



Reflections from a mother scientist

Being a parent scientist can feel like a catch-22, feeling guilty for both the time spent away from the children and the time spent away from the bench. Embracing healthy boundaries can be liberating but will only go so far if childcare remains unaffordable.

I had my first son, Zachary, exactly 1 year after starting my lab and had my second son, Elias, 17 months later. I had no grants funded by the US National Institutes of Health, no last-author papers and a strong feeling that my chairman was very anxious about seeing me pregnant so early during my tenure.

As a new investigator with two small kids, the biggest challenge I had to deal with was time: I had a constant need to spend more time in the lab and more time with the kids. I did not enjoy traveling to conferences and started to fear receiving invitations to speak, some of which I felt I could not refuse. Although I loved the talks and socializing with colleagues, I hated the travel time. I wish I could have taken the kids with me more often, as it would have made the travel more enjoyable. To this day, I still resent it when meetings overlap with weekends and family time and that almost none ever provide childcare options.

The main memory I have of my kids' early childhood is the feeling of guilt: guilt for abandoning my lab for so long during my maternity leave, and guilt for not being a good-enough PI or a good-enough mother. I quickly learned the most important lesson a young parent scientist can learn: to protect my time. I refused additional activities that were not essential to my lab, I avoided most committees and I tried to devote most of my free time to the kids. Obtaining my first R01 grant and publishing my first last-author paper made me confident that it was possible to do both quite well. By the time my kids were 3 or 4, although I would still have to deal with this guilt for a long time, I had embraced my role as a mother scientist.

My lab grew quite a lot, and soon it was my turn to supervise fellows who had babies during their training. I often noticed that becoming a parent made my trainees more

organized and more pragmatic, with a sense of urgency that has been quite useful to some.

I found that different parents have to overcome different challenges, but that the most common barrier to success is financial. When I had my kids, I was more established. I was lucky that my husband and I made a decent living in the city. But for some of my students and fellows, childcare costs have been and remain outrageously expensive. I have seen my fellows exhausted not only by the complexity of having to navigate their lives as scientists and as parents but also because they could not afford the help they needed to keep their heads above water. When they have had partners helping with the childcare tasks, I have seen that this sometimes put a strain on their relationships.

Mothers often suffer more than the new fathers, fatigued by the pregnancy and the breastfeeding routine. Some women are expected to take on more of the child-rearing responsibility than are their male partners. Technical help for new parents is sparse, and most of my fellows could not be at the bench as much as they would have liked. The National Institute of Allergy and Infectious Diseases started a program, championed by Laurie Glimcher, that provides technical help to female postdoctoral scientists during the first year after they give birth. One of my postdoctoral fellows applied successfully to this program and benefitted from a fully paid technician.

In the context of the COVID 19 pandemic, these challenges have been put into sharp focus. The closure of schools and daycare centers have excluded parents of small kids from the research effort, creating two classes of scientists: those who are able to afford private care and those who are not. Trainees have been the most-affected group

among parent scientists: unable to work at the bench, they have compromised months of research, which has caused substantial delays in their research careers and has affected their job prospects.

My kids have now turned 15 and 13 and do not want to spend much time with their parents anymore. They love to hear stories about the lab and about my trainees, especially the students. They do not seem to resent my travels, but I make sure to involve them as much as possible in everything I do.

When I am asked to advise mother scientists, which happens quite often, I always encourage them not to compromise on maternity leave — it is such a precious time that will never come back. I urge them to not feel guilty for not spending time they need, either with the kids or with the lab. I tell trainees to respect the fact that they are good parents and to trust that kids are very forgiving, especially if they involve the kids in their passion and interest for their work. I push parent scientists to enlist their partners to help. Finally, and most importantly, I encourage parents to keep fighting for affordable childcare. But this is something that we should all work toward. It is imperative that we align childcare costs with income, or attracting these brilliant minds to science will become increasingly difficult. □

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