

# **The gender challenge in research funding - assessing the European national scenes**

## **United Kingdom**

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### **Background to Study**

During the last 10 years or so there have been a number of studies on the situation of women in science, including on grant application behaviour and success, in particular in the late 1990s. In 1997 an article in *Nature*, based on an audit of the Swedish Medical Research Council, argued that women needed to be 2.5 times more productive than their male colleagues to get the same peer-review rating. Following this study, the Wellcome Trust in the UK carried out an audit of its own grant awards, as a result of which it found no evidence of discrimination. The Medical Research Council (MRC) conducted a study of its own procedures and similarly found no evidence of discrimination in peer review. The Wellcome study did however, identify the problem of low application rates by women, even relative to the number of women researchers. These audits of individual grant awarding bodies were followed by two larger studies. The issue of low application rates was also identified in relation to the EU, which prompted the European Commission to request a study of the reasons for low application rates by women to the European Commission's mobility fellowships in 1998-99 (the then 'TMR' programme which existed under the Fourth Framework). This study, carried out by Leeds University, identified a number of reasons for low participation rates of women in science and barriers to applying for fellowship, in particular relating to the need for researchers to be highly mobile.

During 1999-2000, a study of research funding applications among British academics was carried out for the Wellcome Trust and the UK Research Councils by the National Centre for Social Research. The study found that women were as successful as men in getting grants they applied for, but were less likely to apply for grants. The main factors that influenced grant application behaviour were; seniority, employment status, tenure, type of institution, professional profile, institutional support, career breaks and family circumstances (Wellcome 2000). Other related studies show that the rate of RAE submissions is lower for women than for men (AUT, HEFCE 2006).

The ERA Gender Group of the European Commission is now seeking to carry out an ERA-wide data mapping study on women and applications for research awards (PhDs, fellowships and research grants). This preliminary report will briefly identify what data is available within the UK.

### **Context of UK Research Funding**

UK academic institutions are funded based on a 'Dual system', where the funding councils provide infrastructure funding in the form of block grants, and funding for

specific projects is provided by the research councils, learned institutions, charities and government departments. The funding councils are the Higher Education Funding Council for England (HEFCE)

The bulk of funding is provided by the seven research councils responsible for different disciplinary areas:

- AHRC (Arts and Humanities Research Council)
- BBSRC (Biotechnology and Biological Sciences Research Council)
- EPSRC (Engineering and Physical Sciences Research Council)
- ESRC (Economic and Social Research Council)
- MRC (Medical Research Council)
- NERC (Natural Environment Research Council)
- STFC (Science and Technology Facilities Council)

The research councils provide funding for PhD studentships, postdoctoral and other fellowships and research funding for research projects. The STFC was formed in 2007, replacing the former PPARC (Particle Physics and Astronomy Research Council).

The main charitable organisations and learned societies which provide research funding are:

- The Wellcome Trust (funding for biomedical sciences)
- The Leverhulme Trust
- The Royal Society
- The Nuffield Foundation

### **Data on women and research awards in the UK**

The Equality Challenge Unit (ECU), which was set up in 2001, promotes diversity and equality among higher education staff and students. As an initial step in improving the availability of data on equality and diversity, it recent carried out a data mapping study. It found that each research council has data on applications, but the type of data held varies. It is planning to set up a Shared Service Centre by the end of 2009. Data about applicants (eg for grants and fellowships) is captured through JeS. Account holders update their own details by gender, ethnicity, disability, nationality and data of birth.

Most of the research councils publish data in their annual reports. Data on individual awards and success rates is frequently also publicly available on websites, but on the whole, this is not broken down by gender (or other demographic characteristics). Some of the research councils provide breakdowns by gender for applicants for fellowship and research grants. The following provides details.

### **BBSRC (Biotechnology and Biological Sciences Research Council)**

The Annual report provides application and success rates by gender for grants and fellowships. The Operating Reports provides a male/female breakdown in current fellowship holders and BBSRC funded Pis (grant holders). The Operating Report also provides m/f numbers for new starters. The BBSRC has data on the gender balance on committees and panels.

**EPSRC (Engineering and Physical Sciences Research Council)**

EPSRC publishes data on success rates by gender for applications for first grants, advanced fellows, standard research grants and PPAs in its Annual Report.

**ESRC (Economic and Social Research Council)**

Prior to 2005, the ESRC published data on grants by gender of PI in its annual report, but stopped collecting data in this form afterwards. In 2005 the ESRC carried out a study on the demographic profile of the UK Science Community (ESRC 2005).

**NERC (Natural Environment Research Council)**

In the Annual Report, they publish success rates for fellowships and grants by gender.

**STFC (Science and Technology Facilities Council)**

The Statistics section on the STFC website has data by gender on: postdoc fellowships applied for and success rates, senior fellowships and advanced fellowships.

**Wellcome Trust**

As mentioned above, the Wellcome Trust has published two major studies on research awards, one audit of its own procedure in 1997 and in 2000, a study of funding applications across the research council and Wellcome.

**The Royal Society**

A gender profile of Royal Society fellows can be found on their website.

