

Experience of Mother's Maternal Stress and General Stress of Young Children's Mental Health during COVID-19 Pandemic

Riko Kubo^{1,2}

1. Canadian Academy, Higashinada Ward, Koyochonaka, 4-1, Kobe, Hyogo, 658-0032, JAPAN; ricolickkubo@gmail.com

2. Indigo Research Academy

Mentor: Sinead Sinnott

ABSTRACT: Chronic stress can cause significant problems for humans affecting mental and physical health. I conducted a scoping review of the effects of stress on maternal and child mental health, focusing on the impact of COVID-19 stress on health. The review utilized Google Scholar and PSYCinfo databases. From the collection of sources, mothers and students experience high levels of baseline stress that was exacerbated in both demographic groups by the COVID-19 pandemic. COVID-19 created additional stressors such as academic stress, social isolation, and work limitation. Things that particularly helped were mental support and social support from family and friends.

KEYWORDS: Behavioral and Social Sciences; Physiological Psychology; maternal and youth stress; COVID-19 effect on stress; depression.

■ Introduction

Stress affects mental and physical health,¹ particularly if an individual experiences stress that they do not have the resources to cope with or if stressors last over a prolonged period.¹ Certain stressful contexts can exacerbate mental and physical health difficulties for mothers and children, in particular. Individuals, particularly mothers, experience worse health outcomes when they experience financial stress, have lower education levels, and lack social support.² Among children and adolescents, health-related quality of life is lower when children have a mother who smokes when they do not participate in physical activity, and when they have lower household income.³ One of the most prominent stressors in recent years was the global COVID-19 pandemic, classified as a pandemic in early 2020.⁴ As of May 30th, 2022, 525,467,084 individuals had been diagnosed with COVID-19.⁵ Regarding physical health effects of COVID-19, evidence illustrates long-term negative effects on immune, pulmonary, neurological, and cardiovascular function, including increased likelihood of stroke, lung fibrosis, and pediatric multisystem inflammatory syndrome.⁶ Further, the effects of COVID extend well beyond its physical health effects. This highly contagious global pandemic resulted in lockdowns and isolation to prevent its spread, leading to increased negative mental consequences.^{6, 7} Despite older men having higher incidence rates and hospitalizations due to COVID,⁸ women and children experienced a high prevalence of mental health consequences during the pandemic;^{9, 10} Therefore it is necessary to examine the unique consequences of COVID-19 stress among women and children.

Learning in a different environment presented a stressful change for young and adolescent students. Communication with both teachers and friends was more difficult online and students felt less successful in their academic careers.¹¹ Students faced isolation in their homes, resulting in a decrease in

social interactions, leading to increased mental health problems.¹²

The present study aimed to examine stress among mothers and children during the COVID-19 pandemic and how this global stressor may have influenced their mental health. Given that mothers and children face unique stressors generally and during the COVID-19 pandemic, these two populations will be the focus of the current study. This scoping review aims to explore the following research questions:

1. How do mothers experience maternal stress generally and during the COVID-19 pandemic?
2. How did COVID-19 stress influence the mental health of school-age children?

■ Discussion

Method:

The author conducted this scoping review utilizing Google Scholar and PSYCinfo databases using the following boolean phrases and search terms: ("Maternal stress") OR ("child stress") OR ("pregnancy") AND ("Covid" OR "covid-19" OR "coronavirus") AND Health, as well as the additional keywords: immunity systems, diseases, external stress, internal stress, and environmental stress.

43 studies are included in this scoping review of the literature examining maternal and child stress, particularly during the COVID-19 pandemic.

Effects of COVID Stress on Maternal Mental Health:

Maternal stress is common.¹³ While mothers with pre-existing depression reported higher levels of stress during the pandemic,¹⁴ women who were pregnant during the pandemic were significantly more likely to experience high stress and anxiety relative to women who were pregnant before the pandemic.¹⁵ Maternal stress during pregnancy may be an early risk factor for infants once born, with the disruption of development caused by mothers dealing with chronically elevated stress.¹⁶

Further, depression, anxiety and stress are common mental health difficulties, with 32.7% of women experiencing depression, 43.9% experiencing anxiety, and 32.7% experiencing high general stress, respectively. The prevalence of symptomatic depression among pregnant women is approximately 16%, with approximately 5% of pregnant women dealing with severe depression.¹⁷ Further, mothers experience significantly higher levels of post-partum depression, anxiety, and stress than fathers.¹⁸ Education level, spouse job level, spousal support and marital satisfaction all impact maternal mental health conditions for mothers.² Prenatal anxiety, depression, and stress can lead to adverse birth outcomes, such as miscarriage, preterm birth, low birth weight, and fetal death.¹⁹ The biggest predictors of anxiety and post-traumatic stress disorders among women included family and employment worries, coping with unhealthy eating habits and diets, lack of adaptation to different situations and circumstances, insomnia, and dependency on social media and other online platforms.⁷ Also, some common stressors that are seen in women around the world are lack of access to resources, lack of satisfaction with employment and job opportunities, heavy workloads and roles within their families, unsuccessful and intimidating relationships, and complications during their pregnancy.¹⁷

