

# **Attachment and the COVID-19 Pandemic**

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**A**ttachment bonds between parents and children represent a core developmental system that supports adaptation to stress. A wealth of evidence suggests that secure attachment relationships are associated with greater psychological and physical wellbeing as well as with resilience in the wake of difficult life events (Darling Rasmussen et al.). At the same time, the family stress model (Masarik and Conger) emphasizes the negative influence of outside challenges on parent-child relationship quality and attachment. The COVID-19 pandemic has introduced numerous challenges for families, which both heighten the salience of attachment for child wellbeing and pose significant threats to its security.

In this chapter, we explore the role of attachment in children's experience of and adaptation to the COVID-19 pandemic. We focus on the development and impact of attachment security but also consider how the different forms of insecure attachment (i.e., avoidant, resistant, and disorganized) may influence these processes. Throughout, we emphasize the heightened significance of attachment in stressful contexts to explicate how attachment relationships have likely affected children's psychological responses (e.g., psychological distress and wellbeing), behavioural responses (e.g., prosocial behaviours to benefit others and health protective behaviours, such as masking and social distancing), and physiological responses (e.g., immune function) to the COVID-19 pandemic. We also consider how the security of parent-child attachments has likely been shaped by the changes and challenges introduced

by the COVID-19 pandemic. We identify several factors, such as racial and ethnic disparities, facets of the family environment, and access to social support, which may further influence the relation between attachment and child adjustment within the COVID-19 context. We conclude by discussing how lessons learned in the context of the COVID-19 pandemic can be harnessed to support the ongoing negotiation and recovery of children and families in response to this crisis.

## **The Development and Adaptive Significance of Attachment Security**

Psychological theorists and researchers have long centred the quality of the parent-child relationship in models of both health and illness. However, it was not until the 1950s that central features of this relationship were codified in John Bowlby and Mary Ainsworth's notions of attachment and sensitive caregiving. Bowlby coined the term "attachment" to describe a species-universal evolutionary process that encourages human survival by establishing and maintaining proximity to a sensitive and responsive caregiver. He posited that this behavioural system is activated by the introduction of environmental threats and reciprocally reinforced when caregivers manage or resolve the child's distress. In her direct observations of mother-infant interactions, Ainsworth demonstrated that repeated experiences of sensitive responding to children's attachment behaviours (e.g., crying, vocalizing, and clinging) contributed to the development of an organized regulatory system through which children manage the physical and psychological distance between themselves and their parent (Ainsworth et al.). Across development, children's trust in their relationship with their parent supports their exploration and interaction with their environment (i.e., secure base); they have confidence that they can find physical and emotional safety in the relationship should they become threatened (i.e., a safe haven; Ainsworth et al.). Together, these functions of secure base and safe haven comprise attachment security.

Over time, repeated exchanges in the caregiving relationship inform children's emergent beliefs and expectations, or mental representations, about the reliability and safety of others. In tandem, children develop a complementary representation of their own worth and competence (Bretherton and Munholland). Sensitive and responsive parents, and

the resultant security of attachment, support children's understanding of the world as predictable and safe as well as their confidence in their capacity to overcome challenges with the help of their parent (Sroufe). Parents' sensitive modulation of children's emotional, behavioural, and physiological responses to contextual demands, or coregulation, offers critical support for children's emergent capacities to control their own responses in the interest of goal attainment through self-monitoring (i.e., self-regulation). Although attachment security develops across the infant and toddler years, its implications for adaptation are enduring, as it lays the foundation for the way individuals think about others, the self, and the self-with-others. These internal working models are informed by the quality of these early caregiving exchanges and remain relatively stable across time (Bretherton and Munholland).

Internal working models encompass individuals' beliefs and expectations of the self, others, and the self-in-relationship with others, which emerge from the quality of early caregiving exchanges. In the context of sensitive and responsive caregiving, children develop positive expectations for themselves and the social world. However, when caregiving sensitivity is compromised by rejecting or inconsistent parenting practices, children may develop insecure internal working models. In cases of a severe breakdown in parenting quality, such as when a parent is frightening and abusive or frightened and traumatized, the attachment system breaks down, resulting in a disorganized or disoriented attachment. In these cases, the parent either represents a source of fear, as in the case of a frightening or abusive parent, or communicates that the child is a source of fear, as in the case of a frightened or traumatized parent. Because the evolutionary function of attachment is to provide children with safety during times of vulnerability, the experience of frightening or frightened behaviour from their attachment figure evokes competing strategies for managing separation and challenge. In these instances, the attachment system becomes disorganized, as the child is compelled to both flee from the danger of the parent, as in avoidant attachment, and approach the safety of the parent, as in resistant attachment simultaneously.

Attachment security is positively associated with a range of adjustment indicators (Cassidy and Shaver). For example, children with secure attachments are better able to label and define emotions, which supports their capacity to manage and regulate them effectively. By engendering

children's positive beliefs about the self and others, sensitive caregiving and ensuing attachment security also enhance the quality of children's social relationships. In the cognitive domain, attachment security is positively linked with children's executive functioning (e.g., working memory and attentional control) as well as academic achievement. Of particular relevance to children's navigation of the COVID-19 pandemic is the special significance of attachment relationships for understanding individual differences in adjusting to stressful contexts. Indeed, a wealth of literature points to the robust contribution of attachment security to positive adaptation in the face of adverse life events (Darling Rasmussen et al.).

