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Kourosh Saeb-Parsy with his children, Nadia and Kiana, at a Mini Mudder obstacle course.

WORK-LIFE BALANCE

Fathers in science

Five scientist dads describe how they and their partners juggle their family and careers.

GERAINT REES

Be pragmatic and flexible

Dean of the faculty of life sciences at University College London. His daughter Milly is 15; his son Alex is 13.

Milly was due at the end of March 2003 but arrived in December 2002 with a 50% chance of survival, and a 50% chance of having a serious disability.

I was about to set up my own research group and achieve full independence. I'd been awarded a Wellcome Senior Clinical Fellowship and we were soon to move house.

We spent 99 days in the neonatal intensive care unit, a distressing environment.

I returned to work after three months and the focus that first year was hiring postdocs and getting back into the swing of things. Then things got more normal. We stopped worrying about Milly being rushed back into hospital. We started thinking about child care and had our first family holiday.

My wife, Rebecca, is a medical oncologist. We try to divide our child-care responsibilities 50-50. The live-out nannies we had before the children started school (a fantastic privilege to be able to afford, but also a significant cost) usually arrived around 8 a.m. and left around 6-7 p.m.. Our working pattern then had clear starts and stops. We often had to leave meetings to get home.

Even now, making meetings outside

normal working hours is tough. The children go to school at 8 a.m. so I can just about make 8.45 a.m.. You have to be pragmatic and flexible about what can be cancelled or rescheduled and what can't. It's important to keep talking to your partner so you don't get out of kilter with sharing child care. Otherwise you lose that feeling of shared responsibility.

Milly plays the flute and several years ago her primary school gave us six days' notice of a lunchtime concert, her first solo performance. It was also Brain Awareness Week and I was giving a lunchtime public lecture. Rebecca was in clinic.

I wanted to attend the concert, but also to deliver the lecture. I made the right decision. My colleague, Sarah-Jayne Blakemore, stepped in and her wonderful lecture was

much better than the one I would have given. And I got to see Milly perform.

People have occasionally said they chose my research group because of the respect I try to foster for work-life balance. I have a reputation for my out-of-office messages, which I use to communicate clearly (and humorously) that life outside work can sometimes take priority, and that family holidays are something I enjoy. I started getting congratulatory e-mails about them. Now I face pressure to come up with a funnier one whenever we go away. My last one read: "A long hot summer, epic collapse of global political discourse, impending Brexit chaos, new NSS scores, creeping REF preparation and a crescendo of short-notice UKRI deadlines. This can mean only one thing it's time to go on vacation! I've gone with my wife and children to play, talk, swim, read, eat, drink, think, snooze and relax. And you should too — it's August, after all!"

A core message that I repeat is how much I value my family and that sometimes they will come first. But I'm also sensitive to the fact that not everybody wants to talk about their family or personal life at work.

No single solution works for everybody. I often get asked what the best time is to have children. There's never a single right time. There are trade-offs at all stages. Also, some people don't want, or can't, have children and you need to have sensitivity and respect for evervone.

At her inaugural professorial lecture, my colleague Mairéad MacSweeney talked about solidarity across genders and that men need to speak up more for flexible working. Until both men and women articulate that parenting is a normal part of working life, it won't be accepted.

Balance is a verb, not a noun. And worklife balance is not something you fix. It's something you're constantly practising and rehearsing and reflecting on.

KOUROSH SAEB-PARSY

Align priorities to avoid conflict

Transplant surgeon at Cambridge University Hospitals, UK. His daughter Nadia is 8 and his daughter Kiana is 7.

My wife, Kathryn, is a primary-school teacher and has frequent evening or weekend social or work commitments. We work as a team and divide and conquer what needs to be done.

So I might pick the girls up from school or drop them off for guitar lessons because Kathryn is at work. She picks them up probably 75% of the time — but we don't keep tabs or 'scores.' If I can't pick them up from school, it is because I am doing something that Kathryn believes is good for our team.

I don't buy the idea that you have to sacrifice family life for your profession. Historically, that might have been the case, but times are changing, and I tell my students that you have to aim

When there is competition between family and work, it's because everyone's priorities are not aligned. If you do start sacrificing time with your children, you're on a slippery slope that's not sustainable in the long term. I told Nadia and Kiana what I do when they were each about 3. I described what a transplant is. We've also talked about organ donation, where kidneys come from and about difficult situations in which patients have died.

