Adolescence Amid a Pandemic: Short- and Long-Term Implications

Andrea M. Hussong
University of North Carolina at Chapel Hill

Aprile D. Benner
University of Texas at Austin

Gizem Erdem
Koç University

Jennifer E. Lansford
Duke University

Leunita Makutsa Makila
Kibabii University

Rachel C. Petrie
University of North Carolina at Chapel Hill

The SRA COVID-19 Response Team

Members of the Society for Research on Adolescents COVID-19 Response Team offer this commentary to accompany this special issue of the Journal of Research on Adolescence regarding the impact of the pandemic on adolescents’ social, emotional, and academic functioning. In addition to outlining the critical need for scholarly collaboration to address the global impact of this crisis on adolescent development, we argue that a broad investigative lens is needed to guide research and recovery efforts targeting youth development. We then use this broad lens to consider dimensions of the pandemic impact relative to developmental implications within community and policy contexts, educational contexts, social contexts, and family contexts. Finally, we describe guideposts for setting a global, shared research agenda that can hasten research to recovery efforts surrounding the pandemic and youth development.

Key words: Adolescents – Pandemic – COVID-19 – Stress – Resilience

INTRODUCTION

Salient historical crises can define a generation. Like water to fish, they become integral to living as well as life itself, simultaneously overemphasized and overlooked due to their ubiquity. Their impact is both immediate and an echo, booming through the life course. Developmental scientists often relegate these events to context, using such lenses as psychological stress and trauma to highlight their pervasive negative impact (e.g., Rousseau, Jamil, Bhui, & Boudjarane, 2015 regarding 9/11 and the war on terror). Through this lens, the communal and personal unite with implications for developmental deviation and delay, perhaps most evident in domains undergoing rapid formation during this time in the life course. For youth experiencing the COVID-19 pandemic, these developmental perturbations may thus become most evident in their social relationships; in how they balance autonomy and relatedness; in how they form intersectional identities; in their educational, work, and career engagement and aspirations; in how they define and solve problems; in how they view and respond to the world around them with its related power structures (e.g., industry, politics, science, religion); and in their vision and optimism for a personal as well as societal future. Studies in this special issue provide evidence of such near-term consequences of the pandemic and provide evidence that the overall impact of the pandemic is perhaps more mixed as well as strongest for adolescents from less fortunate or more marginalized backgrounds.

In this vein, there are other lenses beyond stress and trauma that define how history shapes development, including those that view consequences of stress as a balance of negatives and positives (e.g., stress inoculation and post-traumatic growth theories; Joseph, 2004; Meichenbaum, 1977). Much like the yin-yang concept from ancient Chinese philosophy, in these theories the hard-earned benefits of the pandemic on youth development are acknowledged alongside the widely recognized hardships. In his study of the children of the Great Depression, sociologist and developmental scientist Glen Elder (2018) characterized the impact of this multinational event for American youth as reverberating across the life course. Similarly, anthropologists...
thread together the narrative of cultural contexts and individual development (e.g., Rogoff, Baker-Sennett, Lacasa, & Goldsmith, 1995). Integrative ecological models (e.g., Bronfenbrenner & Morris, 2006) further reinforce this link, although such theorists as Spencer (2006) and Coll et al. (1996) emphasize that historical and cultural events are not simply forces distal to individual development. Rather, they imbue every aspect of development with meaning, differentiating how youth living through the same historical time may experience and internalize events in different ways.

We already have evidence that the pandemic is both a shared historical event and an individually varying one. Experiences of school closures and remote learning, quarantine and isolation, resource restrictions and supply chain disruptions, uncertainty and confusion in both the populous and government leaders have been common disruptors. For some, pandemic disruptors are more intense and prolonged, encompassing loss of loved ones, financial crises, housing and food insecurity, and much more (Bornstein, 2020). Youth experiencing greater disruption (or stressors) seem to carry more of the mental health burden of the pandemic (Skinner et al., 2021). We have yet to learn who will experience hard-earned growth from the pandemic, though we can speculate about the potential for compounding inequities. In countries around the world, inequality in the pandemic’s impact has widened disparities between those who are and are not marginalized by society— and it continues to do so.

**Moving Towards International Research and Recovery: The SRA COVID-19 Response Team**

In anticipation of widespread and disparate implications of the COVID-19 pandemic on youth development, the Society for Research on Adolescence (SRA) partnered with eleven other international research societies to better understand the long-term impact of the pandemic on development for today’s youth and the ways that we as societies can promote resilience and healing. Within its harsh grip, the pandemic brings a scientific opportunity to better understand how cultural and national ecologies influence youth development on a global level. Given the plurality of the pandemic experience, multiple voices and viewpoints must inform this agenda—including those of youth and those who care for and interact with them.

Many scholars are already engaged in this work. The goal of the SRA COVID-19 Response Team is to disseminate findings pertaining to the long-term impact of the pandemic on youth development and to coordinate international efforts for research and recovery. To gauge existing resources, we circulated a survey to the membership of societies that form the International Consortium of Developmental Science Societies to identify those with interest in coordinated efforts to address COVID-19. Between 7/13/20 and 8/13/20, 204 scholars responded. These scholars resided in 27 different countries (with 32% of respondents residing outside of the United States) and collected data about adolescent development from 60 different countries. These scholars represented all levels of career advancement, including those in training (26%) and senior scholars (20%). They were primarily aligned with Psychology (47%) or Human Development and Family Studies (23%), but also included those aligned with Education, Public Health, Sociology, Economics, Psychiatry, Medicine, Methods, Public Policy, Communication, Developmental Neuroscience, Recreation and Leisure Studies, Social Work, Peace Studies, Linguistics, and Criminology. As a group, they represented thirty different professional organizations and societies whose missions encompass research on adolescence. Such broad international collaborations may be one important way to advance not only our understanding of the pandemic on adolescent development but also our understanding of adolescent development and context more broadly.

In addition to supporting this special issue focused on the near-term impacts of the pandemic, the SRA COVID-19 Response Team aims to foster a scholarly network to study the long-term impact of COVID-19 on adolescent development. Beyond identifying interested scholars, the Response Team has created a shared communications channel, amplified observations from around the globe regarding what issues need to be addressed, and disseminated early findings through webinars. The Response Team continues to build an infrastructure to foster greater collaboration and insights as we move forward (see: http://www.andreahussong.org/research/).

In this commentary, Response Team members have identified key issues around adolescents’ experiences of the COVID-19 pandemic that deserve the field’s attention and form opportunities for international collaboration. First, we make the case that a broad perspective is needed to guide research and recovery efforts targeting youth development. Second, we use this broad lens to consider dimensions of the pandemic’s impact relative to developmental implications within
community and policy contexts, educational contexts, social contexts, and family contexts. Finally, we describe guideposts for setting a global, shared research agenda that can hasten research to recovery efforts surrounding the pandemic and youth development. Throughout, we integrate the voices of adolescents drawn from a study of 44 student interviews conducted in the summer of 2020 in the southern United States (Benner, 2021).^{1}

The Critical Need for a Broad Perspective

Studies from this special issue parallel those in the larger literature documenting a negative impact of the COVID-19 pandemic for youth mental health (Alt, Reim, & Walper, 2021; Hollenstein, Colasante, & Lougheed, 2021; van Loon et al., 2021; Miconi et al., 2021; Romm, Park, Hughes, & Gentzler, 2021), including suicidal ideation (Hutchinson et al., 2021) and loneliness (Janssens et al., 2021; Sabato, Abraham, & Kogut, 2021). These effects, though not always found particularly for studies of youth in the earliest months of the pandemic lockdown (Barendse et al., 2021; De France, Hancock, Stack, Serbin, & Hollenstein, 2021), appear strongest for youth at greatest risk (Hussong, Midgette, Thomas, Coffman, & Cho, 2021; Hutchinson et al., 2021). As reported by one youth when asked about the biggest challenges of the pandemic (11th grade female; Benner, 2021).

