

PhDnet Survey 2024 – Executive Summary

Doctoral researchers (DRs) form the backbone of the Max Planck Society's (MPS) scientific endeavors and innovation. The Max Planck PhDnet represents nearly 5,000 DRs across 84 Max Planck Institutes in Germany and abroad. In order to advocate for improved conditions across the Society, the Survey Group of PhDnet conducts an annual survey to assess the academic, professional, and personal experiences of DRs.

For nearly 20 years, the PhDnet Survey has functioned as a vital instrument for identifying systemic challenges and informing policy at the institutional level, with insights published in yearly reports. This year's edition continues to address core topics such as working conditions, mental health, and supervision, while also introducing new focal points including exploitation, environmental responsibility, and gender equity. Notably, this inclusive effort accounts for all DRs regardless of employment type, including stipend holders, guest researchers, and those without formal contracts, offering a holistic perspective on the doctoral experience within the MPS.

Relevance of the survey

For the 2024 PhDnet survey, 4952 DRs were contacted. Among them, 1949 DRs (39%) completed the survey entirely, and around 600 DRs (12%) completed it partially. Participation rate is similar across the different sections. In this sample, 49% of the respondents identify as female, 49% as male, and 2% as non-binary. Gender is distributed similarly across citizenship and ethnicity. Most DRs (43%) come from outside the EU, while 38% are from Germany and 18% come from EU excluding Germany. The majority of the DRs identify as Western European in ethnicity (52%), followed by Eastern and Central Asian ethnicity (13.1%), South and Southeast Asian ethnicity (12.7%) and Eastern European ethnicity (12.1%). The average age at the start of doctorate was 26.2 years. 4.1% reported a disability, and 8.9% live with a chronic illness. The LGBTQA+ community represents 19.5% of respondents, and more than 73% have at least one parent with a tertiary education background.

Together, these data provide statistically relevant and representative insights. The following paragraphs present an overview of the key findings considered most compelling and trend-setting for future action by the PhDnet and the support of DRs by the MPS. We highlight areas where changes have improved the experience of DRs and identify where additional support is needed.

Working Conditions

The assessment of the working conditions has always been a key topic of analysis in our report, as it allows us to picture the status quo of the employment conditions of DRs and the impact of recent policy changes whilst also revealing persistent issues. We investigated four different axes: Employment situation and distribution, Financial stability, PhD duration and time management.

The vast majority of the DRs (90.2%) are employed under contracts, continuing a positive trend of increased employment security. However, 1.1% of DRs still report being unpaid. Employment duration, number of work agreement, and work agreement type are distributed evenly across gender and citizenship, indicating that institutional policies regarding employment conditions are applied consistently.

The average net monthly income has increased to €2,182, and median pay gaps by gender, citizenship, and section remain minimal, though field-specific differences persist. These results suggest the positive impact of setting a standard base salary. The share of DRs who took an additional job to get

by financially is 7.6%, a decrease compared to 2020. However, 23.6% of respondents rely on external financial support to cover living expenses—an increasing trend since 2020—with nearly half depending on this support to a moderate or significant extent. Further, 4.3% of respondents had to take a loan during their PhD to cover living expenses, a share that has quadrupled since 2020.

The expected duration of a PhD lies between 3.5 and 4.3 years depending on the section and field of work, aligning with the “3+1” employment structure – a guideline consisting in an initial three-year contract with a possible one-year extension. This average time lies at around four years which is significantly lower than other Germany-wide estimates of 5.7 years (which also includes DRs with obligations at universities). Whilst these findings are generally positive, our data reveal deviations from the “3+1” guideline: 12% of DRs in their first year reported already having more than one work agreement, and by the third year only 66% remain on their initial work agreement, with 7% having received three or more. Despite these observations, the share of DRs under their first work agreement has been increasing since 2022 and a majority (63%) feel confident they could secure an extension if more time is needed to complete their PhD.

Despite these improvements, challenges persist. Nearly two-thirds (65.1%) of DRs work 40 hours or more per week, and almost half (49.8%) report working at least two weekends per month. Overtime often goes unchecked, as 17.3% of DRs track their own working hours, while only 7.1% have their hours monitored by the institute. Alarmingly, more than half (56.5%) of menstruating DRs feel unable to take sick leave due to menstrual pain, pointing to ongoing gaps in inclusive workplace policies. About 25% of DRs took less than half of the paid leave they were entitled to, with workload-related pressures cited as the main reasons for not feeling free to take holidays. We also find that 17.6% of DRs feel exploited at work, most often by a supervisor.

In summary, the survey points to meaningful advances in contractual fairness and pay equality for DRs. At the same time, challenges remain in workload, financial pressures and inclusivity. Together, these findings highlight that continued efforts are needed to build a truly sustainable and supportive environment for all DRs.

General satisfaction of DRs

Most DRs are satisfied with the research infrastructures, ethos, and the scientific environment at their institutes. By contrast, satisfaction with personal development opportunities, and psychological support at institutes remain low and require significant improvement. Notably, 57.3% of DRs have considered quitting their PhD, a decision often tied to the quality of supervision. Still, more than 2/3 of DRs would recommend doing a PhD at their institute to a friend. Finally, sustainability is a major concern to the majority of the DRs, yet the satisfaction with the measures implemented at their institute is rather neutral.