## **Attachment Security and Adaptation to the COVID-19 Context**

Given the role of attachment security in multiple domains of competence, and especially in coping with difficult life events, secure parent-child attachment relationships are an important source of support for children's and adolescents' successful navigation of the COVID-19 pandemic. Children have experienced a variety of stressful changes to their daily lives as a result of this pandemic, including the shift to remote schooling, limited access to extracurricular activities (e.g., sports and music groups), and reduced contact with extrafamilial social partners (e.g., friends, teachers, and extended family). For the more than 5.2 million children worldwide who have experienced the death of a parent due to COVID-19 (Unwin et al.)—and the countless others who have lost extended family members, particularly grandparents—these challenges are all the greater. In addition to direct stressors, children have witnessed changes in the physical, emotional, and economic stability of their families and communities that assuredly threaten their sense of safety and predictability in the world. For these reasons, parent-child attachment relationships have played an important role in children's psychological, behavioural, and biological adaptation to the COVID-19 pandemic.

## **Attachment and Psychological Adjustment to COVID-19**

Among older children and adolescents, the quality of attachment relationships prior to the onset of the pandemic likely supported their

psychological health during it, even amid contemporaneous changes in parenting stress or sensitivity. Children's confidence in the availability and sensitivity of their parents equips them with a wide repertoire of effective coping mechanisms to recruit when facing difficult life events, both in the presence and the absence of their attachment figure. As children gain experience coregulating difficult emotions with a supportive parent, they develop the skills to effectively regulate emotions independently, which decreases their risk for psychopathology. The COVID-19 pandemic precipitated worldwide spikes in anxiety, depression, and posttraumatic stress (Vindegard and Benros). Thus, it is critical to understand and amplify the protective potential of attachment relationships to promote mental health.

A primary function of the attachment relationship is to mitigate the distress caused by difficult or stressful experiences. Thus, it is unsurprising that young children have demonstrated a significant increase in attachment-related behaviours, such as clinging to parents, since the start of the pandemic (Jiao et al.). Moreover, growing evidence demonstrates that parents' capacity to respond to these attachment-related demands appropriately promoted children's psychological wellbeing during the early phases of the pandemic (Neubauer et al.). Similarly, recent evidence suggests that relations between parents' and children's mental health problems during the pandemic were less pronounced in families with positive parent-child relationships (Bate et al.). That is, positive parent-child relationships protected children from the anxiety, depression, and behaviour problems that are typically associated with parental distress.

Adolescence represents a crucial transition period in attachment because youth turn towards peers and romantic partners as attachment figures of equal or greater value to parents (Cassidy and Shaver). COVID-19 lockdowns and school closures might have presented unique challenges for adolescents who experienced reduced contact with these emergent attachment relationships. For example, evidence suggests that attachment to peers was a stronger predictor of adolescents' posttraumatic stress symptoms during COVID-19 than attachment to parents (Tambelli et al.). The deleterious impact of COVID-19 restrictions might have been magnified for adolescents who depend on extrafamilial relationships for psychological support. For example, a study of Italian adolescents conducted at the height of the country-wide lockdown

demonstrated that psychopathological outcomes were most pronounced among those high in attachment insecurity with both parents and peers (Muzi et al.). Notwithstanding the rising significance of extrafamilial relationships across development, parent-child attachment security continues to shape adolescents' psychological adjustment. Indeed, emerging evidence suggests that adolescents with secure attachment relationships prior to the pandemic evidenced fewer than expected mental health symptoms in response to the onset of the pandemic (Coulombe and Yates).

### **Attachment and Behavioural Adjustment to COVID-19**

Attachment security supports children's prosocial behaviour, or behaviour intended to benefit others. Repeated experiences of successfully managing distress with the help of a sensitive parent gives children the confidence that they can be similarly effective in mitigating the distress of others (Cassidy et al.). Furthermore, as children effectively process their own distress, they gain the capacity to turn their attention to the needs of others (Williams and Berthelsen). Thus, secure attachments engender positive behaviours.

The containment of the COVID-19 pandemic relies heavily on our willingness and capability to behave prosocially. For example, although wearing a mask prevents the contraction of COVID-19, it mitigates the spread of the virus to others even more strongly. Likewise, COVID-19 vaccines not only enhance individual immunity but also reduce virus transmission rates and support herd immunity for the broader population. Thus, understanding how and why children may engage in these other-oriented behaviours is of critical importance to containing and ending the COVID-19 pandemic. Early longitudinal evidence suggests that secure attachment relationships in early adolescence promoted later psychological wellbeing during the onset of the COVID-19 pandemic and, as a result, engendered both prosocial and COVID-19 health-protective behaviours (Coulombe and Yates). However, even some instances of attachment insecurity, such as resistant attachment, might have contributed to positive health protective practices (Lozano and Fraley).

### **Attachment and Biological Adjustment to COVID-19**

In addition to psychological and behavioural health outcomes, attachment security influences the development and operation of biological stress response systems (Gunnar et al.). Fundamental stress response

systems, such as the hypothalamic-pituitary-adrenal (HPA) axis, are coregulated with parents. Over time, recurrent patterns of coregulation shape children's capacities to modulate their own biological responses to stressful experiences.