...mental health... I know not only me but several other people, you know, struggled with that - staying at home, like not being able to see anyone. And I know multiple friends who were just already or diagnosed with different things like depression, and I know that was very hard on them and especially [being] homebound. My brother was just, you know, not being able to see his friends, with the very few he has, [he] was diagnosed with mild depression, and so it’s just been that mental health state of not being able to see anyone and not being able to get that one-on-one interaction is hard for some.

Despite the wave of mental health challenges many youths are facing, broader developmental challenges also bear note. Studies in this special issue point to disruptions in emotional development (i.e., elevations in stress and negative emotions—Deng, Gadassi Polack, Creighton, Kober, & Joormann, 2021; Maheux, Nesi, Galla, Roberts, & Choukas-Bradley, 2021; Sabato et al., 2021; Shi & Wang, 2021), decrements in emotion regulation (Di Giunta et al., 2021), academic motivation challenges (Klootwijk, Koele, van Hoom, Güroğlu, & van Duijvenoorde, 2021), and threats to school bonding (Maiya, Dotterer, & Whiteman, 2021). These findings are consistent with prior research that has documented the impact of global financial upheavals—including the Great Depression and Great Recession—and international wars in deflecting young people’s larger educational and employment trajectories (Elder, 2018; Maclean, 2005; Schoon & Mortimer, 2017; Shores & Steinberg, 2019).

These domains of functioning are clearly interconnected, in development more broadly and in pandemic-responding more specifically. For example, in this issue, Klootwijk et al. (2021) showed that greater conflict with friends and lower parent social support (social factors) were linked to poorer academic motivation (academic factor). Hutchinson et al. (2021) found that neural responding to anticipated social rewards (biological factor) before the pandemic was associated with changes in peer contact (social factor) during the pandemic. Steinhoff et al. (2021) showed that living conditions (physical context) were associated with suicidal ideation and domestic violence (risk behaviors). To capture the breadth of the impact of the pandemic on adolescent development, we thus need to broaden our investigative lens to include targeted outcomes beyond mental health that encompass a wide array of developmental domains and interpersonal relationships.

A second way scholars need to broaden the investigative lens is by expanding how we operationalize predictors—namely, the aspects of the pandemic that are impacting youth. The pandemic is not a singular experience, and it encompasses far more than the spread of a devastating virus. Although risk of mortality and severe illness is relatively lower for adolescents than for adults (CDC, 2021), other direct and indirect effects of the pandemic may impede adolescent development. Adolescents have experienced significant loss, including the abrupt withdrawal from school, social isolation and restricted outdoor activities, the death of loved ones, sudden shifts to caretaking roles, and exposure to increased domestic violence and poverty-related stressors as a result of diminished household income (Darmody, Smyth, & Russell, 2020). School closures disrupted the daily routines of youth, decreasing adolescents’ access to learning, increasing time spent on household responsibilities, and heightening exposure to potentially harmful online activities (Ferrara et al., 2021). The extent to which such disruptions may hold
long-term implications for youth vary and may be offset by the extent to which support systems are prepared to respond to youth’s needs, an asset that varies across communities and countries.

In this vein, a third critical way to broaden the lens on research and responses to the pandemic is to prioritize international collaboration and scholarship. Varying policy, economic, health, and societal responses to the pandemic around the world have created a unique opportunity for scholars to characterize how adolescent development is altered (or not) as a function of complex, nested, and interacting contextual factors. When environmental contexts become inadequate or marred by conflict, natural disasters, or other humanitarian events such as socioeconomic inequalities, adolescents may experience challenges in navigating common developmental struggles. An international lens allows scholars to chart how the COVID-19 pandemic has exacerbated these challenges as a function of richly varying environmental contexts. Conversely, this perspective also permits scholars to chart how youth may be empowered to recover from these challenges and overcome considerable risks to their education, mental health, and social lives.

International work also has the potential to identify common challenges for which we can develop global responses. For example, during the pandemic adolescents have experienced helplessness and hopelessness. They may be irritable, angry, or not sure of what tomorrow holds (Lee, 2020; Liang et al., 2020). Emerging research suggests that adolescents around the globe are experiencing increased anxiety, changes in their diets and in school dynamics, and death of parents or guardians (Buzzi et al., 2020; Liang et al., 2020). Elevated rates of depression and anxiety, helplessness, and worry are reported in China (Chen et al., 2020), India (Saurabh & Ranjan, 2020), and the Philippines (Tee et al., 2021).

Despite these commonalities, adolescents in different parts of the world are being affected in unique and nuanced ways, including compromises to physical, psychological, and emotional well-being in the face of social and economic problems (Esterwood & Saeed, 2020). For example, most schools in Kenya are now grappling with how to support growing numbers of pregnant teenage girls (close to 4000 since the pandemic’s outbreak), teen fathers, and students addicted to alcohol and drugs (Nation newspaper, 5th July 2021). In Turkey, official statistics (TURKSTAT, 2020) indicate record-high youth unemployment, and, consequently, an increasing number of adolescents report being hopeless about the post-pandemic era. An international lens allows scholars to acknowledge that adolescents vary in developmental assets or the resources that they have amassed to cope with challenge and stress, exacerbating existing social inequalities within and across nations.

For example, Miconi et al. (2021) showed that minority youth in Albania have diminished awareness of and access to resources and developmental assets (lack of money, clothes, or support), as well as greater mental health concerns, with the pandemic as compared with their peers. Thus, the long-term impact of the pandemic will include varying degrees of continued disruptions in the lives of adolescents as some rebound and recover while others struggle to do so.

Pandemic Implications: The Community and Policy Context

Local and national governments have responded differently with respect to school and business closures or capacity limitations, mask mandates, contact tracing, and the like. These policy decisions have had direct implications for adolescents’ lives—for example, whether adolescents have gone to school in person, virtually, or in a hybrid combination. Policy decisions around mask mandates and social distancing have also had implications for adolescents’ likelihood of contracting the virus and their likelihood of having family members or friends who have been hospitalized or died during the course of the pandemic. Just as adolescents are affected by other aspects of their communities, such as whether they live in an urban or rural area, adolescents’ experiences during the pandemic are socially and culturally constructed and thus closely tied to where they live.

Adolescents internalize beliefs and behaviors that are modeled by others in their communities and can take advantage (or not) of available resources. Early in the pandemic, community responses influenced how serious adolescents perceived the pandemic to be and the extent to which adolescents modified their behaviors by wearing masks, maintaining physical distancing, and following other public health guidelines (Park & Oh, 2021). As the pandemic progressed and vaccines became available in high-income countries, different countries prioritized different demographic groups for receiving the vaccine (e.g., older adults due to greater risk for serious illness and death from COVID versus younger adults who are still in the workforce). Regulatory bodies such as the U.S. Food and Drug Administration and the European
Medicines Authority did not approve vaccines for adolescents until after approval for adults, so adolescents' vaccination rates lag behind those of adults. Yet, in locales where adults are likely to be vaccinated both because of having access to vaccines and the willingness to be vaccinated, adolescents are also more likely to be vaccinated. Individuals' vaccine hesitancy for religious, political, and other reasons remains a barrier to achieving vaccination goals in locations where the vaccine is widely available (Troiano & Nardi, 2021). As of this writing, there is discrepancy between low- and middle-income countries in availability of and access to vaccines, which means that the potential for some adolescents to return to their pre-COVID activities and routines is still not an option.

