

## **Reform of Academy of Finland funding for early-career researchers: assessing the impacts on gender equality and nondiscrimination**

Section 5 of the Non-Discrimination Act requires that all authorities in Finland evaluate the realisation of equality in their activities and take necessary measures to promote the realisation of equality. These measures shall be effective, expedient and proportionate, taking into account the authorities' operating environment, resources and other circumstances. Furthermore, it is required that the authorities have a plan for the necessary measures for promoting equality.

Section 4 of the Act on Equality between Women and Men stipulates that the authorities shall promote equality between women and men purposefully and systematically, and that they create and consolidate administrative and operating practices that ensure the advancement of equality between women and men in the preparatory work undertaken on different matters and in decision-making.

The measures adopted by the Academy of Finland in its current Equality and Nondiscrimination Plan include actions to facilitate the balancing of work and family life; to support women's research careers in all funding schemes; and to weigh the impact of the mobility requirement on the number and gender ratio of applicants. The Academy's decision-making bodies monitor the state of gender equality in connection with decision-making on research funding. Special focus is given to the impact of new funding schemes or changes made to existing funding schemes on equality and nondiscrimination.

The present assessment aims to investigate the potential impacts of the funding reform for early-career researchers in terms of 1) opportunities to balance work and family life; 2) equality and nondiscrimination in researcher evaluations; 3) the gender distribution effects of changes to eligibility criteria; and 4) the position of international applicants. Furthermore, the assessment sets out a plan for the necessary follow-up and other measures.

### **Does the funding reform have discernible impacts on opportunities to balance work and family life?**

The new funding scheme for Academy Research Fellowships will no longer include a requirement of postdoctoral mobility.

Since 2016, Academy of Finland funding opportunities for early-career research positions have included a mobility requirement: before taking up their position, applicants will have had to spend at least six months outside their doctoral research environment (either abroad or in Finland), unless their application is for a research position in some other research environment. This may refer to a national or international or an intersectoral new environment.

Although the Academy does not require that applicants spend time abroad or even move within the country, the mobility requirement has been considered a major hurdle, especially among researchers



with families or caring responsibilities. Based on feedback from the research community over the past six years, it has often proved very difficult for researchers with families to satisfy the mobility requirement in a high-quality and genuinely meaningful way.

In our stakeholder questionnaire on the funding reform for early-career researchers, we solicited researchers' views on balancing family life and professional research by asking them this question:

*What kind of challenges have you faced/do you see in balancing family and private life with the researcher's job duties? What kind of flexibilities in funding would help to facilitate the balancing of work and family/private life?*

We received 640 open-ended responses from a total of 828 respondents. Preliminary analysis suggests that around 60% of these responses concerned the current mobility requirement and difficulties reconciling this requirement with family and private life. Other frequently mentioned challenges were the general demands of doing research work, long working hours and the uncertainty of employment. Positive feedback was received regarding the opportunity to extend eligibility or the funding period based on family leaves.

In this light, the removal of the mobility requirement under the new funding scheme would improve applicants' experiences of their chances to reconcile family life and work. Based on the open-ended responses and earlier feedback, this applies most particularly to parents of small children, sole providers and other applicants with caring responsibilities. It can therefore be assumed that the funding reform will contribute to promoting equality and nondiscrimination in that it will strengthen the position of applicants with families or caring responsibilities.

In line with the Academy's decision criteria for research funding, the new review criteria for Academy Research Fellowships emphasise the applicant's experience and plans for working in different research environments and different types of research collaboration as well as the international dimension of the application. Apart from physical mobility, the call for applications will highlight other possible routes to meeting these criteria so as to enable the positive equality impacts of removing the mobility requirement.

Under the new funding scheme, Academy Research Fellows will be able to apply for extensions to their funding period on grounds of family leave or long-term illness, on the same terms and conditions as previously.

### **Questions related to researcher evaluation**

In line with the general principles of Academy of Finland research funding, the new scheme will support the Academy's overall commitment to promoting gender equality and nondiscrimination in all its funding operations. Scientific reviews of applications for Academy Research Fellowships will give special attention to the applicant's career development and independence or growth to independence. Independence is an elusive review criterion and as such a potential source of unequal treatment. A 2017



report by the Swedish Research Council (Söderqvist et al. (2017). A Gender-Neutral Process? Gender equality observations in the Swedish Research Council's review panels 2016. Stockholm: Swedish Research Council) found that reviewers far more often questioned the "independence" of women applicants compared to male applicants with the same level of academic competence.

The Academy of Finland is committed to the principles of good practice in researcher evaluation (Good practice in researcher evaluation. Recommendation for the responsible evaluation of a researcher in Finland. Responsible Research Series 5:2020. Working group for responsible researcher evaluation. Federation of Finnish Learned Societies. TSV & TJNK: Helsinki. – in Finnish only). It is important to ensure that systematic attention is paid to the review criteria applied in the new funding scheme, to the practical implementation of research evaluations and to upholding the principles of equality and nondiscrimination in decision-making.

