time over the Internet (Samji et al., 2021). The government lockdown enabled parents and children to spend quality time together at home without distractions from outside activities and friends.

While this forced quality time was not ideal, it helped reset many families back to a more biblical structure of the home where parents were the central figures in their child's life. They were not just parents, but also teachers, referees, comforters, and

providers of spiritual support and guidelines. In biblical times the home was a place of love and protection. It was a place where the parents were instrumental in teaching children their proper relationship with God (Casson et al., 2023; *The Holy Bible, New International Version*, 1973/2011, Ephesians 6:4; Joel 1:3; Psalms 78:4; Proverbs 22:6; Proverbs 31:10-31). Jesus exemplified how children should respond in obedience to parents when even as a grown man he relented to His mother's request and turned water into wine in Cana (*The Holy Bible, New International Version*, 1973/2011, John 2:4). By this act He provided an example of honoring mothers and fathers. He chastised the people for using excuses for not taking responsibility for elderly parents as God required (*The Holy Bible, New International Version*, 1973/2011, Matthew 15:5-6). Prior to COVID-19, family time was rare, with members being pulled in various directions (Wheeler & Green, 2019). Families having to stay and work together provided a unique opportunity for strengthening family bonds and aligning them closer to the biblical model (Casson et al., 2023).

When communities were reopened and children finally returned to school, the continuing concerns of COVID-19 prompted new requirements to keep children and teachers safe. As a result, schools initially required strict social distancing and masks, which impacted daily school routines such as recess, mealtime, walking in line, and sharing materials and spaces (Pattison et al., 2021). These safety measures were stress-inducing for some children as well as the adults who worked with them (Anderson et al., 2021; O'Toole & Simovska, 2021).

As the country has moved forward, various mutations of the COVID-19 virus are still causing concern; however, school mask mandates and other protocols are now only

recommended by the CDC when the threat rises to a specific level in the community (Centers for Disease Control, 2022). Despite decreases in COVID-19 restrictions and illness, student anxiety and problematic behavior in schools have continued to increase. Anxiety and aggression have been two of the significant issues currently plaguing some children and adolescents after returning to school (Li & Zhou, 2021; Schwartz et al., 2021), although some children are experiencing very little behavioral distress after returning to school (Bartlett & Vivrette, 2020; Herbers et al., 2021; PeConga et al., 2020; Sonesson et al., 2023; Teo & Griffiths, 2020).

The literature suggested the harmful behavioral effects of the pandemic-related lockdowns could be mitigated through resilience, especially resilience developed through healthy parental coping skills and responses to the pandemic crisis. (Achterberg et al., 2021; Carney et al., 2022; Luthar, 2020; Sonesson et al., 2023). The term resilience can be understood in various ways, but it includes the ability to react positively and be healthy in the face of traumatic events (Anderson et al., 2021; Capurso et al., 2021; O'Toole & Simovska, 2021). Unfortunately, it is unclear what strategies helped students be more resilient as they returned to in-person school. However, exploring the resilience strategies employed by parents or caregivers whose children returned successfully to school would be helpful. In addition, looking at strategies thought to be effective for building resilience in students who have experienced adverse childhood events (ACEs) may also be a good starting point to help students affected by the adverse events they experienced throughout the pandemic.

Problem Statement

The importance of this study hinges on gaps where the current literature did not explicitly explore the relationship of parental resilience with the successful transition of children back to in-person school. The specific age group included young elementary students 7-11 years old who attended kindergarten through 2nd grade when lockdowns closed their schools early in 2020. This population's mental health and behavioral issues are overlooked in the literature, emphasizing instead the physical and health effects of the pandemic lockdowns, such as sedentary behavior, extended digital device use, and obesity (Breidokienė et al., 2021). Additionally, current literature focuses on the pandemic's adverse events during the lockdown phases; however, the post-lockdown phases, including returning to in-person school, have not been addressed to the same extent. This omission in the literature seems most apparent in the young primary-age student population. This age group was targeted specifically since they missed out on foundational educational and social-emotional learning that typically occurs in the school setting at this age, such as self-regulation, negotiating with friends, and resilience (Booth et al., 2019; Egan et al., 2021).

Exploring the relationship between parental resilience during the pandemic and children's behavior as they returned to in-person schools may help school and mental health professionals provide additional support to struggling students and their families. Some of the behaviors and health issues that the pandemic lockdowns may have exacerbated include anxiety and aggression. Additionally, by understanding the role of parental resilience in relation to their children's behavior, future mental and physical pandemic-related health problems may be averted.

Purpose of the Study

The purpose of this quantitative correlational study was to examine parental stress and resilience during the COVID-19 lockdown and its relationship to children's behaviors, specifically anxiety and aggression, when returning to in-person school.

Research Question(s) and Hypotheses

The six research questions were written in three couplets with the only difference in the couplets being the children's variables of anxiety and aggression. The first couplet addressed parental COVID stress, the second parental resilience, and the last couplet the mediated effects of parental resilience on COVID stress.

Research Questions

RQ1: Does parental COVID lockdown stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) relate to children's *anxiety* when returning to in-person schools as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

RQ2: Does parental COVID lockdown stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) relate to children's *aggression* when returning to in-person schools as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

RQ3: Is parental resilience during lockdown as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) associated with children's *anxiety* when returning to in-person schools as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

RQ 4: Does parental resilience during lockdown as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) relate to children's *aggression* when returning to in-person schools as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

RQ5: Does parental resilience as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) mediate parent COVID stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) on children's post-lockdown *anxiety* as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

RQ6: Does parental resilience as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) mediate parent COVID stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) on children's post-lockdown *aggression* as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

Hypotheses

Hypothesis 1: There is a relationship between parental COVID stress during lockdown and children's *anxiety* when returning to in-person school.

Hypothesis 2: There is a relationship between parental COVID stress during lockdown and children's *aggression* when returning to in-person school.

Hypothesis 3: There is a relationship between parental resilience during lockdown and children's *anxiety* when returning to in-person school.

Hypothesis 4: There is a relationship between parental resilience during lockdown and children's *aggression* when returning to in-person school.

Hypothesis 5: Parent resilience mediates the effects of COVID stress on children's post-lockdown *anxiety*.

Hypothesis 6: Parent resilience mediates the effects of COVID stress on children's post-lockdown *aggression*.

Assumptions and Limitations of the Study

There were several assumptions and limitations to this study. The first assumption was the ability to obtain the agreement of school districts to participate in the study. However, approximately twelve urban school districts were approached to participate. They were large enough to recruit the number of participants needed to provide adequate power and run the study as it was designed.

Another major assumption was that the current level of parental resilience would be similar to levels from lockdown. While there was some evidence that resilience could be situation specific (Denckla et al., 2020), it was more likely that any parental resilience during lockdowns would still be evident at the time of data collection. This limited the design since it could only gauge the present state of resilience in the parents.

Limitations of the correlational study were due to its inability to identify resilience-building strategies used by caregivers. Additionally, only the relationships of COVID stress and resilience on children's behaviors were studied, not causation.

Theoretical Foundations of the Study

The theoretical underpinning for this study was based on Elder's Life-Course Theory (Elder & Shanahan, 2006). This theory is regarded as a Relational Developmental

Systems (RDS) metatheory that focuses on the influences of individuals within their context. Elder's Life-Course Theory not only considers the bidirectional influence of individuals on other people and individuals on contexts, but it also suggests that people's lives are affected by the historical time and context in which they live. Although people may share the same experience, they may express their experiences uniquely due to their age and role differences. Influences that affect a person's life trajectory may include social interactions, linked relationships, and transition points into different developmental roles, such as becoming a parent. While the Life-Course Theory acknowledges the role of the individual in making choices towards a specific trajectory, the personal limitations caused by social constraints and physical or biological attributes also influence a person's life-course trajectory, as does the influence of major or catastrophic historical events (Lerner, 2018). While several RDS theories could dovetail with this study, the Life-Course Theory of Elder and Shanahan (2006) accounted for the bidirectional influences that were examined, as well as the particular conditions of the historical time frame of the study, the COVID-19 pandemic lockdowns within the United States.

The influence of parental resilience and positive interactions are also part of the developmental process that allows children to learn resilience in the face of adversity and challenges (Denckla et al., 2020; Pugliese et al., 2022). Ann Masten (2021) discussed resilience as a part of the normal childhood developmental process. Elder and Shanahan (2006) later described the processes and contexts that encourage children to thrive as a natural part of growth and development into adulthood and beyond. Unfortunately, like many other developmental tasks, developing resilience can be derailed through circumstances and conditions outside the control of the children, such as abuse,

catastrophic wars, natural events, and pandemics. Therefore, parental nurturing and modeling are critical in helping to keep young children on their developmental trajectory as they grow and become adults (Masten, 2021; Pugliese, 2022).

Definition of Terms

The following is a list of terms and definitions that were used in this study.

Parental COVID-19 Stress – The occurrence of parental frustration, worry, and mental health symptoms caused by COVID-19 containment measures on typical life activities including finances, schooling, illness, and job security (Pugliese et al., 2022).

Resilience – The ability to overcome adversity, to react positively, and to be healthy in the face of traumatic events or duress (Anderson et al., 2021; Capurso et al., 2021; Masten, 2018; O’Toole & Simovska, 2021).

Anxiety – Persistent worry that interferes with normal daily activities. Somatic symptoms such as stomach aches, headaches, and trouble sleeping frequently occur as well (American Psychiatric Association [APA] 2013; Wegmann, 2015).

Aggression – Intentional physical harm such as hitting, shoving, or pushing, relational aggression where peers are excluded or verbally abused, and aggression towards self (Chen et al., 2022; Laurent et al., 2020).

Significance of the Study

Most current research examined children’s mental health while still in the lockdown phase of the COVID-19 pandemic. Studies that discussed student mental health after lockdown used either secondary or post-secondary populations. This study focused

on the post-lockdown period and helped fill the research gaps within the younger elementary student population. Additionally, by focusing on children who were in kindergarten through 2nd grade during lockdowns, the roles of parental stress and resilience were more evident. Children at this stage in school were still learning appropriate social-emotional and self-regulatory skills. Consequently, during COVID-19 lockdowns they were looking to their parents for guidance and support in these areas (Booth et al., 2019).

Summary

As the world emerged from the pandemic, mental health issues precipitated by lockdowns and other pandemic-related mitigating measures emerged, especially in school settings (Adegboye et al., 2021; Munir, 2021; O’Sullivan et al., 2021). Yet, up to this point, the literature did not specifically address how younger children coped after returning to school. Literature studies of older students indicated that many children and adolescents returned to the school setting with minimal issues, while other studies suggested that students struggled with mental health-related issues such as anxiety and aggression (Achterberg et al., 2021; Carney et al., 2022; Dabravolskaj et al., 2021; Luthar, 2020; Sonesson et al., 2023). Several mitigating factors were suggested to explain this discrepancy, with caregiver or parental resilience at the forefront of these discussions (Dominguez-Alvarez et al., 2020; Suh & Luthar, 2020; Wang, 2022). By focusing on the K-2nd students who were sent home from school during the pandemic lockdowns, this study focused on parental COVID-19 stress and resilience in relation to their children’s mental health behaviors. Most children in the target grade levels were still beginning to

learn social-emotional and self-regulation skills at school when they were closed. Due to the lack of social skills training from the school, it is possible that children's success in returning to school was correlated to parents who showed less stress and more resilience during the pandemic.

The study examined how parental COVID stress and resilience were related to anxiety and aggressive behaviors in young children when they returned to school in person. Parental resilience as a mediator of parental COVID-19 stress on children's behaviors was also examined. This information could help mental health and school professionals by providing information on the relationship of resilience as a protective factor for children's behavior. Many children are suffering from behavioral issues and other mental health problems since the COVID-19 lockdowns. It is important to investigate these issues in children and consider possible strategies to help them.

