



Editorial

Adolescents' Pro-social Behavior During the Early COVID-19 Pandemic



Adolescents in modern US society are tasked with identity development including establishing values, college expectations, and future orientation, a process likely to have been affected by the ongoing Covid-19 pandemic. The analysis of the American Time Use Survey in this issue describes adolescents' behavior during the first year of the pandemic [1]. Contrary to concerns that closing schools leads to greater risky socialization [2] and even with persistently decreasing pro-social attitudes in the United States [3], adolescents did exactly as they were asked to: they spent more time with their households and less time with friends and in school [1]. Adolescents also did not increase hours of sleep or take on employment despite the potential flexibilities offered by remote learning, possibly because their families' household incomes also increased relative to the poverty line, consistent with the intent of the economic impact payments of the Coronavirus Aid, Relief, and Economic Security Act [1]. In this commentary, I will consider which adolescents are excluded from the analysis and how we can plan for future pandemics to improve adolescents' experiences.

Excluded populations

The American Time Use Survey includes adolescents whose lives allowed them to respond to the survey. Traditional survey weighting methods cannot fully account for nonresponse in pandemic-related surveys because we do not know the pandemic's effects on nonrespondents due to the unprecedented nature of this event [4]. Adolescents who experienced the pandemic's most severe effects likely participated at diminished rates, including the 140,000 children and adolescents orphaned during the pandemic's first 14 months [5], adolescents who engaged in time-intensive caregiving or employment, and adolescents experiencing food and housing insecurity. Some adolescents' pandemic experiences were unacceptably close to adolescents' experience of the 1918 flu pandemic, such as adolescents whose employer violated Alabama child labor laws by illegally employing them in heavy industry [6]. Public awareness of US child labor as an important present-day phenomenon is almost nonexistent because society has marginalized the affected populations. US child labor law also includes racialized exceptions such as agricultural labor [7] that violate international norms, although the US is one of three Organization for

Economic Co-operation and Development countries not to ratify the Minimum Age Convention of 1973 [8].

Adolescent school attendance in future pandemics

In future pandemics, adolescents may not need to change their behavior as much as they did in 2020, but keeping schools open safely for adolescents may be challenging. The Lancet commission recommends keeping schools open early in the pandemic with "stringent" non-pharmaceutical intervention (NPI) protections such as masks, ventilation, and distancing tied to the epidemiology of disease spread [3]. Pandemic planning needs to account for how implementing health protections may be complicated by individual-level violence against workers enforcing NPIs, as occurred early in the pandemic [9]; violence against public health officials, clinicians, and scientists [10]; and the potential for grievance-based group violence [11]. All US states closed schools early in the pandemic, but jurisdictions varied in the timing of return to full in-person school and the presence of NPI protections, with return ranging from fall 2020 to late spring 2021 [12]. States then dropped remaining NPIs and vaccine mandates over 2022 [3].

Inconsistent pandemic response occurred in parallel with North American domestic violent extremist activity including violent incitement against public health officials, clinicians, and scientists [10] and armed take-overs of state houses (e.g., Michigan on May 14, 2020), the US Capitol building (January 6, 2021), and Canada's capital city, Ottawa (January 28 to February 17, 2022) [13]. The August 2021 Department of Homeland Security bulletin noted disease prevention measures risked grievance-based violence [11], a term related to a theory of radicalization to extremist violence [14], so ending protections may have been rushed in part due to security concerns.

Irrespective of the reason, the premature reductions in pandemic protection policies appear inconsistent to the public, motivate further reduction in disease prevention outside the scope of these policies, and facilitate viral spread and mutation. Vulnerable populations and their families justly feel afraid and abandoned when governments act contrary to trusted organizations such as the American Academy of Pediatrics that have consistently recommended masks in schools [15]. The memory of

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these premature reductions may harm future pandemic responses: for example, if people believe that a future pandemic-related vaccine mandate is temporary, as this one has been, they are less likely to cooperate. Pandemic planning must consider how to implement recommendations so adolescents can attend school safe from disease and violence by considering interdisciplinary perspectives from criminologists and domestic terrorism experts.

Adolescent vaccination

In planning for the next pandemic, we also need to evaluate how to improve adolescent vaccination rates. Vaccine take-up in the United States has been low relative to peer nations [16], but vaccine take-up by adolescents has been lower than for emerging adults: among ages 12–17, 71% have had at least one dose (vs. 80% of ages 18–25), 61% have had at least two doses (vs. 65% of ages 18–25), and 29% have had two doses plus 1 booster (vs. 34% of ages 18–25) [17]. In theory, young adults and adolescents could have had comparable vaccination rates because most members of the two age groups have effectively had access for nearly the same amount of time. The US emergency use authorization for the Pfizer vaccine for adolescents ages 12–15 occurred on May 10, 2021, and healthy adults were allowed access to vaccination on May 1, 2021; vaccine access had previously been restricted by health conditions and age, although the first emergency use authorization occurred in December 2020. One reason for the gap between adolescents and young adults may be that vaccinated parents are hesitant to vaccinate their children and adolescents immediately and instead prefer to wait and see [18]. The “wait and see” attitude was reported by 48.5% of Black respondents to the Household Pulse Survey [19], a population that has been under-represented in pandemic planning and response. In the context of a pandemic, simultaneous vaccine trials should be considered to accommodate the “wait and see” preference and may also increase uptake by allowing parents and adolescents to vaccinate simultaneously. Earlier adolescent vaccine availability would also improve the safety of in-person school attendance.