When specifically considering COVID-19 stressors faced by mothers, mothers experienced greater levels of stress during the pandemic relative to before the pandemic among a sample of mothers in China (Tamo, 2020). In this study, single mothers and mothers in small households experienced the greatest levels of COVID-19-related stress relative to individuals of other demographics.²⁰ Further, many families had to transition to children remotely attending school from home or homeschooling.²¹ This posed multiple unique additional stressors for both parents and their children. Parents had the stress of having less privacy due to so much extra time spent supporting their children in conjunction to their additional housework.²² Further, job loss was highest for mothers, relative to fathers or adults without children, often due to childcare difficulties, potentially contributing to more negative mental health consequences.^{23, 24} Data from Statistics Canada shows the percentage of parental tasks performed by four categories of parents during the COVID pandemic: men working outside of home, men working at home, women working outside of home, and women working at home. The study examined three main tasks: “1. Playing with children or taking part in leisure activities with them, 2. Putting children to bed or seeing that they go to bed, 3. Homeschooling or helping children with homework”.²⁵ This study found that women working at home have the most parental tasks at home followed by women working outside of home, men working at home, then men working outside of home, respectively.

Another study examining maternal and paternal mental health during the pandemic found that mothers were ten times more likely than fathers to be responsible for homeschooling.²⁶ Also, nearly half of the mothers in the sample reported feeling like they had no help with homeschooling. Ten percent of the mothers reported leaving their jobs to take on additional homeschooling. Regardless of COVID-19 and

employment circumstances, much of the burden around family care and homemaking goes to mothers. Further, a separate study found that mothers experience more COVID-19-related anxiety than fathers.²⁷ Further, there is evidence which shows that maternal postnatal anxiety is associated with infants’ later abilities to self-regulate (such as self-soothing). Parental stress levels and the amount of mother-infant bonding time mediated the relationship between maternal anxiety and infant regulation abilities.¹⁶

Protective Factors Against High Maternal Stress:

Maintaining self-care strategies is beneficial for mothers to maintain lower stress levels. To reduce stress mothers, having self-care routines and strategies can help to enhance maternal mental health and may prevent the likelihood of contracting COVID-19.¹⁹ Interestingly, research found that implementing social restriction improved depressive symptoms within pregnant women with low socioeconomic status during COVID-19 pandemic.²⁸ Self-care practices may also lower stress levels preventing cesarean-section delivery risks for women¹⁹ due to damage in the uterus, loss of a need for cesarean-section for future births, and blood loss.

Family members and friends can aid in reducing maternal stress by providing instrumental and social support. Existing research shows that maternal stress is significantly lower when fathers are more active in child-rearing.²⁹ School-aged children experienced more time with their fathers during COVID-19.³⁰ One study highlighted a child describing that COVID-19 has helped them get more family time, especially with their father. With fewer work hours during the pandemic,³¹ fathers may be able to contribute to parental work to give social and family support to stressed mothers. Other than mothers individually seeking to decrease their stress levels with self-care routines, family members offering support may lower maternal stress levels as well.³⁰

Effects of COVID on Child Mental Health:

Similar to adults, children’s three major COVID-19 stressors were anxiety, depression and stress, with 24.9% of children experiencing anxiety, 19.7% experiencing depression, and 15.2% experiencing high levels of stress, respectively.¹² Children have different stressors depending on their age groups.³² Most children’s stress levels increased due to the global pandemic of COVID-19. More children experienced high levels of stress as they were adapting to a new environment with different restrictions, including academic stress with a new learning style of “online learning”²² and having restrictions around asking direct questions to teachers. Other stressors included a “rapid rise in the number of infected cases and deaths, disruption of daily routines, home confinement, fear of infection, social distancing from peers and friends, and lack of access to educational resources”.³² This research shows that COVID-19 was a stressor for children, as their normal routine was significantly disrupted by having to transition from physically attending school to remote virtual learning. As a result of remote schooling, students often lose physical interaction with friends, which makes it difficult for children to adapt to COVID-19 lifestyles.³³ Having these stressors during early

disorder symptoms in their adulthood.³⁴ Stressors related to COVID-19 can also trigger neuroinflammation and behavioral impairments. This trigger in neuroinflammation can induce social isolation and stress due to the changes during early life.³⁴ Also, there was a correlation between the increase in screen time due to social isolation and the incidence of mental health disorders.³²

Major routine changes may expose children to a significant risk for their well-being as these changes lower the levels of resilience in children, changes in working conditions, and parental psychological, physical, or genetic problems.³⁵ Children and adolescents are already at the highest risk of mental health issues due to hormonal changes, brain changes, and overall identity changes during puberty, making adolescence a challenging adjustment period.³⁶ With the additional stressor of COVID-19, children experience even more difficulty coping with stress.