## Proportion of Women Awarded Research Funding

### BBSRC

	Percentage of successful applications from total applications					
	2004		2005		2006	
	Male	Female	Male	Female	Male	Female
Project Grants	26.3	24.1	27.0	24.5	27.2	23.0
Programme Grants	44.9	37.9	42.9	39.7	41.3	45.7
New investigators	41.8	50.0	40.8	33.3	31.7	35.0
Fellowships	9.3	17.4	16.9	5.6	16.7	9.1

Source: BBSRC (2007)

	Percentage of female applicants for peer reviewed funding		
	2004	2005	2006
Project Grants	19.8	21.4	21.9
Programme Grants	14.1	19.4	18.1
New investigators	21.2	29.7	27.8
Fellowships	32.2	35.6	42.3

Source: BBSRC (2007)

Women form around a fifth or less of applicants for project grants and programme grants, but somewhat more for new investigators and fellowship, which may be because there are more women at the lower grades. They are slightly less successful than males in project grants and in programme grants, except 2006. But in new investigators they were more successful than men in 2004 and 2006.

### EPSRC

#### Success rates by gender – where known

	Standard Research Grants				
	2001	2002	2003	2004	2005
Male	39%	34%	33%	34%	27%
Female	39%	31%	31%	31%	27%

  

	Under 35s				
	2001	2002	2003	2004	2005
Male	39%	32%	31%	33%	32%
Female	49%	29%	37%	31%	31%

  

	Advanced Fellows				
	2001	2002	2003	2004	2005
Male	21%	21%	22%	14%	14%
Female	23%	23%	24%	21%	16%

First Grant Scheme

	2002	2003	2004	2005
Male	34%	42%	51%	44%
Female	36%	49%	42%	40%

	PPA			
	2002	2003	2004	2005
Male	31%	36%	53%	34%
Female	11%	23%	23%	44%

Source (EPSRC)

Men appear to be consistently slightly more successful in standard research grants, but there is greater variation in the schemes for less senior researchers (under 35s and first grants), with sometimes women being considerably more successful and sometimes men. Women have been consistently slightly more successful in the advanced fellows scheme.

## NERC

	Fellowships – success rates by gender			
	2005-06		2006-07	
	Men	Women	Men	Women
Number of applications	93	50	102	51
Number of successful applications	17	13	20	10
% success by gender	18	26	20	20

Source (NERC)

	Grants – success rates by gender					
	2004-05		2005-06		2006-07	
	Men	Women	Men	Women	Men	Women
Number of applications	1,092	193	906	175	827	207
Number of successful applications	179	20	212	39	207	39
% success by gender	25	18	23	22	25	19

Source (NERC)

Around twice as many men as women applied for fellowships and from the limited data, they appear to be as successful or more successful than men. Far less women than men applied for grants, albeit the numbers and proportions of women have been increasingly recently from 15% in 2004-05 to 20% in 2006-07. And for grants, men have been consistently more successful than women.

## STFC

Grant Applicants by Gender			
Financial Year	Female No (%)	Male No (%)	Unknown
00/01	43 (10.4%)	371 (89.4%)	1 (0.2%)
01/02	38 (9.9%)	344 (90.1%)	0 (0.0%)
02/03	25 (7.7%)	299 (92.0%)	1 (0.3%)
03/04	29 (10.4%)	230 (82.1%)	21 (7.5%)
04/05	37 (9.6%)	311 (80.8%)	37 (9.6%)
05/06	37 (12.0%)	275 (87.0%)	4 (1.0%)

This tells us only that far less women than men made applications, probably due, at least in part to the low numbers of women working in disciplines such as particle and astrophysics which operate large installations.

Advanced Fellowships by Gender						
Financial Year	Applied for	Male		Applied for	Female	
		Awarded	Success rate		Awarded	Success rate
00/01	72	12	16.7%	16	1	6.2%
01/02	77	10	13.0%	13	3	23.1%
02/03	97	9	9.3%	17	4	23.0%
03/04	106	11	10.4%	15	2	13.3%
04/05	134	12	9.0%	21	1	4.8%
05/06	124	9	7.3%	26	2	7.7%

Senior Fellowships by Gender						
Financial Year	Applied for	Male		Applied for	Female	
		Awarded	Success rate		Awarded	Success rate
00/01	21	8	38.1%	3	1	33.3%
01/02	28	10	35.7%	0	0	0.0%
02/03	29	10	34.5%	0	0	0.0%
03/04	25	5	20.0%	2	1	50.0%
04/05	23	5	21.7%	1	1	100.0%
05/06	0	0	0.0%	0	0	0.0%

Postdocs by Gender						
Financial Year	Applied for	Male		Applied for	Female	
		Awarded	Success rate		Awarded	Success rate
00/01	71	9	12.7%	14	5	35.7%
01/02	81	12	14.8%	20	2	10.0%
02/03	98	10	10.2%	31	4	12.9%
03/04	111	8	7.2%	31	6	19.4%
04/05	123	10	8.1%	52	4	7.7%
05/06	122	7	5.7%	40	5	12.5%

Women are in the minority in all areas. However, the proportions of postdoc applications from women has increased, although not the number of advanced fellows. The number of women applications for senior fellowships has been very low. In some years postdoc applications from women have also been significantly more successful than for men.

However, success rates overall are far higher for senior fellowships for which very few women applied.

The STFC data is the most comprehensive and easily accessible. It was available on the website. However, here too there are some gaps.

### **Gaps in data/more work needed**

The research councils provide various data, which are not necessarily consistent with each other. Therefore, they cannot be directly compared. There are also a variety of types of schemes. More information can be provided. This may start to explain better the participation and success rates of women.

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