

# **Advancing women's careers in science, technology, engineering, mathematics and medicine: evaluating the effectiveness and impact of the Athena SWAN Charter**

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# 1 Executive Summary

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## 1.1 Introduction

Higher education mirrors the general UK workforce pattern whereby women are usually well represented in universities as a whole, but there is a lack of women in senior positions, particularly in academic posts.

Disciplinary differences are also evident with women best represented in language-based studies and worst represented in science, engineering and technology (SET), where in 2011 only 15% of professors were female. This pattern is also evident across the wider science, technology, engineering, mathematics and medicine subject group (STEM/STEMM).

To contribute to addressing these issues, the Athena SWAN Charter award scheme was established in 2005, recognising employment excellence for women in higher education in SET, and more recently in STEMM. The Charter is owned and managed by Equality Challenge Unit (ECU). Participating institutions and departments can submit for Athena SWAN awards at Gold, Silver and Bronze Award levels.

In 2013 ECU commissioned a research team from Loughborough University to examine the impact of the Athena SWAN Charter in higher education institutions (HEIs) in the UK including:

- the effectiveness of the Charter in advancing women's careers in STEMM
- the sustainability of the changes that HEIs are making as a result of their participation in Athena SWAN
- the impact of the Athena SWAN Charter in changing the culture and attitudes across the participating HEIs to address inequality and unequal representation
- the suitability of Athena SWAN processes for use in complex and busy institutional environments

It was also anticipated that the research would add to the body of literature describing and analysing the different experiences of women and men in HEIs.

## 1.2 Methods

The approach adopted involved two complementary strands of work.

- Programme-wide survey data collection across a sample of HEIs involved in the programme stratified by institutional and departmental Athena SWAN award level together with a sample of HEIs holding no award (28 institutions, 41 departments, 2645 staff and 2051 students returned surveys).

- Nine in-depth case studies conducted with particular HEIs in three different categories: HEIs holding institutional and departmental awards, HEIs holding an institutional award only, and HEIs holding no awards.

### **1.3 Key findings – effectiveness of the Charter in advancing women’s careers in STEMM**

There was considerable evidence from the institutional and departmental Champions survey and from the academic/research staff and administrative/technical staff survey that career satisfaction, opportunities for training and development, knowledge of promotion processes and fairness in the allocation of workload was considered better in the Silver Award and other Athena SWAN category groups than in no award departments. There was also some evidence that women had benefited from Athena SWAN to a greater extent than men. However, Athena SWAN seemed to have had a limited impact on postgraduate students and had not yet reached the undergraduate population.

- Nearly all of Athena SWAN institutional Champions (90%) and the vast majority of departmental Champions (81%) agreed Athena SWAN had impacted positively on gender issues.
- Most institutional Champions (65%) and about half of departmental Champions (52%) agreed that there had been a positive impact on women’s career progression
- Academic/research staff in Silver Award departments were more satisfied with their career performance/development review and with opportunities for training and development than staff in no award departments.
- Academic/research staff in all Athena SWAN category departments (Silver, Bronze and institutional Bronze Award) were more familiar with the processes for promotion, more likely to have received rewards for their work and rated their university higher for the promotion of equality and diversity than staff in no award departments.
- Fairness of workload allocation was rated higher by academic/research staff in Silver Award than in no award departments, but women rated the fairness of workload and transparency of the workload model lower than men.
- Women academic/research staff felt that Athena SWAN had improved their visibility, increased self-confidence, enhanced their leadership skills, helped them to think more broadly about gender issues and had impacted positively on their career development to a greater extent than men.
- The pattern of response to survey statements was similar for academic staff and research staff, but there were fewer statistically significant differences for research staff, and often lower ratings to statements, which may reflect less impact in the research staff grouping.
- For administrative/technical staff perceptions of support from their university and from their school/department for career development and progression were more positive in departments with a Silver Award than in no award departments.

- There was some limited evidence that postgraduate students in some Athena SWAN award departments had a better experience of their postgraduate studies, felt more strongly that they had increased their knowledge of science and research, and had better access to academic role models than in no award departments.
- Female students across all departments (award and no award) were less optimistic about their prospects for successfully combining family life with a career in their field.
- The Athena SWAN award process did not yet seem to have impacted upon undergraduate students based on the lack of differences in responses across Athena SWAN award and no award categories to nearly all questions on the undergraduate survey.
- Female undergraduates across all departments (award and no award) though were less confident than male undergraduates in approaching staff, and male staff, for advice and were less confident about their career prospects in the field than male undergraduates.

There was considerable evidence from interviews and focus groups in the case studies that Athena SWAN had impacted positively on institutional practices within participating HEIs.

- The Athena SWAN application process and award have provided credibility, focus and impetus for gender work that was already taking place within HEIs.
- The data-collection processes for Athena SWAN submissions enabled HEIs to identify challenges to gender equality that were relevant to their HEI and departments.
- In some HEIs the practices developed through Athena SWAN have impacted on departments beyond STEMM.
- Changes to institutional practice identified through involvement with Athena SWAN include efforts focused on promotion, supporting women returners, improved communication systems to ensure all voices are heard and scheduling meetings to accommodate part-time staff.
- Facilitating factors for delivering institutional change include the involvement of senior committed individuals who exert influence and are visible role models.
- Linking Athena SWAN to research funding was a contentious issue with some interviewees suggesting this was needed in some HEIs in order to motivate involvement with gender equality issues, whilst other interviewees felt that this link was problematic, particularly because Athena SWAN awards are not standard based.
- Persistent barriers impacting on delivering institutional change included recognition that delivering cultural change remains extremely challenging in any HEI.



## **1.4 Key findings – sustainability of the changes that HEIs are making as a result of their participation in Athena SWAN**

There was considerable evidence from the institutional and departmental Champions survey that the changes implemented as a result of the Athena SWAN process were sustainable.

- At the time of the institutional and departmental Champions' surveys, 100% of university and 95% of departmental self-assessment teams (the Athena SWAN process for identifying and providing solutions to gender inequalities) were ongoing/currently active with most formally embedded within the respective university and departmental committee structures.
- The most important actions since receiving an Athena SWAN institutional award were increased departmental engagement in the process, the putting in place of structures and data collection systems, increased engagement of university senior management in the process, improved processes for promotion and reward/review panels, the development of mentoring systems targeted at women, the appointment of designated Athena SWAN officers, changes to the maternity leave cover process, and the development of women's networking and leadership training events.
- The most important actions since receiving an Athena SWAN departmental award were enhanced communication within the department concerning equality and diversity matters, in particular the sharing of survey findings and proposed solutions, support and encouragement for women academics to apply for promotion, and ensuring the voice of postdoctoral researchers is heard and acted upon.
- Overwhelmingly institutions reported that they had applied for an Athena SWAN award because it was the 'right thing to do' and because of their commitment to gender equality.

The findings from the case studies also suggested that practices introduced as a result of Athena SWAN had been incorporated at both strategic and operational levels within participating HEIs in that:

- practices were championed by very senior people within HEIs
- HEIs had dedicated staff resources for managing the Athena SWAN process, which reflected their commitment to the process and the embedding of Athena SWAN within normal HEI practice
- as HEIs became more experienced with Athena SWAN they developed more sophisticated data-collection processes to identify key issues and to monitor progress against action plans
- departments also sought to identify ways in which resources could be best dedicated to support Athena SWAN which is reflected in the formation of sub-groups and in some HEIs this work was reflected in the workload model
- collaborations and networks were instigated or re-invigorated through Athena SWAN as HEI staff sought to complete the submission process, and to identify and deliver effective practice in promoting gender equality

- revisions to existing practices and processes within HEIs have arisen as a result of involvement with Athena SWAN including revisions to promotion processes and the development of new avenues for staff to acquire the skills they require for promotion

## **1.5 Key findings – impact of the Athena SWAN Charter in changing the culture and attitudes across the participating HEIs to address inequality and unequal representation**

There was evidence from the academic/research and administrative/technical survey responses that some changes in culture and attitude had been achieved.

- Academic/research staff reported that Athena SWAN had had a greater impact on the work environment and work practices in Silver and Bronze Award departments than in departments within an institution with a Bronze Award, but no departmental award.
- Administrative/technical staff in Silver Award schools/departments in comparison with no award departments made more use of flexible working, and staff in all Athena SWAN categories rated their department higher than staff in no award departments for the statement 'The school/department actively promotes a healthy work-life balance'.
- Administrative/technical staff in Silver Award departments gave a higher rating than staff in institutional Bronze Award departments to the statements that the Athena SWAN process and awards had had a positive impact on the work environment and work practices of their school/department.
- Administrative and technical staff felt a greater sense of belonging in all Athena SWAN category departments than in no award departments.

The findings of the case studies also indicted some cultural changes within participating HEIs, but there was variation in both the nature and extent of the changes between HEIs:

- the visible representation of more women in key positions and senior roles was a widely reported positive change
- some interviewees reported that they had witnessed positive changes within their HEIs in terms of staff recruitment as a result of being involved with Athena SWAN

## **1.6 Key findings – suitability of Athena SWAN processes for use in complex and busy institutional environments**

Both the survey data and qualitative findings revealed that the Athena SWAN process and award was considered to be of great value and generally the workload was considered to be 'appropriate' by institutional Champions and 'appropriate' or 'excessive' by departmental Champions.

*'It's [Athena SWAN] the most effective standard/process/lever for change I've come across in 12 years of equality work, including impact assessment.'* (Institutional Champion)

- Institutional Champions had been in post for 1–2 years (40%) or more than 3 years (29%) and were generally female (73%), white British (92%), senior academics or senior administrators with an equality and diversity role.
- Departmental Champions were generally female (80%), white British (75%) or white other (19%) with their main role most commonly cited as reader (26%), senior lecturer (23%) or professor (20%).
- The time for completion of the paperwork for the most recent university submission was 6–12 months (39%), and less than 6 months (44%) or 6–12 months (38%) for the most recent departmental submission.
- University and departmental self-assessment teams met on an average of six and seven occasions respectively, with 'a great deal of work being undertaken in between meetings'.
- The burden of the workload of the submission was considered to fall on the Champions and on human resources staff with institutional Champions considering the workload 'appropriate' and departmental Champions split between considering the workload 'excessive' (49%) and 'appropriate' (49%).
- Suggestions for improvements to the Athena SWAN process included clearer guidance or a template for the presentation of quantitative data, the removal of replication and repetition across sections, the need for a question concerning the proportion of staff attending equality and diversity training and some subject-specific points, particularly for medicine.
- Suggestions for improvements to the Athena SWAN assessment process included providing clearer guidelines for the assessment team and assessor training, considering the possibility of some visits, particularly for Gold Awards, asking more probing questions in terms of the funding of maternity cover and maternity cover for short-term contracts, and to provide clearer assessment criteria.