CHAPTER 2: LITERATURE REVIEW

Overview

This chapter describes specific search strategies employed for the literature research. Searches were completed online either through the Jerry Falwell Library or through online searches using Google Scholar. Limits were placed on the searches to exclude studies where participants either had a chronic medical illness or were in treatment for a mental health disorder. Limits were also placed on the dates of the articles, with most literature from the prior three years. Due to the subject matter, pre-pandemic literature was generally irrelevant for the purposes of this study with a few exceptions including survey instruments and some theories of resilience, anxiety, and aggression.

The review of literature discussed the initial warnings of mental health issues that were predicted after entire countries were locked down during the height of the COVID-19 pandemic. Articles that specifically addressed COVID stress and resilience in parents were identified as well as articles that discussed anxiety and aggression related to young children's development and COVID-19. The concepts of resilience as a trait versus a systems construct were also examined, along with a discussion of aggression as an externalization of depression in children. Next, a biblical view of the nature of God's design for families and how they were impacted during the COVID-19 lockdowns was discussed. Finally, the chapter was summarized, and the next steps for supporting children with mental health issues were addressed.

Description of Search Strategy

Searches were done in the Liberty University Jerry Falwell Library search engine and Google Scholar. Specific databases used included Open Access, Psychology and Behavioral Sciences Collection (EBSCO), APAP, PsycINFO (APA PsycNet), PsycTests, and APA PsycNET.

Search phrases for resilience included “parental resilience,” “parental resilience AND COVID-19 OR pandemic,” “resilience,” “school reentry after lockdowns,” “children returning to in-person school.” Anxiety search phrases included “behavior AND return to in-person school,” “anxiety AND Covid-19 AND child[ren],” “anxiety AND COVID-19 AND children in school,” and “children AND internalizing behaviors AND school.” Lastly, search terms for aggression included “post-pandemic aggression AND children,” “School conduct AND COVID-19,” and “Child[ren] AND externalizing behaviors AND COVID-19.”

Studies that included mentally ill or chronically medically ill children prior to the pandemic lockdowns were excluded. Search parameters were set to include only studies done within the last three to five years, unless the article was foundational in a specific theory, construct, or survey.

Review of Literature

Children’s Early Responses to Lockdowns

The early studies concerning lockdowns first focused on how children coped with the pandemic restrictions (Ellis et al., 2020; Pascal & Bertram, 2021; Rider et al., 2021; Rosen et al., 2021; Thompson et al., 2021). Many of these studies indicated that children

in lockdown had mental health symptoms such as anxiety, sleep disturbances, and attention difficulties directly related to the stress of the abrupt changes in their lives and the stress of the adults around them (Ashworth et al., 2022; Breidokienė et al., 2021; Cost et al., 2022; Garcia de Avila et al., 2020; Idoiaga Mondragon et al., 2021; Jones et al., 2021; Munir, 2021; O’Sullivan et al., 2021; Singh et al., 2020).

The studies also suggested that the stressful lockdown conditions significantly impacted vulnerable at-risk children (Ashworth et al., 2022; Chafouleas & Iovino, 2021; Egan et al., 2021; Herbers et al., 2021; Idoiaga Mondragon et al., 2021; Munir, 2021; O’Sullivan et al., 2021; Singh et al., 2020). These vulnerable groups included migrant children, children with low socioeconomic status, ethnic and racial minorities, children with diagnosed mental disorders, refugees, and those living in poverty (Dabravolskaj et al., 2021; Herbers et al., 2021; Idoiaga Mondragon et al., 2021; Munir, 2021).

Disadvantaged children who came from these vulnerable groups frequently lacked the social and personal support systems that others enjoyed. The financial and social strain of the pandemic was particularly harsh for these children and their families. Themes from the early studies of children and the pandemic included social isolation, loneliness, stress due to school closures, increased anxiety and depression, and difficulties with pandemic protocols (Ashworth et al., 2022; Idoiaga Mondragon et al., 2021; Mohler-Kuo et al., 2021; Munir, 2021; O’Sullivan et al., 2021; Singh et al., 2020; Thompson et al., 2021; Vasileva et al., 2021).

Parental Stress During Lockdown

Despite many experts predicting widespread mental health issues (Samji et al., 2021; Sonuga-Barke & Fearon, 2021), some children did not experience drastic adverse

effects. Even with the financial and social difficulties faced by their families, some children adapted to the situation and showed resilience through continued developmental growth (Bartlett & Vivrette, 2020; Herbers et al., 2021; PeConga et al., 2020; Sonesson et al., 2023; Teo & Griffiths, 2020). The suggested mediators for this phenomenon were positive and supportive parental attitudes, a sense of security at home, more sleep and increased exercise, and more quality family time (Achterberg et al., 2021; Carney et al., 2022; Cost et al., 2022; Cusinato et al., 2020; Imber-Black, 2020; Luthar, 2020; Sonesson et al., 2023; Tang et al., 2021). Parental mental health, parenting style, and coping ability significantly predicted how children responded to lockdowns (Dominguez-Alvarez et al., 2020; Suh & Luthar, 2020; Wang, 2022). The positive effects of parental coping skills were also reflected in the recent research on Adverse Childhood Experiences (Choi et al., 2019; Crouch et al., 2018). These studies suggested that having close social relationships or a special safe adult in childhood increased the likelihood that a person was resilient, whereas loneliness and a perceived lack of social connections increased the vulnerability to negative outcomes when exposed to adverse situations (Crouch et al., 2018; Negriff, 2020; Ray et al., 2020; Valiente et al., 2021).

During the COVID-19 lockdowns, studies indicated that parents who perceived more stress in themselves also reported higher levels of stress, anxiety, and behavior problems in their children (Giordano et al., 2022; Pugliese et al., 2022; Shorer & Leibovich, 2022). Additionally, new incidences of agitation and aggression were reported in children exposed to stressful events during the pandemic (Pugliese et al., 2022; Shorer & Leibovich, 2022). Conversely, parents who reported lower levels of personal stress and anxiety during the COVID-19 lockdowns also reported lower levels of anxiety and stress

in their children (Pugliese et al., 2022). Lionetti et al. (2023) indicated that parental distress regarding their lockdown circumstances significantly impacted their children's conduct and anxiety. Their children's behavior affected parental stress, indicating a possible bidirectional influence of the parent-child dyad. In many bioecological theories, it is also possible for other members of the family to have bidirectional interactions with multiple dyads such as with siblings, spouses, and significant others (Denckla et al., 2020; Russell et al., 2022; Waller et al., 2021). The struggles within the family dynamic can cause issues with the parent-child relationship and their psychological health. Parents with better skills in handling personal stress appeared to experience better outcomes in their child's behavior. Parents with the ability to show resilience in the face of distressing events reported less family conflict and fewer instances of anxiety and conduct problems with their children (Jones et al., 2022; Pugliese et al., 2022).

If poor parental coping skills were remediated, children might have better outcomes in terms of resilience and ability to cope, thereby mitigating the adverse consequences of lockdowns (Achterberg et al., 2021; Dvorsky et al., 2021; Gissandaner et al., 2022; Luthar et al., 2021; Prime et al., 2020; Tso et al., 2022). Additionally, school-based programs targeting parental behavior and attitude training could help mitigate stress in children and encourage resilience (Hamoda et al., 2021; Lester et al., 2020; Luthar et al., 2021).

Parental Resilience

During the pandemic, parents endured drastic changes and stressful situations. Due to lockdowns and school closures, they not only had to adapt to new job parameters but also became their children's teachers overnight. Additionally, many parents suddenly

faced financial uncertainty and the increased stress that accompanied the isolation of lockdowns and the threat of an unknown virus (Jones et al., 2022; Pugliese et al., 2022; Russell et al., 2022). Masten (2018) described resilience as the ability to make positive changes under duress. Many parents adjusted to the stress of the pandemic lockdowns and managed to provide positive experiences for their children. Their ability to stay focused on positive strategies and coping skills allowed their children to feel supported and successful throughout the crisis. Parental behaviors that positively affected children were identified as providing affection, supporting their child's interests, praising, and being proactive with their child's behavior (Jones et al., 2022; Russell et al., 2022).

Resilience in parents was also connected to their sense of competence as a parent. Parents who felt well equipped to handle the pressures of raising children tended to show the most resilience. Psychological well-being was connected to a parental sense of competence, while anxiety and mood dysregulation were predictors of poor parenting skills (Jones et al., 2022; Russell et al., 2022). During the pandemic lockdowns, parents and other caregivers were children's main sources of stability and assurance. While their role was important in helping children develop resilience, Masten (2001) suggested that it was the entire network of supportive systems surrounding children that provided them with the ability to be resilient. Instead of resilience being an unusual ability, it was one children have in common (Jones et al., 2022).

Resilience: System or Personal Trait

The construct of resilience spans multiple disciplines; however, researchers have still not come to a consensus defining resilience. While many professionals use definitions that suggest resilience as the ability of a person to overcome adversity, this

individualistic focus has been challenged (Herbers et al., 2021; Masten, 2021; Russell et al., 2022). It is argued that an individual focus of resilience can obscure factors that influence adverse outcomes, such as cultural and socioeconomic bias. Family and community support systems may also affect a person's ability to overcome adversity (Denckla et al., 2020; Masten, 2021; Russell et al., 2022).

Masten's (2001) theory of resilience systems suggested that resilience is not an individual trait that a child develops, but the result of the bidirectional influence of the various social, community, and family supports in which a child is embedded. Masten's resilience theory mirrors the work of Urie Bronfenbrenner's bioecological model and other systems theorists who believe that individuals exist in interactive bidirectional environments (Bronfenbrenner & Ceci, 1994; Elder & Shanahan, 2006; Waller et al., 2021). These environments influence the behavior of individuals while, at the same time, individuals influence the environment. For example, while parents may exert some influence over their children's behavior, children may also influence parental behavior. Members of the family may also exert influence on the children, whether it is siblings, grandparents, or significant people. Individuals are constantly being influenced by environmental factors, making it difficult to establish which factors are responsible for resilience (Denckla et al., 2020; Russell et al., 2022). Masten (2001) also suggested that resilience is a naturally occurring phenomenon and that the ability of humans to adapt to their environment is a natural part of human development. Her theory described resilience as a common developmental adaptation within the human life span instead of a trait or consequence of adversity.

The various definitions of resilience and its role in human behavior make it hard to determine how resilience initially occurs. For example, does resilience predict an individual's ability to overcome adversity, or is it an outcome of adversity (Valiente et al., 2021)? If resilience is defined as a product of an individual's ability to learn and overcome adversity, it would seem that it is an outcome of the individual's experiences. However, if resilience is defined from a multisystem viewpoint, it would be defined as an organism's ability to adapt and return to a state of equilibrium. These diverse views regarding the definition of resilience have prevented researchers from establishing a universal definition, despite the immense interest in the construct of resilience (Denckla et al., 2020; Masten, 2021; Valiente et al., 2021).

Anxiety

At the beginning of the pandemic lockdowns, psychiatrists, psychologists, and other mental health experts were concerned about the mental health consequences of physical lockdowns. They expressed concern that people's mental health would deteriorate and result in a surge in new cases, overwhelming the already fragile mental health system (Bartek et al., 2021; Browne et al., 2021; Fitzpatrick et al., 2020; Shuja et al., 2020; Vindegaard & Benros, 2020).

This concern was especially worrisome regarding children, whose normal social supports of school, activities, and religious services were suddenly gone, with nothing to replace the void. As researchers explored the effects of the lockdowns on children specifically, increased numbers of children with anxiety and other mental health issues were identified (Garcia de Avila et al., 2020; Güzelsoy et al., 2022; Kostev et al., 2023).