One direction for future research will be to investigate how communities can design and communicate public health guidelines in ways that will be compelling enough for adolescents to follow. In some ways, these design and communication features may be similar to what is compelling for adults, but in other ways, adolescents may be convinced by different messaging. Because risk-taking behaviors normatively peak during adolescence (a finding that has been replicated across a number of countries), adolescents may be less inclined to take public health precautions, especially in the face of a virus that is much less likely to affect them personally compared to older adults. Future research could systematically examine the effectiveness of different public health campaigns in changing adolescents' beliefs and behaviors related to disease transmission and prevention.

Another direction for future research will be to understand how communities and policies can support adolescents' resilience in the aftermath of the pandemic. Recognizing that adolescents' education, extracurricular activities, peer relationships, and burgeoning independence were disrupted by the pandemic, communities will need to be prepared to offer additional support to help adolescents recover. Some of this research may involve needs assessments to determine what would benefit adolescents at this time and how supports could be mobilized and delivered. Other research may involve capitalizing on data available before the pandemic in conjunction with newly collected data to understand how adolescents are doing now compared to before the pandemic and developing community responses to address any areas of concern.

Pandemic Implications: The Educational Context

When Benner (2021) asked American youth what they missed most from school, more than academics was on their minds.

There's a lot of like extracurriculars that I'm not able to participate in anymore [12th grade female]

I'm missing my friends because I have school friends, and I usually don't have any out of school friends. [12th grade male]

You know, kids everywhere aren't really getting the best support from schools, and that can be really bad. [12th grade female]

Clearly, the impact of changes in policies and practices around schooling move beyond education to include a sudden decline or even end to social interactions with classmates as well as access to sports, clubs, and other extracurricular activities. Yet, the method and extent of the educational services, if any at all, that was delivered to youth has been most centrally impacted over the past year.

As in other domains, educational vulnerabilities have been often amplified in low- and middle-income countries. In high-income countries, most schools shifted to online learning at the onset of the pandemic, albeit more successfully in higher-income communities in high-income countries because of more reliable internet access and the availability of computers. In low- and middle-income countries, where fewer families have reliable internet access and computers, shifting to online learning was less often possible. In Kenya, the government decided that all basic education students would need to repeat the academic year (i.e., be retained a grade) because remote education was not an option for the majority of students (Mbogo, 2020). When schools closed in India and many other countries, students began working or increased their work to help support their families financially, often in risky and dangerous jobs (Kaur & Byard, 2021). Fears abound that even when schools reopen, disadvantaged students will not return to the classroom because they have become disengaged from the educational system and because their families have come to rely on the economic support their labor provides.
It is worth noting that not all adolescents found the switch to remote school difficult. Indeed, some adolescents preferred it to typical school formats (Salmela-Aro, Upadyaya, Vinni-Laakso, & Hietajärvi, 2021). As noted by an adolescent in the Benner study (2021):

I like it a lot better... I don’t really like going to school... I just personally do not like waking up at 7:30 and getting on the bus going to school and doing the same thing. [11th grade female]

In this vein, Hutchinson et al. (2021) attributed clinically significant reductions in anxiety symptoms following stay-at-home orders to reduced social pressures and academic stressors that may accompany in-person schooling as well as to greater access to supportive factors (e.g., more family time). Other work suggests that some educational innovations necessitated by the pandemic—such as greater use of online format, self-directed learning, and access to recorded or evergreen materials—may be beneficial at least for some students. Ongoing work that identifies what we may have learned about changes in educational platforms from the pandemic relative to student needs has the potential to support novel approaches to schooling in the future.

Even with changes to academic platforms, a key concern with academic re-engagement is the potential lingering damage to student motivation due to the pandemic. For example, Klootwijk et al. (2021) showed that academic motivation in Dutch adolescents was lower on online school days compared to in-person school days, and that this lower motivation was correlated with increased friend conflict and decreased mood. Additionally, Salmela-Aro et al. (2021) found that Finnish youth whose well-being and academic engagement had decreased during the pandemic also experienced increased loneliness and a decreased sense of belonging. It will be important for future psychological research to explore methods of raising academic motivation in an entire generation of students, since this will be a crucial first step in getting academic development back on track.

Given upheaval wrought by the pandemic to educational systems around the globe, many are asking quite simply “where do we go from here?” For the many students who fell behind during the pandemic, do we “meet them where they are” by adjusting curricular goals and acknowledging that the pandemic resulted in academic decrements that must now be accommodated? Or, do we retain academic standards and view the challenge as one of remediation through such practices as accelerated educational and social learning? Solutions to these dilemmas will likely be as varied as the presentation of these problems themselves. Thus, further directions for future research may include evaluating the link between academic gains or losses with different remote learning platforms to identify and retain beneficial aspects of online education across varying community and national settings.

**Pandemic Implications: The Social Context**

The pandemic and related policies changed the way adolescents spend time with others (Wray-Lake, Wilf, Kwan, & Oosterhoff, 2020), most notably by constraining meaningful social interactions of youth with close friends, romantic partners, co-workers, teammates, and other peers. One youth describes the experience this way (Benner, 2021).

For the first couple months of the pandemic, probably until about May – mid-May [2020] – I hadn’t seen any of my friends. I was stuck at home because I have severe asthma, and so my mom was very frightened for me because it affects your respiratory system, and my mom also has asthma and other medical problems, so we were just taking extreme caution – not going anywhere, not seeing anyone, couldn’t see family. So, we were just kind of stuck at home, and that didn’t do well for my mental health because soon into like April-May I was seeing my friends who weren’t being so serious about it, who didn’t really have anything to worry about, going out and hanging out with one another, and it was just like really tough for me because I really wanted to, but I couldn’t because I knew that it probably wasn’t safe for me to do so. [11th grade female]

During the pandemic, limited peer interaction has become a notable driver of increased loneliness (Caubergh, Van Wesenbeeck, De Jans, Hudders, & Ponnet, 2021), particularly for adolescents who experience higher affiliative needs than adults (Groarke et al., 2020). Pandemic loneliness has been linked with decrements in mental health and well-being just as lower social connection (Nitschke et al., 2021), less time spent with friends, lower quality friendships (Bernasco, Nelemans, van der Graaff, & Branje, 2021), and smaller social networks.
(Ellis, Dumas, & Forbes, 2020) have been linked with greater distress and anxiety. In addition to loneliness, greater isolation has brought potential loss of peer support during a time when youth are experiencing increased life stress. Indeed, the protective role of peer support and connection during the pandemic is evident in several studies in this special issue (Alt et al., 2021; Bernasco et al., 2021; Hutchinson et al., 2021). However, we may also find that adolescents called on to serve as a source of support to highly distressed friends can become overwhelmed with empathic overload, increasing their own distress and undermining well-being (Sabato et al., 2021). The emotional toll of the prolonged pandemic has likely put pressure on youth’s relationships. Further research is needed to explore the long-term impact of the pandemic on how adolescents turn to others for support and provide support to others in ways that promote health for both the giver and receiver.

