Without trust, politicians struggle to convince people to follow their advice and instructions. From COVID-19 to climate change and now the Russian invasion of Ukraine, governments are asking or telling people to alter their behavior and make sacrifices—great sacrifices in the case of war. Yet in an environment rife with conspiracy theories, trust is becoming much harder to establish and sustain. Public responses to the pandemic have underscored the importance of trust, among the young especially, and may hold lessons for other areas of public life.

Governments and modern medical science have played important roles in mitigating the pandemic. Public officials and agencies have offered advice and issued rules on social distancing, mask wearing, and vaccination. Scientists, in their capacity as advisors, have informed those rules and policies, and as researchers have developed mRNA vaccines and now prophylactic and therapeutic drugs that promise to lessen spread of the disease.
Recent research and casual observation both suggest that, in order for such efforts to succeed, members of the public must trust government officials and scientists, together with their associated institutions. Only if people believe that government is trustworthy—that it will adopt unbiased and well-informed measures—are they likely to follow its advice and instructions. A study published in the British medical journal *Lancet* in early 2022 looked at the incidence of COVID-19 in 177 countries and found that higher levels of trust in government and society had “large, statistically significant associations with fewer infections for the entire study period.” Similarly, multiple studies comparing across countries and individuals have found that trust in science is positively correlated with adherence to pandemic measures. Evidently, only if people think that scientists are trustworthy are they likely to follow their advice and instructions. Questions about the motivations, competence, and honesty of scientists are frequently expressed by vaccine skeptics, to take a prominent case in point.

But trust is not a given: it is shaped by events. And among the events that prominently affect individuals’ trust in government and scientists, recent research suggests, is exposure to epidemics. Trust in both governments and scientists is negatively affected by epidemic exposure. Importantly, however, not everyone’s expressed and displayed level of trust is affected equally. As we report in a series of papers, the largest effect of epidemic exposure is on trust among the young—more specifically, on young adults aged 18 to 25.

**The impressionable years**

A long list of studies has found sharp perceptual and behavioral changes among young adults, and that such changes persist for years thereafter. A classic study initiated in the 1930s by the sociologist Theodore Newcomb of students at Bennington College found that social and political beliefs adopted by his subjects in their undergraduate years persisted long after; they became part of individuals’ enduring ideological identity. The psychologist Jon Krosnick and sociologist Duane Alwin showed that political attitudes and affiliations acquired in the 18- to 25-year-old period tend to persist durably for many years. Economists Paola Giuliano and Antonio Spilimbergo found that experiencing a recession between the ages of 18 and 25 had a significant, enduring impact on beliefs about the economy. All this has led investigators to refer to the 18- to 25-year-old phase of the life cycle as the “impressionable years.”

The singular importance of the impressionable years has been rationalized in various ways. Some scholars draw on the concept of the “fresh encounter” described by the early 20th century philosopher Karl Mannheim, who suggested that views were durably formed when late adolescents, on leaving the household, are first exposed to new ideas or events. Others invoke the psychologist Erik Erikson, whose work suggests that late adolescents and young adults are open to new influences because this is the age at which they form their sense of self and identity. Cognitive scientists link the persistence of attitudes adopted in the impressionable years to increased cognitive capacity starting in late adolescence. Others point to work in neurology suggesting that neurochemical and anatomical changes between the adolescent and adult brain are associated with durable attitude formation. But whatever the rationalization for the impressionable years, their importance is clear.

**Epidemics and political trust**

Our own work provides the first large-scale evidence on the effects of epidemics on political trust for individuals in their impressionable years. We use data on trust and confidence in governments, elections, and national leaders from Gallup World Polls fielded in 140 countries annually between 2006 and 2018, together with data on the incidence of epidemics since 1970, as tabulated in the International Disaster Database maintained by the nongovernmental organization EM-DAT. Given that the sample period ends in 2018, it predates COVID. But a number of tests support the external validity of our results.

We show that exposure to epidemics, specifically during the impressionable years, durably shapes confidence in government, elections, and leaders. We do so by asking whether cohorts of individuals exposed to an epidemic during their impressionable years display lower political trust
than other cohorts surveyed in the same country and same year, while at the same time controlling for a variety of other social, economic, and personal characteristics.

The impact of epidemic exposure is substantial: someone who is highly exposed to an epidemic throughout his or her impressionable years, compared with someone with no such exposure, is 5.1 percentage points less likely to have confidence in the government, 7.2 percentage points less likely to have confidence in the honesty of elections, and 6.2 percentage points less likely to approve of the performance of the national leader (where the mean outcomes for these variables are 50 percent, 51 percent, and 51 percent, respectively).

Strikingly, there is no analogous effect for individuals who have not yet reached their impressionable years or who have aged beyond them when the epidemic erupts. These effects decay only gradually as the exposed individual ages. On average, they persist for nearly two decades.

Importance of the health policy response

Moreover, the effect is specific to political institutions and leaders. We find no analogous impact on other societal institutions such as the police, military, banks, and financial institutions. An important exception is the relationship between individuals’ impressionable-year exposure to epidemics and their trust in their country’s health care system, where again we find a pronounced negative effect. This suggests that loss of trust in political institutions is related to the adequacy of governments’ health-care-related policy responses to the public health threat.

