

Five ways team leaders can improve research culture

Zoë Ayres 

Good mental health and wellbeing of research staff and students lead to better science: it is time to reflect on what we can do as team leaders to create a positive research culture.

Mental health concerns in academia are at an all-time high. With approximately one in two PhD students experiencing common mood disorders such as anxiety and/or depression^{1,2} (which is six times the rate for the general population)², and with 78% of UK research staff showing moderate to severe [signs of mental distress during the COVID-19 pandemic](#), it is clear something needs to change. These statistics are reflected within our post-doctoral community, with 51% of postdocs having considered leaving science altogether due to mental-health issues related to their work³. With such a high incidence of mental health concerns, providing support for team members is essential. But as team leaders we can often be left wondering — what can we actually do to help?

The first and most important step for us as team leaders is to acknowledge that mental health concerns are not just brought about by biological factors and that the onus for staying well is not just on the individual. A person may have pre-existing mental illnesses, but a toxic working environment can make it difficult even for the most resilient to survive. In short: the working environment we create as team leaders can impact the mental wellness of those around us. By acknowledging this fact, we can work towards building and reinforcing a positive research culture where every member of our team can thrive.

There are many environmental factors that can add stress and lead to worsened mental wellbeing for students and staff. For example, financial struggles, feeling like an impostor (the ‘impostor phenomenon’), being subject to bullying and harassment, or simply feeling like a ‘bad scientist’ because science is not going to plan, can all have negative effects. And whilst one person’s experience may be different to another’s, there are often common themes that emerge that we, as team leaders, have influence over.

Foster collaboration, not competition

In a [report by the Wellcome Trust](#), 78% of researchers said that high levels of competition in their workplace had created unkind and aggressive research conditions. This is not conducive to maintaining mental wellness: it can lead people to working long hours in a ‘race to

the bottom’ to stay ‘ahead’ of others⁴. This is damaging both to mental and physical health, with overwork being a key contributor to occupational stress⁵. It is therefore important that as team leaders we encourage our staff and students to take time off and not routinely overwork. The culture of overwork is often reinforced passively — if we never take breaks, our team will infer they cannot either. As team leaders we must therefore lead by example (where we can). Further, a highly competitive environment can make it difficult for our staff and students to speak to one another about how they are feeling and reach out to their colleagues when they need support. For those of you that wish to use competition as a motivator, consider having your team compete with external groups, rather than internally, to create a more positive working environment.

Put the conversation on the agenda

One of the biggest issues with mental health is that we simply do not talk about it due to stigma, and yet talking can often help those struggling. As team leaders we can be creative in how we start off the conversation, for example incorporating papers on research culture, like the [report by the Wellcome Trust](#) ‘What researchers think about the culture they work in’, into our journal clubs, creating a safe space for discussion. Further, simply taking the time to discuss with our staff and students about how they are actually getting on and how they are feeling at the start of one-to-one meetings, rather than jumping straight into discussing science, can be beneficial. Sometimes it is small but simple changes in our behaviour that can have long-term impact on the wellbeing of those around us.

Address bullying and harassment

Unfortunately bullying and harassment are rife in science, with around one in five PhD students experiencing one or both⁶. It is important to understand that bullying can be perpetuated by team leaders who enable toxic behaviour to happen. It is our responsibility to understand our own biases (we all have them) and call out discriminatory behaviour within our own research groups by members of our team. If we do not do this, we risk

Birmingham, UK.
e-mail: zjayres@gmail.com
<https://doi.org/10.1038/s41578-021-00357-1>

alienating vulnerable team members. Feeling isolated and targeted can have huge mental health implications. Visible reporting routes are also essential to support our staff and students: if they don't exist, we must advocate for them to be introduced at our institutions.

Seek training

As team leaders, we have typically been elevated to our position based on scientific merit and our publication record. Very few of us have training in mental health support (something that universities and institutions need to work on). In the meantime, seeking out training for ourselves is key. By developing skills to respond to a student in crisis we not only help the student but also ourselves: it can be incredibly stressful to manage a crisis situation with no training. Having knowledge of the resources that are available to support staff and students, be it referrals to medical support or talking therapy, can also help our staff and students get the rapid support they require.

Don't be afraid to be vulnerable

It can be all too easy for people to internalize the (incorrect) notion that to be a scientist is to 'think and not feel'⁷, which leads to increased impostor feelings, a reduced sense of belonging and ultimately impacts mental health. Leading a team, we can often think that strength lies in appearing infallible, but our staff and students benefit from seeing us as real people behind the scientific work that we do. If we don't show on occasion how we feel, and that we are human, when others are struggling it can be hard for them to seek help and turn to us for support.

Conclusion

As a final note — undoubtedly we will get things wrong. Mental health is complex, and we are learning too. It is important to recognize that even as team leaders we cannot control everything, particularly when it comes to the personal lives and experiences of our team members. Instead we can realize the positive impact we can have on the day-to-day workings of our laboratories and research groups. We can set boundaries. We can decide which behaviours get reinforced and which do not. We can choose to be become more informed on mental health topics to support our staff and students. By realizing the power that resides with us and in the example we set, we can make a difference and work towards making science a safer, more inclusive space for everyone. It starts with us.

1. Levecque, K. et al. Work organization and mental health problems in PhD students. *Res. Policy* **46**, 868–879 (2017).
2. Evans, T. et al. Evidence for a mental health crisis in graduate education. *Nat. Biotechnol.* **36**, 282–284 (2018).
3. Woolston, C. Postdocs under pressure: 'can I even do this any more?' **587**, 689–692 (2020).
4. Smith, D. K. The race to the bottom and the route to the top. *Nat. Chem.* **12**, 101–103 (2020).
5. Winefield, A. H. & Jarrett, R. Occupational stress in university staff. *Int. J. Stress Manag.* **8**, 285–298 (2001).
6. Woolston, C. PhDs: the tortuous truth. *Nature* **575**, 403–406 (2019).
7. Makarova, E. et al. The Gender Gap in STEM fields: the impact of the gender stereotype of math and science on secondary students' career aspirations. *Front. Educ.* <https://doi.org/10.3389/educ.2019.00060> (2019).

Competing interests

The authors declare no competing interests.

RELATED LINKS

Report by the Wellcome Trust: <https://wellcome.org/reports/what-researchers-think-about-research-culture>
 Signs of mental distress during the COVID-19 pandemic: <https://www.smartten.org.uk/covid-19-study.html>