I did this so that they understand why I'm not always around, usually because I'm on call. If I can't be there for lunch on Christmas Day, for example, I tell them why — saying it's because a patient has been given an amazing present, a

They also know about my research. They love coming to the lab and meeting my group. We

play (safely) with pipettes and solutions. I get them to label things. I don't want my science to be a black box to them.

I mentor people at Cambridge. We often talk about careers and family. One asked how he could finish his PhD with a second child. We discussed the importance of perspective and how, in the grand scheme of family life, work events should not always be prioritized over 'life'.

This is symptomatic of the wider issue — seeing parenting as a problem, rather than as one of the most wonderful events in vour life.

We've been impressing on our daughters that they can be anything they want, and are keen to introduce them to strong female role models.

DAVID SMITH

Cement your relationships

Chemist at the University of York, UK. His son is 5.

My husband, Sam, has cystic fibrosis, and after his lung transplant in 2011, we were able to adopt. When our son arrived in 2015, I was in my early 40s and a full professor.

We wanted to split the adoption leave into six months each, but the social worker at the adoption agency preferred one primary carer for the first 12 months to help form attachments. Sam earned less than me, so he took the full year. I was disappointed and a bit jealous, but wanted to maximize my involvement and took two months of full leave and then worked at 80% of a full-time post for a year.

Many scientist mums have a hard job juggling work and family. I hope that more fathers will step up to caring responsibilities, and that this situation will change.

Our son knows that his daddy does science and wears a lab coat. He's really into volcanoes, both fascinated by and a bit scared of them.

We went to Iceland recently. When we got home, we made a plaster-cast volcano, then added bicarbonate of soda, washing up liquid and red food colouring into it. We tasted stuff for its acidity, to see what would cause an eruption. He loved that.

The chemistry department has an Athena SWAN Gold Award (a UK gender-equality charter) and meetings take place in core hours, so there shouldn't ever be one that starts before 9.45 a.m., and they should finish by 4 p.m.. We do have 9 a.m. lectures, and I have to drop my son off at school at 8.45 a.m., so I can't give those. But the department makes it easy for that to be arranged.

I used to spend around 50 nights a year away at conferences; now, it's more like 10, and never more than one night at a time. I recently did a PhD viva (oral exam) in Bristol. I left at 8 a.m. and got back at midnight, spending nine hours



David Smith's son learns to grow crystals.

on a train. Previously I would have stayed over, but you have to trim those bits of academic life to enable yourself to cement relationships to support family life.

I've just turned down conference invitations to India, Canada and the United States. Employers consider business travel as part of your working hours. But it's still time away from your family.

I think the conversations that men often have at conferences can be corrosive. They talk about how big their research groups are and how many papers they have published, and not about whether they took some time off when their kids came along. That needs to change.

In academia, many people work way beyond any idea of notional contracted hours. In my experience, when you became a parent, you realize how many 'soft hours' you were putting in — those hours when you don't think you're at work. You're sitting with your partner, but you're completely absent and catching up on e-mails on your phone.

Now I try to compartmentalize work and home life, but this can lead to massive e-mail crises, especially when I am trying to do the role working 35–40 hours a week. If I spent 5 minutes on every e-mail I receive, that would be my whole working week gone.

BRIAN CAHILL Organize your day carefully

Research programme manager at the University of Edinburgh, UK. His sons are 5 and 3.

My wife, Lini, is from Indonesia and a television producer. We were in Germany for ten years, until I moved to the University of Edinburgh in October.

We had been in Germany for five years when our first son was born. Already knowing the country and some German helped us to make some of the administration around parenting, such as registering births, easier. Also, if you're dealing with a midwife in the middle of the night, it's good to be able to speak the local language. A scientist who speaks only English and moves to a foreign country can still function as a scientist. But being able to speak the local language outside the lab bubble can help in getting things done.

Before we had kids, I would get up at 6 a.m., leave at 7 a.m., and be at work for 7.30 a.m.. When we had our first child, I still got up at 6 a.m. and mostly reached work by 8.30 a.m.. With two children, it was often around 9 a.m.. I dropped them off at kindergarten at 7.45 a.m.. It's important to be part of your children's kindergarten life (Lini picked the boys up in the afternoon). Otherwise you're excluded from a huge part of their lives.