## **1.7 Recommendations for ECU**

A key strength of the Athena SWAN process is that it facilitates more collaborative work both within and across HEIs. It is recommended that ECU continue to support, promote and publicise these collaborative opportunities.

HEIs were able to identify, but not always able to address, the challenges associated with gender equality in their institutions and departments. It recommended that ECU continue to share examples of effective practice in meeting the challenges to promoting gender equality.

This study has confirmed that gender-equality work within academia is predominantly characterised as being driven by women with the assistance of some men. It is recommended that this is an issue that is given consideration by ECU.

Gender-equality work is considered by some academic staff, both male and female, to be focused on pursuing improvements for women rather than addressing inequality for both females and males. It is recommended that ECU consider ways in which this misconception can be addressed.

A persistent issue for ECU is engaging staff, departments and HEIs that face particular challenges in promoting gender equality. An example of such challenges is departments with very few staff or disciplines that struggle to attract women due to issues of supply. It is recommended that ECU consider the introduction of a 'Pre-bronze' or 'Small Department Award' to engage these groups in the process.

The link between Athena SWAN and research funding is a controversial issue particularly because Athena SWAN is not a standard-based award (i.e. two HEIs with a Bronze Award may be at very different stages in their progress, especially where one of the awards is a renewal). It is recommended that ECU continue to consider how this tension can be addressed satisfactorily.

It is recommended that ECU consider the suggestions made by HEI staff for improvements to the Athena SWAN process and assessment process.

## **1.8 Recommendations for HEIs**

For HEIs and departments relatively new to the Athena SWAN process or looking to move up to the next award level, it is suggested that it might be helpful to consider the most important actions taken in the Athena SWAN process as stated by the institutional and departmental Champions who participated in this study.

The most important actions taken since receiving an Athena SWAN institutional award were:

- increased departmental engagement in the Athena SWAN process
- the putting in place of structures and data-collection systems
- increased engagement of university senior management in the Athena SWAN process
- improved processes for promotion and reward/review panels
- the development of mentoring systems targeted at women
- the appointment of designated Athena SWAN officers
- changes to the maternity leave cover process
- the development of women's networking and leadership training events

The most important actions taken since receiving an Athena SWAN departmental award were:

- enhanced communication within the department concerning equality and diversity matters, in particular the sharing of survey findings and proposed solutions
- enhanced support and encouragement for women academics to apply for promotion

- ensuring the voice of postdoctoral researchers was heard and acted upon

## 2 Introduction

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The progress of women to senior positions across all industries in the UK has been tortuously slow (Equality and Human Rights Commission, 2011). In 2011, at best, only 13 % directors of FTSE 100 boards and 8% of directors of FTSE 250 boards were women, with only 32% of FTSE 100 companies disclosing the number of women directors on their boards (Equality and Human Rights Commission, 2011).

Higher education mirrors the general UK workforce pattern whereby women are usually well represented in universities as a whole, but there remains a serious lack of women in senior positions, particularly in academic posts (Equality Challenge Unit, 2011a). In 2011, across all disciplines, men comprised 56% of academic staff in non-managerial roles and 72% of academic staff in senior management roles. Only 19% of academic professors were women (Equality Challenge Unit, 2011a). Disciplinary differences are also evident with women best represented in language-based studies and worst represented in science, engineering and technology (SET), where, in 2011, only 15% of professors were female (Bebbington, 2002; Blickenstaff, 2005; Equality Challenge Unit, 2011a). This pattern is also evident across the wider science, technology, engineering, mathematics and medicine subject group (STEM/STEMM).

With a growing awareness that women are not progressing in STEMM careers, the 'leaky pipeline' and 'glass ceiling' have both received significant attention to identify the factors affecting decisions to leave academia (O'Brien & Hapgood, 2012; Barnard *et al.*, 2010). It has been suggested that the diminishing proportion of women progressing to senior levels in STEM careers (Blickenstaff, 2005) could be due to a lack of academic preparation for a science career, the absence of suitable female role models, the pedagogy of science classes favouring male students, an inherent masculine worldview in scientific epistemology, and even biological differences between men and women (Blickenstaff, 2005). In addition, the lack of progression for women is further exacerbated by a dominant culture in SET where long hours are the norm and the unequal division of domestic responsibilities limits women's potential to find the time and energy that the more senior posts are shown to demand (Davis, 2001; Grant *et al.*, 2000; Lingard & Francis, 2004).

Research such as the European Technology Assessment Network (ETAN) report (European Commission, 2000) has moved attention on from just increasing the supply of women in SET sectors to the impact of institutional structures, cultures and systems that disadvantage women. Thus, although women can cope with engineering work, for example, they are likely to find it much more difficult to cope with engineering values, systems and performance criteria, which have been established by men for men, and not for women (Evetts, 1998; Bagilhole, 2002). It is argued that women's unfair treatment stems from men's belief that women are different from them (Benckert & Staberg, 2000). This perception of the dichotomy of masculinity and femininity means that women who 'succeed' in traditionally masculine domains are perceived to 'fail' in supposedly feminine domains. As Van den Brandt suggests 'the image of a good scientist does not reflect the image of femininity' (Van den Brandt, 2006).

Studies conducted in Europe, Australia and the USA provide further evidence as to why women leave STEM careers at a greater rate than men (e.g. Bell, 2009). For

example, part-time roles still remain uncommon despite many women wishing to work part-time (Corral & Isusi, 2007). Those women who do work part-time, do so in a system designed for full-time employees (Bell, 2009; Lawrence & Garwood, 2011). Women are also disadvantaged compared with their male counterparts in terms of pay and are more likely to be employed on short-term contracts (University and College Union, 2007, 2012).

A further issue identified within SET and more recently, STEM professions, is the competitive nature of research funding based on a typical career route (O'Brien & Hapgood, 2012; Cameron *et al.*, 2013). Generally, the cumulative use of metrics, developed for and by academics with full-time unremitting careers, actually produces significant obstacles to successful part-time careers and the re-entry of women to academia after a break to raise children (Bell, 2009; Lawrence & Garwood, 2011). Furthermore, metrics such as publication quantity are 'frequently used as a ranking metric for employment, promotion, and grant success' (Cameron *et al.*, 2013). Yet evidence suggests that while women publish fewer papers than men (McGuire *et al.*, 2012), their papers are more likely to have higher impact (Symonds *et al.*, 2006). Finally, while it is recognised that many of the previous barriers to women's progression may now also affect men, women who demonstrate the same scientific productivity as their male counterparts, are judged as less competent (Moss-Racusin *et al.*, 2012).

With the aim of providing a general reference point for good practice within industry, a number of initiatives have set standards for the career management of women. These include Top 50 Employer and EU Excellence in HR award. Such benchmarks have extended to higher education with the Research Concordat (1996) and Athena SWAN (2005). The Athena SWAN Charter is a scheme that recognises excellence in SET, and more recently in STEMM, employment for women in higher education. Participating institutions and departments can submit for Athena SWAN awards at various levels (as at 31 December 2012 there were 127 Athena SWAN award holders).

In 2011, the Equality Challenge Unit (ECU) undertook research in order to understand how the Athena SWAN Charter had impacted on the number, and seniority level, of women in SET in higher education since its launch in 2005 (Equality Challenge Unit, 2011b). Through a small number of case studies, the research highlighted that many members are indeed using the Athena SWAN award as a framework for identifying current good practice and as a process in which to refine, improve and formalise many policies and practices. This process has also led to much better communication of these initiatives to staff and students (Equality Challenge Unit, 2011b). The full extent of the impact of Athena SWAN on enhancing the career progression and experiences of women in STEMM has not been fully explored or documented. Therefore, the purpose of the present study was to examine the impact of the Athena SWAN Charter in a wider range of higher education institutions (HEIs), with a larger number of participants, using a mixed methods survey and case-study approach. The study will also add to the body of literature describing and analysing the different experiences of women and men in HEIs.

## 3 Programme Overview and Research Context

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### 3.1 Programme overview

The Athena SWAN Charter award scheme operates by making Gold (significant *sustained* progress and achievement), Silver (significant *record* of achievement and progress) and Bronze (*solid foundation* of policies and practices to eliminate gender bias and an inclusive culture that values female staff) Awards at both institutional and departmental level twice per year, and by providing workshops, guidance and opportunities to share effective practice via its website. The Charter is owned and managed by ECU, which works to support and further equality and diversity for staff and students in HEIs across all four nations of the UK. In addition, the scheme is funded by the Royal Society, the Biochemical Society and the Department of Health.

To support HEIs in influencing culture change and improving working practices, ECU has commissioned this research which aims to assess and demonstrate the impact and benefit of the Athena SWAN Charter on participating HEIs and on the wider sector.

### 3.2 Athena SWAN Charter principles

Any HEI that is committed to the advancement of the careers of women in STEMM can become a member of the Charter (83 members as at 31 December 2012), accepting and promoting the six Charter principles.

- Addressing gender inequalities requires commitment and action from everyone, at all levels of the organisation.
- A change in cultures and attitudes across the organisation is required to tackle the unequal representation of women in science.
- The absence of diversity at management and policy-making levels has broad implications that the organisation will examine.
- The high rate of loss of women in science is an urgent concern that the organisation will address.
- The system of short-term contracts has particularly negative consequences for the retention and progression of women in science, which the organisation recognises.
- There are both personal and structural obstacles to women making the transition from PhD into a sustainable academic career in science, which require the active consideration of the organisation.



## 4 Research Overview and Methodology

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### 4.1 Research aims and objectives

The aim of the research was to investigate the impact of the Athena SWAN Charter in HEIs in the UK including:

- the effectiveness of the Charter in advancing women's careers in STEMM
- the sustainability of the changes that HEIs are making as a result of their participation in Athena SWAN
- the impact of the Athena SWAN Charter in changing the culture and attitudes across the participating HEIs to address inequality and unequal representation
- the suitability of Athena SWAN processes for use in complex and busy institutional environments

The objectives of the research were to examine:

- the impact of the Athena SWAN Charter on institutional practices designed to increase the number, level, career progression and employment experiences of women in STEMM in higher education since its launch in 2005
- evidence of differences in practice and outcomes related to the career opportunities of women in STEMM between HEIs that are members of Athena SWAN and those that are not
- the permeation, quality and longevity of engagement with the Athena SWAN Charter in participating institutions
- the correlation between the progress evidenced by institutions in their Athena SWAN submissions and the experiences of female staff working in STEMM
- the extent to which Athena SWAN practices and learning have been incorporated into mainstream strategies and processes in participating HEIs
- the experience of HEIs in implementing the Athena SWAN Charter and awards process
- the standing and health of the Athena SWAN Charter amongst comparative benchmarking/recognition schemes in the STEMM and equality and diversity fields

## 4.2 Research methods

### 4.2.1 *Introduction*

This study was approved by Loughborough University Ethical Committee. The approach adopted involved two complementary strands of work.

