

Postdocs in crisis: science risks losing the next generation

The pandemic has worsened the plight of postdoctoral researchers. Funders need to be offering more than moral support.

Postdoctoral researchers know what it's like to be in career limbo, spending years – in some cases decades – on a succession of short-term contracts. The anxiety and uncertainty this creates can be immense. And, as the results of a new *Nature* survey show, the pandemic is adding to postdocs' distress. The current generation might be facing the most severe career and health crisis so far.

Nature asked postdocs how the pandemic is affecting their current and future career plans; about their health and well-being; and whether they feel supported by their supervisors.

The poll ran in June and July, and more than 7,600 people responded from across 19 disciplines. The sample, a self-selecting group scattered over 93 countries, is not fully representative globally, because the overwhelming majority of respondents are in Europe and North America. But the picture that emerges is undoubtedly concerning.

Six out of ten respondents think the pandemic has worsened their career prospects, and one in four feel that their supervisors have not done enough to support them during the pandemic. Moreover, 23% of respondents said that they have sought help for anxiety or depression caused by their work, and a further 26% would like such help but have not yet sought it. This is in line with other findings of pandemic-related mental ill-health.

Equally concerning is the fact that 51% of respondents to the latest survey have considered leaving active research because of work-related mental-health concerns. It is tragic that so many early-career researchers are in such distress. And it spells trouble for knowledge, discovery and invention if so many people are concluding that they have no future in science.

The written survey responses offer a more detailed picture. An engineer in India wrote that he is unable to take up a postdoctoral job offer abroad because of travel restrictions imposed as a result of the pandemic; a researcher in Germany described how employment offers were being withdrawn; a physicist in Brazil feared that the government would curtail scholarships. These individual stories reflect the fact that universities, which are under financial pressure because of the pandemic, are widely freezing recruitment and cutting roles.

We put the survey findings to several major funding organizations in Australia, Europe and the United States,

and asked what they are doing to help. They described the ways in which they are supporting early-career researchers, such as by providing extensions to project deadlines. With most national economies in recession, all efforts to help workers, no matter how small, are welcome; but, on their own, small measures will sadly not be enough to save many academic science careers.

The US National Science Foundation (NSF), for example, said that it has extended project deadlines and directed universities to continue paying the salaries of NSF-funded postdocs while research has had to be put on hold. But it isn't clear who is funding these salary extensions. The NSF isn't providing any extra money, and universities are not compelled to comply with the NSF's requests – nor should they be. Other funders provided a similar response to our questions: grants are being extended, but there is no more money from the funder. This is neither fair nor sustainable.

Universities cannot be expected to bear this extra cost. The pandemic is already severely testing their finances, especially for those institutions that rely on income from international students' fees. Global student mobility will be much lower than usual in the coming academic year, and some institutions will lose a good fraction of their fee income as a result. In places where research is cross-subsidized from tuition-fee income, contract-research workers such as postdocs are most vulnerable to losing their jobs – and, in many fields, that will disproportionately affect women and people from minority groups, who constitute a comparatively high share of the postdoctoral workforce.

Such uncertainty is adding to the strain being experienced by postdocs, who rightly worry that shuttered experiments and unfinished manuscripts will set back their quest for grants and jobs. And our poll results suggest that many are looking to leave their posts now, anticipating that worse is to come. Research and university leaders must think of innovative ways to support early-career colleagues.

Senior investigators who wish to see promising younger colleagues find long-term careers in academia must look for ways to make it possible for them to stay. But they must equally be champions for those who want to pursue fulfilling careers in science elsewhere. What matters is that talented people find satisfying careers in science. Principal investigators should show flexibility, patience and support for everyone in their group. They and their institutions must also push harder than ever for accessible mental-health services.

Now is also the time to pause or slow down the treadmill of research evaluation. Even before the pandemic, early-career researchers faced the pressures of continuous assessment, and a more competitive and less secure working atmosphere than those who came before them. The pandemic has worsened this situation. A crushing, urgent crisis for individuals now risks becoming an existential crisis for a system that needs today's postdocs to become tomorrow's research leaders in academia, industry, government and the non-profit world. We cannot allow the pandemic to destroy the careers of these smart young people – many of whom are likely to contribute to finding a solution to it.

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