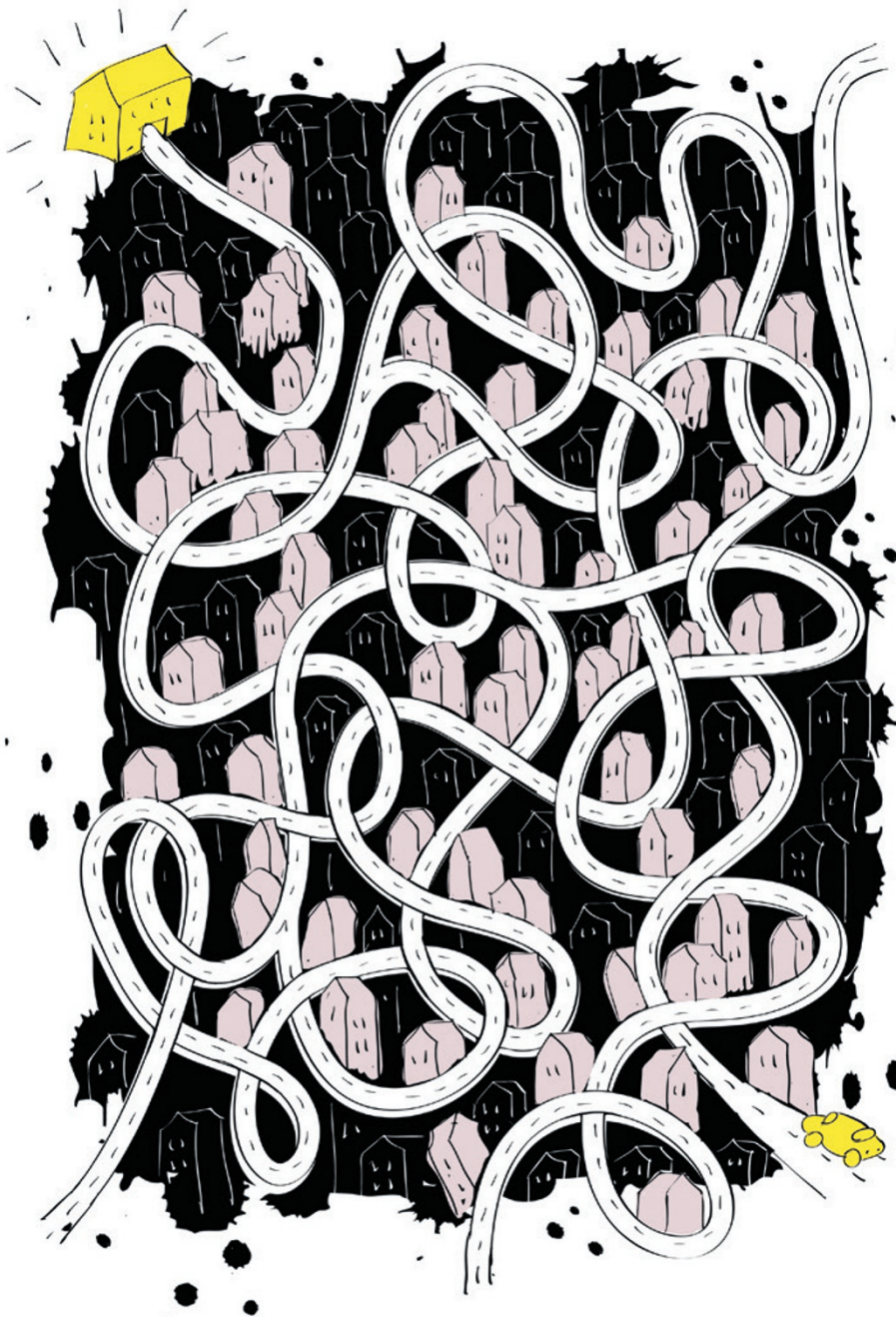


CAREERS

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JOB SATISFACTION

Divided opinions

Financial woes are marring researchers' enjoyment of their work.

BY PAUL SMAGLIK

Researchers around the world love their work, but tight funding is eroding their spirits, according to this year's *Nature* Careers salary survey. Although nearly two-thirds of the survey's 7,216 respondents across the world report being satisfied or very satisfied with their job, nearly half say that they think that the morale in their lab or department is slipping, and two-thirds of those who responded to the question do not believe that the funding environment is improving (see 'Money and morale').