- Programme-wide survey data collection across a sample of HEIs involved in the programme stratified by institutional and departmental Athena SWAN award level together with a sample of HEIs holding no award.
- In-depth case studies conducted with particular HEIs in three different categories: HEIs holding institutional and departmental awards, HEIs holding an institutional award only and HEIs holding no awards.

### 4.2.2 *Surveys*

#### **Rationale for the selection of departments for completion of online surveys and case-study visits**

The aim was to recruit departments in the following categories and when a department declined to undertake the survey a replacement was sought resulting in 114 departments from 44 institutions being invited to complete surveys.

- All departments with awards and other STEMM departments nationally were grouped into five categories on the basis of Athena award status: 'Departmental Gold Award', 'Departmental Silver Award', 'Departmental Bronze Award', 'No Departmental Award but an Institutional Award', 'No Departmental Award and No Institutional Award'.
- All Gold Award institutions ( $n = 3$ ) were selected for survey.
- Within each of the remaining categories (Silver Award, Bronze Award, etc.) departments were selected on the basis of STEMM Higher Education Statistics Agency (HESA) Joint Academic Coding System (JACS) subject code. Therefore, two departments in each category were selected from each of medicine and dentistry, subjects allied to medicine, mathematical sciences and engineering and technology. Four departments in each category were selected from the biological sciences subject code to allow both biological sciences and psychology to be included, and four departments were selected from physical sciences because of the anticipated small numbers of female staff in these departments and to facilitate the inclusion of physics and chemistry.
- For subjects allied to medicine and for physical sciences, because of the wide range of degree programmes within these JACS codes, selections were limited to pharmacy and pharmacology, and to chemistry and physics.
- Where possible, to control for perceived institutional status, within each JACS subject area for each category (e.g. Silver Award, Bronze Award, etc.), half of the departments were selected from Russell Group institutions.

## Survey development

The surveys were designed on the basis of previous literature concerning the employment experiences of women and men in higher education and using the 2010 Athena research report. The survey was piloted with a small group of staff and students (approximately 60), and some questions were re-worded to improve clarity, some questions were omitted and new questions were included after the pilot process following consideration of the suggestions of participants.

## Survey response rates

A total of 41 departments from 28 institutions agreed to take part in the survey. This was a response rate of 36% for departments and 64% for institutions. The response rate within departments is unknown, but ranged from 16% to 48% based on the departments that gave us participant numbers based on their email listings. The total numbers of staff and students that started the survey are listed below (the numbers of those that reached the end of the survey are shown in brackets).

Academic staff/researchers Athena SWAN departmental awards	939 (622)
Academic staff/researchers Athena SWAN institutional awards	507 (364)
Academic staff/researchers no awards	336 (219)
Administrative/technical staff Athena SWAN departmental awards	399 (242)
Administrative/technical staff Athena SWAN institutional awards	206 (148)
Administrative/technical staff no awards	150 (95)
Institutional Champions survey	51 (29)
Departmental Champions survey	57 (36)
Total staff	2645 (1755)
Postgraduate students (all)	995 (796)
Undergraduate students (all)	1056 (836)
Total students	2051 (1632)

Despite our best efforts to invite a similar number of Russell and non-Russell group departments to take part in the surveys the responses varied by category with 82%, 51%, 20% and 7% returns from individuals in Russell Group institutions in the Silver Award, Bronze Award, institutional Bronze Award and no award categories. However, at the time the surveys were sent out 84% of all Athena SWAN Silver Awards and 75% of Athena SWAN Bronze departmental Awards were held by Russell Group departments illustrating the difficulty in achieving returns from non-Russell group departments for Silver and Bronze categories and from Russell group departments for the other categories, with few or no replacement departments available if the originally selected department declined to take part.

### 4.2.3 *In-depth case studies*

#### **Case-study selection**

For the case studies the initial selection of HEIs was made largely on the basis of interest to the research. Fifteen institutions were invited to participate and nine accepted the invitation to become a case study.

All nine institutions included departments that were receiving surveys. Of the HEIs selected:

- five institutions included department(s) that held an Athena SWAN departmental award
- two institutions held an institutional award only
- two institutions held no award at all
- four of the institutions were from the Russell Group

Initial contact was made via email with the institutional-level Athena SWAN representative identified by ECU (Appendix C).

#### **Case-study approach**

Semi-structured interviews were undertaken with senior management, academic, research, technical and human resources staff to provide rich explanatory data above and beyond that which can be obtained from surveys. Interviews were conducted both face-to-face and by telephone depending on the preference of the HEI. Focus groups and interviews were also undertaken with undergraduate and postgraduate students.

Interviews were audio-recorded, transcribed and analysed thematically.

Interview topics included:

- contextual data about the interviewees and their HEI/department
- involvement with, and reflections on the Athena award submission process and the award itself
- views on their experiences of issues affecting equality, representation and progression within their department
- organisational and departmental culture
- the impact of Athena SWAN on reducing gender inequality and unequal representation, and on advancing women's careers in STEMM and beyond
- future challenges faced by individuals and HEIs

The case studies also sought to facilitate the identification and later dissemination of examples of effective practice.

## **Summary of interviews completed**

Interviews and focus groups were undertaken with:

- members of the university senior management
- heads of departments
- female and male academic/faculty staff from lecturer to professor
- female and male postdoctoral researchers and
- female and male PhD students

A total of 64 interviews and focus groups were conducted across the nine case studies including a total of 152 participants.

## 5 Research Findings: Surveys

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### 5.1 The Athena SWAN academic/research staff survey

#### *Summary of key findings – academic/researcher staff survey*

- Staff in Silver Award departments were more satisfied with their career performance/development review and with opportunities for training and development than staff in no award departments.
- Staff in all Athena SWAN category departments (Silver, Bronze and institutional Bronze Awards) were more familiar with the processes for promotion, more likely to have received rewards for their work and rated their university higher for the promotion of equality and diversity than staff in no award departments.
- Women gave a more negative rating to all responses than men, and agreed more strongly than men that it is more difficult for women to reach the top employment positions in their field.
- Career satisfaction was similar across all Athena SWAN award categories and no award departments, but women were less satisfied with their career progression than men.
- Workload allocation fairness was rated higher in Silver Award than in no award departments, but women rated the fairness of workload and transparency of the workload model lower than men.
- Athena SWAN was considered to have had a greater impact on the work environment and work practices in Silver and Bronze Award departments than in departments within an institution with a Bronze Award, but no departmental award.
- Women felt that Athena SWAN had improved their visibility, increased self-confidence, enhanced their leadership skills, helped them to think more broadly about gender issues and had impacted positively on their career development to a greater extent than men.
- The pattern of response to survey statements was similar for academic staff and research staff, but there were fewer statistically significant differences between Athena SWAN award and no award departments for research staff, and often lower ratings to statements, which may reflect less impact in the research staff grouping.

#### 5.1.1 *Career performance/development reviews, training and promotion*

The responses of all academic staff and researchers to the nine survey statements relating to career performance/development reviews, training and promotion issues are shown in Table 1. The key findings were that for all but one of the nine

statements in this section departments with a Silver Award scored more highly than no award departments.

**Table 1.** Career performance/development reviews, training and promotion for all academic/research staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I was satisfied with my career performance/development review.					
4.25 #	4.52	4.51 †	4.49	4.28	4.16
<b>QU:</b> I am familiar with the university's criteria and processes for promotion.					
3.94 #	4.36	4.18 †	4.30 †	4.27 †	3.76
<b>QU:</b> I have been encouraged to apply for promotion.					
2.95 #	3.43	3.25	3.35	3.17	3.01
<b>QU:</b> Adequate opportunities exist within my university for personal development and training.					
4.30	4.42	4.63 †	4.25	4.32	4.12
<b>QU:</b> My university encourages me to undertake further training and pursue personal development opportunities relevant to my career.					
4.05 #	4.19	4.38 †	3.98	4.03	3.94
<b>QU:</b> There are rewards, incentives and awards available to me at my university.					
3.11 #	3.56	3.62 †	3.36 †	3.26	2.94
<b>QU:</b> I have received rewards, incentives or awards from my university for my work.					
2.64 #	3.16	3.14 †	2.89 †	2.90 †	2.46
<b>QU:</b> There are flexible promotion policies (e.g. takes into account part-time work, career breaks, etc.) at my university.					
3.26 #	3.59	3.70 †	3.61 †	3.28	2.98
<b>QU:</b> There is real commitment at my university to promote equality and diversity.					
3.81 #	4.33	4.31 †	4.26 †	4.02 †	3.60

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

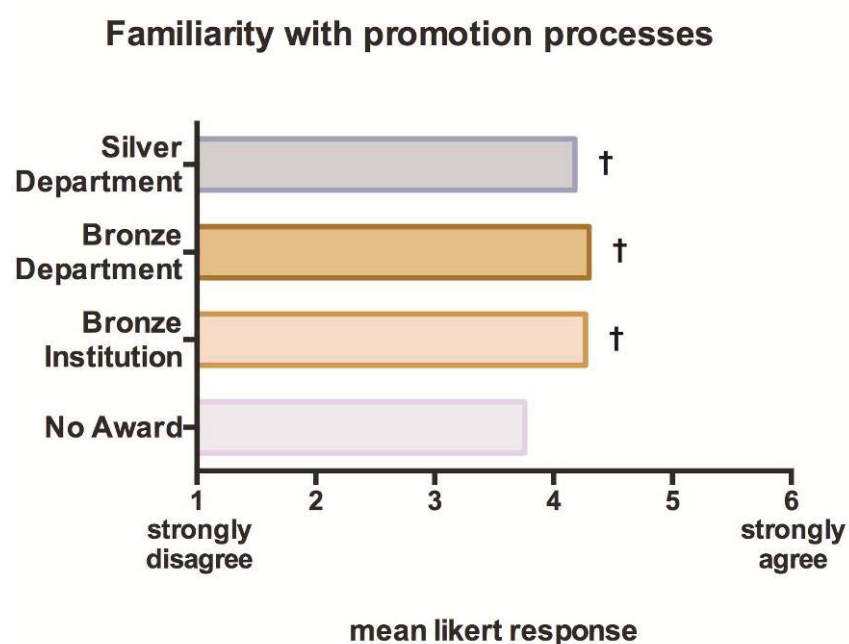
Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

