



How do we educate children during a pandemic?

We must look at the long-term psychological fallout

BY ANNA DOVRE, BA, AND JENNA TRIANA, MD

The widespread implementation of school closures in response to the SARS-CoV-2 pandemic has been one of many public health interventions aimed at stemming the tide of viral transmission. While data regarding the epidemiologic impact of school closures remains scarce, the deleterious effects of social isolation on the developing child and the negative psychological sequelae of living in a time of pandemic must be addressed. Distance-learning measures, intended to replace classroom instruction, have varied widely across school systems based on inequitable resource capacity and rely heavily on parents and caregivers to fill in the gaps, exacerbating the impacts of social determinants on children's educational and mental welfare. The decision of when and how to return to in-person learning should take into consideration not only the dangers posed by the novel coronavirus, but the equally significant dangers of prolonged isolation and its effects on the pediatric psyche.

Over the last year of tumultuous, taxing and unprecedented change, schools across the country have struggled with the decision of how to educate their students:

reopening classrooms for in-person learning, keeping students at home with virtual curricula or opting for a hybrid model. In many school systems, these decisions have been made and remade over again as COVID-19 case rates oscillate in severity across seasons and regions. Families continue to wrestle with the competing demands of work, health and the safety of their children. It has been a time of profound uncertainty for school-aged children and their caregivers. The limitations and disparities of our school systems have been thrown into sharp focus, and the leaders of these institutions have struggled to scramble together a solution that fits for all parties. Meanwhile, the compounding effects of the pandemic place an ever-increasing burden on families to provide an environment that meets the myriad social, educational and psychological needs of their children.

The online distance-learning and home-schooling measures adopted at the beginning of the pandemic to adhere with social distancing guidelines have been applied inconsistently across school systems based on inequitable resource capacity and rely heavily on parents and caregivers to fill

in the gaps. Where parents are unable to provide structure or technology resources to ensure distance participation in school, children are falling through the cracks. Public school teachers, already struggling with low wages and a lack of structural support, were abruptly saddled with the task of providing the same services to their students in a radically altered digital environment; many have also been asked to face uncertain epidemiologic risks by returning to in-person teaching. The questions with which all of these stakeholders are grappling is: how do we raise our children in a time of pandemic? How do we keep them safe? How do we keep ourselves safe? And what will be the long-term fallout?

The question of how to educate our children during a pandemic is tied to the question of how this new paradigm of social isolation and physical distancing affects the well-being and development of our youth. Determining the costs and benefits of home-schooling measures must include a careful triage of the physical, social and psychological needs of the pediatric population, and whether these needs are currently being met. The psychological

health of children during a pandemic is particularly salient because of children's unique vulnerability to psychological trauma, as well as the deleterious effects of trauma on the developing nervous system, endocrine system and hypothalamic-pituitary-adrenal axis. It is essential for us to recognize the potential effects of the COVID-19 pandemic on children's mental and behavioral health in order to generate and implement timely interventions, both on a familial and a structural level, to mitigate harms and bolster the healthy development of our next generation.

As the COVID-19 virus began to reach pandemic proportions in China, researchers acknowledged that such an adverse event would have notable psychological and physiological manifestations in children. In a preliminary study, the three most severe of these manifestations were identified as inattention, irritability and clinginess. Other concerns included sleep difficulties, nightmares, decreased physical activity, loneliness, agitation, worry and fear for the health of relatives. In more recent studies, the COVID-19 crisis has been associated with feelings of abandonment, despair, incapacity and exhaustion in children.

As our understanding of adverse childhood experiences has broadened over the last several years, we have come to recognize the profound impacts of such experiences on the allostatic processes of the body, and the long-term effects on health outcomes. We know now that children exposed to traumatic events are at greater risk of premature mortality, depression, hypertension, diabetes and other causes of morbidity. It is possibly too soon to determine whether COVID-19 can be considered an adverse childhood experience on its own. However, it is not too soon to say that the pandemic has weakened our existing social safety nets, and rendered many families in ever-more-precarious economic and interpersonal situations. In the home, this puts children at increased risk for experiencing parental mental illness, domestic violence, and other forms of maltreatment. Children who had to undergo isolation or quarantine during

previous pandemics developed PTSD at rates as high as 30 percent.