A simple way of describing anxiety would be persistent worry that interferes with normal daily activities. Somatic symptoms are frequently reported, such as stomach aches, headaches, trouble sleeping, or other types of physical illness. These symptoms can range from mild to debilitating and frequently get worse as the anxiety increases (American Psychiatric Association [APA] 2013; Wegmann, 2015).

Studies across different countries have investigated whether the mental health of school-age children was affected by the pandemic lockdowns. These studies were conducted in such diverse places as the United States, China, Germany, and India, to name a few. A varying degree of increased anxiety was identified in school-aged children during the pandemic. The age range of the children in these studies was from 7 to 18 years old. While the research articles varied in participant size and scope, they all found that certain demographics tended to show higher anxiety scores. Children who were female, the only child in the family, from a racial minority, or from a low socioeconomic background showed higher anxiety scores than children who were male, had siblings, and were in more financially stable families. These studies identified the increases in mental health issues, such as anxiety, using cross-sectional or longitudinal designs that established mild to moderate correlations between the beginning and mid-pandemic anxiety. However, they were unable to ascertain why the increase occurred or why girls appeared to be more affected by anxiety during lockdown than their male counterparts. In addition, studies that correlated factors such as parental behavior and family support to lockdown anxiety, depression, or other mental health issues are lacking in the literature (Kostev et al., 2023; Pustake et al., 2022; Spencer et al., 2021; Xie et al., 2022).

Aggression or Depression?

While most researchers agreed that internalizing behaviors such as anxiety have increased since the COVID-19 lockdowns, there is a murkier view of externalizing behaviors. Some studies mentioned that parents reported externalizing behaviors like tantrums and aggressive behavior amid the pandemic lockdowns; however, these behaviors were not discussed in most literature in a post-lockdown setting outside the home (Pugilese et al., 2022).

Current literature focused on children's aggressive behavior and poor conduct related to exposure to family violence, physical abuse, or maltreatment of the child. The lockdowns were blamed for the increase in domestic violence and, by association, the aggressive and other externalizing behavior in children. Negative parental behavior towards their child was also suggested as a possible root cause of aggression. Although aggression was discussed as a problem during lockdowns, now that children have returned to school, there is an absence in the literature regarding the effect of lockdowns on children's conduct and aggressive behavior in the school setting. Literature that discussed children's conduct issues focused on family violence as a precipitator (Chen et al., 2022; Jambon et al., 2019). Additionally, lack of parental resilience was not discussed in the literature as a variable associated with the problematic increases of aggressive student behavior at school towards peers and staff as reported in school discipline trackers (Texas Education Agency Discipline Reports, 2022).

Internalizing and externalizing behaviors are considered compartmentalized behaviors that occur within the person, such as anxiety, shyness, or depression, or behaviors that others can see, such as aggression, tantrums, and bullying. However, it is

essential to note that children do not always display adult-like symptoms. One example of this is depression in children. While depression has often been identified as overwhelming sadness, not all children with depression appear sad. Many children show increased irritability, such as reacting angrily to minor frustrations, blaming other people, appearing angry most of the day, or acting cranky. In addition, some children also exhibit symptoms of agitation and are unable to sit still, or they develop physical movements like handwringing, rubbing, or pulling on items such as clothes, body, and objects in their environment (Mohamed Ali et al., 2022). Many of these behaviors would cause distractions and conflicts in the classroom, appearing to be either defiance or aggression. Although the *Diagnostic and Statistical Manual of Mental Disorders* (5th ed.; APA, 2013) does not differentiate the criteria of depression for children and adults, it is clear that the knowledge of children and their prior behavior would be an important factor when considering if a child was misbehaving versus exhibiting symptoms of depression or other mental disorders. While it is plausible for a child to have a comorbid condition, it is important to avoid erroneously adding labels for other mental disorders, such as attention deficit hyperactivity disorder (ADHD; APA, 2013). Establishing prior behavior patterns to help exclude a comorbid diagnosis is essential when considering major depressive disorder (MDD) in children, especially when they have only recently started struggling with behavior in school. If a child's behavior is determined to be caused by symptoms of MDD, then the effects of the pandemic lockdown can be considered as factors of a mental health disorder, namely depression. In this case, the externalizing symptoms of depression are artifacts of the disorder that may be linked to the pandemic lockdowns (Chen et al., 2022; Jambon et al., 2019).

Considering children's aggression, anger, and acting out as symptoms of depression or other mental health disorders also suggests that the protective factors of parental resilience and positive parenting during COVID-19 lockdowns may be examined in children who successfully transitioned back to school without these symptoms. It is possible that a relationship exists between children whose parents were resilient and exhibited positive parenting skills and their children's ability to rebound from the stress of lockdown when returning to school. This could also account for how they avoided mental health problems, such as depression or aggressive behavior.

Returning to In-Person School

There was concern that the effects of lockdowns from COVID-19 would produce long-term adverse effects in children. Data from earlier pandemics suggested that these adverse effects could linger for three years or longer after the end of a pandemic (Singh et al., 2020; Waters et al., 2021). Very little was discussed in the current literature regarding the return of younger students to school and how they were coping after being in lockdown, despite literature that discussed these issues in secondary and college-aged students. Some studies that addressed secondary students suggested they were exhibiting positive signs of resilience (Duke, 2020). For example, Dabravolskaj et al. (2021) and Waters et al. (2021) discussed the successful return of students who received specific instruction in mental health wellness strategies through school-sponsored internet programs during lockdown. The studies cautiously revealed that adolescents' mental health stabilized near levels before the pandemic lockdowns after the students returned to school in person.

Additionally, a study conducted by Schwartz et al. (2021) indicated moderate stress levels in their sample of 12-18 year-olds. Despite some findings of higher stress and mental illness, they concluded that students were doing well and within range compared to prior years pre-pandemic. Despite the hopeful mental health outlook, other researchers found harmful results from lockdown experiences (Thompson et al., 2021; Vasileva et al., 2021; Zhu et al., 2021). For example, students who had become accustomed to learning at home were reluctant to return to in-person school due to anxiety about school and COVID-19 safety (Banerjee et al., 2022). Students from marginalized and low-income backgrounds struggled to keep up with school work and maintain their mental health (Anderson et al., 2021; O'Toole & Simovska, 2021; Wang et al., 2021). In addition, parents expressed concerns regarding their children's physical safety, academic gaps, and mental health as they returned to school in person (Anderson et al., 2021).

Biblical Foundations of the Study

Resilience as Christian Witnesses

The pandemic was both worrisome and conflicting as Christians faced restrictions from worship and other church activities due to the possibility of COVID-19 transmission (Capponi, 2020). Christian parents were concerned about how the pandemic affected their lives and focused on protecting and nurturing their children from the fear caused by the pandemic restrictions and the illness itself. (Evener, 2020; *The Holy Bible*, 1973/2011, Romans 8:18-25; Modell & Kardia, 2020). One way parents accomplished this was by teaching their children about the love and trustworthiness of God, who

provides hope for a better future (Dura, 2020; *The Holy Bible*, 1973/2011, Jeremiah 29:11, Psalms 93:5; Taylor, 2021).

The role of parents in the Christian heritage has focused on the nurturing and training aspects of the parent-child relationship. James Dobson (1977), founder of Focus on the Family, wrote:

Simply stated the family was designed by God Almighty to have a specific purpose and function: when it operates as intended, the emotional and physical needs of husbands, wives, and children are met in a beautiful relationship of symbiotic love. (pp. 222–223)

During the pandemic, Christian parents were provided an opportunity to guide and mold their children toward a relationship with God. Teaching children about their heavenly Father helped them understand God's plan for them and their future role living as children of God (Casson et al., 2023; Dobson, 2077; *The Holy Bible*, 1973/2011, Jeremiah 29:11). This promoted a sense of well-being and a positive focus on life's troubles during the pandemic. Paul wrote in his letter to the Philippians that it was possible to do everything because Christ provided strength to His followers (*The Holy Bible*, 1973/2011, Philippians 4:13).

Those who followed Christ were not promised a problem-free life. Christians experienced pain, illness, and death just like everyone else. However, Christians shared their sorrows with the Creator and asked for His comfort through prayer. Jesus exemplified this as He stood at the tomb of his friend Lazarus and wept with the grieving family. Being faithful in prayer has allowed Christians to build their strength and

resilience through Him (*The Holy Bible*, 1973/2011, 2 Timothy 1:7; Klan, 2018; Taylor, 2021).

As parents boldly prayed for God's strength in those troubling times, the children witnessed their parents' personal faith in God. Parents modeling Christian faith helped children understand God's comfort and grace, allowing them to cope by building their own resilience through faith and hope in God's love (Beamish, 2021; Casson et al., 2023; *The Holy Bible*, 1973/2011, Isaiah 54:13).

Summary

Next Steps

As people emerge from the worldwide pandemic, mental health issues precipitated by lockdowns and other pandemic-related mitigating measures have come to light, especially in school settings (Adegboye et al., 2021; Munir, 2021; O'Sullivan et al., 2021). Yet, up to this point, the literature has not specifically addressed how younger children coped after returning to school. Literature studies of older students indicated that many children and adolescents returned to the school setting with minimal issues, while other studies suggested that students were struggling with mental health-related issues such as anxiety and aggression (Achterberg et al., 2021; Carney et al., 2022; Dabravolskaj et al., 2021; Luther, 2020; Soneson et al., 2023). Several mitigating factors were suggested to explain this discrepancy, with parental resilience being the foremost (Dominguez-Alvarez et al., 2020; Suh & Luthar, 2020; Wang, 2022). By focusing on the K-2nd students who were sent home from school during the pandemic lockdowns, this study honed in on the relationship between parental factors--resilience and COVID

stress--and children's mental health behaviors. Most children in these grade levels were just beginning to learn social-emotional and self-regulation skills at school, suggesting pandemic-associated resilience to be a product of parental guidance (Wang et al., 2021).

While parents and school officials expressed concerns about safety and supporting students' mental health, the literature was sparse regarding how the younger elementary-age children were coping as they returned to school. Encouraging the growth of resilience to offset the stress caused by returning to school and managing the COVID-19 virus should be a primary focus moving forward (Anderson et al., 2021; Capurso et al., 2021; O'Toole & Simovska, 2021; Pattison et al., 2021; Stark et al., 2020; Sullivan, 2021).

While there was some evidence of parental resilience mediating behavior in children, it is important to know which strategies build resilience in order to protect young elementary-age children from pandemic-related adverse events. To this end, it is crucial to identify specific mitigating strategies to address current and future problematic behaviors (Ashworth et al., 2022; Munir, 2021; O'Sullivan et al., 2021; Singh et al., 2020; Sonuga-Barke & Fearon, 2021; Sullivan, 2021).

CHAPTER 3: RESEARCH METHOD

Overview

In this chapter, the procedures for the study were described including the research questions and hypotheses. The research method and design were explained and justified, including a power analysis of the proposed study. The procedures that were used in the study and the various instruments and measures were also described. The four variables in the study were operationalized and the statistical test and procedures were outlined. Finally, possible delimitations, assumptions, and limitations related to the outcomes of the study were discussed thoroughly and the entire chapter concluded with a summary.

Research Questions and Hypotheses

Research Questions

RQ1: Does parental COVID lockdown stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) relate to children's *anxiety* when returning to in-person schools as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

RQ2: Does parental COVID lockdown stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) relate to children's *aggression* when returning to in-person schools as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

RQ3: Is parental resilience during lockdown as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) associated with children's *anxiety* when returning to in-person schools as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

RQ 4: Does parental resilience during lockdown as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) relate to children's *aggression* when returning to in-person schools as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

RQ5: Does parental resilience as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) mediate parent COVID Stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) on children's post-lockdown *anxiety* as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

RQ6: Does parental resilience as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) mediate parent COVID Stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) on children's post-lockdown *aggression* as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

Hypotheses

Hypothesis 1: There is a relationship between parental COVID stress during lockdown and children's *anxiety* when returning to in-person school.