For three questions, i.e. 'I am familiar with the university's criteria and processes for promotion', 'I have received rewards, incentives or awards from my university for my

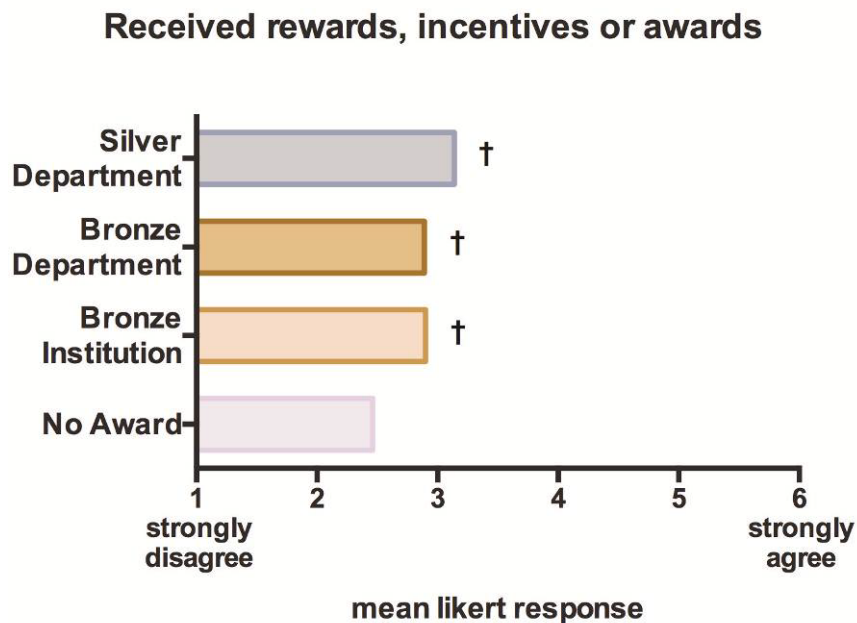
work' and 'There is real commitment at my university to promote equality and diversity', departments with a Silver and Bronze Awards and departments within a university with an institutional Bronze Award all scored more highly than no award departments (Figures 1, 2 and 3). The statement where impact had not yet been achieved was 'I have been encouraged to apply for promotion'.

**Figure 1.** Ratings given by female and male academics/researchers in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I am familiar with the university's criteria and processes for promotion' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

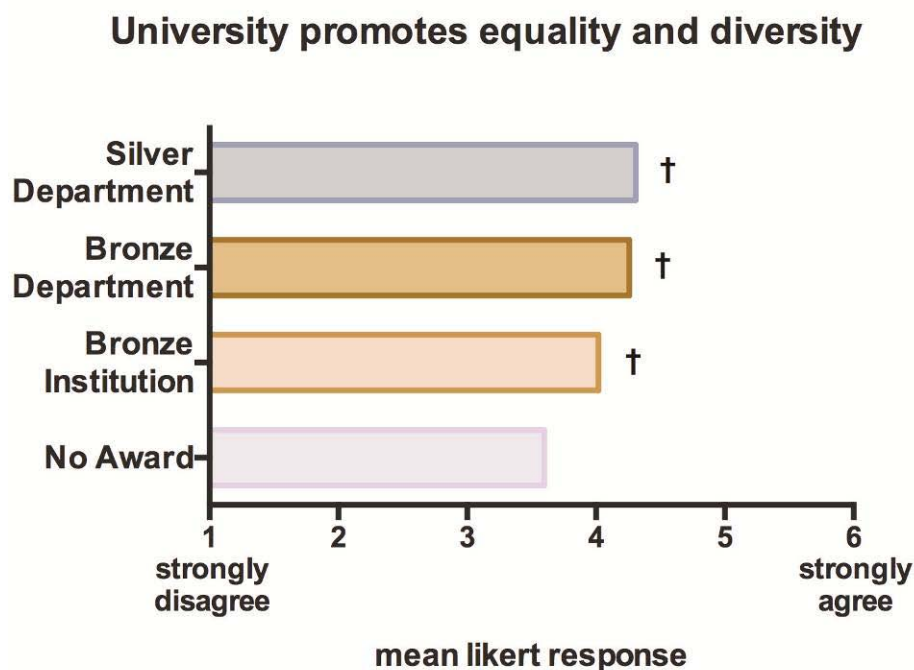




**Figure 2.** Ratings given by female and male academics/researchers in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I have received rewards, incentives or awards from my university for my work' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

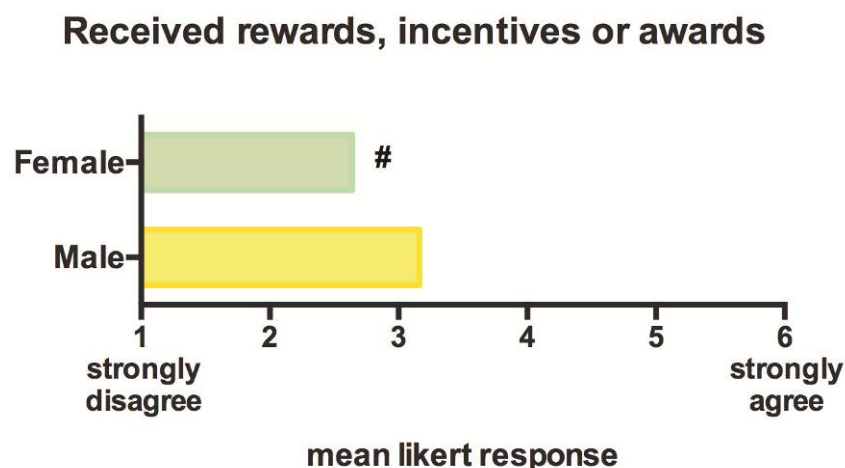


**Figure 3.** Ratings given by female and male academics/researchers in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'There is real commitment at my university to promote equality and diversity' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

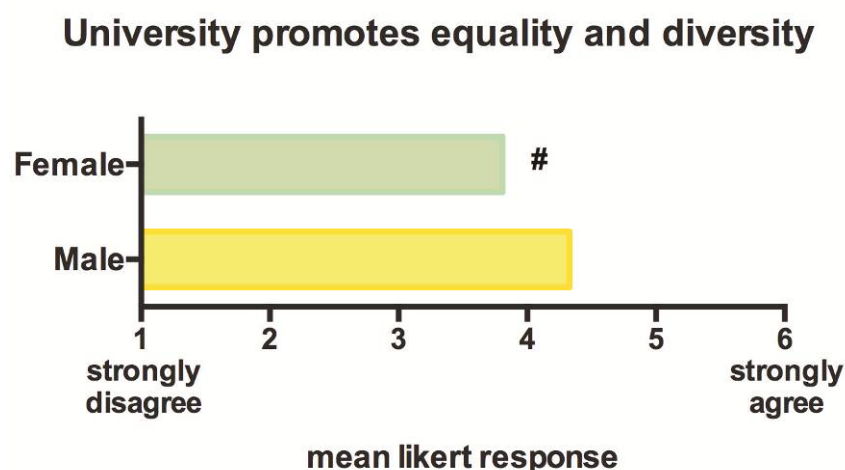


For all but one of the nine statements in this section women gave a more negative response than men with the greatest differences on the statements 'I have received rewards, incentives or awards from my university for my work' and 'There is real commitment at my university to promote equality and diversity' (Figures 4 and 5). There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 1b).

**Figure 4.** Ratings given by female and male staff to the statement 'I have received rewards, incentives or awards from my university for my work' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 5.** Ratings given by female and male staff to the statement 'There is real commitment at my university to promote equality and diversity' (female vs male comparison: # =  $P < 0.05$ , t-test.).



### 5.1.2 Departmental/school encouragement to progress

The responses of academic staff and researchers to the survey statements relating to departmental/school encouragement to progress are shown in Table 2. The key findings were: departments with a Silver Award scored more highly than no award departments for the following statements:

- 'My line manager encourages me to progress in my career'
- 'My line manager or appraiser encourages me to have a strategic plan for promotion'
- 'My line manager or appraiser has encouraged me to apply for university rewards, incentives or awards'
- 'Adequate opportunities exist in my school/department for personal development and training'

Silver and Bronze Award departments scored more highly than no award departments for the following statement:

- 'My school/department takes part-time work and/or career breaks into account when putting staff forward for promotion'

There were major differences in the perceptions of women and men as to whether or not it was more difficult for women than men to reach the most senior employment positions in the field with women strongly agreeing with this statement and men remaining more neutral (Figure 6).

However, there were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 2b).

**Table 2.** *Departmental/school encouragement to progress for all academic/research staff.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> It is more difficult for women than men to reach the most senior employment positions in my field (e.g. biological sciences, chemistry, computing/ICT, engineering, food science/nutrition, mathematics, medicine, physics, psychology, pharmacy/pharmacology).					
4.42 #	2.97	3.71	3.72	3.74	3.52
<b>QU:</b> My line manager or appraiser encourages me to progress in my career.					
4.18	4.35	4.47 †	4.28	4.19	3.96
<b>QU:</b> My line manager or appraiser encourages me to undertake further training and pursue personal development opportunities relevant to my career.					
3.95	3.95	4.09	3.92	3.82	3.83
<b>QU:</b> My line manager or appraiser gives me helpful feedback about my performance.					
3.93	4.03	4.14	4.06	3.81	3.81
<b>QU:</b> My line manager or appraiser encourages me to have a strategic plan for promotion.					
3.25 #	3.58	3.60 †	3.41	3.32	3.12

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> My line manager or appraiser has encouraged me to apply for university rewards, incentives or awards.					
2.73 #	3.14	3.18 †	2.92	2.72	2.72
<b>QU:</b> Adequate opportunities exist in my school/department for personal development and training.					
3.84	4.00	4.21 †	3.84	3.75	3.71
<b>QU:</b> My school/department takes part-time work and/or career breaks into account when putting staff forward for promotion.					
3.22 #	3.73	3.69 †	3.77 †	3.31	2.99
<b>QU:</b> I would find a sabbatical beneficial.					
3.77 #	4.19	3.90	3.96	4.03	3.96

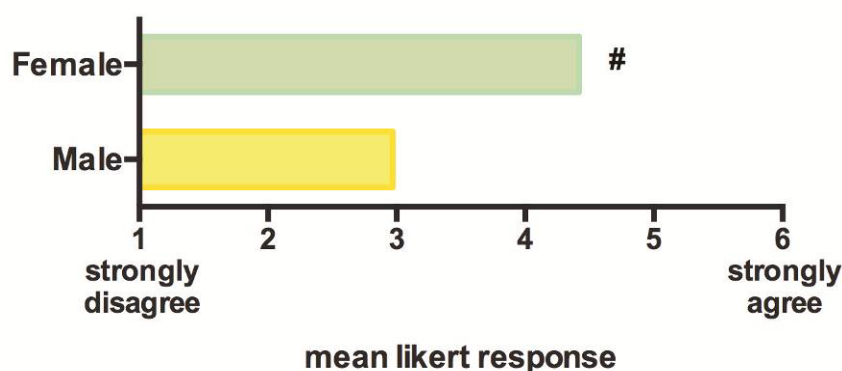
Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Figure 6.** Women's and men's responses to the statement 'It is more difficult for women than for men to reach the top employment positions in the field' (female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.).