The social isolation and physical distancing measures enacted as a result of COVID-19 carry their own psychological sequelae. For many children, the loss of the usual school routine means a lack of peer contact, reduced opportunities for stress regulation and impeded access to community resources such as social work, counseling and psychiatric care. Quarantining in the home often results in increased screen time, decreased physical activity and disrupted diet and sleep schedules, all of which have an impact on overall psychological health and development.

In the absence of the normal school structure, the role of parents and caregivers in creating an environment that meets their children's needs while mitigating stress and anxiety becomes a crucial one. Caregivers can ensure that a child is getting regular meals and adequate sleep, helping them to maintain a healthy daily rhythm. They can also serve as role-models for appropriate emotional regulation, listen patiently and attentively to their children's concerns and anxieties, and encourage productive coping strategies. In an ideal scenario, the stay-at-home policies offer an opportunity to strengthen familial bonds while meeting children's psychological needs. However, this is a model that over-burdens families, especially those who are least resourced and most vulnerable to economic hardships. In the face of school and daycare closures, the burden of childcare may fall upon elderly family members, who face the highest pandemic-related health risks. Parents who are essential workers, if they have no childcare options, may be forced to stay home and shoulder even greater economic burden. As a result, families may face increased risk of unstable housing or food insecurity.

Universal, structural interventions are necessary to ensure that the psychological welfare of our youth is not left up to parents and caregivers alone. The continued development of new content and technology, which can facilitate equitable, effica-

cious virtual learning experiences, is of the utmost importance. As part of the online curriculum, schools should consider incorporating education on strategies for emotional regulation, so children may learn how to reduce negative emotions, cultivate empathy and compassion and enhance adaptability. The likely long-term continuation of social-distancing measures may also require school leadership and policymakers to reassess the costs and benefits of keeping children at home, even part time, as the social and economic hardships of limited in person time at school begin to outweigh the epidemiologic benefits. Fundamentally, whether in the home or in the classroom, we must create conditions that keep our children and our communities safe, while enabling them to grow and flourish amidst the chaos of the pandemic. **MM**

Anna Dovre, BA, is a third-year student, University of Minnesota Medical School. Jenna Triana, MD, psychiatrist, is program director, Intensive Treatment Center, M Health Fairview, and associate program director, CAP Fellowship, University of Minnesota Medical School.

REFERENCES

- Fegert JM, Vitiello B, Plener PL, Clemens V. Challenges and burden of the Coronavirus 2019 (COVID-19) pandemic for child and adolescent mental health: a narrative review to highlight clinical and research needs in the acute phase and the long return to normality. *Child Adolesc Psychiatry Ment Health*. 2020;14:20. Published 2020 May 12. doi:10.1186/s13034-020-00329-3
- Jiao WY, Wang LN, Liu J, et al. Behavioral and Emotional Disorders in Children during the COVID-19 Epidemic. *J Pediatr*. 2020;221:264-266.e1. doi:10.1016/j.jpeds.2020.03.013
- Restubog SLD, Ocampo ACG, Wang L. Taking control amidst the chaos: Emotion regulation during the COVID-19 pandemic [published online ahead of print, 2020 May 8]. *J Vocat Behav*. 2020;119:103440. doi:10.1016/j.jvb.2020.103440
- Sprang G, & Silman M. Posttraumatic Stress Disorder in Parents and Youth After Health-Related Disasters. *Disaster Medicine and Public Health Preparedness*. 2013;7(1), 105-110. doi:10.1017/dmp.2013.22
- Thurston H, Bell JF, & Induni M. Community-level adverse experiences and emotional regulation in children and adolescents. *Journal of Pediatric Nursing*. 2018;42, 25-33. doi:10.1016/j.pedn.2018.06.008
- Viner RM, Russell SJ, Croker H, Packer J, Ward J, Stansfield C, Mytton O, Bonell C, & Booy R. School closure and management practices during coronavirus outbreaks including COVID-19: a rapid systematic review. *The Lancet. Child & adolescent health*. 2020;4(5), 397-404. [https://doi.org/ezp1.lib.umn.edu/10.1016/S2352-4642\(20\)30095-X](https://doi.org/ezp1.lib.umn.edu/10.1016/S2352-4642(20)30095-X)
- Ye J. Pediatric Mental and Behavioral Health in the Period of Quarantine and Social Distancing With COVID-19. *JMIR Pediatr Parent*. 2020;3(2):e19867. Published 2020 Jul 28. doi:10.2196/19867