In addition, restricted social interactions during the pandemic have decreased adolescents’ opportunities to develop social competencies. With shrinking friendship and peer networks—vital contexts for identity exploration and autonomy development—youth had fewer opportunities for building interpersonal skills such as managing peer group dynamics. Youth also missed out on opportunities to engage with familiar adults and even strangers, perhaps delaying skills in negotiating relationships, building connection, and even resolving conflict with others different from oneself. Conversely, the pandemic may have provided some youth with opportunities to explore new ways to make social connections, such as by engaging in prosocial behavior (Alvis, Douglas, Shook, & Oosterhoff, 2020). Prosocial behavior, such as volunteer work, acts of kindness or helping, and supporting community members, have boosted adolescents’ positive affect and life satisfaction during the pandemic (Sin, Klaiber, Wen, & DeLongis, 2021), though may be harder to engage in for youth with fewer social connections and more isolation and loneliness associated with the pandemic (Sabato et al., 2021). Such experiences gave adolescents meaning and purpose in times of crisis, increasing a sense of belonging, happiness, and overall well-being (Varma, Chen, Lin, Aknin, & Hu, 2020). As found by Maheux et al. (2021), youth reporting greater pre-pandemic gratitude placed more importance on social media for later meaningful conversations. Further examination of how pandemic disruptions have impacted adolescents’ social competencies can thus expand our understanding of positive youth development (Lerner et al., 2019).

Clearly, however, the most widely noted social change for youth during the pandemic has been the surge in the use of virtual platforms for social engagement. Social media served as a primary resource to build and maintain social relationships during the pandemic and, therefore, helped some adolescents cope with feelings of uncertainty, health anxiety, and loneliness (Cauberghe et al., 2021). Wray-Lake et al. (2020) noted that adolescents with low family support were especially drawn to use social media for social support. Additionally, some adolescents were able to regulate their negative emotions and gain a sense of control by searching for information and having meaningful conversations on social media (Ellis et al., 2020; Maheux et al., 2021). For example, Magis-Weinberg et al. (2021) showed that youth reported more positive than negative online experiences during the pandemic and that such experiences have the potential to mitigate pandemic loneliness and isolation. Moreover, sharing memes, funny videos, and games for entertainment are often ways of humorous coping to alleviate distress and to promote happiness (Cauberghe et al., 2021).

Despite these potential benefits of social media, for some youth increased social media use has carried significant risks. Among them is greater exposure to the “dark web”, which predominantly hosts unethical and criminal activities ranging from identity theft and the drug trade to suicide chat rooms and child pornography (Ferrara et al., 2021). Many parents, especially those from impoverished communities, may lack digital literacy to effectively monitor and supervise adolescents’ screen time and exposure to such sites. Moreover, increased online social engagement may leave adolescents vulnerable to a rise in problematic internet use involving high, sustained screen time that interferes with sleep and physical activity and is linked with poor attention (Muzi, Sansò, & Pace, 2021; Paschke, Austermann, Simon-Kutscher, & Thomsius, 2021). In some cases, social media has amplified negative emotions through disinformation, triggering anxiety and depressive symptoms (Finkel, Alba, & Zhong, 2020). Further guidance in how to help youth engage in healthy social media and internet use, aligned with a harm reduction approach in the addictions literature (Vanderloo et al., 2020), is a goal shared by scholars, parents, and those serving youth. As prior studies show, the impact of social media on adolescent development likely depends both on the ways in which...
social media and screens are used and on youth vulnerabilities (Odgers & Jensen, 2020). More scholarship is needed to raise parents’ awareness of both the dangers of the internet as well as the benefits that may help youth maintain social connections even in the face of physical distancing (Magis-Weinberg et al., 2021).

**Pandemic Implications: The Familial Context**

Adolescence often entails increasing time spent away from family in the presence of peers at school and in social and extracurricular contexts. However, with stay-at-home orders implemented, often more than once, in most locations at some point during the pandemic, many adolescents were spending more time with their families than they were prior to the pandemic. As in other domains, this increase in time spent with family has had both benefits and drawbacks. Adolescents and parents alike sometimes valued the slower pace of life when stay-at-home orders were in place, without the rushing and stresses that sometimes accompany going about typical daily activities. However, an increase in family time also brought the potential for more parent-adolescent conflict and even violence. Calls to child abuse helplines increased during the pandemic (Petrowski, Cappa, Pereira, Mason, & Daban, 2021), raising concerns that adolescents were at increased risk for abuse by caregivers when they were mandated to stay home. Adolescents who were being maltreated were less likely to be identified and provided with support as they were no longer being seen by teachers or other adults on a regular basis.

These different experiences were captured in the voices of youth (Benner, 2021):

I can spend a lot more time with my mom. Like, for example, my mom’s usually backed up with work, but during that time when it first happened after spring break, my mom and I spent a lot of time together because obviously if we were stuck at home, we watched a lot of movies and TV shows, and there was more bonding going on than usual. I liked it a lot. [12th grade male]

With my parents, toward like April, whenever I saw my friends going out and continuing to do things, it just kind of grew as a little anger and confusion as to why I couldn’t be out with them, and I know it put stress on my mom because she wanted me to be happy, and I was just not overall happy just being stuck at home-like not being able to have connections to anyone. [11th grade female]

As these youth note, families can serve as important resources but also as vulnerabilities (Donker, Mastrotheodoros, & Branje, 2021). In a longitudinal study of adolescents and parents in five countries, associations between adolescents’ and their mothers’ perceptions of how disrupted their lives were during the pandemic and their reported increases in internalizing and externalizing behaviors during the pandemic were attenuated by higher levels of adolescent disclosure, more supportive parenting, and lower levels of destructive adolescent-parent conflict prior to the pandemic (Skinner et al., 2021). Moreover, studies in this special issue highlight the potential protective impact of positive relationships with parents on buffering maladjustment following the pandemic onset (Campione-Barr, Rote, Killoren, & Rose, 2021; Janssens et al., 2021; Miconi et al., 2021). These findings suggest that positive parent-adolescent relationships established prior to a health crisis can serve as buffers against maladjustment during the crisis.

One direction for future research is to understand how communities can provide support to families so that they can contribute to adolescents’ resilience rather than adding further stress. Some of this support may be financial, as in the case of government payments meant to help families pay for food, rent, and other essentials, which was especially important during the pandemic as many parents lost their jobs or were unable to work when businesses were closed. Other support may be in providing information, such as how to access online resources, or in providing counseling to parents to manage their own distress so they do not become harsh in parenting and are better able to support their adolescents. An understanding of how communities can support families will benefit adolescents’ adjustment, particularly during times of pandemic or other disasters.

Another direction for future research is to investigate how families operate as systems in the face of widespread disruptions that affect everyone’s lives. Researchers currently have a better understanding of how events such as job loss or divorce affect entire family systems than how community-wide experiences such as the pandemic affect entire family systems. If one family member experiences a negative life event, such as losing a job,
other family members may be in a position to compensate and offer support. However, if the entire family experiences disrupted daily activities as in the case of the pandemic, less evidence is available about how families cope.

Another avenue for future research is to investigate whether and how sibling relationships may buffer adolescents from distress during community-wide disruptions, such as the pandemic. With their peer-like qualities, supportive and close relationships with siblings may be particularly beneficial, especially for those adolescents who have limited peer networks or have strained relationships with their parents. Early research evidence has shown that time spent face-to-face or via video calls with siblings was related to less loneliness and depression for adolescents (Ellis et al., 2020). However, Campione-Barr et al. (2021) showed that relationships with best friends and siblings were more significantly impacted by COVID-related stress than those with parents. Further research is needed to understand the potential protective role of siblings for adolescents in times of crisis.