Hypothesis 2: There is a relationship between parental COVID stress during lockdown and children's *aggression* when returning to in-person school.

Hypothesis 3: There is a relationship between parental resilience during lockdown and children's *anxiety* when returning to in-person school.

Hypothesis 4: There is a relationship between parental resilience during lockdown and children's *aggression* when returning to in-person school.

Hypothesis 5: Parent resilience mediates the effects of COVID stress on children's post-lockdown *anxiety*.

Hypothesis 6: Parent resilience mediates the effects of COVID stress on children's post-lockdown *aggression*.

Research Design

The study used a quantitative method study with a correlational design. This research design was chosen because the research questions focused on parental COVID stress and resilience, as each was related to their children's behavior, specifically anxiety and aggression. Correlational designs were well suited to provide an analysis for relationships. They provided information about how strong or weak the variables of parental COVID stress and resilience were when related to children's anxiety and aggression. In addition, mediation models were run to help explain the action of parental resilience on parental COVID stress and children's post-lockdown anxiety and aggression. Mediation models helped clarify the action of the mediator on the other variables.

Participants

Parents from elementary schools who experienced extended lockdowns with their children due to COVID-19 were invited to participate in the study. Participants included parents of children between the ages of 7-11. For inclusion in the study, all children of the participating parents would have been enrolled in grades K-2 when the community

was locked down in approximately March 2020, ending their in-person school year. Data were collected from their parents in the form of surveys.

Children who had a parent-reported pre-lockdown diagnosis of a mental illness, such as depression, bipolar disorder, or anxiety disorders, were excluded from study participation. However, a diagnosis of ADHD was not an exclusionary criterion.

Approval for this study was obtained from the Institutional Review Board (IRB) at Liberty University in addition to the school districts where the participants were recruited. Permissions to execute the study within local school districts were obtained from each district's administration leadership team. Additionally, the school district administrators allowed recruitment information to be posted to district media accounts such as email, websites, and parent forums. After all permissions were obtained in writing from the participating district administration teams, parents were recruited through the district websites and social media platforms, as well as printed fliers.

Due to unforeseen circumstances, parental recruitment from school districts occurred near the last few weeks of the school term. To compensate for this shortfall, a modified plan was submitted to the Liberty University IRB for approval to use private social media, such as Facebook, and personal emails to recruit participants. The modification was approved and participants were recruited using Facebook groups, social media shares, and emails to potential participants who fell within the parameters of the study.

A power analysis for correlations was run using G*Power 3.1. The analysis uses an alpha level of 0.05, a medium Cohen's *d* effect size of 0.05, and 0.80 for power (1- β) which resulted in a suggested total sample size of 132, with each group including 66

participants. The actual calculated power is 0.8013. For the mediation model, approximately 600 participants were needed to provide the power to use this model. The model was still run with the understanding that it was underpowered.

Study Procedures

After permissions were obtained from the participating districts and school administrations, parents were recruited through the targeted schools' websites and social media platforms. The researcher provided each district with recruitment information regarding the study's purpose, participation details, and contact information. Study information was distributed on the district websites and other school media within the school districts.

After the first three weeks, it was apparent that additional recruitment strategies were required. After obtaining a modification approval from the Liberty University IRB, posts were placed on Facebook personal pages, local Facebook groups, and personal emails.

Parents who were interested in participating clicked on a live link on either the school's media page, the Facebook post, or email to open the first part of the survey containing study information and informed consent. The questionnaire included three sections, with the first section providing study information, study contact information, as well as informed consent. If the participants wanted to participate, they clicked on the next part of the survey. In this second part, the parents were asked to complete demographic questions such as the ages of the adults and children, ethnicity, race, adult educational attainment, job type, and employment status. Additional questions regarding

pre-lockdown mental health diagnoses were included for exclusion criteria screening.

The third part of the parental questionnaire contained four different scales. These scales included a measure of parental resilience using the Brief Resilience Scale (BRS; Smith et al., 2008), a measure of parental COVID stress using the COVID Stress Scales (CSS; Taylor et al., 2020), a screening scale measuring their child's level of anxiety using the Screen for Child Anxiety Related Disorders (SCARED; Birmaher et al., 1999), and finally, a scale measuring their child's level of aggression using the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007).

The survey delivery platform Google Forms was adjusted so it would not collect emails from participants when they completed their surveys. Additionally, no identifiable information was collected from the participants.

Instrumentation and Measurement

COVID Stress Scales

Measure

COVID Stress Scales (Taylor et al., 2020).

Content

The COVID Stress Scales contained five scales that measured different aspects of COVID-19 stress. The topics of the scales included perceived danger, economic problems, fear of foreigners, trauma, and compulsive symptoms. The items were based on a 5-point Likert scale (0-4) with scores for each subscale determined by summing the item scores for each subscale. All scales contained six items, except the scale examining

the danger perceived from COVID-19 which contained 12 items. Higher numbers on each scale indicated more distress from COVID-19.

Purpose

The purpose of these scales was to identify and predict stress in adult individuals exposed to the COVID-19 pandemic. The scales were also designed in such a way that they could be modified to address future pandemics as needed. The scales were developed individually based on specific factors, so the scales could be used individually. However, when used together the scales indicated a stress syndrome related to COVID-19.

Reliability and Validity

The COVID Stress Scales (CSS) significantly correlated with the traits they were designed to measure supporting validity. The scales were tested separately on Canadian and United States samples. Comparing these two populations indicated strong internal consistency indicating that the scales showed good reliability.

Brief Resilience Scale

Measure

Brief Resilience Scale (BRS; Smith et al., 2008).

Content

This scale was comprised of six items, each with selection choices from a 5-point Likert scale of 1 = strongly disagree to 5 = strongly agree. Reverse scoring was used for items 2, 4, and 6 since these were written negatively. All scores were added together and divided by six to obtain a mean score.

Purpose

This resilience scale was designed to identify the ability of individuals to rebound from adverse stressors. The scale was designed to measure resilience in its original sense of an individual trait-based construct.

Reliability and Validity

Reliability for the Brief Resilience Scale showed strong internal consistency with Cronbach's alpha between .80-.91. Test-Retest measures also indicated strong reliability. The BRS was also found to be a valid measure of resilience in the sense of recovering from stressful situations.

Screen for Child Anxiety Related Disorders***Measure***

The Screen for Child Anxiety Related Disorders (SCARED; Birmaher et al., 1999).

Content

The SCARED-parent version consisted of 41 items that used a three-point Likert scale of 0-2 that indicated the item was not true, sometimes true, and often true.

Purpose

The SCARED was intended to screen for five different types of childhood anxiety as found in the *DSM-IV* (American Psychiatric Association, 1994).

Reliability and Validity

The SCARED was compared to other validated anxiety measures and was found

to have good reliability. Cronbach's alpha was shown to range from 0.7-0.9 for internal consistency and 0.6-0.9 for test-retest reliability.

Outburst Monitoring Scale

Measure

Outburst Monitoring Scale (OMS; Kronenberger et al., 2007).

Content

The Outburst Monitoring Scale is a 20-item scale that identifies children with aggressive behavior. The scale was scored on a Likert scale based on the frequency of the item behavior during the past week. Answers on the 5-point scale range from 0 = "Never" to 4 = "very often." The items were summed, with larger numbers indicating more aggression.

Purpose

The OMS was developed to fill the gap of providing information in a brief format that could be completed by many different people, like parents, without specific training. This format provided a complete picture of aggression in children, that could be used frequently to monitor the progress of any interventions used to moderate the aggressive behavior.

Reliability and Validity

Scale items were based on the Overt Aggression Scale (OAS; Yudofsky, 1986) and the Modified Overt Aggression Scale (MOAS; Sorgi et al., 1991). The OMS was validated by comparing it with other validated measures of childhood aggression.

The OMS showed high reliability, with Cronbach's alpha for all scales at 0.92. Analysis of Covariance also showed that the scores from both control and clinical samples were statistically significant with just the most rarely endorsed items being nonsignificant.

Operationalization of Variables

Parental COVID-19 Stress – this ratio variable was measured using the COVID Stress Scales (CSS; Taylor et al., 2020). There were six subscales in the form of a 0-4 Likert scale with 0 indicating that the item occurred “not at all” or “never” for the participant and a 4 on the scale indicating the participant was “extremely” concerned or “almost always” endorsing the behavior. Item Likert scores were summed to provide a total score for the subscale. Higher scores indicated more COVID-19 stress.

Parental Resilience – this ratio variable was measured by reverse scoring items 2, 4, and 6 then adding the responses for a total between 6-30 then dividing by 6 to obtain the average of all six items on the Brief Resilience Scale (BRS; Smith et al., 2008). Normal resilience scores ranged from 3.0 to 4.30 and a high resilience score ranged from 4.31 to 5.0. A score below 3.0 indicated low resilience.

Child Anxiety – this ratio variable was measured by using the provided cut-off scores for the Screen for Child Anxiety Related Disorders (SCARED; Birmaher et al., 1999). Likert score scales consisted of a range from 0-2, with 0 = not true, 1 = sometimes true, and 2 = true. Scores were summed to provide a total score. Scores of 25 or greater on the full scale indicated higher anxiety. Cut-off scores for the five subscales were *Panic Disorder: 7, Generalized Anxiety Disorder: 9, Separation Anxiety Disorder: 5, Social Anxiety Disorder: 8, and School Avoidance: 3.*

Child Aggression – this ratio variable was measured using the 20-item Outburst Monitoring Scale (OMS; Kronenberger et al., 2007).

The response to the items was a Likert scale of 0-4. The sum of the scores was used for the total scale score. Larger scores indicated more aggressive behavior. There were four subscales which were made up of the first 16 items that measured different aggression types: verbal (items 1-4), property (items 5-8), self (items 9-12), and physical (items 13-16). The last four items (17-20) addressed authority and severe harm and were omitted in the analysis since they were not included in the original validation study.

Data Analysis

The data analysis strategy for this study included running Pearson's r correlations using SPSS version 28. This analysis was used on the first four research questions since these questions were asking about relationships. The first two research questions examined relationships between the parents' COVID stress and children's anxiety and aggression after returning to school. The second two research questions considered the relationship of the variables of parental resilience to children's anxiety and aggression when returning to in-person schools. The demographic data completed by parents were analyzed using appropriate descriptive statistic methods.

Despite not obtaining a large enough number of participants, mediation models were run to ascertain the mediating influence of parental resilience on parental stress and children's post-lockdown behaviors of anxiety and aggression. The mediation was run using the Hayes (2022) PROCESS Macro (v. 4.2) as an add-on to SPSS v. 28.

Delimitations, Assumptions, and Limitations

Several delimitations were included in the study design to hone in on the specific population needed. Participants were limited to parents of children who were sent home for the pandemic lockdowns while attending their kindergarten through second-grade year, who now ranged in age from 7-11 years old. Additionally, any children with a diagnosed mental health condition, except ADHD, prior to the pandemic lockdowns were excluded from the study. The study recruited from urban and rural elementary schools, Facebook groups, and acquaintances via email.

The study included assumptions that the parents were engaged enough with their child to accurately answer the questions regarding anxiety and aggression, as well as truthfully answer questions on their own resilience abilities. It was assumed that there was not an issue with anxiety or aggression in the children pre-pandemic, since children who were clinically diagnosed as such were excluded. Additionally, it was also assumed that the parents answered the survey questions honestly and without bias or prejudice toward their child.