Conclusion

As we enter the third year of this ongoing pandemic, the United States must plan for the next pandemic. As a population, adolescents did exactly as they were asked in this pandemic, but the United States failed to give a consistent and effective pandemic response due to complicated dynamics. Even as policy has fluctuated, mortality has remained consistently higher than usual seasonal mortality levels for nearly every week since March 2020 [20]. Next time, we must do better.

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References

- [1] Morrissey T, Engel K. Adolescents' time during the first year of the COVID-19 pandemic: Evidence from the American time use survey. *J Adolesc Health* 2022.
- [2] Cauchemez S, Ferguson NM, Wachtel C, et al. Closure of schools during an influenza pandemic. *Lancet Infect Dis* 2009;9:473–81.
- [3] Sachs JD, Karim SSA, Akinin L, et al. The Lancet Commission on lessons for the future from the COVID-19 pandemic. *Lancet* 2022;400:1224–80.
- [4] Peterson S, Toribio N, Farber J, Hornick D. Nonresponse bias report for the 2020 household Pulse survey [Internet]. US Census Bureau. 2021. https://www2.census.gov/programs-surveys/demo/technical-documentation/hhp/2020_HPS_NR_Bias_Report-final.pdf. Accessed October 6, 2022.
- [5] Hillis SD, Blenkinsop A, Villaveces A, et al. COVID-19-Associated orphanhood and caregiver death in the United States. *Pediatrics* 2021. 48 (6): e2021053760. <https://doi.org/10.1542/peds.2021-053760>.
- [6] Schneyer J, Rosenberg M, Cooke K. Exclusive: Hyundai subsidiary has used child labor at Alabama factory. Reuters [Internet]. 2022. Available at: <https://www.reuters.com/world/us/exclusive-hyundai-subsidiary-has-used-child-labor-alabama-factory-2022-07-22/>. Accessed October 6, 2022.
- [7] U.S. Department of Labor. State child labor laws applicable to agricultural employment [Internet]. Available at: <https://www.dol.gov/agencies/whd/state/child-labor/agriculture>. Accessed October 6, 2022.
- [8] Governing Body of the International Labour Office. Minimum age convention, 1973 (No. 138) [Internet]. 138. 1973. https://www.ilo.org/dyn/normlex/en/f?p=NORMLEXPUB:12100:0::NO::P12100_ILO_CODE:C138. Accessed October 6, 2022.
- [9] Tiesman H, Marsh S, Konda S, et al. Workplace violence during the COVID-19 pandemic: March–October, 2020, United States. *J Saf Res* 2022; 82:376–84.
- [10] Hotez PJ. Mounting antiscience aggression in the United States. *PLoS Biol* 2021;19:e3001369.
- [11] Department of Homeland Security. Summary of terrorism threat to the U.S. Homeland [Internet]. Washington, D.C.: Department of Homeland Security; 2021 (National Terrorism Advisory System Bulletin). Available at: <https://www.dhs.gov/ntas/advisory/national-terrorism-advisory-system-bulletin-august-13-2021>. Accessed October 6, 2022.
- [12] Levinson M, Geller AC, Allen JG. Health equity, schooling hesitancy, and the social determinants of learning. *The Lancet Regional Health – Americas* [Internet] 2021;2. Available at: [https://www.thelancet.com/journals/lanam/article/PIIS2667-193X\(21\)00024-7/fulltext](https://www.thelancet.com/journals/lanam/article/PIIS2667-193X(21)00024-7/fulltext). Accessed October 6, 2022.
- [13] Morabia A. The fascist threat. *Am J Public Health* 2021;111:538–9.
- [14] Dyrstad K, Hillesund S. Explaining support for political violence: Grievance and perceived opportunity. *J Conflict Resolut* 2020;64:1724–53.
- [15] American Academy of Pediatrics. COVID-19 guidance for safe schools and promotion of in-person learning [Internet]. Chicago, IL. 2022. Available at: <http://www.aap.org/en/pages/2019-novel-coronavirus-covid-19-infections/c/clinical-guidance/covid-19-planning-considerations-return-to-in-person-education-in-schools/>. Accessed September 14, 2022.
- [16] Omer SB, Benjamin RM, Brewer NT, et al. Promoting COVID-19 vaccine acceptance: Recommendations from the Lancet commission on vaccine refusal, acceptance, and demand in the USA. *Lancet* 2021;398: 2186–92.
- [17] Center for Disease Control and Prevention. Trends in demographic characteristics of people receiving COVID-19 vaccinations in the United States [Internet]. 2022. Available at: <https://covid.cdc.gov/covid-data-tracker>. Accessed September 14, 2022.
- [18] Nguyen KH, Nguyen K, Mansfield K, et al. Child and adolescent COVID-19 vaccination status and reasons for non-vaccination by parental vaccination status. *Public Health* 2022;209:82–9.
- [19] Chen J, Shiu C. Race, ethnicity and COVID-19 vaccine concerns: A latent class analysis of data during early phase of vaccination. *SSM - Popul Health* 2022;18.
- [20] National Center for Health Statistics. Excess deaths associated with COVID-19: Provisional death counts for Coronavirus disease (COVID-19) [Internet]. Hyattsville, Maryland: National Center for Health Statistics, Centers for Disease Control and Prevention; 2022. Last reviewed: October 5, 2022. Available at: https://www.cdc.gov/nchs/nvss/vsr/covid19/excess_deaths.htm. Accessed October 6, 2022.