With COVID-19 and the lack of accessibility to education, there were gaps in specific countries and regions.³⁷ This caused more limitations in literature impacting children's education. This lack of resources caused more comprehensive education and health gaps between the wealthy and the poor.³⁸ Given that individuals with lower education levels were already at increased risk of mental health consequences before COVID-19, it is important to consider how COVID-19 may have exacerbated an already prominent risk factor for mental health disorders and chronic stress.

Additional risk factors for child mental health consequences include parental stress, a decrease in individual levels of resilience, changes in environment, and psychological, genetic and physical problems.³⁵ To cope with COVID-19 stress, parent-child discussions were a beneficial act in maintaining mothers' and children's mental health.¹²

A stressor that both mothers and children shared was race and cultural differences. As COVID-19 originated in China, many citizens of Asia have suffered from Asian hate crimes and stereotyping. This was another stressor and fear for many Asians, as there were many cases of physical violence with Asians as victims. There was a 77% increase in hate crimes targeting Asian people from March 2020 to June 2021,³⁹ leading to fear among individuals of Asian descent of being physically abused due to theories of COVID-19.

Protective Factors Against High Child Stress:

To combat stressors of COVID-19 amongst children, implementing health policies will mitigate negative mental health outcomes of COVID-19.³⁴ Also, some children benefit from having parent-child discussions as they get to share their thoughts and express themselves openly.¹² Because many stressors are related to education, prioritizing equal and quality education for all children can be another possible solution to a stress-free environment. This means that regardless of a child's race, gender, ethnicity and other background, children should be educated appropriately. This way, all children will have access to resources and be provided with essential education.

■ Conclusion

This study aimed to determine how COVID-19 stressors impacted mothers' and children's physical and mental health.

Between these two populations, the research revealed commonalities and differences in the types of stressors experienced and the impacts of those stressors. Some common stressors that both mothers and children deal with are anxiety, depression, and chronically high stress. All of these were increased by disrupting daily lives and restrictions during the COVID-19 pandemic. In particular, many mothers experienced more work, at home and outside of home due to children staying home for school, whereas pre-COVID-19, children were at school for much of each day. Children, they were socially isolated from their friends and were limited to being in their homes. A big part of childhood is socializing with peers and forming peer connections.

Children and adolescents faced the unique challenge of adapting to COVID-19 life changes during an already difficult period of life adjustment. Many children were required to adjust to major life changes at such a young age. Being adaptive to a different environment can be a benefit for some people, while others may struggle. For instance, during online school, people might have been able to improve their grades, as they had much more time to work on assignments at home with canceled after-school commitments and eliminated transportation time. However, for some others, learning in online school might have been a challenge. Children may have experienced difficulty motivating themselves while maintaining their self-esteem when they were not doing well in school. When people struggle at work or school, they have room to overcome this stress by doing something fun in their free time, for instance, going to a sports club after-school. However, with COVID-19 restrictions, people were restricted to their homes and not able to do things that were previous sources of stress relief.

Approaches towards treating stress may differ for mothers versus children as the types of stress these two demographics face are different. Further research needs to be completed to understand the full impact of COVID-19 stress on mothers and children. Conducting a qualitative interview study will be essential to hear voices from the populations researched in this project, including mothers and children. Different people have varying experiences and some may have experienced extreme conflict from COVID-19. Hearing the direct experiences of mothers and children in a qualitative study will strengthen this research. Further investigation is also needed to determine the differences of stressors between pregnant women and mothers. Currently, they are tied under the same category since not much research has been found that aims to distinctly separate the types of stressors that mothers and pregnant women experience. Having them individually researched will determine more specific stressors, experiences, and feelings these two groups experience. Additionally, more worldwide data with a better understanding of this topic is needed. Some of the data included in this review was specific to different countries, and more data is required on cultural differences in COVID-19 stress. Further, worldwide data that incorporates how Asian hate may have exacerbated COVID-19 stress for mothers and children will benefit this line of research.

The limitation of the manuscript lies in the fact that this is a COVID-19-targeted paper. As COVID-19 only started

roughly about 3 years ago, there is still much to be learned about the long-term physical health, mental health, educational, and economic effects of COVID-19, particularly among mothers and children.

This paper strongly connects to our daily lives as we live in a world with COVID-19. Acknowledging that being in this circumstance causes stress is important to remember as society is said to live with COVID-19 for at least the next few years. Especially for the targeted audience for this paper, pregnant women/mothers and children, it is important to note that due to the change in our lives from pre-COVID-19 to the COVID-19 era there are many stressors around them that they might not be familiar with

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■ Author

A life-long animal lover, Riko Kubo has developed her interest in animal welfare since elementary school after a project on euthanasia. After her careful examination on pets, she sparked her curiosity in examining the different symptoms her dog carried depending on the breeding conditions of its mothers. After seeing the correlation between mother's poor breeding conditions and stress symptoms its children shows, she began researching into how the experience of mother's maternal stress affects young children's general stress. Riko continues to raise awareness about animals and hopes to carry on her experience becoming a biology researcher, veterinarian or political advocate for animal lives.