One of the limitations of this design was that it could only retrospectively measure COVID stress, with participants reflecting on their feelings of stress during lockdown. Additionally, only the present state of resilience could be gauged in the parents. It was assumed that the current state of parental resilience was similar to when they were in lockdown. Resilience-building strategies used by caregivers could not be identified or studied. However, exploring the relationship of stress and resilience in parents may help future researchers eventually identify the types of successful strategies employed by parents and caregivers at another time. However, as a first step,

it was essential to understand if there was a relationship between parent and child variables, which could provide the basis for further study.

Summary

This chapter presented the study questions and hypotheses, which focused on parental COVID-19 stress and resilience related to their children's mental health behaviors since the children returned to school after the pandemic lockdowns. The research design was a quantitative study using correlational statistics, specifically Pearson's *r*. Descriptive statistics were used to describe demographic data and participant characteristics. Additionally, a mediation model was used even though the necessary number of participants was not met. Participants included parents whose children were sent home from school due to lockdowns during their child's school year. The children's current ages corresponded with them being in kindergarten, first grade, or second grade during the pandemic year of 2020.

Measures for the study were described with parental COVID stress measured using the COVID Stress Scales (CSS; Taylor et al., 2020) and parental resilience measured using the Brief Resilience Scale (BRS; Smith et al., 2008). Children's anxiety was measured using the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999). Children's aggression was measured using the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007). The processes for examining variables were discussed and the limitations of the study were outlined.

CHAPTER 4: RESULTS

Overview

The purpose of this quantitative correlational study was to examine parental stress and resilience during the COVID-19 lockdown and its relationship to children's behaviors, specifically anxiety and aggression, when returning to in-person school. Data were collected through a survey completed by parents from an online link posted on various school and local websites, and social media. The survey included demographic questions, questions that measured parental COVID-19 stress and parental resilience, and also questions that measured anxiety and aggression in children. The six research questions were organized into three couplets. The first couplet asked if parental COVID stress during lockdown was related to children's anxiety and aggression when returning to in-person schools. The second couplet asked if parental resilience during lockdown was associated with children's anxiety and aggression when returning to in-person schools. The final couplet addressed whether parental resilience mediated parent COVID Stress on children's post-lockdown anxiety and aggression.

Descriptive Results

Sixty-four participants completed the survey in its entirety. Of the 64 total participants, three were omitted from further review because the parents reported their children had a preexisting mental health condition such as depression, anxiety, or aggression before the COVID-19 lockdowns. The remaining participants ($N = 61$) in the study were mostly white (86.9%), with 6.6 % identifying as Black or African American,

4.9% as American Indian or Alaskan Native, and 1.6 % identifying as Asian. The participants identified as mostly non-Hispanic (85.2 %).

Over half of the respondents ($n= 34$) were between the ages of 35-44 (55.7%). The majority of the respondents (88.5%) had post-secondary degrees with 41% of the participants classified as essential workers during the COVID-19 lockdowns. The most frequent jobs during lockdowns, reported by category, were in education (29.5%) and mental health (21.3%). Other categories were business and medical at 13.1% each, trades and post-secondary students at 4.9% each, and homemaker/unemployed at 13.1%. Currently, the percentages in the job categories have shifted with 37.7% of the participants indicating they work in education. Business and medical jobs increased to 14.8% and 16.4% respectively. Respondents employed in trades or in post-secondary school both decreased to 1.6%. The homemaker/unemployed category also decreased to 9.8% (See Appendix B). Over half of the respondents (55.7%) reported an income between \$45,000-\$139,999 during COVID-19 lockdowns, which was considered a middle class income. Income rose slightly after COVID-19 lockdowns, with an increase in the number of participants in the highest income range of \$140,000-\$200,000+ growing from 14.8% during lockdowns to 21.3% currently (See Appendix C).

The children were ages 7-11, with the most frequent age being 10 years old (27.9%) and the next frequent age 11 years old (21.3%). The other children, in descending order of frequency were: 9 years old (19.7%), 8 years old (18.0%), and 7 years old (13.1%). Parents reported that the majority of the children attended public schools (91.8%) in rural areas (62.3%).

Prior to the COVID-19 lockdowns, 4.7 % (n=3) of the parents affirmed that their child had been diagnosed with a mental health disorder. These participants were subsequently excluded from the descriptive and statistical analyses with the effect of having none of the remaining participants affirming any mental health diagnosis before the lockdowns. However, after the COVID-19 lockdowns, 21.3% of the respondents indicated their children were subsequently medically diagnosed with a mental health disorder, such as anxiety, depression, or anger outbursts. Anxiety was the most common diagnosis reported at 14.8% with depression and anger outbursts indicated with 3.3% for each (see Appendix A).

In addition to demographic information, each participant completed four separate survey scales with the first two scales measuring parental COVID stress and resilience. Parent COVID stress was measured using the COVID Stress Scales (CSS; Taylor et al., 2020) and parental resilience was measured using the Brief Resilience Scale (BRS; Smith et al., 2008). Most parents reported normal to high resilience with only 6.56% indicating low resilience on the BRS. Only 11.48% of parents indicated that they had significant COVID stress as indicated by the CSS.

Participants also completed two measures to assess their children's anxiety and aggression. Anxiety was measured using the Screen for Child Anxiety Related Disorders (SCARED; Birmaher et al., 1999). The SCARED indicated that after the end of lockdowns when children returned to school, some of the children were dealing with significant symptoms of an anxiety disorder (31.15%). When looking at specific types of anxiety, 24.95% of the children had symptoms indicating Generalized Anxiety Disorder (GAD). Aggression was measured using the Outburst Monitoring Scale (OMS;

Kronenberger et al., 2007). Most parents affirmed through this measure that they had few issues with aggression in their children. Only 8.2% of the children were scored in the moderate (“sometimes” range) or greater on the OMS.

Study Findings

RQ1: Does parental COVID lockdown stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) relate to children’s *anxiety* when returning to in-person schools as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

A Pearson’s r was conducted to test the first research question about the relationship between parental COVID stress during lockdown and children’s anxiety using the full scales of both instruments. Data for these scales were tested for kurtosis and skewness by obtaining z -scores. The z -scores for kurtosis and skewness for COVID stress were $z = -2.04$ and $z = 1.11$ respectively, while the z -scores for the SCARED were $z = 1.09$ and $z = 3.19$. All z -scores for these variables data were within the acceptable ranges of the z -scores criterion of $z = \pm 3.29$. This relationship was significant, $r(59) = .363$, $p = .004$ (2-tailed), with 13.18% of children’s anxiety being accounted for by parental COVID-19 stress. Additionally, when looking at the relationship between the full COVID-19 stress scale and the Generalized Anxiety Disorder (GAD) subscale on the SCARED (Birmaher et al., 1999), the relationship was even stronger, with the Pearson’s r in the moderate range of correlation, $r(59) = .400$, $p = .001$, with 16% of the GAD subscale accounted for by parental COVID-19 Stress. The kurtosis ($z = -.724$) and skewness ($z = 2.27$) for the GAD subscale data were within acceptable limits. Additionally, the parental Traumatic

Stress subscale within the COVID-19 Stress scales was compared to the children's SCARED total scale anxiety score with a significant result, $r(59) = .412, p = <.001$ (2-tailed), with 16.97% of the total anxiety score of the children accounted for by the parental Traumatic Stress subscale. However, the kurtosis ($z = 3.77$) and skewness ($z = 5.57$) of the Traumatic Stress subscale data were outside the limits of the recommended criterion of $z = \pm 3.29$, which suggested that this variable's data were not normally distributed, and the last set of results should be cautiously interpreted. A Spearman's rho was used to see if it showed a relationship between the Traumatic Stress subscale and children's total anxiety. It was also significant $r_s(59) = .503, p < .001$ (2-tailed), with 25.3% of the children's anxiety accounted for by Traumatic Stress. See Appendix D for the correlation's tables for the first four research questions.

RQ2: Does parental COVID lockdown stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) relate to children's *aggression* when returning to in-person schools as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

The second research question about the relationship between parental COVID stress during lockdown and children's aggression was first examined by conducting a Pearson's r . This relationship was significant, $r(59) = .256, p = .046$ (2-tailed), with 6.55% of children's aggression being accounted for by parental COVID-19 stress. As mentioned earlier, the z -scores for kurtosis and skewness for COVID stress data were $z = -2.04$ and $z = 1.11$ respectively, within acceptable limits. However, the OMS data showed unacceptable kurtosis ($z = 5.95$) and skewness ($z = 6.24$), suggesting that it was not normally distributed. The Traumatic Stress subscale within the COVID-19 Stress scales

was also compared to the OMS total aggression score with a significant result, $r(59) = .289, p = .024$ (2-tailed), with 8.35% of the children's aggression accounted for by the parental Traumatic Stress Subscale. However, it was established that both of these variables have data that are out of range for kurtosis and skewness, failing to support normal distribution.

In order to ascertain if there is a correlation between both sets of variables despite the aggression scales not being normally distributed, a nonparametric test, Spearman's rho was used. The Spearman's rho concurred that there was a significant relationship between parental COVID stress during lockdown and children's aggression (OMS), $r_s(59) = .321, p = .012$ (2-tailed), with 10.3% of the children's aggression being accounted for by parental COVID stress. There was no difference in the results output from the Spearman's rho versus the Pearson's r when using the Traumatic Stress subscale with children's aggression instead of the Total Covid scale. The results were $r_s(59) = .321, p = .012$ (2-tailed), with 10.3% of the children's aggression being accounted for by parental traumatic stress.

RQ3: Is parental resilience during lockdown as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) associated with children's *anxiety* when returning to in-person schools as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

A Pearson's r was conducted to test the third research question about the relationship between parental resilience during lockdown and children's anxiety based on the total SCARED (Birmaher et al., 1999) battery. While this relationship was not significant,

$r(59) = -.166, p = .201$ (2-tailed), there was a negative relationship between the two variables indicating that 2.76% of children's anxiety was accounted for by lower parental resilience. The z -scores for kurtosis and skewness for parental resilience were $z = -0.291$ and $z = -0.59$ respectively, while the z -scores for the SCARED were $z = 1.09$ and $z = 3.19$ with all z scores within acceptable limits. Parental resilience was also compared to the Generalized Anxiety Disorder (GAD) subscale of the SCARED (Birmaher et al., 1999), and the results were statistically significant. The output showed that parental resilience and GAD were inversely correlated with lower parental resilience related to higher GAD in children, $r(59) = -.263$ (2-tailed), $p = .040$, with 6.92% of children's anxiety being accounted for by lower parental resilience. The kurtosis ($z = -0.72$) and skewness ($z = 2.27$ for the GAD data were within acceptable limits.

RQ 4: Does parental resilience during lockdown as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) relate to children's *aggression* when returning to in-person schools as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

A Pearson's r was conducted to test the fourth research question about the relationship between parental resilience during lockdown and children's aggression. This relationship was not significant, $r(59) = -.030, p = .818$ (two tailed), with 0.09% of children's aggression being accounted for by weaker parental resilience. However, when parental resilience was compared to the Self-Aggressions subscale on the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007), there was statistical significance, $r(59) = -.291, p = .023$ (2-tailed), with 8.47% of self-aggression accounted for by parental resilience. The OMS data and the Self-Aggression subscale data were both out of the acceptable

range for kurtosis and skewness, suggesting data from these scales were not normally distributed. The OMS data showed unacceptable kurtosis ($z = 5.95$) and skewness ($z = 6.24$), and the Self-Aggression subscale data also indicated high kurtosis ($z = 8.77$) and skewness ($z = 7.89$). Spearman's rho correlations were run on both sets of variables. There was no statistical significance of parental resilience and the OMS, $r_s(59) = -.067$, $p = .610$ (2-tailed), with 0.44% of the children's aggression being accounted for by parental resilience. When looking at the relationship between parental resilience and the Self-Aggression subscale, the Spearman's rho was nonsignificant, $r_s(59) = -.213$, $p = .099$ (2-tailed), with 4.54% of the children's self-aggression being accounted for by parental resilience.