Although some level of physiological reactivity to stress is normative, absent, extreme, or prolonged (e.g., dysregulated), stress responses have markedly negative implications for physical health (Turner et al.). Stressful experiences, especially those occurring in childhood, are linked with a host of later health problems, including decreased immunity, cardiovascular disease, autoimmune disease, obesity, diabetes, and early mortality (Hughes et al.). Children with secure attachment relationships demonstrate adaptive HPA responsivity to and adequate recovery from stress (Gunnar et al.), which decreases their risk for subsequent health problems. Thus, attachment security has the potential to support children's navigation of pandemic-related stressors in ways that protect their physical health and may render them less vulnerable to disease contraction and progression.

## **The Development of Attachment Security during the COVID-19 Pandemic**

The COVID-19 pandemic and the attendant restrictions placed on individuals and families changed the landscape in which attachment security develops. Families have encountered unprecedented economic and social stress, children have faced marked changes in their access to social partners, and together they have worried about and mourned the lost lives of loved ones. Against the backdrop of these disruptions, more than 3.5 million infants who were born in the United States (US) in 2020 are forming their primary attachments (Hamilton et al.). Theoretical and empirical findings suggest that COVID-19 has influenced attachment security and development across the lifespan.

### **Prenatal Attachment during the COVID-19 Pandemic**

Prenatal attachment captures the unique relationship between an expectant parent and a developing fetus (Brandon et al.). During the prenatal period, parents think about their child-to-be, talk with others, prepare for delivery, and experience a host of feelings about their developing child. Expectant parents carry their own hopes and fears

into this emerging relationship resulting in a set of beliefs and expectations (i.e., an internal working model) about their child-to-be that shapes the postnatal parent-infant relationship (Slade and Sadler).

In the best of times, pregnancy is accompanied by numerous worries, but the COVID-19 pandemic has magnified these uncertainties. Expectant parents face intensified worries about the quality and availability of their support networks amid social distancing requirements, potential insecurities in their finances and employment, and threats to the health and safety of their newborn in the absence of vaccination resources. Evidence from the first few months of the COVID-19 pandemic suggest that near-term pregnant women felt stressed and confused; half the sample were unsure as to whether breastfeeding would become unsafe, over a third frequently worried about becoming infected with COVID-19 while pregnant, and most worried that they or their baby may be infected during or right after delivery (Yassa et al.). Amid this heightened sense of uncertainty and vulnerability, parents may be more likely to question their capacity to adequately nurture and protect their child. In turn, these feelings of helplessness may undermine the development of prenatal attachment and subsequent self-efficacy in the caregiving role (George and Solomon). Recent findings indicate that the COVID-19 pandemic has negatively affected prenatal attachment for many women. For example, a spring 2020 survey of Italian pregnant women revealed negative relations between anxiety and important indicators of positive prenatal attachment, such as thinking about, planning for, and talking to the developing baby (Craig et al.). Other studies have documented negative associations between COVID-19 anxieties, such as fear of contracting the illness, and prenatal attachment (e.g., Karaca et al.). Since the COVID-19 pandemic began, pregnant women have consistently reported marked elevations in anxiety and depressive symptoms above pre-pandemic levels (e.g., King et al.). These escalations are of serious concern, since prior studies have shown that mothers' mental health difficulties undermine positive prenatal attachment (Alhusen et al.) with enduring implications for postnatal attachment security (Barnes and Theule).



## Postnatal Attachment during the COVID-19 Pandemic

As with expectant parents, the COVID-19 pandemic has negatively affected parental wellbeing and attachment security in families with infants and children. As noted earlier, one mechanism by which the pandemic may have negatively affected postnatal attachment security is parental psychological distress, including parenting stress, anxiety, and depression. Parents struggling with mental health concerns may be “psychologically separated from their infants,” making it difficult for them to be attuned and responsive, even when the parent and infant are physically together. The more psychological distress parents experience, the less secure their attachment relationships with their own infants and children tend to be (Barnes and Theule).

During the infant and toddler periods, postpartum depression (PPD), which is a clinical condition in which a parent experiences a major depressive episode within one month of delivery (American Psychiatric Association), may pose a particularly potent threat to parent-infant attachment security. Symptoms of PPD include low mood, lack of interest or pleasure, sleep disturbances, irritability, feelings of guilt and hopelessness, difficulty concentrating, and suicidality. PPD impairs parent-infant bonding, with parents suffering from the condition more likely to say that they feel irritated by their baby, trapped by parenthood, and that they lack closeness with their babies (Faisal-Cury et al.). Maternal depression, including PPD, consistently predicts insecure attachment (Barnes and Theule).

New parents are particularly vulnerable to PPD during community-wide catastrophic events due to the loss of psychosocial resources (Ehrlich et al.). Consistent with this prior literature, rates of PPD have increased during the COVID-19 pandemic. A study conducted in north-eastern Italy, which was heavily affected by COVID-19 early in the pandemic, compared rates of PPD symptoms among women who gave birth between March and May of 2020 to a similar group of women who gave birth during the same time the previous year. The prevalence of PPD more than doubled during the pandemic; 12% of women reported clinically significant symptoms in 2019 compared to 26% in 2020 (Zanardo et al.). Similarly, in a Turkish study, twice as many women who gave birth in the spring of 2020 were at risk for PPD (14.7%), compared to a similar group of women surveyed at the same hospital prior to the pandemic (7.8%; Oskovi-Kaplan et al.). Maternal attachment security was

also lower among mothers with high PPD symptoms in this sample.