Supervision and Support

The way doctoral researchers are guided during their PhD strongly influences both the quality of their science and their future career opportunities. Effective supervision not only supports research progress but also provides mentoring, skills development, and long-term professional orientation. Despite formal recommendations, implementation of support structures remains inconsistent: 26% of DRs report not having a Thesis Advisory Committee (TAC), and 31% do not have a written supervision agreement. Additional measures, such as graduate schools or training plans, are also unevenly available. Satisfaction with supervision continues to influence the overall doctoral experience. While most DRs report frequent and meaningful interactions with their supervisors, deficiencies remain as around 40% of DRs report supervision related problems, most often due to infrequent meetings or insufficient expertise within their

group. Overall, however, supervisors are rated highly for professionalism and adherence to scientific practice.

Another important topic in our survey is the availability of support structures. Most DRs report insufficient support on many aspects of on-boarding and even 17% have not received any support on that. International DRs, who represent the majority, face additional hurdle with only 53% reporting that all the relevant information was available in a language they understand, leaving nearly half experiencing at least occasional difficulties in accessing essential information in a language they are comfortable with. Access to career development resources likewise varies. While most institutes provide guidance for academic careers, fewer offer support for non-academic paths, despite 32% of DRs expressing interest in such careers. This mismatch highlights the need for broader and more targeted career services. Addressing these gaps in on-boarding, international support, and career services would significantly strengthen the overall research environment and better prepare DRs for diverse career trajectories.

Conflicts and Discrimination

Workplace conflicts, discrimination, and harassment remain critical challenges for DRs, as highlighted both in survey data and external reporting. Given the strong power imbalances in academia—where supervisors often control key career decisions—even relatively small conflicts can create significant stress and undermine motivation and job satisfaction. Our data shows that workplace conflict and discrimination remain significant concerns. While awareness of institutional contact points (e.g., ombudspersons, DR representatives) is high, only 8.6% of DRs reported conflicts, and many abstain from doing so. Fear of repercussions and doubts about whether reporting would lead to resolution remain key barriers. Among those who did report, satisfaction with outcomes was mixed, with many expressing disappointment. Notably, conflicts most often involved supervisors, underscoring the impact of hierarchical structures on workplace dynamics.

Sexual harassment continues to affect 8.3% of DRs, most commonly through verbal remarks, intrusive looks, or unwanted touching. Perpetrators are often peers, though cases involving supervisors also occur, highlighting the need for training and preventive measures across all levels of the MPS. Discrimination and bullying are similarly prevalent. One in five DRs reported experiencing discrimination, most often related to nationality, gender, or hierarchical status, while 19.5% reported bullying such as exclusion, destabilization, or unrealistic work pressure. Alarming, both issues are often ongoing rather than isolated incidents, and the prevalence of these instances has been as high for several years in a row, according to our data. Taken together, these findings show that, despite existing support structures, some DRs face hostile work environments that compromise wellbeing, equity, and career progression. Stronger preventive mechanisms, effective reporting procedures, and accountability measures remain urgently needed.

Mental and Physical Health

Since 2019, the PhDnet Survey has included validated measures of anxiety and depression, recognizing that DRs worldwide face increased risks compared to the general population due to factors such as high workloads, internal pressure, and supervisory challenges. These data provide crucial insight into the mental and emotional demands of DRs in the MPS, also allowing for comparison with evidence from other studies. Encouragingly, the 2024 data shows a marked decrease in trait anxiety compared to 2023, with 69% of DRs reporting no or only mild symptoms, a significant improvement compared to prior years. However, depression scores remain stable, with 23.2% of respondents experiencing moderate to severe symptoms. Gender disparities persist, with women and gender-diverse DRs reporting higher levels than men.

Physical health is equally relevant, as issues such as pain, fatigue, or poor sleep directly affect productivity, well-being, and the ability to fully engage in research. Somatic symptoms such as back pain and poor sleep quality are common, affecting nearly half (45.4%) of respondents. Awareness of the Employee and Manager Assistance Program (EMAP) plateaued at 31.1%, following a sharp rise in 2023, indicating that further outreach is necessary to maintain momentum in mental health support.

Conclusion

The 2024 PhDnet Survey confirms progress on several fronts, including employment stability, supervision, and mental health awareness, while simultaneously revealing persistent gaps in support systems and equity across the MPS. While many DRs benefit from stable contracts and fair pay, others face untracked overtime, and lack adequate access to key resources to navigate conflict, challenges regarding aspects of mental and physical health, and non-academic career transitions. Supervision quality continues to shape satisfaction and retention, and discrimination, particularly related to gender, nationality and institutional power, remains a systemic issue.

Going forward, we call for:

- Better enforcement of contract duration guidelines and overtime regulations.
- Inclusive leave policies for menstruation, as well as for DRs with disabilities or chronic illness.
- Broader access to non-academic career support.
- Mandatory trainings on conflict resolution, harassment prevention, and inclusive supervision.
- Continued improvement in mental health resources and awareness campaigns.

Through data-driven advocacy, the PhDnet Survey remains a key tool to ensure the voices of DRs are heard and translated into tangible policy changes that uphold the excellence and equity at the heart of the Max Planck Society.