RQ5: Does parental resilience as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) mediate parent COVID Stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) on children's post-lockdown *anxiety* as measured by the Screen for Child Anxiety Related Emotional Disorders (SCARED; Birmaher et al., 1999)?

A mediation model with Hayes PROCESS Macro v.4.2 (2022), was run using Model 4 to discern if parental resilience mediated the effects of the independent variable (IV) COVID stress on the dependent variable (DV) of children's post-lockdown anxiety (see Figure 1). There were no effects of parental resilience on COVID stress through path *a* ($b = -.0025$, $t(61) = -.6477$, $p = .5197$, 95% CI [LLCI = $-.0101$, ULCI = $.0051$]). Additionally, parental resilience did not have a significant impact on children's anxiety through path *b*, ($b = -2.751$, $t(61) = -1.1225$), $p = .266$, 95% CI [LLCI = -7.6562 , ULCI = 2.1546]. The indirect effect, which was the product of path *a* and path *b* in the model,

was non-significant, $b = 0.0068$, 95% CI [BootLLCI = $-.0200$, BootULCI = $.0426$]. The direct effect (c') on COVID stress and children's anxiety was significant, $b = 0.208$, $t(61) = 2.898$, $p = .005$, 95% CI [LLCI = $.0643$, ULCI = $.3512$]. R^2 indicated that 15% of variance in anxiety was accounted for by COVID stress. There was also a significant total effect of parental COVID stress on children's anxiety ($b = .2145$, $t(61) = 2.9967$, $p = .0040$, 95% CI [LLCI = $.0713$, ULCI = $.3578$]. However, parental resilience was not shown as a significant mediator for the effects of COVID stress on children's post lockdown anxiety (see Table 1). A table of model coefficients may be found in Appendix E (see Table E1).

Figure 1

Mediation Model for Anxiety

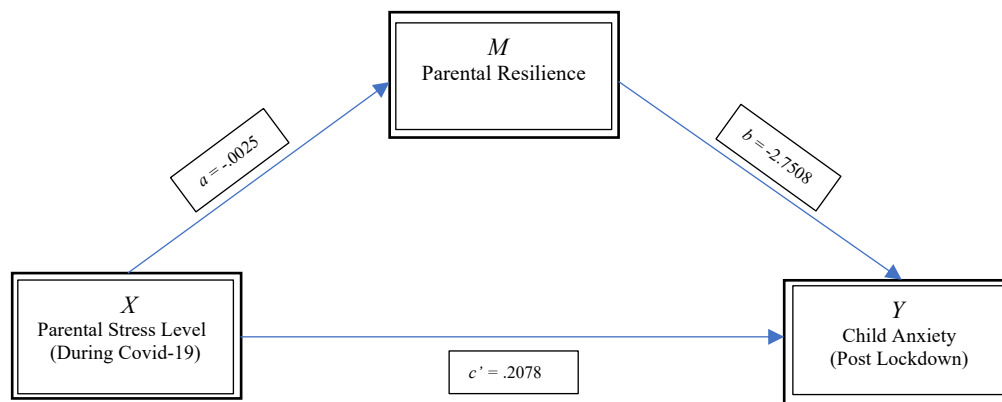


Table 1*Resilience Mediation Model Summary with Anxiety*

| Relationship | Total Effect | Direct Effect | Indirect Effect | Confidence Interval | | <i>t</i> -Statistics | Conclusion |
|---------------------------------------|------------------|------------------|-----------------|---------------------|-------------|----------------------|--------------|
| | | | | Lower Bound | Upper Bound | | |
| COVID Stress -> Resilience -> Anxiety | .2145 (.0040) | .2078 (.0053) | .0068 | -.020 | .043 | 2.8983 | No Mediation |

RQ6: Does parental resilience as measured by the Brief Resilience Scale (BRS; Smith et al., 2008) mediate parent COVID Stress as measured by the COVID Stress Scales (CSS; Taylor et al., 2020) on children's post-lockdown *aggression* as measured by the Outburst Monitoring Scale (OMS; Kronenberger et al., 2007)?

A mediation model with Hayes PROCESS Macro v.4.2 (2022), was run using Model 4 to discern if parental resilience mediated the effects of COVID stress (IV) on children's post-lockdown aggression (DV; see Figure 2). There were no effects of parental resilience on COVID stress through path *a* ($b = -.0025$, $t(61) = -.6477$, $p = .5197$, 95% CI [LLCI = $-.0101$, ULCI = $.0051$]). Additionally, parental resilience did not have a significant impact on children's aggression through path *b*, ($b = -.0646$, $t(61) = -.0669$), $p = .9469$, 95% CI [LLCI = -1.9964 , ULCI = 1.8673]). The indirect effect, which was the product of path *a* and path *b* in the model, was non-significant, $b = .0002$, 95% CI [BootLLCI = $-.0056$, BootULCI = $.0089$]). The direct effect (*c'*) on COVID stress and children's aggression was significant, $b = .0567$, $t(61) = 2.0075$, $p = .0494$, 95% CI [LLCI = $.0002$, ULCI = $.1132$]). R^2 indicated that 6.58% of variance in aggression was accounted for by COVID stress. There was a significant total effect of parental COVID

stress on children's anxiety ($b = .0568$, $t(61) = 2.0376$, $p = .0461$, 95% CI [LLCI = .0010, ULCI = .1126]). However, parental resilience was not shown to be a significant mediator for the effects of COVID stress on children's post lockdown aggression (see Table 2). A table of model coefficients may be found in Appendix E (see Table E2).

Figure 2

Mediation Model for Aggression

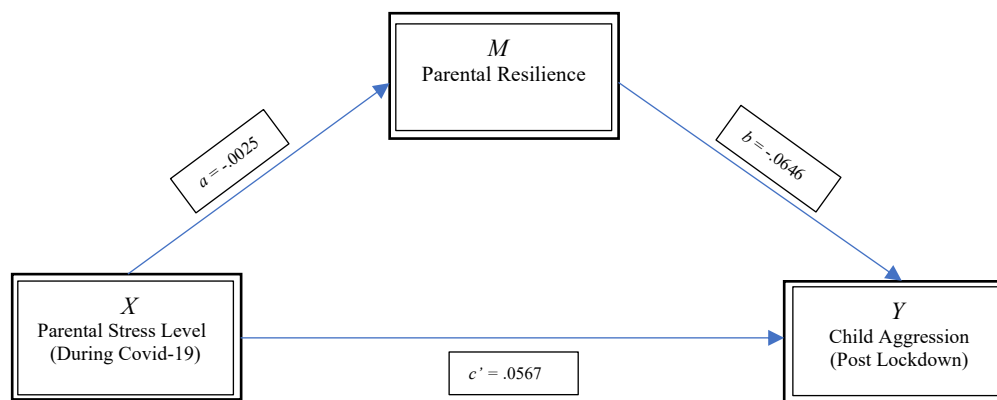


Table 2

Resilience Mediation Model Summary with Aggression

| Relationship Conclusion | Total | Direct | Indirect | Confidence Interval | | <i>t</i> - Statistics | |
|--|------------------|------------------|----------|---------------------|----------------|--------------------------|----|
| | Effect | Effect | Effect | Lower Bound | Upper Bound | | |
| COVID Stress -> Resilience -> Aggression | .0568 (.0461) | .0567 (.0494) | .0002 | -.0056 | .0089 | 2.0075 | No |

Summary

Chapter Four starts with a brief review of the study's purpose and an overview of the topics addressed in the chapter. Descriptive statistics are provided including the race, ethnicity, age, and approximate income of the parents. Most of the parents who participated were white, non-Hispanic with middle-class incomes between \$45,000-\$139,999 during COVID-19 lockdowns. More than half of the parents' ages were between 35-44 years old. Over 88% of the participants reported attending college or trade school, with 41% classified as essential workers during the pandemic. Three participants were dropped from the statistical analyses due to affirming their children were diagnosed with a mental health issue by a doctor prior to the COVID-19 lockdowns. None of the remaining participants included in the analyses reported prior mental health diagnoses. After the COVID-19 lockdowns, participants reported that 21.3% of their children were diagnosed with a mental health disorder, such as anxiety, depression, or aggression. While most parents indicated that they had average to high resilience, at least 11.48% indicated that they had significant stress from COVID-19. Results of the SCARED indicated that almost one-third (31.15%) of the children had symptoms of an anxiety disorder, with almost 25% of those children exhibiting symptoms of GAD. Most parents denied symptoms of aggression, with only 8.2% affirming moderate aggression in their children after COVID-19 lockdowns.

The six research questions for the study were tested using Pearson's r correlations for the first four, with Spearman's Rho additionally being used for research questions one, two and four due to concerns with the normal distribution of the data. Hayes PROCESS Macro version 4.2 (2022), Model 4, was used for the last two hypotheses.

Both research questions one and two showed a relationship. Additional Pearson's r correlations were run for the first research question using the GAD subscale of the SCARED coupled with the total COVID Stress Scale. Pearson's r correlations were also run using the Trauma subscale of the COVID Stress Scales and total anxiety. All additional correlations were found to be significant as well. The second research question was also tested using the COVID Stress full scale and using the Trauma subscale with total aggression, which was also significant. However, both the OMS and Trauma subscales had kurtosis and skewness levels out of the acceptable range. Spearman's rho was used which confirmed significant relationships between all of the variables tested. Research questions three and four did not show a relationship when the total scales were used. However, when parental resilience was tested with the GAD subscale of the SCARED, there was a significant statistical result. Additionally, on research question four, when the OMS Self-Aggression subscale was used instead of the total OMS, the result was statically significant using Pearson's r . Due to the normal distribution issues of the Self-Aggression subscale data, Spearman's rho was used to confirm these correlations. The results of Spearman's rho were not statistically significant for a correlation between the variables for the fourth research question. The last two research questions, which explored the mediation of resilience on the predictor variable of Parental COVID Stress to the outcome variables of anxiety and aggression, had a non-significant relationship.

CHAPTER 5: DISCUSSION

Overview

The purpose of this quantitative correlational study was to examine parental stress and resilience during the COVID-19 lockdown and its relationship to children's behaviors, specifically anxiety and aggression when returning to in-person school. This chapter will provide a summary of the findings and a discussion of the results from the previous chapter. Limitations of the study as well as future implications will be discussed. Finally, suggestions for future studies will be addressed and a chapter summary will be provided.

Summary of Findings

The relationships between parental COVID-19 stress and children's anxiety and aggression were found to be significant. There were relationships between parent stress during the lockdowns and the amount of anxiety and aggression exhibited by their children as they returned to school. Pearson's r and Spearman's rho showed positive correlations, which indicated the greater the parental stress, the more anxiety and aggression were displayed by the children.

The relationships between parental resilience and children's anxiety and aggression showed a non-significant correlation using the full scales for the children's behaviors. However, there was a significant correlation in the relationship of resilience, as measured by the Brief Resilience Scale, with anxiety, as measured by the Generalized Anxiety Disorder (GAD) subscale of the SCARED. Aggression, using the Self-Aggression subscale of the Outburst Monitoring Scales (OMS; Kronenberger et al.,

2007), and resilience, measured using the BRS, also showed significance for Pearson's r ; however, Spearman's rho did not show a significant relationship when using the Self-Aggression subscale and BRS. The variables had a negative correlation, indicating that higher parental resilience was related to lower anxiety and aggression in the children.

The mediation models lacked power to show mediation of parental resilience on COVID stress and children's anxiety and aggression. This was due to the low number of participants in the study. In order to run the mediation properly, several hundred participants would have been required. Using the brief measure of resilience (BRS) instead of a full-scale measure and the OMS aggression data not being normally distributed may have also played a role. While there was no mediation indicated, there was a significant direct effect shown for parental COVID stress and children's anxiety and aggression, which affirmed the results of Pearson's r correlations.