In addition to PPD, the pandemic might have affected postnatal attachment via escalations of intimate partner conflict. Stressful life events negatively affect subjective perceptions of intimacy, support, and enjoyment in romantic relationships (Williams). Romantic partnerships have suffered during the pandemic amid increased stress and uncertainty (e.g., Agüero). These risks may be compounded in families with young children, as the postpartum period is associated with lower relationship and sexual satisfaction at the best of times (Leavitt et al.) Given that interparental relationships with high conflict, low communication, and poor satisfaction predict lower parent-child attachment security during early childhood (Howes and Markman), the pandemic might have undermined attachment security via these relational processes.

For many couples, the pandemic introduced elevated threats of violence in the home as global rates of intimate partner violence rose sharply following initial pandemic lockdowns. Given previous evidence that rates of intimate partner violence increase during the perinatal period (Bowen et al.), families with infants were at particularly significant risk during the pandemic. Following the tenets of emotional security theory (Cummings and Davies), intimate partner violence undermines the development of attachment security during infancy and childhood. In these settings, children's heightened fear, due to violence exposure, activates the attachment system at the very moment when parents are least equipped to restore the child's sense of trust and safety.

## **Moderators of the Association Between Pandemic Stressors and Attachment Security**

Notwithstanding the adaptive significance of parent-child attachment security, as well as the aforementioned risks to its development during this pandemic, the experience of the COVID-19 pandemic has been far from uniform, even within the US. Numerous factors influenced how each family adapted to the pandemic, including prepandemic child, parent, and family characteristics; the extent to which the pandemic altered the family environment; and the degree to which the family's economic and social resources were affected. Thus, it is important to consider potential moderators of associations between attachment security and children's adaptation to the pandemic as well as between

pandemic stressors and the development of attachment security.

### **Racial and Ethnic Disparities**

The COVID-19 pandemic has been a uniquely traumatic experience for racial and ethnic minority families for several reasons. First, the coronavirus has disproportionately caused illness and death among people of colour (Holmes et al.). Second, racial and ethnic minority groups experienced greater economic and employment instability compared to white people (Dias). Finally, the COVID-19 pandemic coincided with increased anti-Asian violence and heightened exposure to anti-Black violence in the US, including highly publicized instances of police brutality and social backlash against protests calling for racial justice. Although psychological distress was widely experienced during the pandemic, racial and ethnic minority individuals were particularly hard hit (Gibbs et al.), especially those with prepandemic psychosocial risk factors such as financial strain (Adesogan et al.). Thus, both the significance of attachment security and threats to its development may have been heightened for racial and ethnic minority families.

### **Family Environment**

The COVID-19 pandemic introduced shifts in the degree of contact between parents and children. In many cases, parents and children found themselves working and learning from home, with attendant increases in parent-child contact. For example, one study conducted in the spring of 2020 found that parents were spending more time with their children in a variety of activities compared to before the pandemic, including playing, eating meals, going for walks, reading books, and watching television together (Lee et al.). In cases of positive relationships, heightened proximity may have increased the relevance and security of attachment relationships. For example, one study evaluating the musical engagement of parents and children during the pandemic indicated that parents found many opportunities to help their children connect with music during the pandemic and parent-child musical engagement predicted attachment security (Steinberg et al.).

For other families, the heightened intensity of parent-child contact might have strained the attachment relationship. Results of the American Psychological Association's (2020) *Stress In America* poll found that parents were significantly more stressed than adults without children, and longitudinal studies documented increases in parents' depression,

anxiety, and stress since before the pandemic began (Westrupp et al.). Being confined to the same living quarters without the possibility of the reprieve normally offered by out-of-home childcare and social engagements with friends and family may have rendered parents less patient and emotionally available to their children, with expected negative implications for parent-child relationship quality and child adaptation. Given that attachment behaviours are most relevant in stressful situations, reductions in parents' patience and emotional availability may have undermined children's successful navigation of COVID-19 and related stressors (Neubauer et al.).

Of note, a significant minority of families experienced dramatic declines in the quantity and quality of time spent together. Many frontline workers isolated themselves from their families to avoid disease transmission or were temporarily separated from their families while they travelled to areas where their clinical services were needed (Schwartz). Although empirical data regarding the impact of family separation for frontline workers and their children have yet to emerge, prior studies showing that even temporary parent-child separations negatively affect children's attachment security point to the need for targeted research focussed on these families.

### **Economic Stressors**

Variable experiences of economic and occupational stability throughout the pandemic likely shaped the significance and quality of parent-child attachment. Many parents experienced layoffs alongside increased childcare demands. More than 22 million Americans lost their jobs during the first month after the US declared COVID-19 a national emergency (Long). One quarter of adults reported that they or someone in their household was laid off or lost their job due to the pandemic, one quarter reported trouble paying their bills, and about one-in-six had borrowed money from others or visited a food bank to make ends meet (Parker et al.).