**Moving From Research to Recovery**

Although we have highlighted potential directions for future research throughout our discussion of various developmental contexts impacted by the pandemic, the urgent needs presented by the pandemic require that research and recovery efforts move forward hand-in-hand. Methods that incorporate on-the-ground knowledge of communities, including youth, to define the key challenges of recovery within lived contexts are a step forward in marrying the wealth of knowledge regarding stress, trauma, and recovery with the rich narratives and insights of those programs already in the field that are designed to serve youth and their families. A variety of mixed-methods approaches (e.g., community-based participatory action research, daily diaries, fMRI and other imaging techniques, and observational studies) contribute to this goal, such as those highlighted in studies from this special issue. Studies that use non-self-report data, particularly existing public record data (e.g., hospital, school, and arrest records), can be leveraged through methods championed in public health (e.g., linkage studies). Importantly, approaches to data pooling and integrating datasets that create larger samples with greater diversity may play a role in expanding the global lens of inquiry (Hussong, Cole, Curran, Bauer, & Gottfredson, 2020). For example, integrative data analysis and other data harmonization techniques as well as coordinated data collection efforts around key constructs may propel our individual scientific findings into a network of global knowledge (e.g., Hussong, Curran, & Bauer, 2013). Finally, quasi-experimental designs and other alternatives to classic randomized controlled trials may play a vital role in speeding up intervention development. Interventions with adaptive designs (e.g., SMART) may be particularly helpful to develop and implement individualized programs whose components and scope match the unique intervention needs of an adolescent (Lei, Nahum-Shani, Lynch, Oslin, & Murphy, 2012).

Perhaps most important in accelerating the recovery response to the pandemic is setting a collaborative agenda for priority research. The rapid development of COVID-19 tests and vaccinations is evidence that with a shared focus and adequate resources, science can deliver essential, timely solutions to pressing societal problems. What could we accomplish with a parallel response in other areas of science to the urgent needs of youth in the wake of the pandemic surge? To what extent can a collaborative scholarly focus result in knowledge, tools, policies, and programs that promote resilience in youth differentially impacted by the pandemic? Can our pooled efforts address the impact of the pandemic on communities, schools and educational institutions, peers and social relationships, and families? Can we guide recovery away from a return to the old normal toward a betterment of society that acknowledges and responds to the rights and needs of youth across emerging identities, sociocultural contexts, and developmental assets. In the face of this challenge, we offer three guideposts for building such an agenda including (a) identifying and supporting vulnerable populations most impacted by the pandemic, (b) using resilience and strengths-based models of recovery to frame intervention targets, and (c) prioritizing research using an intervention and recovery lens.

**Identifying and supporting vulnerable populations.** As noted by U.S. youth in their own voices (Benner, 2021), the pandemic held the potential to strike anyone, though some groups have been impacted more than others.

I think low-income households are being affected the most because, in the very beginning, the jobs weren’t open, and so that probably took a toll and had a lot of stress on
parents and stuff like that. I think that it affected them the most because most low-income households have a lot of things to pay for, and then like with this happening, it probably made everything worse. [12th grade female]

COVID doesn’t care about if you’re White, Black, Mexican, or Asian. It’ll affect you if it wants to infect you. And [if] you’re not taking the precautions, you’re just going to get infected. It doesn’t matter who you are. Hell, the president got infected. [12th grade male]

Research regarding the pandemic must take into account the differential effects exerted on vulnerable populations. Across many countries, race/ethnicity and social class are two central societal stratifiers, and there is clear and compelling evidence that low-income communities and communities of color have borne the greatest consequences of the pandemic. For example, rates of infection, hospitalization, and deaths are higher for Black, Latina/o/x, and indigenous individuals compared to White and Asian American individuals in the United States (CDC, 2021), and those in poverty have suffered similar fates (Goldstein & Atherwood, 2020). Immigrants and refugees fleeing high conflict zones are at higher COVID-19 mortality risk due to a lack of insurance, limited access to health care, and language barrier that makes pandemic health guidelines difficult to follow (Browne, Smith, & Basabose, 2021; UNHCR, 2020). The underlying contributors to these differential impacts are structural and far-reaching, but the ultimate result is that racial/ethnic minority youth and those from low-income and immigrant families have greater direct exposure to the health impacts of the COVID-19 pandemic.

The pandemic’s reach and its differential impacts on vulnerable populations, however, have extended far beyond the toll it has exacted on physical health. Around the globe, race/ethnic minority and low-income families have faced more dire financial upheaval and have fewer social and financial safety nets necessary to better weather the economic consequences of the pandemic. These families also often face unique stressors, as they have been more likely to be employed as frontline workers or in positions that could not (or would not) accommodate working from home. Informal casual workers, on the other hand, completely lost their income when daily paid jobs disappeared during the lockdowns. As such, it is critical to determine how adolescents from these vulnerable groups have had to manage concerns about not only their parents’ physical health and disease exposure but also the financial well-being of their families.

Schooling as previously noted is another context in which existing inequalities have magnified. It is critical to not only document variation in instructional delivery and quality during the pandemic, but also to determine the extent to which these mounting pandemic-related inequalities translate into widening achievement gaps across groups and the perpetuation of intergenerational poverty. Beyond achievement, understanding the school experiences of vulnerable adolescent populations also requires attention to how pandemic-related educational disruptions might have differentially impacted social relationships within schools—between students and teachers and among students with one another—as these relationships often provide critical connections for vulnerable youth that support not only academic success but also school belonging.

Finally, consideration of vulnerable populations necessitates attention to differential and discriminatory treatment. As one example, the labeling of the pandemic in racialized terms by the former President of the United States and certain media outlets has fueled anti-Asian sentiments and has resulted in a rise in hate crimes against Asians and those of Asian origin worldwide (Human Rights Watch, 2020). As one adolescent in the Benner (2021) study noted:

It was like people called it the China virus or they always blamed us. They always said, ‘Go back to your country.’ In the beginning, I was not comfortable going out because I was so scared that people were gonna treat me very differently. [12th grade female]

As the pandemic progressed, microaggressions toward Asians became prevalent in social media globally via anti-Asian memes, derogatory comments, images, and videos. Direct and indirect exposure to such discriminatory mistreatment is likely a significant influence on youths’ sense of safety and security as well as their mental and physical health. The impact of such pandemic-linked discrimination and resource restriction (e.g., vaccination access) on youth likely varies within and across countries, particularly given different pre-pandemic covert and overt discriminatory
practices. For example, in U.S. sociopolitical context, marred by anti-immigrant sentiment, police brutality against black and brown individuals, and the politicization of discussing race and racism in schools, pandemic-related inequities may take on unique political meaning, with have broader consequences for adolescents growing up in this historical moment in time.

**Emphasizing resilience and strengths-based models of recovery.** The studies in the special issue suggest a number of protective and resilience factors including peer connectedness (virtually and in-person; Campione-Barr et al., 2021; Maheux et al., 2021; Parent, Dadgar, Xiao, Hesse, & Shapka, 2021; Sabato et al., 2021) and support (Bernasco et al., 2021); close sibling relationships (Campione-Barr et al., 2021); adaptive or active coping styles (Maiya et al., 2021; Miconi et al., 2021; Steinhoff et al., 2021); and parental involvement (Maiya et al., 2021), support (Campione-Barr et al., 2021; Klootwijk et al., 2021; Shi & Wang, 2021), and positive responses to negative emotions (Di Giunta et al., 2021); and emotion regulation skills (Deng et al., 2021). However, some factors that we may traditionally consider protective may backfire in the socially restrictive pandemic climate. For example, Alt et al. (2021) showed that, for German youth, extraversion predicted greater loneliness and in turn depression during the pandemic. Risk and protective factors in individuals’ life histories and family systems prior to the pandemic also predict their adjustment during the pandemic (Chang et al., 2021; Hussong et al., 2021). This work, along with studies outside of this special issue, suggests that protective factors often associated with health psychology approaches to understanding the intersection of stress, support, and coping on outcomes may be particularly relevant to understanding resilience in the face of the pandemic (Polizzi, Lynn, & Perry, 2020).

Consideration of resilience also necessitates a broader developmental lens that spans historical time. Studies that are able to integrate pre-pandemic functioning with functioning across the pandemic will enable the identification of those adolescents who are less impacted by the pandemic as well as those who are initially impacted but display subsequent recovery. Attention to variations in developmental trajectories that integrates protective and resilience factors will provide important insights into how to best promote well-being in future historical disruptions.