Guidance and advice on the equal and nondiscriminatory application of the review criteria and decision principles will be provided for reviewers, research councils, panel chairs and presenting officials in autumn 2022 and spring 2023. The Academy's Equality and Nondiscrimination Working Group will contribute to designing this guidance.

Any indications that equality or nondiscrimination may be in jeopardy or any signs of other problems will be followed up by interviewing officials, reviewers and decision-makers and by reviewing statistics. Appropriate actions will be taken as necessary.

### **Does the narrowing of eligibility with respect to academic age have discernible gender equality effects?**

We calculated the gender ratio of applicants by examining the number of applications for research posts as Postdoctoral Researcher and Academy Research Fellow in 2016–2020 and by comparing the averages for these years with a future scenario of narrower eligibility criteria. It is noteworthy that changes to the application criteria and other requirements may also cause changes to the population of applicants beyond those resulting from narrowed eligibility related to academic age. The examination was done separately for each of the Academy's three research councils.

In the light of these statistics it seems there is no significant variation in the gender distribution of applicants in relation to academic age (years since doctorate). The one exception consists of applicants for posts as Postdoctoral Researcher under the Research Council for Natural Sciences and Engineering. When applicants who took their doctorate less than two years ago are excluded from eligibility, the number of female applicants for positions under the Research Council for Natural Sciences and Engineering decreases by three percentage points more than the average number of applications in this same research council (-26% vs. -23%). The exclusion of applicants who completed their doctorate more than seven years ago decreases the number of female applicants in the Research Council for Natural Sciences and Engineering by five percentage points more than the average number of applications (-37% vs. -32%).

There is a distinct gender imbalance in disciplines across the natural sciences and engineering. In 2016–2020, women submitted 24% of all applications for posts as Postdoctoral Researcher and Academy



Research Fellow. One of the Academy's science policy objectives is to advance women's research careers. Although this funding reform overall contributes to promoting equality and nondiscrimination, the low proportion of women in natural sciences and engineering disciplines and the further adverse impacts of narrowing the eligibility criteria certainly warrant attention.

### **Do the new application criteria have discernible equality effects in the case of international applicants?**

We also calculated the gender ratio of international applicants by examining the number of applications for research posts as Postdoctoral Researcher and Academy Research Fellow in 2016–2020 and by comparing the averages for these years with a future scenario of narrower eligibility criteria. In this analysis, an international applicant is defined as a person of other than Finnish nationality. Again, it is noteworthy that changes to the application criteria and other requirements may also cause changes to the population of applicants beyond those resulting from narrowed eligibility related to academic age.

Based on the number of applications submitted in earlier years we have calculated the share of international applicants when eligibility is limited at the front end to two years and at the back end to seven years since doctorate. The examination is done separately for each of the three research councils. The figures indicate that in all research councils, the number of applications from international applicants will decrease less than the number of applications from Finnish applicants. Our calculations thus predict an increase in the share of international applicants.

When postdoctoral mobility was introduced as an eligibility criterion for Academy research posts in 2016, the share of international applicants increased considerably in all research councils (by 5–28 percentage points from 2015 to 2017). This was attributable almost entirely to the declining number of Finnish applicants. Later analyses and feedback from the research community suggest that it is very difficult for many researchers to satisfy the mobility requirement in a genuinely meaningful way. Most international applicants have taken their doctorate in a foreign university and therefore often meet this requirement virtually by default. The removal of the mobility requirement, therefore, will restore the situation where all applicants have equal opportunity to apply and to demonstrate their independence without any eligibility criteria related to mobility.

It is noteworthy that international applicants are equally exposed to the difficulties of balancing family life and research as well as to the problems faced by female researchers. Subsequent analyses and follow-ups must devote special attention to groups who potentially face multiple simultaneous challenges in pursuing a career in science and research.

### **Academy to compile systematic statistics for possible future action**

From autumn 2022, the Academy of Finland will begin systematically to collect information on the gender distribution of applications submitted for Academy Research Fellowships and on the proportion of international applicants. Comprehensive data will be collected on the gender and nationality ratios of applicants at each stage of the funding process, looking at all applications submitted, at scientific reviews and at funding decisions. Data will also be collected separately for the three research councils,



## ACADEMY OF FINLAND

for individual fields of research and by biological and academic age. Data will be collected over a period of 3–4 years before comparing them in detail with the corresponding figures for the pre-reform era. Based on these comparisons we will consider what actions may be required.

If deemed necessary based on this information, the Academy will enter into discussions with research organisations and other stakeholders in fields that are thought to be experiencing problems with respect to equality and nondiscrimination. These discussions will aim to jointly identify measures that could help to improve the gender balance among early-career researchers in these fields and to improve the equality of international and Finnish researchers.