As noted earlier, the family stress model (Masarik and Conger) provides a theoretical framework for understanding how stress, particularly economic stress, adversely affects family functioning. In this view, economic hardship introduces several threats to positive child and adolescent development through its negative effects on parents' psychological functioning, relationship quality, and parenting behaviour. Consistent

with this theory, pandemic mental health effects were more pronounced among lower-income parents compared to higher-income parents (Fong and Iarocci). Likewise, parental job loss was associated with increased conflict between parents and adolescents, which, in turn, predicted declines in adolescents' expression of positive emotions (Wang et al.).

Research has yet to be published regarding the effects of family economic insecurity on parent-infant relationships or the formation of attachment during COVID-19, but parental job loss and other economic and social stressors might have increased rates of child maltreatment (e.g., Griffith). Even parents who continued to work throughout the pandemic, though fortunate not to experience job loss, might have encountered childcare issues, raising the potential for supervisory neglect when parents were required to work outside the home despite school and daycare centre closures (Humphreys et al.)

### **Social Support**

Social support promotes positive mental health outcomes and attenuates the impact of stress and adversity on mental health. Although emotional support from friends and family buffered the effects of COVID-19 stress on mental health difficulties (Szkody et al.), the lack of physical support instantiated by social distancing guidelines may have been particularly impactful for families with children. Amid childcare closures and travel restrictions, families may have lost access to previously available social support networks. Prior research demonstrates that parents' lack of contact with and assistance from friends and family members, such as grandparents, accounts for up to half the parenting stress that parents experience (Parkes et al.). Despite the availability of telecommunications, many parents found these to be an inadequate replacement for in-person social support and contact (Ollivier et al.), and these, too, were differentially accessible across economic and regional groups.

### **Concluding Thoughts and Future Directions of Research**

Attachment theorists emphasize the contribution of sensitive and responsive caregiving to the development of children's trust in the parent-child relationship, regulatory competence, and successful navigation of difficult life events. The COVID-19 pandemic has introduced numer-

ous challenges for both parents and children, but attachment security can help children survive and thrive during this period of marked uncertainty. Likewise, the COVID-19 pandemic has dramatically altered the landscape in which attachment relationships develop, which may have important implications for children's capacity to navigate future crises. As theory and research on the impact of COVID-19 become increasingly available, it is important to consider best practices for moving through and beyond this global crisis. At a time when so much about the COVID-19 pandemic is beyond our control, we can take comfort in knowing that active efforts on the part of parents, providers, and policymakers to protect and promote attachment security can equip children with effective tools to navigate this and future crises. Supporting parents during these challenging times will positively affect family and child functioning. At the same time, supporting children may help to reduce parenting stress during COVID-19.

Several evidence-based dyadic interventions have been developed to support secure attachment and enhance positive parenting of infants and young children, including Child Parent Psychotherapy (Lieberman et al.), Circle of Security (Coyne et al.), and Attachment and Biobehavioral Catch-up (ABC; Dozier and Bernard). These and other attachment-based interventions have been adapted for delivery via telehealth during the pandemic (Zayde et al.) and have shown positive empirical results regarding the feasibility and effectiveness of Circle of Security (Cook et al.) and ABC (Schein et al.). Provision of telehealth services has been facilitated by changes allowing Medicaid to reimburse telehealth therapy services, providing more people safe access to mental health services. Although many have argued for the continuation of this policy, additional support and funding will be needed to increase accessibility of telehealth services for marginalized communities (Ortega et al.), who may be most at risk for negative COVID-19 effects on attachment.

Emerging theory and research clearly indicate that attachment security was and continues to play a vital role in children's adaptation to and recovery from the COVID-19 pandemic. At the same time, pandemic-related stressors have threatened the development of attachment security. Importantly, associations between attachment and child outcomes are likely recursive in ways that have yet to be examined during this pandemic. For example, children with less secure attachments may have experienced greater emotional distress and behaviour problems in

response to the pandemic which, in turn, may have further taxed the parent-child relationship and undermined attachment security in ways that contributed to ongoing escalations of child problems. As we work to understand whether and why children may realize adaptive or maladaptive outcomes during and following the COVID-19 pandemic, future research should examine bidirectional models that fully capture the interplay between attachment and child behaviour.

The consequences of COVID-19 are likely to reach beyond the pandemic's end, as the landscape in which children are developing has changed in significant and potentially enduring ways. Educational systems have shifted, with many schools continuing to vacillate between in-person and online educational modalities. Likewise, interactions with individuals living outside the home have become distanced and strained. Many families have exhausted their emergency savings and many parents, especially mothers, have faced career setbacks that could have long-term implications for their future economic and financial stability.

At the level of policy, we encourage ongoing efforts to provide financial assistance to low- and middle-income families with children (e.g., Child Tax Credits provided through President Biden's American Rescue Plan), especially given recent findings suggesting that cash payments and increases in the minimum wage have positive effects on infant brain development (Troller-Renfree et al.) and family well-being (Raissian and Bullinger). As children learn to navigate this and future crises, they will continue to rely heavily on their attachment figures for support and guidance. Thus, we must support both parents and children to promote positive outcomes now and for future generations.