Discussion of Findings

The majority of the sample for this study were white, middle class, with almost 89% having some form of post-secondary education. They generally reported stable finances during lockdown, despite the stressful time period, with 41% of the respondents classified as essential workers. Despite the lack of diversity in the study, the results still sketched a concerning picture of the parental variables--stress and resilience from COVID-19 lockdowns--on children's behaviors. Unfortunately, due to the higher socioeconomic demographics, examination of these relationships for the more vulnerable at-risk children was not possible.

Significant relationships were identified between COVID stress and children's anxiety and aggression. Lionetti et al. (2023) also suggested that high parental stress had a significant impact on their children's behavior, and conversely, their children's behavior impacted the amount of stress parents were feeling. Their study implied a bidirectional action of stress and behaviors between parents and children during the lockdown phase. This bidirectional relationship discussed by Lionetti et al. (2023) was not evaluated in the current study; however, the results from their study supported parental stress and resilience having a relationship to children's behaviors. Elder's Life-Course theory (Elder & Shanahan, 2006) as the theoretical underpinning for this study was appropriate considering the results both from Lionetti et al. (2023) as well as the current study. The lockdown environment and the historical context of COVID-19, together with the interaction of personalities, perceived stress, and resilience factors in the home, resulted in dynamic changes in the individual's life course that are continuing to this day.

In studies conducted during lockdown by Pugliese et al. (2022) and Shorer & Leibovich (2022), the amount of perceived parental stress was related to the reported anxiety and stress in their children. These findings were supported in the current study, which, although focused on the time frame after COVID lockdowns, indicated a positive relationship between the amount of parental COVID stress and the amount of parent-reported anxiety and aggression in the children. In the current study, 11.48% of respondents indicated they experienced significant COVID-19 stress based on their responses to the COVID Stress Scales (CSS).

Covid stress was correlated to children's behaviors of anxiety and aggression using Pearson's r . Spearman's rho was used in addition to Pearson's r on the full Outburst Monitoring Scale (OMS), the Self-Aggression subscale in the OMS, and the Traumatic Stress subscale in the CSS because the data violated parametric assumptions. The relationship between the measure of parental COVID stress using the CSS and children's anxiety using the total SCARED was significant. Additionally, the relationships of the total CSS to the GAD subscale of the SCARED and the Traumatic Stress subscale of the CSS to the total SCARED were both significant. However, due to the issues with skew and kurtosis with the data for the Traumatic Stress subscale, Spearman's rho was also used, resulting in an even stronger relationship result, with almost 25% of children's anxiety accounted for by traumatic stress as compared to almost 17% using Pearson's r .

When examining the relationship of parental COVID stress to children's aggression, the measures of parental COVID stress using the CSS and children's aggression using the OMS were significantly related. Additionally, the Traumatic Stress subscale of the CSS showed a significant relationship with the total OMS. Spearman's rho, used due to the Traumatic Stress subscale and the total OMS data failing to meet parametric assumptions, also showed significant relationships for both sets of variables. The coefficients comparing parental COVID stress to children's anxiety and aggression, including the subscales previously mentioned, were all positive, indicating that higher parental COVID stress was related to higher anxiety and aggression in children.

The literature suggested that in addition to handling stress, parents who were able to exemplify more resilience in the difficult circumstances during lockdowns also

reported fewer concerns of anxiety and aggression issues in their children (Jones et al., 2022; Pugliese et al., 2022). The current study also supported these findings after lockdowns, but statistical significance was only found when comparing the Brief Resilience Scale (BRS) to the General Anxiety Disorder subscale of the SCARED and the Self-Aggression subscale of the OMS using Pearson's r . However, due to the OMS scale and its subscales having high kurtosis and skewness z -scores, Spearman's rho was also used to determine if the variables of BRS and the Self-Aggression subscale were correlated. While Pearson's r indicated a relationship, Spearman's rho did not find a significant relationship between parental resilience (BRS) and the Self-Aggression subscale of the OMS. However, both Pearson's r and Spearman's rho correlations indicated a negative correlation on all measures run with parental resilience as a variable, indicating an inverse relationship between parental resilience and children's anxiety and aggression.

Participants overwhelmingly endorsed average to high resilience scores on the BRS, with only 6.56% endorsing low resilience. The BRS was used to measure resilience in the study to help limit the length of the survey since it was only a six-item measure. However, by only having six questions, the respondents appeared to have scored themselves high on the scale of resilience with 93.44% endorsing average to high resilience. Additionally, using the BRS as a brief measure for resilience may have prevented more discriminating results that may have been obtained with a full-scale resilience measure. This issue with the BRS was also compounded by the lack of power of the current study due to low participation. The lack of participants also prevented a true picture of the role of resilience in the mediation of COVID stress and children's

mental health behaviors. While the mediation models did not show resilience as a mediator, they did show a significant relationship between COVID stress and children's anxiety and aggression with anxiety accounting for 15.06% and aggression accounting for 6.58% of the variance from COVID stress.

When reviewing the parental reports on their children's mental health before and after lockdowns, it was concerning to note that while the participants ($N=61$) did not endorse any type of mental health issues in their children before lockdowns, mental health diagnoses after COVID-19 lockdowns were affirmed in 21.3% of the children, with 14.8% of these diagnoses related to anxiety. While this information for children ages 7-11 is counter to researchers who were reporting positive mental health signs in preteens and adolescents (Duke, 2020; Schwartz, 2021), it does support the findings of other researchers who reported mental health issues among children and teens who experienced lockdowns (Thompson et al., 2021; Vasileva et al., 2021; Zhu et al., 2021).

When looking specifically at the scores for the SCARED, the number of children identified with clinically significant anxiety-related symptoms was actually much higher than the number of children reported as having a mental health diagnoses of anxiety, with 31.5% of the children having clinically significant anxiety symptoms, including 24.95% of them exhibiting symptoms of Generalized Anxiety Disorder (GAD) based on the SCARED. In essence, this leaves a gap of at least 16 % of children from the study with significant anxiety symptoms who were not having these issues addressed by mental health professionals. This raises concerns that children in need of mental health evaluations or care have been missed by professionals who interact with the children on a daily basis, namely teachers and school counselors, despite the fact that all school

personnel in Texas are trained annually on identifying mental health issues in children (Texas Senate Bill 460, 2013). Additionally, based on the study's highly educated middle-class demographic profile, it is unlikely this disparity in identifying mental health issues can be solely accounted for by socioeconomic factors.

Schools are reporting more incidences of behavior problems relating to aggression as indicated in school discipline trackers (Texas Education Agency Discipline Reports, 2022). However, the parents participating in the study did not report significant aggression in their children based on the OMS with only 8.20% of the children scoring in the moderate range on the OMS. The parental reports of children with a mental health diagnosis post-lockdowns indicated that 3.3% were diagnosed with depression and 3.3% were diagnosed with aggression. Since depression in children can be expressed by externalizing symptoms such as irritability, anger outbursts, or appearing mad (Mohamed Ali et al., 2022), the percentage of children diagnosed with depression and aggression disorders were combined (6.6%). This combined percentage indicated that the Outburst Monitoring Scale (OMS) accurately captured the incidence of aggressive behavior, with a difference of only 1.6% between parental reports and the OMS.

As previously discussed, there were also issues with the data collected using the Outburst Monitoring Scale (OMS). Other aggression scales that were considered for the study were very expensive to use, required the collection of personal contact information from the participants, or required the data from the survey to be stored on the company's servers. The OMS was one of the few instruments that could be parent scored and could be included in the study survey. However, there was very little parental endorsement of many of the physical behaviors included, resulting in high kurtosis and skewness of the

data. Since the collected data were not normally distributed for the OMS, Spearman's rho was used to address the issue. Some researchers believe that Pearson's r would be robust enough to use, despite violating the normal distribution assumption, but using Pearson's r , in this case, could also cause higher Type I error rates (Bishara & Hittner, 2012), so both Pearson's r and Spearman's rho were included to allow for the widest possible interpretations.

The results of this study concurred with the concerns first voiced by mental health experts in 2020 about the impact of lockdowns on the mental health of children (Adegboye et al., 2021; Munir, 2021; O'Sullivan et al., 2021). While there were good outcomes reported by parents, there were also concerns, generated by the study, that children have developed mental health issues since the end of the lockdowns. These concerns also included finding procedures to identify children needing help and providing the services they needed.

The stress of COVID on parents was significantly related to children's behaviors that developed after the lockdowns were lifted; however, parental resilience was more difficult to relate to children's behavior. The total scales for resilience and behavior were not significantly correlated, and while there was significance when using specific subscales of the OMS, namely the Self-Aggression subscale, the significance disappeared when Spearman's rho was used instead of Pearson's r . As discussed earlier, the difficulty in discerning a relationship between resilience and children's behavior may have been caused by the selection of a resilience measure that was inadequate for use in this study. Another reason may have been because the aggression data were highly skewed, making true correlations problematic, and necessitating the use of nonparametric tests.

While the number of children diagnosed by professionals or identified by the screening instruments was concerning, it was also encouraging that the majority of the children were not experiencing mental health effects from the lockdowns. This indicates that while at home, some children were afforded protective benefits within their families that helped them stay healthy mentally. Identifying which protective benefits were helpful did not fit into the scope of this study.

For members of God's family, the COVID-19 lockdowns posed many challenges to faith, belief, and worship. COVID-19 lockdowns provided many parents with the opportunity to take the lead in their children's spiritual development. Despite not being able to attend church in person, Christian parents were able to provide the spiritual and physical nurturing their children needed during the lockdown period and were a testimony to God's design of the family unit (Casson et al., 2023).

Implications

The study contributes to the previously known factors of the role of parental stress and resilience and their impact on children's behavior. The study showed the need for providing access to self-care education in communities and churches that focus on relieving stress and encouraging resilience for parents. Helping parents improve self-care skills that are related to children's mental health would provide long-term benefits. Based on the discrepancy found in the study between children who were diagnosed with anxiety disorders and children who were identified with clinically significant anxiety symptoms on the SCARED, community, school, and church personnel should be thoroughly trained in the identification of mental health issues in children. Additionally, community-based

personnel should be provided with actionable plans for referring students when a mental health issue is suspected.

Limitations

Limitations of this correlational study included its inability to identify resilience-building strategies used by caregivers. Since only the relationships of the parental variables of COVID stress and resilience compared to the children's variables of behavior were studied, causation could not be addressed. COVID stress was addressed in retrospect so the measure was tempered with the perspective of time. Additionally, information on the children's gender should have been collected as part of the demographic information, because studies in the extant literature point to gender differences in the appearance and severity of anxiety (Kostev et al., 2023; Pustake et al., 2022; Spencer et al., 2021; Xie et al., 2022). Along with the inability to break down any gender specific trends, there was also a lack of racial and economic diversity in the sample. Most of the participants identified as white, non-Hispanic, and indicated a middle to upper-income range. This population limited the ability to generalize results to at-risk and lower-socioeconomic groups.

The use of a full-scale measure of parental resilience would have been more beneficial to this study. By trying to keep the number of questions to a minimum, the measure was not as strong compared to the full scales used for the other measures in the study. This limitation might not have been so glaring if the participation in the study were not lower than expected. This caused a decrease in the power of the study, making true significance difficult to ascertain. The scale used to measure aggression should also be

reevaluated for use. Since it was intended to be used primarily to show improvement of symptoms over time for clinically severe patients, the skewed data may have been a function of its intended participants versus the population of this study.

Recommendations for Future Research

Despite the limitations of this study, it raises some concerns that warrant further study. The difference in the number of children identified with a mental health condition by a professional, specifically anxiety, compared with the number identified by the SCARED is concerning. Are children being under-identified for mental health problems? What more can be done to ensure that children affected by the COVID lockdowns are receiving mental health services?