Beyond these factors, resilience encompasses not simply avoiding negative outcomes in the face of challenge but also cultivating growth as youth learn how to identify, optimize, and apply their strengths to overcoming that challenge and thriving. As the youth in the Benner (2021) study note:

“I can do a lot more than what I thought I could do. [11th grade male].

I am more resilient than I give myself credit for. [12th grade female].

I’ve learned that life is very unpredictable and precious so I need to cherish the little things more. I also learned that I can be independent and don’t have to rely on others anymore for my own happiness. [11th grade female]

Frameworks that include positive youth development (Lerner et al., 2019), strengths-based programming (National Academies of Sciences, Engineering, & Medicine, 2020), and perhaps even creative expression as a means for self-regulation (Coholic et al., 2020) may prove essential in understanding long-term implications of the pandemic for youth development into adulthood. Such resilience frameworks apply not just to research and recovery in youth but also in families, schools, and communities. Working with particularly hard-hit communities to build on strengths and avoid deficit-focused frameworks is a necessary approach that recognizes the inherent partnership into which scholars and communities must enter.

**Implications for interventions.** Throughout this commentary, we have discussed several directions for future research that may inform interventions within individual, family, social, and community contexts. Nevertheless, we acknowledge that many of these recommended interventions aim to hit the iron when it is hot. Although the long-term repercussions of the pandemic (biopsychosocial, educational, and financial impact) on adolescents remain unknown, research and recovery efforts enacted now can shape these trajectories for the better.

Moving toward this goal, we need to develop clear action plans and public health policies to promote adolescent physical and mental health during and after pandemics. Virologists warn against new
zoonotic diseases and predict future outbreaks due to the ongoing rapid deforestation, urbanization, climate change, and overall disruption of wildlife globally. An agenda to move forward relates to preparing and/or revising pandemic preparedness plans in line with adolescents’ developmental needs. One step is to establish a post-pandemic task force and collaborate with adolescents to identify lessons learned during the pandemic to develop recommendations for future public health policy. Several key areas include increased access to healthcare, alternative educational resources during school closures, opportunities for social interactions to promote social connectedness, emergency family support programs, and accessible online mental health services. We believe adolescents of the COVID-19 pandemic are among those who need to take an active role in designing and discussing such macro-level interventions.

Second, despite the global nature of the COVID-19 pandemic, adolescents from disadvantaged communities are at higher risk of continued distress, poverty, and missing out on educational and occupational opportunities. We need comprehensive assessment and screening systems to detect the most vulnerable subgroups of adolescents, identify their needs for services, and refer them to preventative interventions. Given that the supply of services and programs will be limited with respect to demand, systems that balance meeting the needs of the masses while also serving the most vulnerable adolescents, the classic public health dilemma, are desperately needed and should be informed by health services research.

Third, given the scope of the pandemic, intervention must be multi-layered. Although universal tools and programs to address key issues such as loneliness, school re-engagement, and social and emotional functioning are indicated by near-term impacts of the pandemic, longer-term impacts may be evident as these youth make other life transitions (e.g., leaving home, forming healthy adult relationships, entering the workforce). Current levers for change include the communities, schools, peers, and families (both for short-term as well as long-term resilience), but youth may vary in whether universal programs will be sufficient to strengthen intrapersonal factors long associated with resilience, including coping and emotion regulation skills. These factors are vital to a resilient stress-response system. Thus, the pairing of universal and targeted intervention for our most vulnerable youth, including those experiencing heightened discrimination and marginalization in the context of the pandemic, is needed.

Understanding adolescents from a global perspective, moreover, is ideal for the development of effective evidence-informed intervention strategies. Leveraging adolescents’ current mobilization in mitigating the crisis through existing mechanisms, tools, and platforms (e.g., the use of digital tools and data) to build resilience in societies against future shocks and disasters across the globe cannot be overemphasized (Bell, 2016). An inclusive response to and recovery from the crisis requires an integrated global approach that anticipates the impact of response and recovery measures for adolescents across the globe and empowers youth to both shape intervention responses and face future crises head on.

SUMMARY AND CONCLUSIONS

The pandemic continues to differentially impact communities around the globe, bringing waves of devastation and disruption to a world whose youth already carried the anxiety and trauma of surging racial tensions, political uncertainties, and climate crises delivered without interruption to their pockets via cell phones. The potential exists for an unprecedented expansion of existing disparities that touches on all aspects of adolescent development, both across and within countries. Rising rates of what have been called diseases of despair in the United States—including suicide, drug addiction, and overdose—are alarming. Yet, with an empirically guided global response, the developmental trajectories of pandemic youth could take a different turn. Developmental disruptions may become departures from the developmental pathways of prior generations, forming novel pathways that expand our understanding of healthy adaptation. Creating flexible expectations for developmental gains that accommodate response to stress and trauma, that recognize the communal and personal aspects of the pandemic experience, and that emphasize healing and recovery over a return to normal may provide an important step forward.

The manuscripts selected for the current special issue (and recently published work during the pandemic) highlight many challenges the COVID-19 pandemic has posed for adolescents globally. Due to government-sanctioned restrictions, school closures, and physical distancing guidelines, adolescents’ daily lives appear to be disrupted in multiple development contexts (including family,
peers, school, and community domains). COVID-19-related distress has created vulnerabilities such as increased social isolation, struggles with online learning and academic achievement, mental health issues, and suicidal ideation, to name a few. Nevertheless, we see adolescent and family resilience indicators during the pandemic, including the protective role of supportive parent-child relationships, adolescent emotion regulation skills, adaptive coping strategies, and social connection (especially with peers). Given the multifaceted nature of the impact of the pandemic, we need interventions that are comprehensive and universal to capture the multiple ecological contexts of adolescent development. Through a strong collaborative effort, and shared set of research priorities that hasten recovery, we believe that developmental scientists around the globe can meet this challenge.

ACKNOWLEDGEMENTS
Funding for this project was provided by the Expanding the Science and Practice of Gratitude Project run by UC Berkeley’s Greater Good Science Center in partnership with UC Davis and by the John Templeton Foundation for earlier waves of data collection. For the most recent data collection, funding was provided by the National Center for Advancing Translational Sciences (NCATS), National Institutes of Health, through Grant Award Number UL1TR002489. The writing of this manuscript was supported in part by a postdoctoral fellowship provided by the National Institute of Child Health and Human Development (T32-HD007376).

Note
Interviews drawn from a sample of 44 adolescents who diverse in terms of race/ethnicity (i.e., 16% Black/African American, 18% Latina/o/x, 23% White, 23% Asian American, 20% biracial), socioeconomic status (i.e., 40% high SES, 26% mid-SES, 34% low-SES), and scholastic achievement (i.e., 12% GPA of C or lower average, 48% B average, 40% A average).

REFERENCES
Alt, P., Reim, J., & Walper, S. (2021). Fall from grace: Increased loneliness and depressiveness among extraverted youth during German COVID-19 lockdown. *Journal of Research on Adolescence*, 31(3), 678–891. https://doi.org/10.1111/jora.12648

Alvis, L., Douglas, R., Shook, N., & Oosterhoff, B. (2020). Adolescents’ prosocial experiences during the COVID-19 pandemic: Associations with mental health and community attachments. *PsyArxiv*. https://doi.org/10.31234/osf.io/2s73n

Barendse, M., Flannery, J. E., Cavanagh, C., Aristizabal, M., Becker, S. P., Berger, E., & Pfeifer, J. H. (2021). Longitudinal change in adolescent depression and anxiety symptoms from before to during the COVID-19 pandemic: An international collaborative of 12 samples. *PsyArxiv*. https://doi.org/10.31234/osf.io/hn7us

Bell, B. T. (2016). Understanding adolescents. In L. Little, D. Fitton, B. T. Bell, & N. Toth (Eds.), *Perspectives on HCI research with teenagers* (pp. 11–27). New York, NY: Springer International Publishing.