### Works Cited

- Adesogan, Olutosin, et al. "COVID-19 Stress and the Health of Black Americans in the Rural South." *Clinical Psychological Science*, Oct. 2021, p. 21677026211049380. *SAGE Journals*, <https://doi.org/10.1177/21677026211049379>.
- Agüero, Jorge M. "COVID-19 and the Rise of Intimate Partner Violence." *World Development*, vol. 137, 2021, p. 105217.
- Ainsworth, Mary, D. Salter, et al. *Patterns of Attachment: A Psychological Study of the Strange Situation*. Psychology Press, 2015.
- Alhusen, Jeanne L., et al. "The Role of Mental Health on Maternal Fetal

- Attachment in Low Income Women.” *Journal of Obstetric, Gynecologic & Neonatal Nursing*, vol. 41, no. 6, Nov. 2012, pp. E71-81.
- American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorders*. 5th ed. APA, 2013.
- Barnes, Jennifer, and Jennifer Theule. “Maternal Depression and Infant Attachment Security: A Meta Analysis.” *Infant Mental Health Journal*, vol. 40, no. 6, Nov. 2019, pp. 817-34.
- Bate, Jordan, et al. “Be My Safe Haven: Parent-Child Relationships and Emotional Health During COVID-19.” *Journal of Pediatric Psychology*, vol. 46, no. 6, 2021, pp. 624-34.
- Bowen, Erica, et al. “Domestic Violence Risk during and after Pregnancy: Findings from a British Longitudinal Study.” *BJOG: An International Journal of Obstetrics & Gynaecology*, vol. 112, no. 8, 2005, pp. 1083-89.
- Bowlby, John. “The Nature of the Child’s Tie to His Mother.” *International Journal of Psycho-Analysis*, vol. 39, 1958, pp. 350-73.
- Brandon, Anna R., et al. “A History of the Theory of Prenatal Attachment.” *Journal of Prenatal & Perinatal Psychology & Health: APPPAH*, vol. 23, no. 4, 2009, pp. 201-22.
- Bretherton, Inge, and Kristine A. Munholland. “Internal Working Models in Attachment Relationships: Elaborating a Central Construct in Attachment Theory.” *Handbook of Attachment: Theory, Research, and Clinical Applications*, edited by J. Cassidy and P. R. Shaver, The Guilford Press, 2008, pp. 102-27.
- Cassidy, Jude, et al. “Influences on Care for Others: Attachment Security, Personal Suffering, and Similarity between Helper and Care Recipient.” *Personality and Social Psychology Bulletin*, vol. 44, no. 4, 2018, pp. 574-88.
- Cassidy, Jude, and Phillip R. Shaver. *Handbook of Attachment: Theory, Research, and Clinical Applications*. Rough Guides, 2002.
- Cook, Alison, et al. “Pivot to Telehealth: Narrative Reflections on Circle of Security Parenting Groups during COVID-19.” *Australian and New Zealand Journal of Family Therapy*, vol. 42, no. 1, Mar. 2021, pp. 106-14.
- Coulombe, Brianne R., and Tuppert M. Yates. “Attachment Security Predicts Adolescents’ Prosocial and Health Protective Responses to



- the COVID-19 Pandemic.” *Child Development*, vol. 93, no. 1, 2022, pp. 58-71.
- Coyne, Joe, et al. “The Circle of Security.” *Handbook of Infant Mental Health*, edited by Charles H. Zeanah, The Guilford Press, 2018, pp. 286-498.
- Craig, Francesco, et al. “Effects of Maternal Psychological Distress and Perception of COVID-19 on Prenatal Attachment in a Large Sample of Italian Pregnant Women.” *Journal of Affective Disorders*, vol. 295, 2021, pp. 665-72.
- Cummings, E. Mark, and Patrick Davies. “Emotional Security as a Regulatory Process in Normal Development and the Development of Psychopathology.” *Development and Psychopathology*, vol. 8, no. 1, 1996, pp. 123-39.
- Darling Rasmussen, Pernille, et al. “Attachment as a Core Feature of Resilience: A Systematic Review and Meta-Analysis.” *Psychological Reports*, vol. 122, no. 4, 2019, pp. 1259-96.
- Dias, Felipe A. “The Racial Gap in Employment and Layoffs during COVID-19 in the United States: A Visualization.” *Socius*, vol. 7, 2021, p. 2378023120988397.
- Dozier, Mary, and Kristin Bernard. “Attachment and Biobehavioral Catch-Up.” *Handbook of Infant Mental Health*, edited by Charles H. Zeanah, The Guilford Press, 2018, pp. 499-511.
- Ehrlich, Matthew, et al. “Loss of Resources and Hurricane Experience as Predictors of Postpartum Depression among Women in Southern Louisiana.” *Journal of Women’s Health*, vol. 19, no. 5, May 2010, pp. 877-84.
- Faisal-Cury, Alexandre, et al. “Postpartum Bonding at the Beginning of the Second Year of a Child’s Life: The Role of Postpartum Depression and Early Bonding Impairment.” *Journal of Psychosomatic Obstetrics & Gynecology*, vol. 41, no. 3, 2020, pp. 224-30.
- Fong, Vanessa C., and Grace Iarocci. “Child and Family Outcomes Following Pandemics: A Systematic Review and Recommendations on COVID-19 Policies.” *Journal of Pediatric Psychology*, vol. 45, no. 10, 2020, pp. 1124-43.
- George, Carol, and Judith Solomon. “Caregiving Helplessness: The Development of a Screening Measure for Disorganized Maternal Care-