The survey asked participants not only about morale in their lab or department but also about the level and accessibility of science funding. It also asked people where their funding came from, such as government grants or contracts, private grants, royalties or venture-capital funds. Participants could also rate how 15 factors — including salary, benefits, financial resources, interest in their work and availability of funding — affect their job satisfaction. And they were asked to rate their level of job satisfaction and indicate whether that had changed in the past year.

Nearly half of respondents across all participating nations say that the availability of funding is cutting into their job satisfaction. That was the biggest negative indicator of job satisfaction in the survey; more than salary, interest in their work and level of guidance (see 'When guidance is important').

Two in every five people also said that the availability of financial resources — of their nation, institution, department or supervisor — negatively affected their satisfaction with their job. Participants from several nations, including the United States, the United Kingdom, Japan and Spain, say that it was more difficult to secure funding last year than the year before.

Respondents are, at least, engaged by their work. Around four-fifths counted interest in their jobs as a positive factor, the most for any indicator of satisfaction. Almost two-thirds say that they are satisfied with their level of independence while more than half said that their colleagues had positively affected their job satisfaction and that they are happy with the location of their workplace. Salary had the most mixed results — roughly equal numbers rated it as positive, negative and neutral in terms of how it affected their job satisfaction.

Job satisfaction seems to rise with age. Three in five of those aged 25–54 are very satisfied ▶

VOOK/SHUTTERSTOCK

► or satisfied. But at age 55 and up, those numbers increase: three in four of those 55–64 say that they are satisfied or very satisfied, and more than four in five of those 65 and older say that they are satisfied or very satisfied. Unsurprisingly, some of the respondents in this age group say that they do not worry as much as their younger colleagues about winning grants.

DIM VIEW

We interviewed some of the respondents after the survey — and many of them said that budgetary problems in their country, which they have faced since the global financial crisis of 2008, threaten their long-term satisfaction. Many also said that they do not see any quick turnaround in the dim situation for science funding.

Interviewed respondents also said that the funding malaise is starting to affect multiple aspects of their job satisfaction. Some said that worries about funding caused them to downgrade their job outlook from very satisfied to satisfied; that spending more time writing grants means less time for research; and that it has created uncertainty or is making the transition to their next career stage more challenging.

Several postdoc respondents, for example, said that they know that they will need to land a grant to kick-start their future, and that they are beginning to become more aware of the proliferation of less-permanent positions owing to budget constraints. “I have a very unstable position so I cannot develop all the things I would like to do,” says Victor Ladero, a postdoc at the Dairy Institute of Asturias in Villaviciosa, Spain. “I cannot plan for the long, even the middle, term.” Because of these limitations, he says that he feels “neutral” in terms of job satisfaction.

Garry Buettner, a radiation oncologist at the

University of Iowa in Iowa City, is concerned that this financially constrained environment will discourage talented people from becoming scientists. “Where are the opportunities?” he asks. “We are supposed to be training our replacements. But where will they go? Where is our investment in the future?” He also feels responsible for younger scientists working with him. “They are vulnerable to changes in funding,” he says. “This is what keeps me up at night.”

In discussing how the lack of financial resources has diminished their job satisfaction, several people noted that rising funding and budget pressures are not the only problem — research costs have increased too.

And they said that their universities are relying more on researcher grants to cover operating costs, which leaves less for the researchers. “If I get a grant for US\$100,000, the university gets half,” says Buettner. Not long ago, he could spend most of his grant on personnel and direct research costs.

One in five respondents strongly agreed that it was more difficult to secure funding in 2013 than in previous years, while another one-third said that it remained the same as before. Scott Steppan, a geneticist at Florida State University in Tallahassee, notes that faculty scientists now need to write more grant applications if they hope to maintain their level of funding. Changes in the review process — made in part to accommodate the increase in applications and decrease in reviewers — are exacerbating the problem, he says.

Paul Roepe, a chemist at Georgetown University in Washington DC, said that the

grant-review process seems more “arbitrary” now, since many quality projects do not get funded because of increased competition for limited funds. He says that he has seen an increase in bumper stickers in the scientist-heavy Washington DC area that read “Peer review isn’t grant review. It’s a lottery.” He agrees that reviewers seem to spend less time on each grant application and are now writing shorter comments — often in bullet points. He once valued feedback on rejected applications. “Now you get these trite little sentences.”

