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# Listening to fathers in STEM

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To write this article, Emily Draper and Jennifer Leigh from the International Women in Supramolecular Chemistry (WISC) network again joined forces with David Smith and asked dads working within the field of supramolecular chemistry to share experiences around parental leave.

When we think about the career impact of having a family, or how to manage the practicalities of parenting as a chemist (or scientist), the conversation has historically tended to focus on the mother, maternity rights, and a mother's need to balance family life with the scientific life. But what about fathers?

Parental leave

Access to paid maternity leave improves a range of outcomes for Universities differ in the amount of leave they offer<sup>3,4</sup>. In the UK, employees have the statutory right to take one or two consecutive weeks of leave within the first few weeks after birth. In addition, parents can take up to four weeks of unpaid leave a year in the first 18 years of a child's life (maximum 18 weeks). Yet, according to the Fatherhood Institute, only one third of fathers in the UK take official paternity leave. UK paternal leave is not incentivized, and is paid at a rate below the minimum wage. Many fathers take annual holiday instead to avoid losing income. The USA remains a significant outlier, with no right to paid leave and options for unpaid leave poorly developed; parents can take 12 weeks of unpaid parenting leave per year.

"The first time [we had a baby], the two weeks weren't enough in retrospect both emotionally and physically (I was shattered every day) and I felt extremely guilty for going back. I was still emotionally drained from the new baby aspect and I'm not convinced I did my best work at that time! Having taken longer leave the second time [two weeks parental leave plus two weeks annual leave] really highlighted how the first time was not enough."

Paid leave for fathers, particularly when structured with incentives, improves attitudes towards all parents in the workplace. Shared parental leave has been introduced in a number of countries, and effectively allows parents to split the total parental leave between them in any ratio, either taking it separately or together. Unfortunately, in many cases, societal and family expectations that the mother should have as much maternity leave as possible mean that parents are sometimes reluctant to take up this option. In Sweden, 12 in 90% of fathers taking leave. In Norway, a similar policy increased the proportion of fathers taking leave from just 2.4% in 1992 to 90% in 2020, with nearly three-quarters taking the full 'daddy quota'.

maternal health and toddlers. When fathers take time off at the birth of a child, it increases the likelihood they will be involved in caring for them, which in turn strengthens the emotional connection between them.

“In Sweden we get 14 months of parental leave to distribute between both parents, and each parent has to take at least three months. We’re expecting our second child in January and this time my wife will take the first 7–8 months, then I’ll take the remaining 6–7 months on my own with both kids. I really look forward to that time!”

In addition to negotiating leave, fathers choosing to take on caring responsibilities for their children must navigate societal expectations and attitudes (Fig. 1). As a chemist, the impact of taking leave will depend a lot on career stage, and this has to be taken into consideration when planning a family. The ability of PhD students and postdocs to get support to take paternal leave is likely in the hands of their supervisor a portion of parental leave is reserved exclusively for fathers<sup>6</sup>, resulting

“One of the big improvements...

parental leave policy for postdocs, and support packages for female academics that included postdoctoral support, but even so, fathers were still expected to get back to work ‘promptly’.”

“[The COVID-19 lockdown] made me reflect more on the kids’ early years [and] how “Family is more important to me than being the most successful scientist in the world.”

“I was expected to

“It would have made our lives easier if I could have taken more leave, especially as we were so sleep deprived... [But] there are still the same expectations re[garding] publications, grants etc.”

“[Shared parental leave] was a great experience that I would strongly recommend... Adjusting to being much my own insecurity in pushing back against my employers and the expectations of others took me away from them. There must still be better ways to support and encourage new parents.”

go back as soon as I could; there was no expectation that I might possibly want to take a longer parental leave.”

back at work, the amount of time I can now work/be away from home has been a bit of a culture shock! ... SPL allowed me to focus on being a parent at a critical time... I would not have been safe to work in a lab given the level of sleep deprivation.”

or principal investigator, and will depend on their attitude as much as statutory or legal rights. As an independent researcher, taking leave necessitates cover to look after ongoing research, students, and projects — tasks that are not easy to delegate.

“The most recent new parent in the school before us was a mid-career male academic who had come back to work very quickly, announcing proudly to anyone who would listen that they had taken less than the allowed two weeks. That attitude was ‘normal’ in the school at the time and it definitely felt that if I’d asked for much more time it would have been seen as a bad thing.”

Caring responsibilities

Historically, gender expectations were for the man to provide and the woman to care. Caring for others is still very much associated with women<sup>6</sup>. Reflecting this, a recent North American study showed that mothers working in academia publish fewer papers than fathers, particularly in the initial years after childbirth<sup>7</sup>. However, the gap appeared to be closing over time, which was tentatively assigned to improving parental leave policies. Another study, specifically in science, technology, engineering and mathematics (STEM), showed that 23% of new fathers leave the field after their first child — this figure rises to 43% for new mothers. However, both fathers and mothers are significantly more likely to leave STEM

than non-parents, and work is clearly required to help all those with caring responsibilities to stay in STEM. In our survey, many fathers did not have the opportunity to take parental leave, though they would have liked to, whilst those that did take leave felt judged.<sup>8</sup>

“It was not an option for me...it was not simply that I couldn’t enjoy that period as much as I could, but because my wife is an academic as well, she was more affected than I in terms of tiredness, and she was discriminated [against] in this sense.”

“Taking parental leave was very strange... at times it seemed I was ‘praised’ for taking leave as a father and at others it felt like I was being judged by other faculty [members] for taking the leave in the first place. My impression was that women were simultaneously ‘expected’ to take the leave but also blamed for somehow ‘falling behind’, and that mechanisms to support mothers on parental leave were inadequate.”

Importantly, being a father does not end with taking parental leave—caring responsibilities are ongoing, as is their impact on careers. Increasingly, a larger number of men are experiencing the same balancing act that women have for many years. Fathers can take advantage of policies developed to help women in STEM, and help normalize them<sup>9 10</sup>. If we want a more family-friendly scientific workplace for everyone, we need more fathers to play a full and active role in caring for their children, and use their gender privilege to demand and take (well-) paid leave, as well as access to flexible and part-time working.

Join in the conversation in the accompanying blogpost at <https://chemistrycommunity.nature.com/posts/lived-experiences-of-paternity-leave>.

### Competing interests

The authors declare no competing interests.

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