- giving.” *Disorganized Attachment and Caregiving*, 2011, pp. 133-66, <https://pascal-uscaiken.primo.exlibrisgroup.com>. Accessed 18 Feb. 2023.
- Gibbs, Tresha, et al. “Mental Health Disparities Among Black Americans During the COVID-19 Pandemic.” *Psychiatric Times*, <https://www.psychiatristimes.com/view/mental-health-disparities-among-black-americans-during-covid-19-pandemic>. Accessed 18 Feb. 2023.
- Griffith, Annette K. “Parental Burnout and Child Maltreatment During the COVID-19 Pandemic.” *Journal of Family Violence*, June 2020. *Springer Link*, <https://doi.org/10.1007/s10896-020-00172-2>.
- Gunnar, Megan R., et al. “Stress Reactivity and Attachment Security.” *Developmental Psychobiology*, vol. 29, no. 3, 1996, pp. 191-204.
- Hamilton, Brady E., et al. *Births: Provisional Data for 2020*. CDC, 2021, [www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf](http://www.cdc.gov/nchs/data/vsrr/vsrr012-508.pdf). Accessed 18 Feb. 2023.
- Holmes, Laurens, et al. “Black–White Risk Differentials in COVID-19 (SARS-COV2) Transmission, Mortality and Case Fatality in the United States: Translational Epidemiologic Perspective and Challenges.” *International Journal of Environmental Research and Public Health*, vol. 17, no. 12, Jan. 2020, p. 4322.
- Howes, Paul, and Howard J. Markman. “Marital Quality and Child Functioning: A Longitudinal Investigation.” *Child Development*, vol. 60, no. 5, Oct. 1989, pp. 1044-51.
- Hughes, Karen, et al. “The Effect of Multiple Adverse Childhood Experiences on Health: A Systematic Review and Meta-Analysis.” *The Lancet Public Health*, vol. 2, no. 8, 2017, pp. e356-66.
- Humphreys, Kathryn L., et al. “Increased Risk for Family Violence During the COVID-19 Pandemic.” *Pediatrics*, vol. 146, no. 1, 2020, p. e20200982.
- Jiao, Wen Yan, et al. “Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic.” *The Journal of Pediatrics*, vol. 221, 2020, p. 264.
- Karaca, Pelin Palas, et al. “The Relationship between Pregnant Women’s Anxiety Levels about Coronavirus and Prenatal Attachment.” *Archives of Psychiatric Nursing*, vol. 36, Feb. 2022, pp. 78-84.
- Leavitt, Chelom E., et al. “Parenting Stress and Sexual Satisfaction

- among First-Time Parents: A Dyadic Approach.” *Sex Roles*, vol. 76, no. 5, Mar. 2017, pp. 346-55.
- Lee, Shawna J., et al. “Parenting Activities and the Transition to Home-Based Education during the COVID-19 Pandemic.” *Children and Youth Services Review*, vol. 122, Mar. 2021, p. 105585.
- Lieberman, Alicia, et al. “Child-Parent Psychotherapy.” *Handbook of Infant Mental Health*, edited by Charles H. Zeanah, The Guilford Press, 2018, pp. 471-85.
- Masarik, April S., and Rand D. Conger. “Stress and Child Development: A Review of the Family Stress Model.” *Current Opinion in Psychology*, vol. 13, 2017, pp. 85-90.
- Muzi, Stefania, et al. “What’s Happened to Italian Adolescents during the COVID-19 Pandemic? A Preliminary Study on Symptoms, Problematic Social Media Usage, and Attachment: Relationships and Differences with Pre-Pandemic Peers.” *Frontiers in Psychiatry*, vol. 12, 2021. [www.frontiersin.org/articles/10.3389/fpsy.2021.590543/full](http://www.frontiersin.org/articles/10.3389/fpsy.2021.590543/full). Accessed 18 Feb. 2023.
- Neubauer, Andreas B., et al. “A Little Autonomy Support Goes a Long Way: Daily Autonomy-Supportive Parenting, Child Well-Being, Parental Need Fulfillment, and Change in Child, Family, and Parent Adjustment Across the Adaptation to the COVID-19 Pandemic.” *Child Development*, vol. 92, no. 5, 2021, pp. 1679-97.
- Ollivier, Rachel, et al. “Mental Health & Parental Concerns during COVID-19: The Experiences of New Mothers Amidst Social Isolation.” *Midwifery*, vol. 94, Mar. 2021, p. 102902.
- Ortega, Gezzer, et al. “Telemedicine, COVID-19, and Disparities: Policy Implications.” *Health Policy and Technology*, vol. 9, no. 3, Sept. 2020, pp. 368-71.
- Oskovi-Kaplan, Z., Asli, et al. “The Effect of Covid-19 Pandemic and Social Restrictions on Depression Rates and Maternal Attachment in Immediate Postpartum Women: A Preliminary Study.” *Psychiatric Quarterly*, Sept. 2020. 2020-67581-001, EBSCOhost, <https://doi.org/10.1007/s11126-020-09843-1>.
- Parker, Kim, et al. “Economic Fallout From COVID-19 Continues To Hit Lower-Income Americans the Hardest.” *Pew Research Center’s Social & Demographic Trends Project*, 24 Sept. 2020, <https://www.pewresearch.org/social-demographic-trends/>