When a proportion of a researcher’s salary comes from grants, it is not surprising that people are seeing salary cuts. And in some cases, rising non-research costs, including outlays for health care, retirement, parking or mass transit, are upsetting to one-quarter of respondents, who say that they are adding to their job dissatisfaction. One researcher at George Washington University in Washington DC, who asked to remain anonymous, says that the amount he pays for parking has almost doubled in the decade he has been there. And his institution’s health-insurance provider has raised its premiums yet decreased its coverage. Like some other US residents, he can benefit from his spouse’s scheme, too, but not all researchers in the United States have this luxury. He says that these changes do not affect how “satisfied” he is with his job, but he knows that they trouble some colleagues.

DISPROPORTIONATE EFFECTS

Such costs bite especially deeply for early-career scientists, who tend to have smaller base compensation. Dominick Burton, a British postdoc at the Weizmann Institute of Science in Rehovot, Israel, needs to pay \$800 a year for health insurance — a requirement for his employment. Burton says that the additional outlay (he would not have to pay anything in Britain) has pushed down his level of job satisfaction to satisfied rather than very satisfied.

A lucky 14% of respondents across all age-groups and career stages report that they are very satisfied with their job. Adil Mardinoglu is one of them. The Turkish native lives on a slim postdoc stipend and sometimes puts in 100-hour weeks at Chalmers University of Technology in Gothenburg, Sweden, but derives “positive energy” from his work on malnutrition in African children. “We are doing something good,” he says.

That outlook may explain why many scientists report satisfaction yet bemoan funding and salary issues. “Everyone would always like more money for research,” says “very satisfied” Thomas Merritt, a biochemist at Laurentian University in Sudbury, Canada. “But we’re so lucky to get paid to do what we do, you can’t spend the time whining about ‘We need more, more, more.’” ■

Paul Smaglik is assistant editor of *Nature Careers*. Additional reporting by Karen Kaplan, Shirana Kelly and Dan Penny.

MENTORING

When guidance is important

The guidance that researchers receive about their work — whether from superiors or co-workers — contributes to their level of satisfaction. But in *Nature*’s latest salary survey, most respondents gave less than glowing reviews. Just one in four say that they are happy with the amount of guidance they have received in the past year, and half say that it has had little effect.

The responses seem to differ greatly by country. People in Japan gave the lowest ratings, with just 13% giving a thumbs-up. Conversely, one-third of respondents from the United States and Canada say that they are pleased with the level of guidance they have received. The difference could reflect the dissimilar cultures. Many US institutions have formal mentorship programmes and some federal grants require descriptions of the applicant’s mentoring plans for junior

scientists in their lab; in Japan, however, there are systemic issues that can hinder the proliferation of great mentors (see *Nature* **462**, 948; 2009).

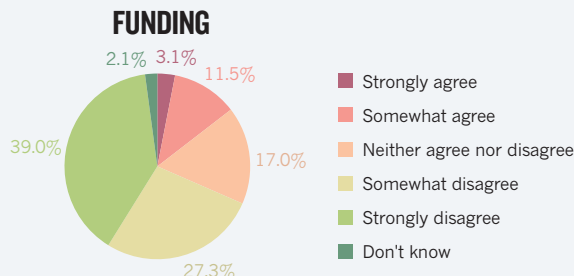
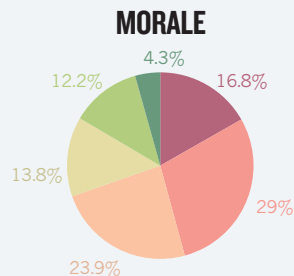
Not many respondents think that they have sufficient opportunities for advancement, either. Fewer than one in three say that such opportunities had boosted their satisfaction in the past year, and two in five say that it has detracted from it. Just one in five participants from the United Kingdom, one in four from the United States and one in three from Japan — the nations with the most responses — say that they feel positive about career advancement. Across income levels, nearly half of those earning between US\$40,000 and \$69,999 — those most likely to be at the early stages of their careers — say that they are unhappy with advancement opportunities. **K.K.**

Money and morale

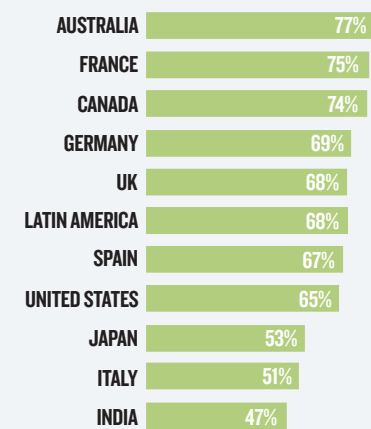
The 2014 *Nature* Careers salary survey collected 7,216 responses from researchers of every career stage around the world. Difficulty in securing grants correlates strongly with decreased lab morale, but most scientists are still happy with their jobs.