### More difficult for women to reach senior positions



#### 5.1.3 Career satisfaction for academic/research staff

The ratings given by academic and research staff for career satisfaction are shown in Table 3. There were no differences in career satisfaction between Athena SWAN award-holding departments and no award departments, but women across all departments, regardless of Athena SWAN status, gave a more negative rating of

their career satisfaction than men, particularly in their progress towards meeting their goals for salary (Figure 7). There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 3b).

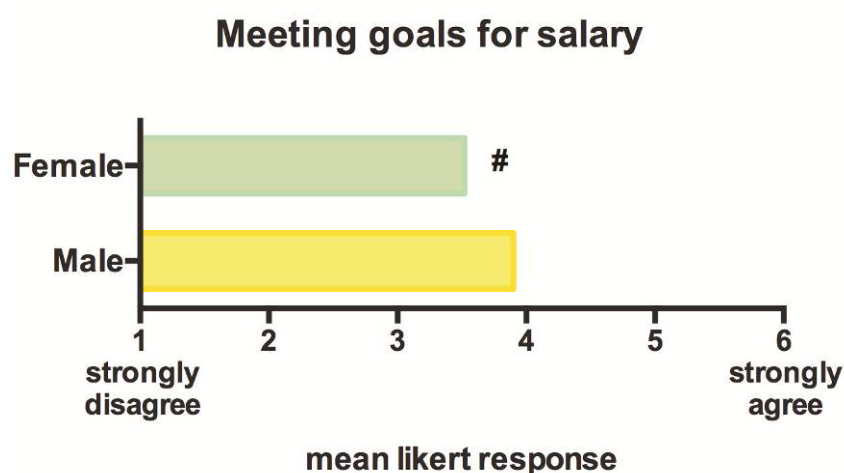
**Table 3.** Career satisfaction for all academic/research staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I am satisfied with the success I have achieved in my career.					
3.78 #	4.10	3.94	3.99	3.89	4.04
<b>QU:</b> I am satisfied with the progress I have made to meeting my overall career goals.					
3.70 #	4.04	3.90	3.91	3.85	3.90
<b>QU:</b> I am satisfied with the progress I have made towards meeting my goals for salary.					
3.52 #	3.90	3.71	3.76	3.69	3.71
<b>QU:</b> I am satisfied with the progress I have made towards meeting my goals for the development of new skills.					
3.91 #	4.07	4.11	4.04	3.87	4.06

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

**Figure 7.** Ratings given by female and male staff to the statement 'I am satisfied with the progress I have made towards meeting my goals for salary' (female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.).



### 5.1.4 Workload allocation for academic/research staff

The ratings given by academic and research staff for statements relating to workload are shown in Table 4 and Figure 8. Academic/research staff in departments with an Athena SWAN Silver Award gave higher ratings than no award departments on the fairness of workload allocation. There were no differences though between award-holding and no award departments on the ability to manage workload in the time available or perceptions of the transparency of the workload model.

**Table 4.** Workload allocation for all academic/research staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I feel that the allocation of workload (i.e. teaching, administrative duties, pastoral care, laboratory work, etc.) in the school/department is fair.					
3.43 #	3.73	3.79 †	3.69	3.50	3.33
<b>QU:</b> I can manage my workload in the time available to me.					
3.57	3.67	3.68	3.59	3.65	3.50
<b>QU:</b> The school's department workload model is transparent.					
2.85 #	3.33	3.28	3.18	2.92	3.05

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

Women gave a more negative response than men to the statements relating to the fairness of workload allocation and to transparency of the workload model. There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 4b).

**Figure 8.** Ratings given by female and male academics/researchers in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I feel the workload allocation in the school/department is fair' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



#### 5.1.5 Work-life balance policies and practice for academic/research staff

Work-life balance ratings for some questions (e.g. scheduling of meetings, use of flexible working hours and accommodation of family-related needs) were higher in Bronze Award departments and departments in a university with an institutional Bronze Award than in the no award departments (Table 5).

Women had a more negative perception of work-life balance for two statements relating to the scheduling of meetings and the promotion of a healthy lifestyle (Figures 9 and 10). There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 5b).

**Table 5.** *Work-life balance policies and practice for all academic/research staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> Meetings and events are seldom scheduled outside 10 am and 4 pm.					
3.53 #	3.74	3.56	3.97 †	3.68	3.42
<b>QU:</b> I make use of flexible working hours.					
4.37	4.48	4.40	4.40	4.59 †	4.06
<b>QU:</b> My line manager is quite accommodating of family-related needs.					
4.66	4.79	4.81	4.85 †	4.67	4.49
<b>QU:</b> The school/department actively promotes a healthy work-life balance.					
3.20 #	3.41	3.43	3.36	3.27	3.10
<b>QU:</b> My career break was not detrimental to my career.					
2.83	3.21	2.91	3.13	2.94	2.73
<b>QU:</b> During my career break, the level of contact with/from the school/department was appropriate.					
3.56	3.88	3.71	3.86	3.70	3.53

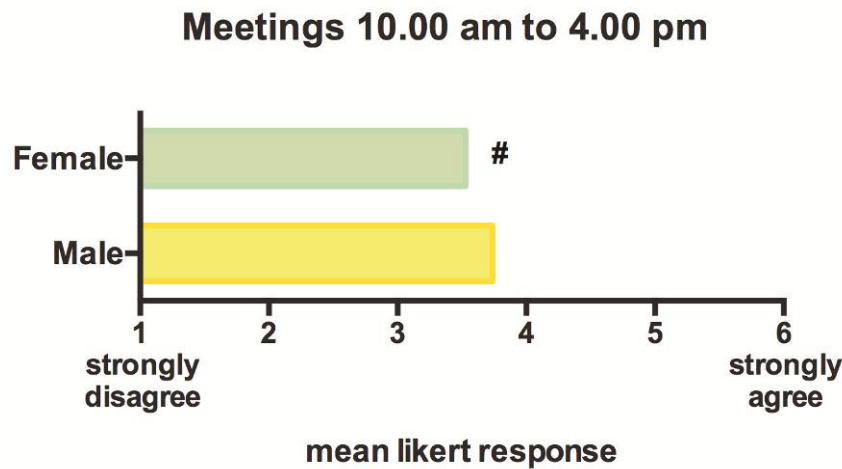
Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

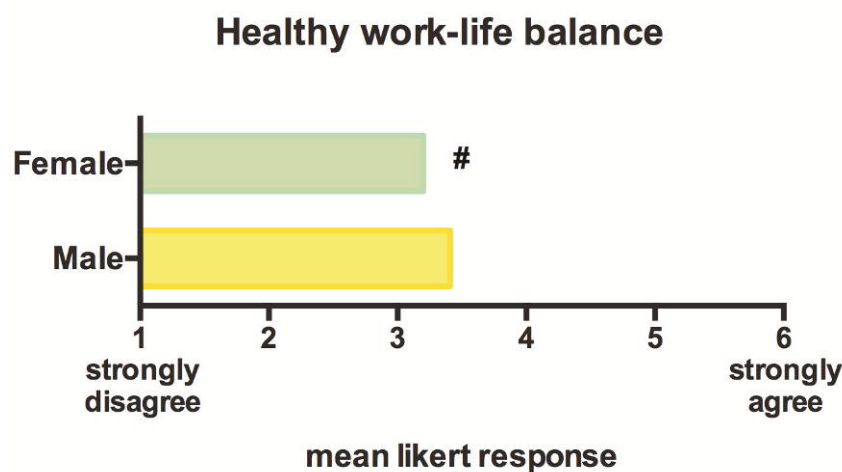
Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.



**Figure 9.** Ratings given by female and male staff to the statement 'Meetings and events are seldom scheduled outside 10.00 am and 4.00 pm' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 10.** Ratings given by female and male staff to the statement 'The school/department promotes a healthy work-life balance' (female vs male comparison: # =  $P < 0.05$ , t-test.).



#### 5.1.6 The achievement of work-life balance for academic/research staff

There were no differences in the achievement of work-life balance and the conflict experienced in attempting to balance work and personal life by Athena SWAN award group or by sex (Table 6). Thus women and male staff were able to achieve some work-life balance, but faced conflict in doing so. There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 6b).