Governments with limited legislative strength, unity, and popular support are typically least able to mount effective policy responses to epidemics. We document this fact by comparing national responses to COVID-19. Evidence from 2020 confirms that weaker governments took longer to respond to the emergency with their first non-pharmaceutical intervention. If they are indeed prone to disappointing their constituents, one would expect the negative effects on trust to be strongest when the government in office at the time of the epidemic is weak and unstable, all else equal. In fact, we find that the effect of epidemic exposure on trust is twice as large when that epidemic is experienced under a weak government.

Finally, it is possible to show that the strongest impact on trust in government for young adults is driven by persons living in democracies. This finding is robust to controlling for country characteristics, such as the level of income, and a wide range of personal and family attributes. An interpretation is that the young expect democratically elected governments to be responsive to their needs and are disappointed when such governments do not respond so as to prevent or contain an epidemic. In addition, democratic regimes may have more difficulty with consistent messaging. Because such regimes are open, they may allow for a cacophony of conflicting official views, resulting in greater erosion of confidence and trust.

Trust in scientists

We use this same comparative approach and a 2018 Wellcome Trust survey of some 75,000 individuals in 138 countries to explore how epidemic exposure affects trust in science and scientists. Again, the analysis points to persistent negative effects of epidemic exposure on trust, once more specific to young adults. People who experience an epidemic when they are between 18 and 25 years old place significantly less trust in scientists and in the benefits of their work, compared with otherwise comparable individuals not so exposed at this stage of life. Those with the highest exposure to epidemics during their impressionable years are on average 11 percentage points less likely to trust scientists than those not so exposed. Individuals who were either younger or older than this at the time of their epidemic exposure display no such change in trust.

One can also distinguish survey respondents who learned about science only in primary school from respondents whose science education continued through at least secondary school. Here we find that the decline in trust is driven by individuals with less background in science-related subjects.

Lower, epidemic-induced, trust among the young translates into negative views of vaccines as well. It affects actual behavior as well as attitudes. Specifically, analysis of survey responses shows that impressionable-year epidemic exposure reduces the likelihood that people will have their children vaccinated against childhood diseases.

Implications

At one level, these findings are alarming. We know that trust in government and scientific experts
If a contagious disease outbreak diminishes trust in government and scientists, it raises the specter of a vicious spiral.

matters hugely for public acceptance of recommendations and policies. It has been important specifically, recent experience suggests, for acceptance of advice and policies for mitigating the spread and effects of COVID-19. But if a contagious disease outbreak diminishes trust in government and scientists, it raises the specter of a vicious spiral in which the outbreak of an epidemic diminishes trust, which in turn makes the epidemic—and its successors—still more difficult to contain.

Indeed, the effects may not be limited to the realm of public health. Other research suggests that trust is an important determinant of how societies respond to natural disasters such as earthquakes and floods. It shows that trust is a factor in long-term economic development. But if a disease outbreak diminishes trust among the young, this in turn may weaken and delay the societal response to other emergencies and create headwinds for economic development. Insofar as these attitudinal changes are enduring and the youth of today are the adults of tomorrow, those headwinds become even more difficult to surmount.

All is not lost, however. As we have seen, governments that respond poorly to a public health emergency are most vulnerable to erosion of trust. Thus, governments conscious of epidemic risk, that build up the response capability of their public health systems in advance, will be less susceptible to this problem. The success with which certain African countries responded to COVID-19 can be attributed in part to efforts to invest in this capacity in the wake of earlier public health emergencies such as SARS and HIV. And when it comes to trust in science and scientists, scientific education can help.

Our results point to an important difference, moreover, in how young people, when exposed to an epidemic, revise their views of science and scientists. Despite negative revisions of views of scientists’ honesty, the accuracy of their findings, and the benefits of their work for the public, views of science as an endeavor (whether people trust science as an enterprise and believe that science and technology will help improve life) are unchanged. This distinction is consistent with the literature in psychology and cognitive science on how people assign blame in complex, high-stakes social settings and with the tendency to blame individuals rather than institutions. It is consistent with the tendency during the COVID-19 pandemic of politicians and commentators to question the value of the public policy recommendations of individual scientists while at the same time seeking to mobilize all available scientific resources to develop a vaccine.

It thus may be that the problem—and its solution—has to do with how scientists present themselves and communicate their findings. People worry that scientists, being self-interested and human, can be unduly influenced by government and corporate agendas. They may worry that scientists’ conclusions are based on personal beliefs rather than hard evidence. Surveys find that a significant share of respondents take disagreements among scientists, which are not uncommon in the context of a swiftly unfolding pandemic, as evidence that their conclusions are based on personal belief, or as indicating that the investigators in question are less than competent.

Addressing concerns about corporate agendas and personal bias is important in this light. Scientists need to explain that disagreements and new evidence contradicting the findings of earlier studies are part of the process by which advances in the scientific endeavor take place. The public policy response to the COVID-19 pandemic has underscored the importance of effective communication. Our analysis suggests that it is especially important to tailor such communication to the concerns of young adults in their impressionable years to strengthen trust so that societies can prepare for future pandemics and other emergencies.

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