Q I feel that in the last year, the morale in my lab/department has decreased.

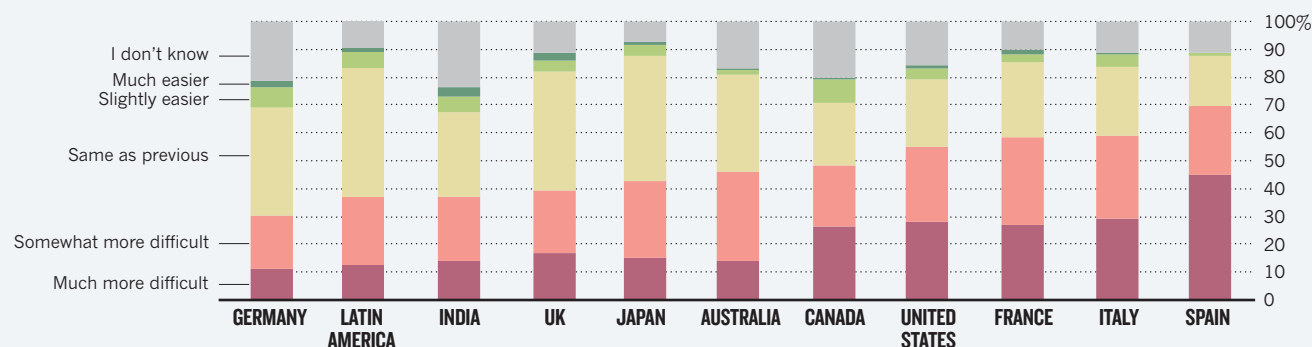
Q I feel that the science funding environment is improving.



Q I am satisfied or very satisfied with my job.

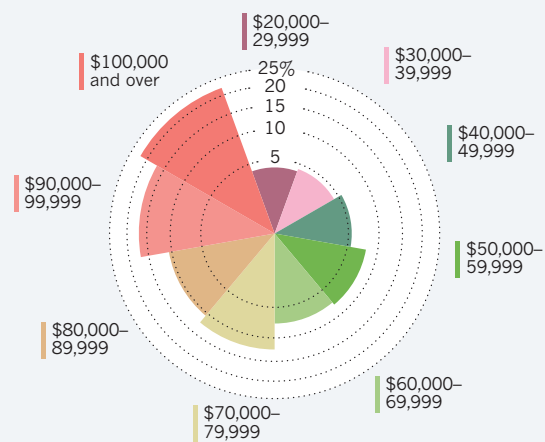
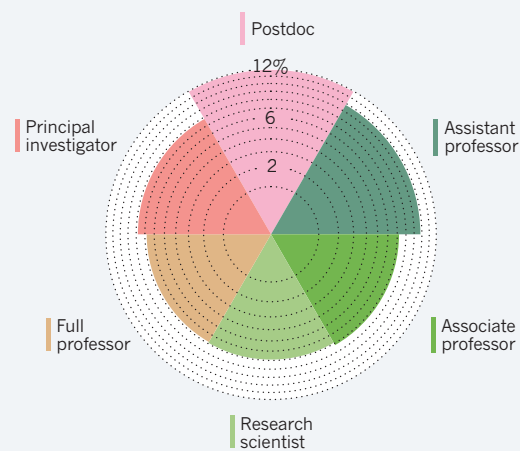


Q How did your efforts to secure grant funding in 2013 compare with your previous attempt?



Q In the past year, would you say your level of satisfaction has improved greatly?

Q Would you say you are very satisfied with your salary?



4 OUT OF 10 RESEARCHERS ACROSS ALL NATIONS, INCOME AND POSITIONS SAY THAT THEIR SALARY NEGATIVELY AFFECTS THEIR JOB OUTLOOK

Q Overall, would you say you were satisfied with your current job?

