

Executive Summary of the 2019 PhDnet Survey

The Max Planck PhDnet represents the roughly 5000 doctoral researchers (DRs) working in the Max Planck Society (MPS). Each year, the PhDnet conducts a comprehensive survey assessing the working conditions, supervision, and general satisfaction of the DRs. This year's survey additionally focused on issues related to mental health and power abuse. Moreover, this survey was conducted in harmony to the Helmholtz Association (Helmholtz Juniors) and the Leibniz Association (Leibniz PhD Network) PhD network surveys. A detailed comparison of the similarities and differences will be featured in a separate report, in the name of our "network of networks" N².

Relevance of the current survey

For the current Max Planck PhDnet survey, **we contacted 4928 DRs out of which 2490 (or 51%) participated**. Of the total respondents, 41% identified themselves as female and 54% as male, and <1% of participants identified themselves with other gender representations. Across the sections of the MPS, 39% of all responses came from the Biomedical (BM) section, 45% from the Chemistry, Physics and Technology (CPT) Section, and 16% from the Humanities (HUM) section. These numbers are in accordance with the general distribution of DRs across sections in the MPS.

Together, this provides invaluable data to gain statistically relevant and representative insights. In the following paragraphs, we present an overview of key findings of the survey which we consider the most compelling, relevant and trend-setting for future points of action regarding the work of PhDnet and the support of DRs by the MPS.

General satisfaction of DRs and improvement of key aspects

Compared to previous surveys, several aspects reveal improvements of the situation of DRs and thus an increase in satisfaction. Importantly, the raise of the number of holidays in the support contract (Doktorandenfördervertrag) from 20 to 30 days has considerably increased the DR's satisfaction with their vacation days (from 39% in 2018 to 83% in 2019). Moreover, the majority of DRs in the MPS are now part of some form of a structured PhD program (74% are in a graduate school, 59% have Thesis Advisory Committees, TACs). The implementation of TACs and supervision agreements improve satisfaction and quality of supervision.

Gender pay gap and unequal treatment of international researchers

Previous surveys have revealed a gender pay gap for DRs, which are influenced by the lower salaries and at the same time higher number of female DRs in the HUM section. This year's survey confirms that DRs in the HUM section earn significantly less than DRs in the BM or CPT section. However, even when correcting for the different gender proportions in the sections, there is a **statistically significant gender pay gap**, with female DRs earning less than their male colleagues. While the majority of DRs (90%) are currently employed through contracts, **11% of non-Europeans DRs are on stipends**, which is substantially more than German (4%) and European (5%) DRs. Moreover, they earn significantly less than Europeans, even when correcting for the factor contract vs. stipend. In addition, 2 out of 3 international DRs report about not receiving sufficient support upon arrival, to settle and establish themselves in the new environment.

Mental health and appraisal of security

It might not be surprising following the above-mentioned results that also the **prevalence of depression and states of anxiety is especially high in non-male, non-European DRs** with both being about 10

percentage points higher than in their respective peers. Also, the general prevalence (17.9%) of depressive symptoms in DRs is alarmingly higher than in the general population (about 9%). The respective values correlate most strongly with workload, work environment and supervision, among others. Similar to the MPS wide employee survey, 11% of DRs reported having been bullied, with the highest rate within non-EU citizens (15%). When it comes to sexual harassment, still 5% of DRs experienced it at least occasionally, again, with the highest prevalence among women (10%), and even more among other gender representations (16%).

Ultimately, the **high level of insecurity that DRs experience**, e.g., in form of short term contracts of less than 24 months (19%), the low salaries, and the feeling of not being prepared for jobs outside academia (45%), not only impacts the mental life of individuals but also **family planning**: in comparison to the average DR (16.8%), the level of DRs with children within the MPS is relatively low with just 8%. Apart from personal reasons (42%), the DR's decision against starting a family is mainly driven by given working conditions (32%) and financial insecurity (31%).

Conclusion

We appreciate the efforts of the MPS, such as the implementation of secure reporting structures (measures against power abuse), the new initiatives around the Planck Academy (career development), and new on-boarding procedures, especially for Non-German DRs. Still, our report shows that there is a high level of insecurity many DRs experience, when it comes to their contracts, their financial situation or working environments. These insecurities have a strong impact on the experience of DRs (mental health), their personal lives and the decisions they make (e.g. family planning). These problems are partly grounded in the structure of the academic system, of whom the MPS is one of most influential institutions in Germany and worldwide. Since these issues are systematic, they can also be systematically addressed. Especially, in light of the still ongoing COVID-19 crisis, we need to work together to alleviate the insecurities that DRs face, and work towards academic and professional excellency, while fostering a welcoming and safe working environment.