Additionally, the lack of power limited the ability of this study to discern the mediation role of resilience. Replicating this study with several hundred participants might provide enough power to find stronger outcomes while broadening the socioeconomic scope may also provide insight into the disadvantaged and at-risk populations.

Prior studies have indicated that there were gender differences in the appearance of children's anxiety during lockdown, with more girls having anxiety (Kostev et al., 2023; Pustake et al., 2022; Spencer et al., 2021; Xie et al., 2022). Assessing the prevalence of anxiety in boys versus girls after lockdowns could provide information regarding whether the gender trend remained stable after students returned to school.

Helping parents practice personal stress-reduction skills should be a focus for communities looking to improve children's mental health, considering the impact of

parental COVID stress on children's behavior. Working with parents on strategies to decrease stress will not only benefit the parents, but it will also help the children in the long run. Future studies researching the most effective ways to educate parents in self-care would be beneficial.

Summary

Most of the relationships between parental COVID-19 stress and children's anxiety and aggression were found to be significant. There were relationships between parent stress during the lockdowns to the amount of anxiety and aggression exhibited by their children as they returned to school. The relationships between parental resilience and children's anxiety and aggression showed a non-significant correlation using the full scales for the children's behaviors. However, they were correlated using Pearson's r after looking at the relationships of the BRS with certain subscales like the Generalized Anxiety Disorder (GAD) subscale in the SCARED and the Self-Aggression subscale in the Outburst Monitoring Scales (OMS; Kronenberger et al., 2007). Spearman's rho did not find significance for the BRS and Self-Aggression subscale, so the relationships between resilience and aggression should be interpreted cautiously. The mediation models lacked power to show mediation of parental resilience on COVID stress and children's anxiety and aggression. Even though there was no mediation indicated, there was a significant direct effect shown for parental COVID stress on children's anxiety and aggression, which supported the Pearson's r correlations.

The unexpected concern from this study was the 16% discrepancy between children who had been diagnosed with anxiety disorders and those that showed clinical-

level anxiety symptoms on the SCARED. This brings into focus the roles of the family, school, and faith communities as gatekeepers of children's mental health. Education programs for identifying mental health symptoms in children should be targeted to personnel in these groups. Additionally, pathways to refer children for mental health screenings need to be clearly delineated when an issue is suspected. The results of the study affirm the need to encourage parents to practice self-care in order to combat stress and build personal resilience, which in turn provides them with tools to be better parents and role models. While not helping children directly, this will help children long term. While the number of children who were affected by the COVID-19 lockdowns was concerning, it was encouraging to know that many more children were doing well and thriving.

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APPENDIX A: POPULATION DESCRIPTIVE STATISTICS

Table A*Population Descriptive Statistics*

| | N | Freq. | % |
|--|----|-------|------|
| Race | 61 | - | 100 |
| Am Ind/Alaska | | | |
| Native | - | 3 | 4.9 |
| Asian | - | 1 | 1.6 |
| Black or African | | | |
| American | - | 4 | 6.6 |
| White | - | 53 | 86.9 |
| Ethnicity | 61 | - | 100 |
| Hispanic | - | 9 | 14.8 |
| Non-Hispanic | - | 52 | 85.2 |
| Age of Parents (Current) | 61 | - | 100 |
| 24-34 | - | 15 | 24.6 |
| 35-44 | - | 34 | 55.7 |
| 45-54 | - | 9 | 14.8 |
| 55-64+ | - | 3 | 4.9 |
| Age of Children (Current) | 61 | - | 100 |
| 7 | - | 8 | 13.1 |
| 8 | - | 11 | 18.0 |
| 9 | - | 12 | 19.7 |
| 10 | - | 17 | 27.9 |
| 11 | - | 13 | 21.3 |
| Type of Schools Attended | 61 | - | 100 |
| Public | - | 56 | 91.8 |
| Private | - | 5 | 8.2 |
| Location of Schools | 61 | - | 100 |
| Rural | - | 38 | 62.3 |
| Urban | - | 23 | 37.7 |
| Post-Lockdown Mental Health Diagnosis (Child) | 61 | - | 100 |
| None | - | 48 | 78.7 |
| Anxiety | - | 9 | 14.8 |
| Depression | - | 2 | 3.3 |
| Anger Outbursts | - | 2 | 3.3 |

APPENDIX B: PARENT WORK STATUS AND JOBS

Table B*Parent Work Status and Jobs During Lockdowns and Current*

| | N | Freq. | % |
|------------------------------|----|-------|------|
| Worker Classification | 61 | - | 100 |
| Essential Worker | - | 25 | 41.0 |
| Non-Essential | - | 36 | 59.0 |
| Work Status | | | |
| (In Lockdown) | 61 | - | 100 |
| Unable to Work | - | 12 | 19.7 |
| Working | - | 49 | 80.3 |
| Parent Job Categories | | | |
| (In Lockdown) | 61 | - | 100 |
| Education | - | 18 | 29.5 |
| Business | - | 8 | 13.1 |
| Medical | - | 8 | 13.1 |
| Mental Health | | | |
| (Incl. School) | - | 13 | 21.3 |
| Trades | - | 3 | 4.9 |
| Post-Secondary | | | |
| School | - | 3 | 4.9 |
| Homemaker/ | | | |
| Unemployed | - | 8 | 13.1 |
| Parent Job Categories | | | |
| (Current) | 61 | - | 100 |
| Education | - | 23 | 37.7 |
| Business | - | 9 | 14.8 |
| Medical | - | 10 | 16.4 |
| Mental Health | | | |
| (Incl. School) | - | 11 | 18.0 |
| Trades | - | 1 | 1.6 |
| Post-Secondary | | | |
| School | - | 1 | 1.6 |
| Homemaker/ | | | |
| Unemployed | - | 6 | 9.8 |

APPENDIX C: PARENT EDUCATION / INCOME

Table C*Parent Education/Income During Lockdown and Current*

| | N | Freq. | % |
|--|----|-------|------|
| Parent Education | 61 | - | 100 |
| Some HS | - | - | - |
| HS Diploma/GED | - | 5 | 8.2 |
| Trade School | - | 2 | 3.3 |
| Assoc./Bachelor's | - | 21 | 34.4 |
| Grad/Professional | - | 33 | 54.1 |
| Parent Income (During Lockdown) | 61 | - | 100 |
| <\$20,000- \$44,999 | - | 18 | 29.5 |
| \$45,000 \$139,999 | - | 34 | 55.7 |
| \$140,000 \$200,000+ | - | 9 | 14.8 |
| Parent Income (Current) | 61 | - | 100 |
| <\$20,000- \$44,999 | - | 15 | 24.6 |
| \$45,000 \$139,999 | - | 33 | 54.1 |
| \$140,000 \$200,000+ | - | 13 | 21.3 |

APPENDIX D: CORRELATIONS TABLES

Table D1*Correlations Table with Pearson's r*

| Variables | n | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------------|----|-------|-------|--------|--------|--------|--------|--------|-------|--------|
| 1. Covid Stress | 61 | 36.31 | 25.72 | – | – | – | .363** | .400** | .256* | .242 |
| 2. Parental Resilience | 61 | 3.81 | 0.752 | – | – | – | -.166 | -.263* | -.030 | -.291* |
| 3. Traumatic Stress | 61 | 3.25 | 4.82 | – | – | – | .412** | .383** | .289* | .125 |
| 4. Anxiety | 61 | 21.46 | 15.18 | .363** | -.166 | .412** | – | – | – | – |
| 5. GAD | 61 | 6.36 | 5.09 | .400** | -.263* | .383** | – | – | – | – |
| 6. Aggression | 61 | 4.08 | 5.7 | .256* | -.030 | .289* | – | – | – | – |
| 7. Self- Aggression | 61 | 0.59 | 1.33 | .242 | -.291* | .125 | – | – | – | – |

Note. * $p < .05$. ** $p < .01$. All correlations Pearson's r .

Table D2*Correlations Table with Pearson's r and Spearman's Rho*

| Variables | n | M | SD | 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|------------------------|----|-------|-------|---------|---------|----------|----------|----------|---------|---------|
| 1. Covid Stress | 61 | 36.31 | 25.72 | – | – | – | .363** | .400** | .256* | .242 |
| | | | | | | | | | (.321*) | (.258*) |
| 2. Parental Resilience | 61 | 3.81 | 0.752 | – | – | – | -.166 | -.263* | -.030 | -.291* |
| | | | | | | | | | (-.067) | (-.213) |
| 3. Traumatic Stress | 61 | 3.25 | 4.82 | – | – | – | .412** | .383** | .289* | .125 |
| | | | | | | | (.503**) | (.471**) | (.321*) | (.212) |
| 4. Anxiety | 61 | 21.46 | 15.18 | .363** | -.166 | .412** | – | – | – | – |
| | | | | | | (.503**) | | | | |
| 5. GAD | 61 | 6.36 | 5.09 | .400** | -.263* | .383** | – | – | – | – |
| | | | | | | (.471**) | | | | |
| 6. Aggression | 61 | 4.08 | 5.7 | .256* | -.030 | .289* | – | – | – | – |
| | | | | (.321*) | (-.067) | (.321*) | | | | |
| 7. Self- Aggression | 61 | 0.59 | 1.33 | .242 | -.291* | .125 | – | – | – | – |
| | | | | (.258*) | (-.213) | (.212) | | | | |

Note. * $p < .05$. ** $p < .01$. All correlations Pearson's r , except where () indicates Spearman's Rho correlations.

APPENDIX E: MEDIATION MODEL COEFFICIENTS

Table E1*Mediation Model Coefficients for Outcome of Anxiety*

| Antecedent | Consequent | | | | | | | |
|-------------------------|-----------------------|------------------------------|----------|--------------------|----------------------|------------------------------|--------|------|
| | <i>M</i> (Resilience) | | | <i>Y</i> (Anxiety) | | | | |
| | Coeff. | <i>SE</i> | <i>p</i> | Coeff. | <i>SE</i> | <i>p</i> | | |
| <i>X</i> (COVID Stress) | <i>a</i> | -0.003 | 0.004 | .520 | <i>c'</i> | 0.208 | 0.072 | .005 |
| <i>M</i> (Resilience) | --- | --- | --- | | <i>b</i> | -2.751 | 2.451 | .266 |
| constant | <i>i_M</i> | 3.901 | 0.168 | <.001 | <i>i_Y</i> | 24.400 | 10.071 | .019 |
| | | $R^2 = 0.007$ | | | | $R^2 = 0.151$ | | |
| | | $F(1, 59) = 0.420, p = .520$ | | | | $F(2, 58) = 5.140, p = .009$ | | |

Table E2*Mediation Model Coefficients for Outcome of Aggression*

| Antecedent | Consequent | | | | | | | |
|-------------------------|-----------------------|------------------------------|----------|-----------------------|----------------------|------------------------------|-------|------|
| | <i>M</i> (Resilience) | | | <i>Y</i> (Aggression) | | | | |
| | Coeff. | <i>SE</i> | <i>p</i> | Coeff. | <i>SE</i> | <i>p</i> | | |
| <i>X</i> (COVID Stress) | <i>a</i> | -0.003 | 0.004 | .520 | <i>c'</i> | 0.057 | 0.028 | .049 |
| <i>M</i> (Resilience) | --- | --- | --- | | <i>b</i> | -0.065 | 0.965 | .947 |
| constant | <i>i_M</i> | 3.901 | 0.168 | <.001 | <i>i_Y</i> | 2.270 | 3.966 | .569 |
| | | $R^2 = 0.007$ | | | | $R^2 = 0.066$ | | |
| | | $F(1, 59) = 0.420, p = .520$ | | | | $F(2, 58) = 2.043, p = .139$ | | |