In Germany, the working day starts at 7 a.m., so by 9 a.m. my colleagues were often having coffee. One thing we had there, which I haven't seen anywhere else in academic life, is flexitime, which was very useful. My workplace strongly discouraged weekend working, which was also great.

I struggle with switching off from work. There's always someone sending important e-mails at 5.30 p.m. on Fridays. It's not good to let people down in research, but I personally can't stay up every night until midnight when I get up at 6 a.m..

I've let go of reviewing, which is a basic part of being a researcher. You say you will do it, but it's often impossible to find the time. Writing papers and project proposals are significant for your career, but many aren't done during work time because of meetings, so you often do the work at home, which is harder with kids, who need our attention.

At home in Germany, we devoted a lot of time and energy to language learning, reading books and singing songs. Otherwise, our children would not pick up English or Indonesian. This did put a lot of responsibility on the kindergarten to teach them German, which they picked up alongside English and Indonesian.

The parental leave we got in Germany gave us 14 months between each parent. The maximum that one parent can take is 12 months. But you can also take it flexibly and extend it over 2.5 years by taking half days, for example.

Lini's parents are in Indonesia, and mine are in Ireland. My kids knew a lot of older people in the housing cooperative where we lived in Göttingen and had a grandparent-like relationship with them. There was a real sense of community there.

It's not completely impossible to be a good parent and a good researcher, but you have to organize your day.

PAUL MARTIN

Become more efficient

Cell biologist at the University of Bristol, UK. His daughter Matilda (Tilly) is 21, and his daughter Charlotte is 15.

When I mentioned that I was being interviewed for this article, some colleagues said that men don't need an article like this, that it's tougher for women. There is no doubt that my wife's career was slowed down more than mine was when the children were younger. If they were off sick from nursery, they tended to want their mum more than they wanted me, for example. Kate is also a cell biologist and head of the school of biochemistry at Bristol and, as the kids have got older, she has been able to move back up a gear with her career.

When Kate was having Tilly, a friend told

her that you publish one less paper per child per year. There's some truth in that. In the early days, we shared child-care responsibility for Tilly in the evenings, although it worked out that I did two evenings and Kate did three, so there was an imbalance. If one of my child-care evenings clashed with a meeting of the London Fly Club (part of the *Drosophila* research community), I'd take Tilly along. She was about 3 or 4 at the time.

I recently came across papers that I had given Tilly one evening during a club meeting. They were subdivided into squares and she'd drawn pictures of the speakers' slides in them. One was of a fly. Another was of a gel. It was a lovely memory, but it made me a little sad. I thought: "What kind of awful parent was I?" In my opinion, we cannot be decent parents if we work until 9 p.m. I remember Kate sometimes calling and telling me to come home. But when you're setting up a lab, you sometimes have to work long hours. Science is highly competitive. As a parent, you somehow have to become more efficient.

Some colleagues have trimmed down important things such as tea-room discussions with potential collaborators, and miss seminars on areas that are slightly outside their remit.

Just working at a university puts pressure on your kids. But there are positives. Tilly recently graduated with a biology degree. As a student, she would check things with us, not the details of lectures but rather the process, and what you need, say, to get a 2:1 (a high honours degree classification in the United Kingdom, one down from a first).

One perk of being a scientist is that you can introduce your kids to useful and interesting people. Tilly just dropped by to meet one of my PhD students, a dentist. She's interested in that as a career.

Our daughters are impressed if something we do relates to their world. Earlier this year, for instance, a paper I co-authored in *Developmental Cell* was featured in *The New York Times* and received a lot of Twitter action.

For a time, I definitely was not as competitive as colleagues who did not have children. I feel that I have a more worldly perspective now — that I'm not engrossed in science all the time.

What forces me to step back (and also to realize my ignorance) is having a daughter who is revising for her biology GCSE (exams taken by secondary-school students aged 16 in England, Wales and Northern Ireland) and asks me about the difference between xylem and phloem. I tell her I know nothing about plants, although I do know lots about inflammation. She says: "You're supposed to be a professor, dad." I say: "Let's look it up." ■

INTERVIEWS BY DAVID PAYNE

These interviews have been edited for length, clarity and style. Would you like to participate in a follow-up article about scientist mothers? E-mail naturecareerseditor@nature.com

CORRECTION

The Careers Feature 'Fathers in science' (*Nature* **563**, 725–727; 2018) gave the wrong name for Brian Cahill's wife. Her name is Lini, not Lina.