Benner, A. D. (2021). *How adolescents are making meaning of the COVID-19 pandemic*. [manuscript in preparation]. Austin, TX: Department of Human Development and Family Sciences, University of Texas at Austin.

Bernasco, E., Nelemans, S., van der Graaff, J., & Branje, S. (2021). Friend support and internalizing symptoms in early adolescence during COVID-19. *Journal of Research on Adolescence*, 31(3), 692–702. https://doi.org/10.1111/jora.12662

Bornstein, M. H. (2020). The SARS-CoV-2 pandemic: Issues for families, parents, and children. In M. H. Bornstein (Ed.), *Psychological insights for understanding COVID-19 in families, parents, and children*. London, UK: Routledge.

Bronfenbrenner, U., & Morris, P. A. (2006). The bioecological model of human development. In R. M. Lerner & W. Damon (Eds.), *Handbook of child psychology: Theoretical models of human development* (pp. 793-828). New York, NY: Wiley.

Browne, D. T., Smith, J. A., & Basabose, J. D. D. (2021). Refugee children and families during the COVID-19 crisis: A resilience framework for mental health. *Journal of Refugee Studies*, 34(1), 1138–1149. https://doi.org/10.1093/jrs/tea113

Buzzi, C., Tucci, M., Ciprandi, R., Brambilla, I., Caimmi, S., Ciprandi, G., & Marseglia, G. L. (2020). The psychosocial effects of COVID-19 on Italian adolescents’ attitudes and behaviors. *Italian Journal of Pediatrics*, 46, 1–7. https://doi.org/10.1186/s13052-020-00833-4

Campione-Barr, N., Rote, W., Killoren, S., & Rose, A. (2021). Adolescent adjustment during COVID-19: The role of close relationships and COVID-19 related stress. *Journal of Research on Adolescence*, 31(3), 608–622. https://doi.org/10.1111/jora.12647

Cauberghe, V., Van Wesenbeeck, I., De Jans, S., Hudders, L., & Ponnet, K. (2021). How adolescents use social media to cope with feelings of loneliness and anxiety during COVID-19 lockdown. *Cyberpsychology, Behavior, and Social Networking*, 24, 250–257. https://doi.org/10.1089/cyber.2020.0478

Center for Disease Control. *National Center for Health Statistics (NCHS) provisional death counts*. Retrieved July 15, 2021 from https://data.cdc.gov/NCHS/Provisional
l-Death-Counts-for-Coronavirus-Disease-C/pj7m-y5uh (data through June 5, 2021).

Chang, L., Liu, Y., Lu, H. J., Lansford, J. E., Bornstein, M., Steinberg, L., … Dodge, K. A. (2021). Slow life history strategies and increases in externalizing and internalizing problems during the COVID-19 pandemic. Journal of Research on Adolescence.

Chen, F., Zheng, D., Liu, J., Gong, Y., Guan, Z., & Lou, D. (2020). Depression and anxiety among adolescents during COVID-19: A cross-sectional study. Brain, Behavior, and Immunity, 88, 36–38. https://doi.org/10.1016/j.bbi.2020.05.061

Coholic, D., Schinke, R., Oghene, O., Dano, K., Jabo, M., McAlister, H., & Grynspan, P. (2020). Arts-based interventions for youth with mental health challenges. Journal of Social Work, 20, 269–286. https://doi.org/10.1177/1468741319828864

Coll, C. G., Crnic, K., Lamberty, G., Wasik, B. H., Jenkins, R., Garcia, H. V., & Maddoo, H. P. (1996). An integrative model for the study of developmental competencies in minority children. Child Development, 67, 1891–1914. https://doi.org/10.1111/j.1467-8624.1996.tb01834.x

Darmody, M., Smyth, E., & Russell, H. (2020). Implications of the covid-19 pandemic for policy in relation to children and young people: A research review (ESRI survey and statistical report series number 94). Dublin, Ireland: The Economic and Social Research Institute.

De France, K., Hancock, G., Stack, D. M., Serbin, L. A., & Hollenstein, T. (2021). The mental health implications of COVID-19 for adolescents: Follow-up of a four-wave longitudinal study during the pandemic. American Psychologist, 1–16. https://doi.org/10.1037/amp0000838

Deng, W., Gadassi Polack, R., Creighton, M., Kober, H., & Joormann, J. (2021). Predicting negative and positive affect during COVID-19: A daily diary study in youths. Journal of Research on Adolescence.

Di Giunta, L., Lunetti, C., Fiasconaro, I., Gliozzo, G., Salvo, G., Ottaviani, C., … D’Angeli, G. (2021). COVID-19 impact on parental emotion socialization and youth socio-emotional adjustment in Italy. Journal of Research on Adolescence.

Donker, M. H., Mastrotheodoros, S., & Branje, S. (2021). Development of parent-adolescent relationships during the COVID-19 pandemic: The role of stress and coping. Developmental Psychology, 1–42. https://doi.org/10.31234/osf.io/urmr9

Elder, G. H. (2018). Children of the great depression: Social change in life experience. London, UK: Routledge.

Ellis, W. E., Dumas, T. M., & Forbes, L. M. (2021). Psychologically isolated but socially connected: Psychological adjustment and stress among adolescents during the initial COVID-19 crisis. Canadian Journal of Behavioural Science, 52, 177–187. https://doi.org/10.1037/cb s0000215

Esterwood, E., & Saeed, S. A. (2020). Past epidemics, natural disasters, COVID19, and mental health: Learning from history as we deal with the present and prepare for the future. Psychiatric Quarterly, 91, 1121–1133. https://doi.org/10.1007/s11126-020-09808-4

Ferrara, P., Franceschini, G., Corsello, G., Mestrovic, J., Giardino, I., Vural, M., … Petteolo-Mantovani, M. (2021). The dark side of the web: A risk for children and adolescents challenged by isolation during the novel Coronavirus 2019 pandemic. The Journal of Pediatrics, 228, 324–325. https://doi.org/10.1016/j.jpeds.2020.10.008

Frenkel, S., Alba, D., & Zhong, R. (2020). Surge of virus misinformation stumps Facebook and Twitter. The New York Times. Retrieved from https://www.nytimes.c om/2020/03/08/technology/coronavirus-misinforma tion-social-media.html

Goldstein, J. R., & Atherwood, S. (2020). Improved measurement of racial/ethnic disparities in COVID-19 mortality in the United States. MedRxiv, https://doi.org/10.1101/2020.05.21.20109116

Groarke, J. M., Berry, E., Graham-Wisener, L., McKenna-Plumley, P. E., McLinchev, E., & Armour, C. (2020). Loneliness in the UK during the COVID-19 pandemic: Cross-sectional results from the COVID-19 psychological wellbeing study. PLoS One, 15(9), e0239698. https://doi.org/10.1371/journal.pone.0239698

Hollenstein, T., Colasante, T., & Lougheed, J. (2021). Adolescent and maternal anxiety symptoms decreased but depressive symptoms increased before to during COVID-19 lockdown. Journal of Research on Adolescence.

Human Rights Watch (2020). Covid-19 fueling anti-Asian racism and xenophobia worldwide. Retrieved from https://www.hrw.org/news/2020/05/12/covid-19-fue ling-anti-asian-racism-and-xenophobia-worldwide. Accessed July 14, 2021.