**Table 6.** *Personal work-life balance for all academic/research staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I am successful at balancing my paid work and my personal life.					
3.50	3.57	3.51	3.60	3.51	3.62
<b>QU:</b> I face much conflict in balancing my work and personal life.					
3.51	3.44	3.40	3.38	3.53	3.54

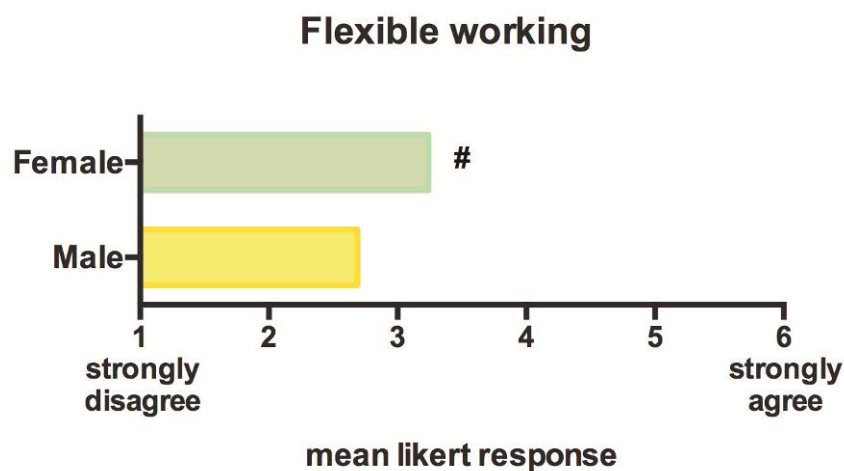
Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

#### 5.1.7 *Work-life balance culture for academic/research staff*

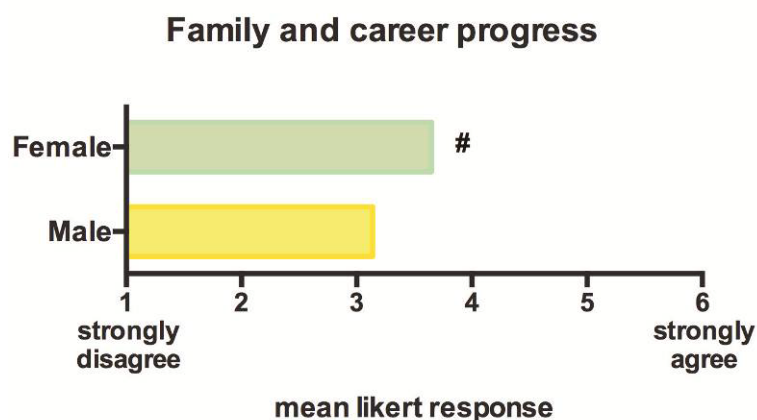
There was no evidence as yet that Athena SWAN was impacting on work-life balance culture for academic/research staff with similar ratings for all Athena award and no award departments to statements such as 'Staff who use work family policies (e.g. job-sharing) are considered to be less serious about their career than those who do not use these policies' and 'To be viewed favourably by the school/department staff must constantly put their jobs ahead of their families and personal lives'.

In addition, women considered the work-life balance culture less positively than men, for example, giving a higher rating (i.e. agreeing more strongly) to the statements 'In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time' and 'To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.' (Figures 11 and 12).

**Figure 11.** Ratings given by female and male academic/research staff to the statement 'In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 12.** Ratings given by female and male academic/research staff to the statement 'To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department' (female vs male comparison: # =  $P < 0.05$ , t-test.).

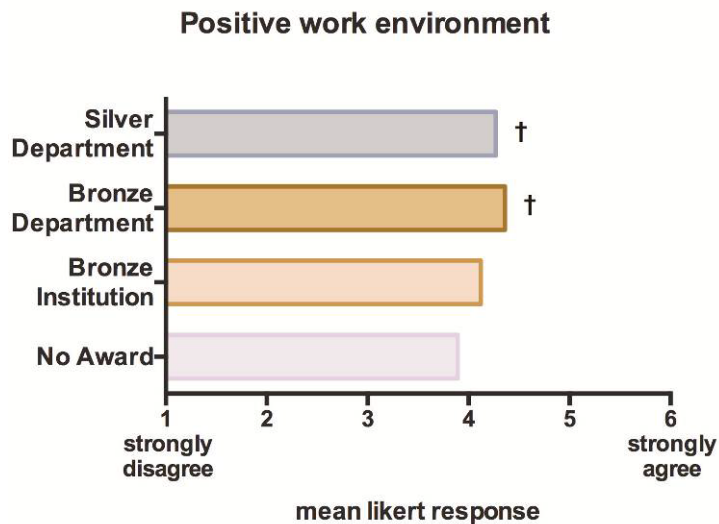


For further findings on this section see Tables 7a and 7b in Appendix A.

### 5.1.8 Gender climate for academic/research staff

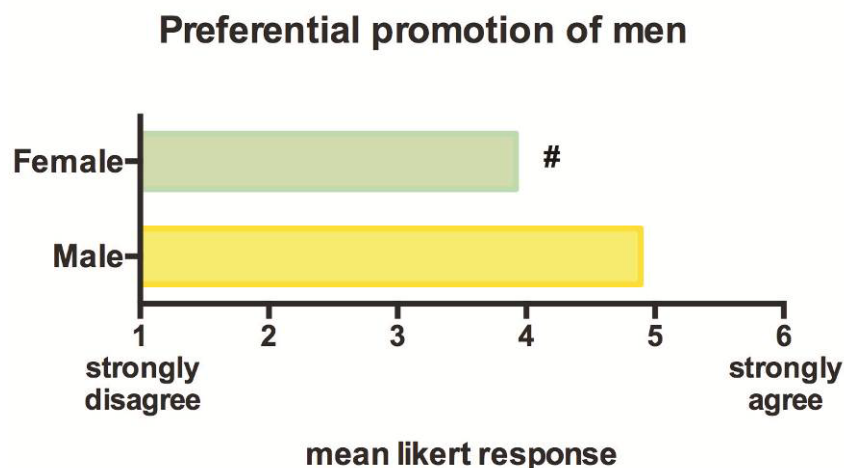
There was some limited evidence that Athena SWAN was impacting positively on the gender climate for academic/research staff in that the ratings for the statement 'My school/department has a positive work environment' were higher for Silver and Bronze Award departments than for no award departments (Figure 13). However, there were no other differences between Athena SWAN award holders and no award departments, with similar ratings for statements such as 'In meetings in my school/department staff pay just as much attention when women speak as when men do' and 'There is appropriate representation of women on major committees in my school/department'.

**Figure 13.** Ratings given by female and male academics/researchers in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'My school/department has a positive work environment' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

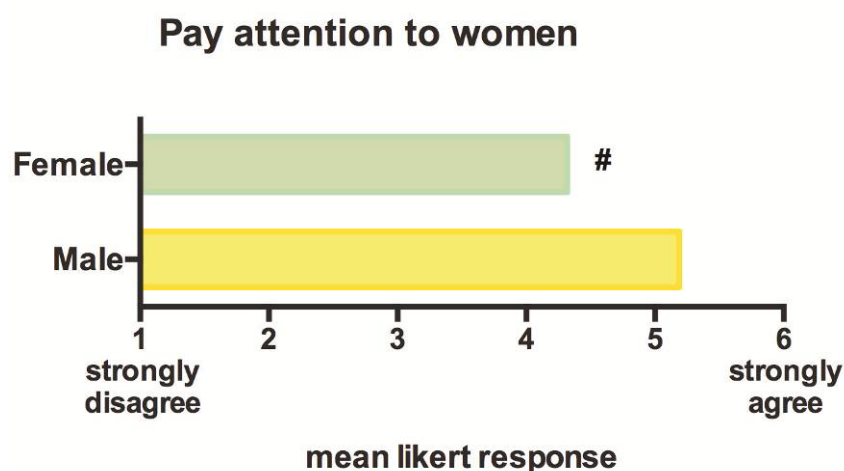


Women across all departments rated the gender climate more negatively than men, for example, agreeing less strongly than men that 'men do not receive preferential treatment in promotion' and that 'managers pay just as much attention when women speak as when men do' (Figures 14 and 15).

**Figure 14.** Ratings given by female and male academic/research staff to the statement 'Men do not receive preferential treatment in promotion in my school/department' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 15.** Ratings given by female and male academic/research staff to the statement 'In meetings in my school/department managers pay just as much attention when women speak as when men do' (female vs male comparison: # =  $P < 0.05$ , t-test.).



For further detail on this section see Tables 8a and 8b in Appendix A.

#### 5.1.9 Intention to leave for academic/research staff

There were no differences across award categories for the intention to seek a job at another university or school/department, or in the consideration of leaving academia and pursuing a different career. However, women were more likely than men to be thinking of leaving the profession (Table 7 and Figure 16). There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 9b).

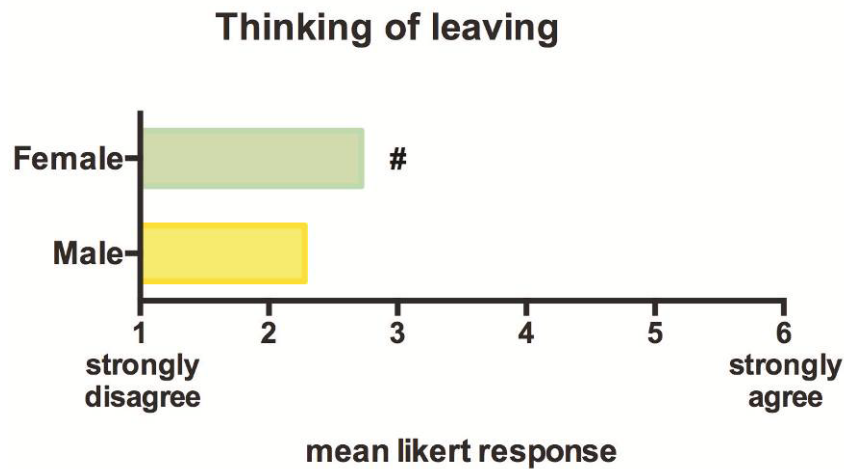
**Table 7.** Intention to leave for all academic/research staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I will actively look for a job at another university or school/department in the next year.					
2.73	2.55	2.53	2.54	2.65	2.73
<b>QU:</b> I am considering leaving my job and pursuing a different career.					
2.72 #	2.28	2.46	2.53	2.50	2.38

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs Male comparison: # =  $P < 0.05$ , t-test.

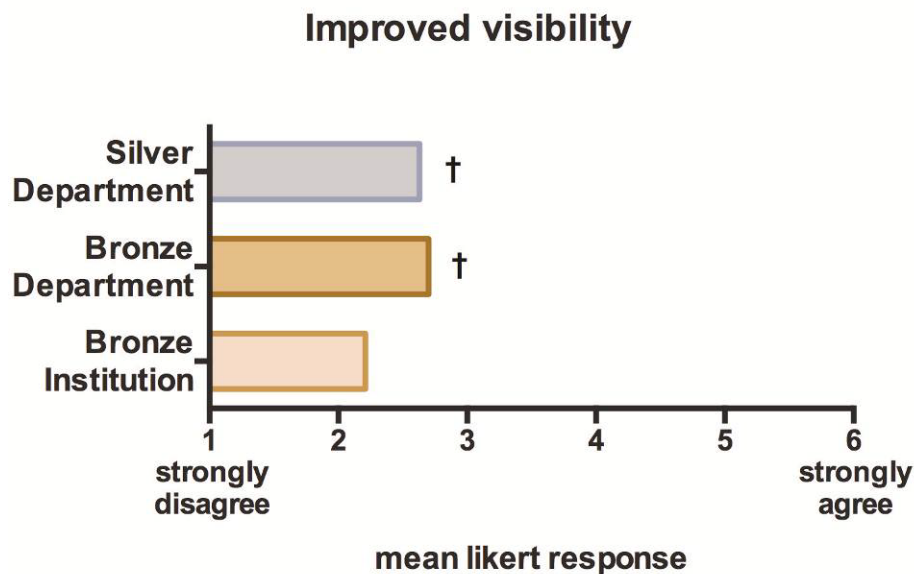
**Figure 16.** Ratings given by female and male staff to the statement ‘I am considering leaving my job and pursuing a different career’ (female vs male comparison: # =  $P < 0.05$ , t-test.).