- pewresearch.org/social-trends/2020/09/24/economic-fallout-from-covid-19-continues-to-hit-lower-income-americans-the-hardest/. Accessed 18 Feb. 2023.
- Parkes, Alison, et al. "Parenting Stress and Parent Support among Mothers with High and Low Education." *Journal of Family Psychology*, vol. 29, no. 6, 2015, p. 907.
- Raissian, Kerri M., and Lindsey Rose Bullinger. "Money Matters: Does the Minimum Wage Affect Child Maltreatment Rates?" *Children and Youth Services Review*, vol. 72, 2017, pp. 60-70.
- Schein, Stevie S., et al. "Assessing Changes in Parent Sensitivity in Telehealth and Hybrid Implementation of Attachment and Biobehavioral Catch-Up During the COVID-19 Pandemic." *Child Maltreatment*, Jan. 2022, p. 10775595211072516. *PubMed*, <https://doi.org/10.1177/10775595211072516>.
- Schwartz, Susan. "Front-Line Health Care Workers Reunite with Children after Months Fighting COVID-19." *ABC News*, <https://abcnews.go.com/Health/front-line-health-care-workers-reunite-children-months/story?id=71521151>. Accessed 18 Feb. 2023.
- Slade, Arietta, and Lois Sadler. "Pregnancy and Infant Mental Health." *Handbook of Infant Mental Health*, edited by Charles H. Zeanah, The Guilford Press, 2018, pp. 25-40.
- Sroufe, L. Alan. "Relationships, Self, and Individual Adaptation." *Relationship Disturbances in Early Childhood: A Developmental Approach*, edited by J. A. Sameroff and R. N. Emde, Basic Books, 1989, pp. 70-94.
- Steinberg, Selena, et al. "Musical Engagement and Parent-Child Attachment in Families With Young Children During the Covid-19 Pandemic." *Frontiers in Psychology*, vol. 12, 2021. *Frontiers*, <https://www.frontiersin.org/article/10.3389/fpsyg.2021.641733>. Accessed 18 Feb. 2023.
- Szkody, Erica, et al. "Stress-Buffering Role of Social Support during COVID-19." *Family Process*, vol. 60, no. 3, 2021, pp. 1002-15.
- Tambelli, Renata, et al. "Late Adolescents' Attachment to Parents and Peers and Psychological Distress Resulting from COVID-19. A Study on the Mediation Role of Alexithymia." *International Journal of Environmental Research and Public Health*, vol. 18, no. 20, 2021, p. 10649.

- Troller-Renfree, Sonya V., et al. "The Impact of a Poverty Reduction Intervention on Infant Brain Activity." *Proceedings of the National Academy of Sciences*, vol. 119, no. 5, Feb. 2022. <https://doi.org/10.1073/pnas.2115649119>.
- Turner, Anne I., et al. "Psychological Stress Reactivity and Future Health and Disease Outcomes: A Systematic Review of Prospective Evidence." *Psychoneuroendocrinology*, vol. 114, 2020, p. 104599.
- Unwin, H. Juliette T., et al. "Global, Regional, and National Minimum Estimates of Children Affected by COVID-19-Associated Orphanhood and Caregiver Death, by Age and Family Circumstance up to Oct 31, 2021: An Updated Modelling Study." *The Lancet Child & Adolescent Health*, vol. 6, no. 4, pp. 249-59.
- Vindegard, Nina, and Michael Eriksen Benros. "COVID-19 Pandemic and Mental Health Consequences: Systematic Review of the Current Evidence." *Brain, Behavior, and Immunity*, vol. 89, 2020, pp. 531-42.
- Wang, Ming-Te, et al. "COVID-19 Employment Status, Dyadic Family Relationships, and Child Psychological Well-Being." *Journal of Adolescent Health*, vol. 69, no. 5, Nov. 2021, pp. 705-12.
- Westrupp, E. M., et al. "Child, Parent, and Family Mental Health and Functioning in Australia during COVID-19: Comparison to Pre-Pandemic Data." *European Child & Adolescent Psychiatry*, Aug. 2021. *Springer Link*, <https://doi.org/10.1007/s00787-021-01861-z>.
- Williams, Kate, and Donna Berthelsen. "The Development of Prosocial Behaviour in Early Childhood: Contributions of Early Parenting and Self-Regulation." *International Journal of Early Childhood*, vol. 49, no. 1, 2017, pp. 73-94.
- Williams, Lee M. "Associations of Stressful Life Events and Marital Quality." *Psychological Reports*, vol. 76, no. 3\_suppl, June 1995, pp. 1115-22.
- Yassa, Murat, et al. "Near-Term Pregnant Women's Attitude toward, Concern about and Knowledge of the COVID-19 Pandemic." *The Journal of Maternal-Fetal & Neonatal Medicine*, vol. 33, no. 22, Nov. 2020, pp. 3827-34.
- Zanardo, Vincenzo, et al. "Psychological Impact of COVID-19 Quarantine Measures in Northeastern Italy on Mothers in the Immediate Postpartum Period." *International Journal of Gynecology & Obstetrics*,

vol. 150, no. 2, 2020, pp. 184-88.

Zayde, Amanda, et al. "Connection During COVID-19: Pilot Study of a Telehealth Group Parenting Intervention." *American Journal of Psychotherapy*, 2021, <https://psychotherapy.psychiatryonline.org/doi/10.1176/appi.psychotherapy.20210005>. Accessed 18 Feb. 2023.