Hussong, A. M., Cole, V. T., Curran, P. J., Bauer, D. J., & Gottfredson, N. C. (2020). Integrative data analysis and the study of global health. In X. Chen, & B. Yu (Eds.), Statistics for global health and epidemiology: Principles, methods and application (pp. 121–158). New York, NY: Springer.

Hussong, A. M., Curran, P. J., & Bauer, D. J. (2013). Integrative data analysis in clinical psychology research. Annual Review of Clinical Psychology, 9, 61–89. https://doi.org/10.1146/annurev-clinpsy-050212-185522

Hussong, A. M., Midgette, A. J., Thomas, T. E., Coffman, J. L., & Cho, S. (2021). Coping and mental health in early adolescence during COVID-19. Research on Child and Adolescent Psychopathology, 49, 1113–1123. https://doi.org/10.3109/s10802-021-00821-0

Hutchinson, E., Sequeira, S., Silk, J., Jones, N., Oppenheimer, C., Scott, L., & Ladouceur, C. (2021). Peer connectedness and pre-existing social reward processing predicts U.S. adolescent girls’ suicidal ideation during COVID-19. Journal of Research on Adolescence.

Janssens, J., Achterhof, R., Lafit, G., Bamps, E., Hagemann, N., Hiekkaaranta, A., … Kirtley, O. (2021). The impact of COVID-19 on adolescents’ daily lives: The role of parent-child attachment. Journal of Research on Adolescence.
Joseph, S. (2004). Client-centred therapy, post-traumatic stress disorder and post-traumatic growth: Theoretical perspectives and practical implications. *Psychology and Psychotherapy: Theory, Research and Practice, 77*(1), 101–119. https://doi.org/10.1348/14760304322874281

Kaur, N., & Byard, R. W. (2021). Prevalence and potential consequences of child labour in India and the possible impact of COVID-19: A contemporary overview. *Medicine, Science and the Law, 61*(3), 208–214. https://doi.org/10.1177/0025802421993364

Klootwijk, C., Koele, I., van Hoom, J., Gölä, B., & van Duivenvoorde, A. (2021). Parental support and positive mood buffer adolescents’ academic motivation during the COVID-19 pandemic. *Journal of Research on Adolescence, 31*(3), 780–795. https://doi.org/10.1111/jora.12660

Lee, O. J. (2020). Mental health effects of school closures during COVID-19. *Lancet Child and Adolescent Health, 4*, 421. https://doi.org/10.1016/S2582-4642(20)30109-7

Lei, H., Nahum-Shani, I., Lynch, K., Oslin, D., & Murphy, S. A. (2012). A ‘SMART’ design for building individualized treatment sequences. *Annual Review of Clinical Psychology, 8*, 21–48. https://doi.org/10.1146/annurev-clinpsy-032511-143152

Lerner, R. M., Tirrell, J. M., Dowling, E. M., Geldhof, G. J., Gestsdóttir, S., Lerner, J. V., ... Sim, A. T. R. (2019). The end of the beginning: Evidence and absences studying positive youth development in a global context. *Adolescent Research Review, 4*, 1–14. https://doi.org/10.1007/s40894-018-0093-4

Liang, L., Ren, H., Cao, R., Hu, Y., Qin, Z., Li, C., & Mei, S. (2020). The effect of COVID-19 on youth mental health. *Psychiatric Quarterly, 91*, 841–852. https://doi.org/10.1007/s11126-020-09744-3

MacLean, A. (2005). Lessons from the Cold War: Military service and college education. *Sociology of Education, 78*(3), 250–266. https://doi.org/10.1177/0038040705780304

Magis-Weinberg, L., Gys, C., Berger, E., Domoff, S., & Dahl, R. (2021). Positive and negative online experiences and loneliness in Peruvian adolescents during the COVID-19 lockdown. *Journal of Research on Adolescence, 31*(3), 717–733. https://doi.org/10.1111/jora.12666

Maheux, A., Nesi, J., Galla, B., Roberts, S., & Choukas-Bradley, S. (2021). #Grateful: Longitudinal associations between adolescents’ social media use and gratitude during the COVID-19 pandemic. *Journal of Research on Adolescence, 31*(3), 734–747. https://doi.org/10.1111/jora.12650

Maiya, S., Dotterer, A., & Whiteman, S. (2021). Longitudinal changes in adolescents’ school bonding during the COVID-19 pandemic: Individual, parenting, and family correlates. *Journal of Research on Adolescence, 31*(3), 809–819. https://doi.org/10.1111/jora.12653

Mbogo, R. W. (2020). Leadership roles in managing education in crises: The case of Kenya during COVID-19 pandemic. *European Journal of Education Studies, 7*, 1–21. https://doi.org/10.46827/ejes.v7i9.3250

Meichenbaum, D. (1977). Stress-inoculation training. In *Cognitive-behavior modification* (pp. 143–182). Berlin, Germany: Springer.

Miconi, D., Dervishi, E., Wiium, N., Johnson-Lafluer, J., Ibrahimii, S., & Rousseau, C. (2021). Egyptian and Roma adolescents’ perspectives on their developmental assets in Albania during the COVID-19 pandemic. *Journal of Research on Adolescence, 31*(3), 576–594. https://doi.org/10.1111/jora.12665

Muzi, S., Sansò, A., & Pace, C. S. (2021). 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, 12*, 1–11. https://doi.org/10.3389/fpsyt.2021.590543

National Academies of Sciences, Engineering, and Medicine. (2020). *Promoting positive adolescent health behaviors and outcomes: Thriving in the 21st century*. Washington, DC: National Academies Press.

Nitschke, J. P., Forbes, P. A. G., Ali, N., Cutler, J., Apps, M. A. J., Lockwood, P. L., & Lamm, C. (2021). Resilience during uncertainty? Greater social connectedness during COVID-19 lockdown is associated with reduced distress and fatigue. *British Journal of Health Psychology, 26*, 553–569. https://doi.org/10.1111/bjhp.12485

Odgers, C. L., & Jensen, M. R. (2020). Adolescent mental health in the digital age: Facts, fears, and future directions. *Journal of Child Psychology and Psychiatry, 61*, 336–348. https://doi.org/10.1111/jcpp.13190

Parent, N., Dadgar, K., Xiao, B., Hesse, C., & Shapka, J. (2021). Social disconnection during COVID-19: The role of attachment, fear of missing out, and smartphone use. *Journal of Research on Adolescence, 31*(3), 748–763. https://doi.org/10.1111/jora.12658

Park, S., & Oh, S. (2021, in press). Factors associated with preventive behaviors for COVID-19 among adolescents in South Korea. *Journal of Pediatric Nursing*, 1–8. https://doi.org/10.1016/j.pedn.2021.07.006

Paschke, K., Austermann, M. I., Simon-Kutscher, K., & Thomasius, R. (2021). Adolescent gaming and social media use before and during the COVID-19 pandemic: Interim results of a longitudinal study. *Sucht, 67*(1), 13–22. https://doi.org/10.1024/0939-5911/a000694

Petrovski, N., Cappa, C., Pereira, A., Mason, H., & Daban, R. A. (2021). Violence against children during COVID-19: Assessing and understanding change in use of helplines. *Child Abuse & Neglect, 116*, 104757. https://doi.org/10.1016/j.chiabu.2020.104757

Polizzi, C., Lynn, S. J., & Perry, A. (2020). Stress and coping in the time of COVID-19: Pathways to resilience and recovery. *Clinical Neuropsychiatry, 17*, 59–62. https://doi.org/10.36313/CN20200204

Rogoff, B., Baker-Sennett, J., Lacasa, P., & Goldsmith, D. (1995). Development through participation in...