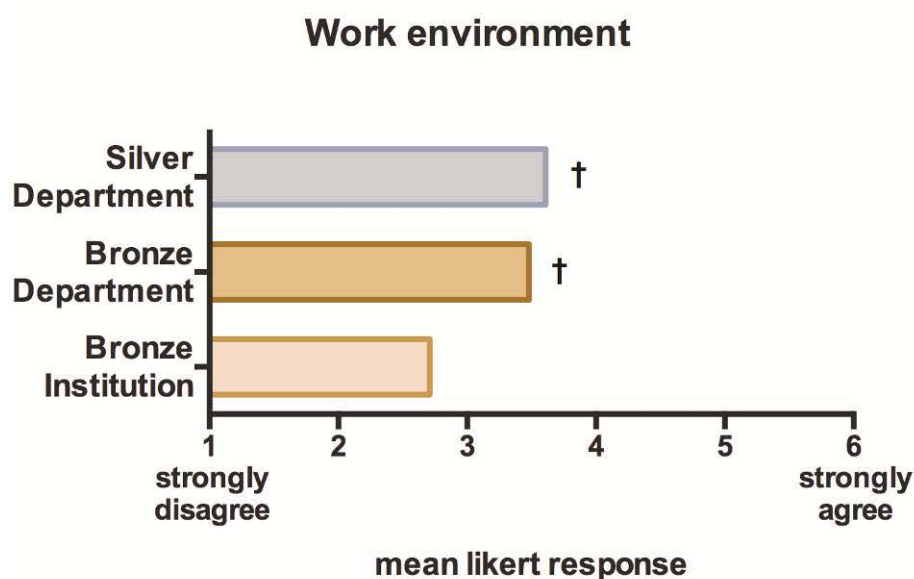
#### 5.1.10 *Impact of Athena SWAN as perceived by academic/research staff*

Academic and research staff in Silver and Bronze Award departments gave higher ratings than academic and research staff in institutional Bronze Award departments for the statements relating to ‘visibility within the school/department’, ‘a positive impact on the work environment of the school/department’ and ‘a positive impact on the work practices of the school/department’ (Figures 17, 18 and 19). Also academic and research staff in Silver Award departments gave a higher rating than staff in institutional Bronze Award departments to the statement ‘Athena SWAN has had a positive impact on my career development’ (Figure 22).

**Figure 17.** Ratings given by female and male academics/researchers in Silver, Bronze and institutional Bronze Award departments to the statement 'Athena SWAN has helped to improve my visibility with my school/department' (Athena SWAN status comparison: † =  $P < 0.05$  vs bronze institution, one-way ANOVA with post-hoc Games-Howell procedure).

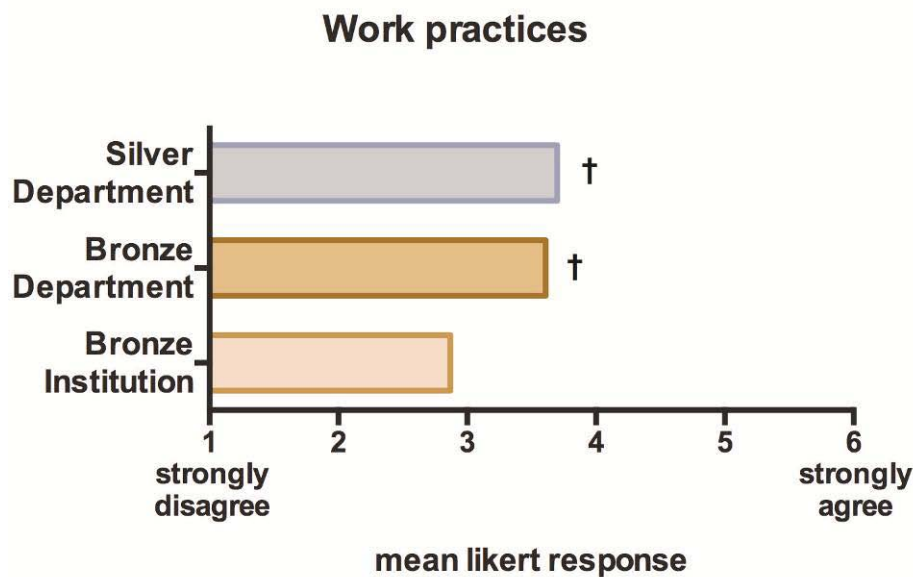


**Figure 18.** Ratings given by female and male academics/researchers in Silver, Bronze and institutional Bronze Award departments to the statement 'Athena SWAN had a positive impact on the work environment of the school/department' (Athena SWAN status comparison: † =  $P < 0.05$  vs bronze institution, one-way ANOVA with post-hoc Games-Howell procedure).



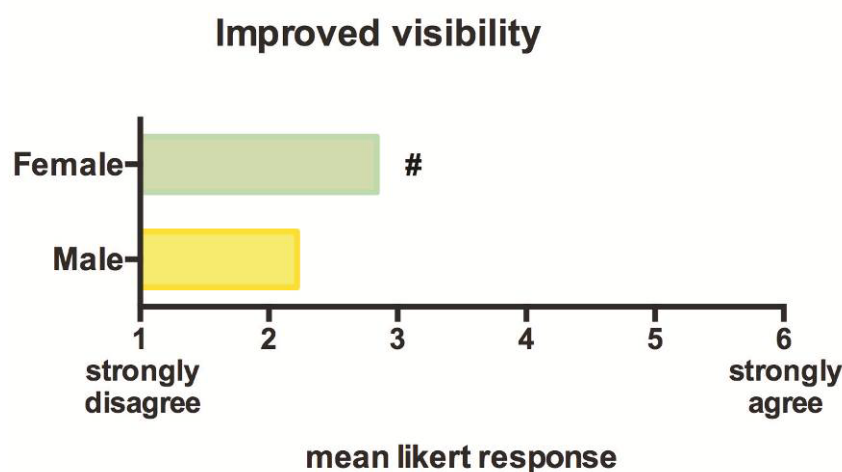
**Figure 19.** Ratings given by female and male academics/researchers in Silver, Bronze and institutional Bronze Award departments to the statement

*'Athena SWAN had a positive impact on work practices of the school/department' (Athena SWAN status comparison: † =  $P < 0.05$  vs bronze institution, one-way ANOVA with post-hoc Games-Howell procedure).*



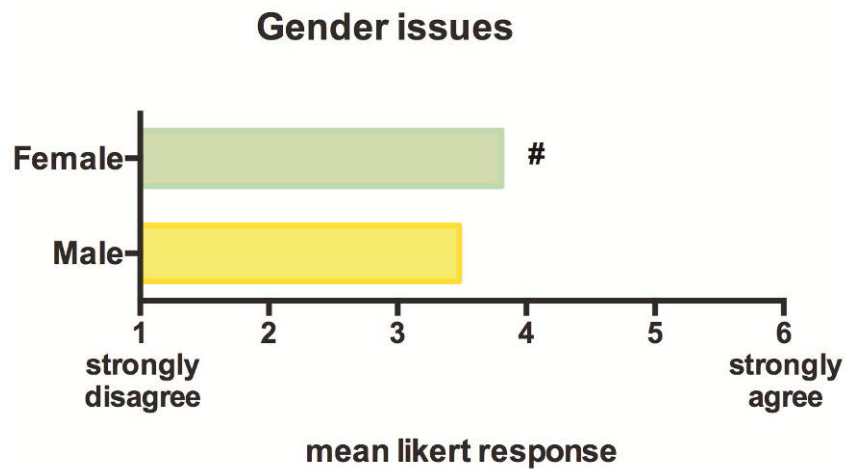
In addition, women to a greater extent than men felt that Athena SWAN had: helped to improve their visibility in the department; helped to think more broadly about gender issues; impacted positively upon their career development; helped to increase self-confidence; helped to develop leadership skills (Figures 20, 21, 22, 23 and 24).

**Figure 20.** *Ratings given by female and male academic/research staff to the statement 'Athena SWAN helped to improve my visibility within my school/department' (female vs male comparison: # =  $P < 0.05$ , t-test).*

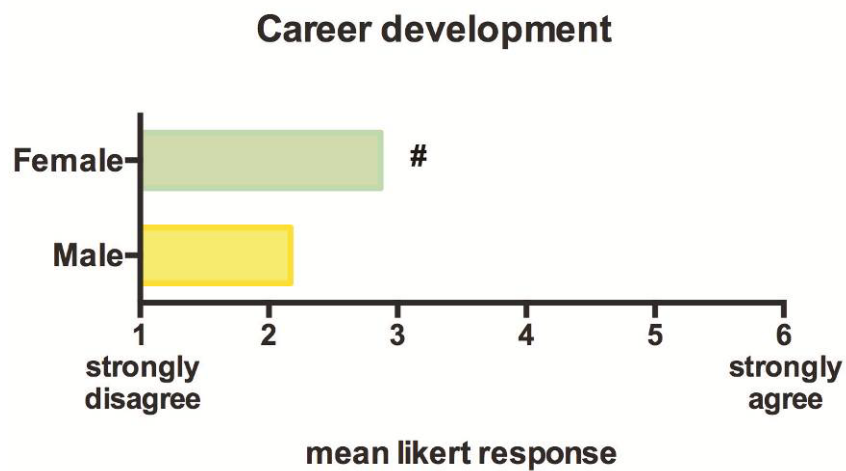




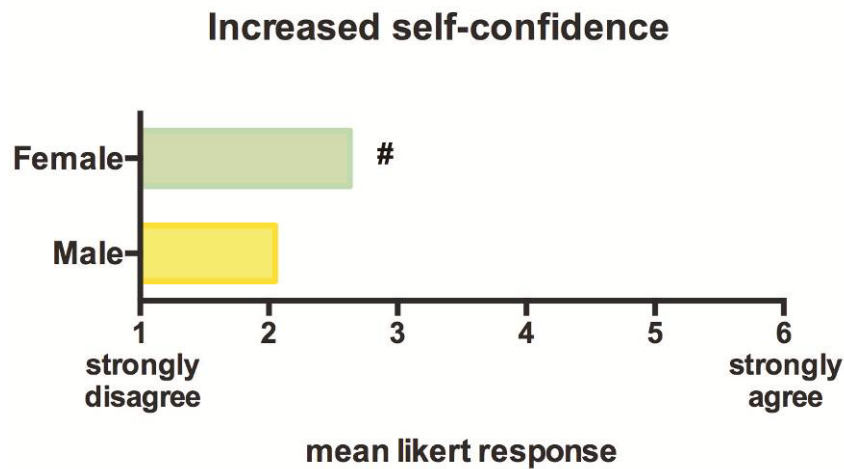
**Figure 21.** Ratings given by female and male academic/research staff to the statement 'Athena SWAN helped me to think more broadly about gender issues' (female vs male comparison: # =  $P < 0.05$ , t-test.).



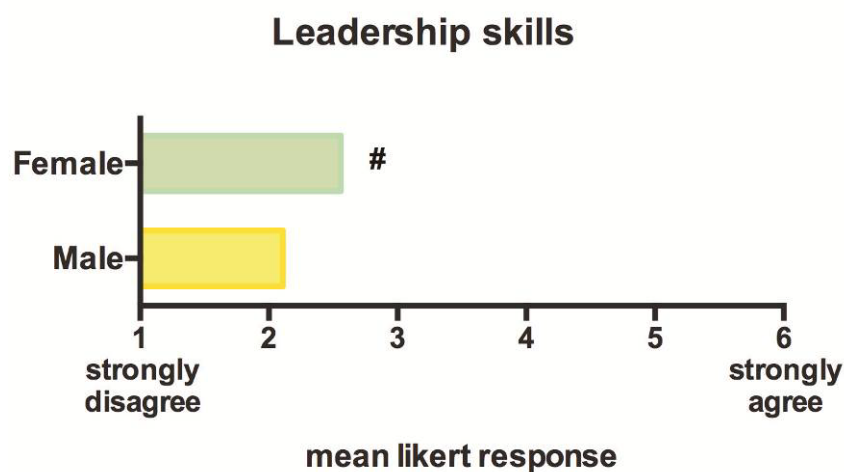
**Figure 22.** Ratings given by female and male academic/research staff to the statement 'Athena SWAN had a positive impact on my career development' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 23.** Ratings given by female and male academic/research staff to the statement 'Athena SWAN helped me to increase my self-confidence' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 24.** Ratings given by female and male academic/research staff to the statement 'Athena SWAN helped me to develop leadership skills' (female vs male comparison: # =  $P < 0.05$ , t-test.).



Further results for this section are included in Tables 10a and 10b in Appendix A.

#### 5.1.11 Sense of belonging for academic/research staff

Academic staff and researchers in Silver Award departments felt more a part of their research group than staff in no award departments (Table 8), but women gave a lower rating than men for the statements 'I feel part of my research group' and 'I feel fully part of my school/department'. There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 11b).

**Table 8.** *Sense of belonging for all academic/research staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I feel fully part of my research group.					
4.58 #	4.90	4.93 †	4.73	4.69	4.40
<b>QU:</b> I feel fully part of my school/department.					
4.02 #	4.45	4.30	4.44	4.18	4.15

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

#### 5.1.12 *Confidence in advancing work recognition for academic/research staff*

Academic/research staff in departments with a Silver Award felt more confident than staff in no award categories in putting themselves forward as principal investigator on a grant. Men were more confident than women in putting themselves forward in all situations listed (Table 9). There were no differences in the responses of women and men by Athena SWAN and no award categories (Appendix A, Table 12b).

**Table 9.** *Confidence in advancing work recognition for all academic/research staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I feel confident in putting myself forward for positions of responsibility within the school/department.					
3.95 #	4.47	4.19	4.39	4.11	4.25
<b>QU:</b> I feel confident in putting myself forward for positions of responsibility within the university.					
3.53 #	4.05	3.74	3.95	3.68	3.86
<b>QU:</b> I feel confident in putting myself forward as a principal investigator on a grant.					
3.90 #	4.73	4.42 †	4.28	4.39 †	3.92
<b>QU:</b> I feel confident in putting myself forward for promotion.					

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
3.46 #	4.02	3.73	3.75	3.71	3.72
<b>QU:</b> I feel confident in putting myself forward for an additional increment/salary increase.					
3.19 #	3.73	3.48	3.47	3.40	3.43

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

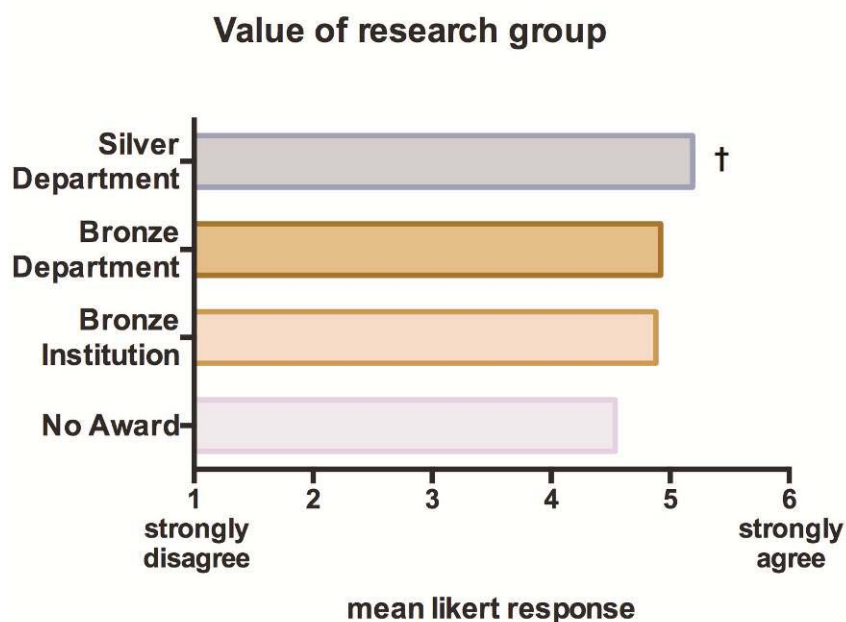
Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

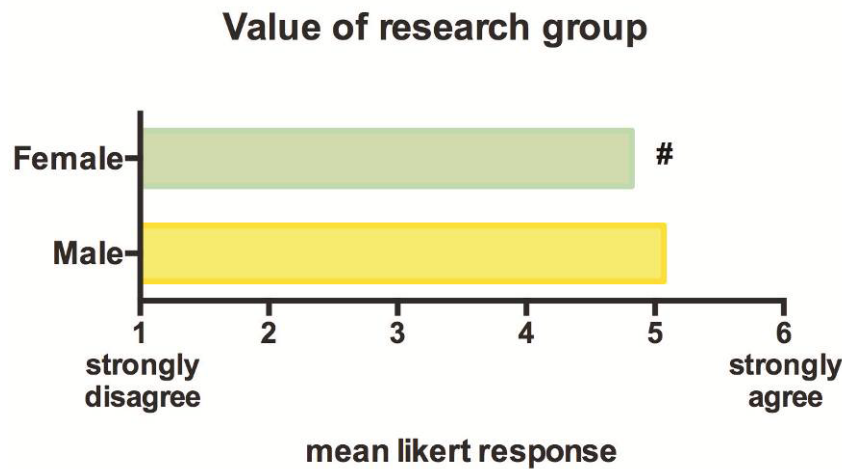
### 5.1.13 Value of research groups, social events and women-only/men-only networks to female and male academic/research staff

Research groups were very highly valued by female and male staff in all Athena SWAN categories (the highest likert scale rating of any statement on the entire survey), but were valued more highly by academic staff and researchers in Silver Award departments than in no award departments and slightly more highly by men than by women (Figures 25 and 26).

**Figure 25.** Ratings given by female and male academic/research staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'My research group is useful to me' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

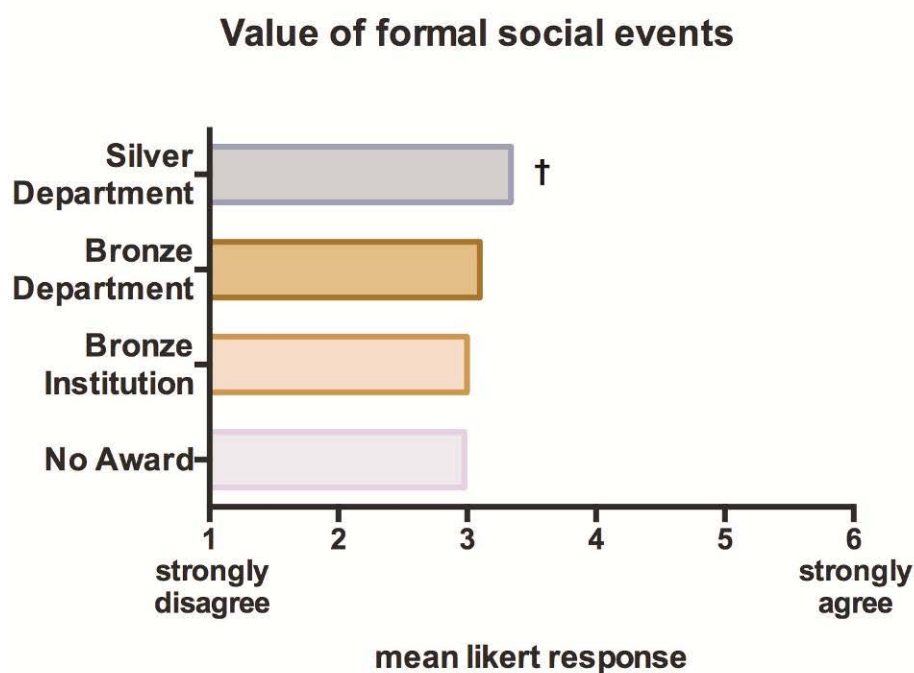


**Figure 26.** Ratings given by female and male academic/research staff to the statement 'My research group is useful to me' (female vs male comparison: # =  $P < 0.05$ , t-test.).



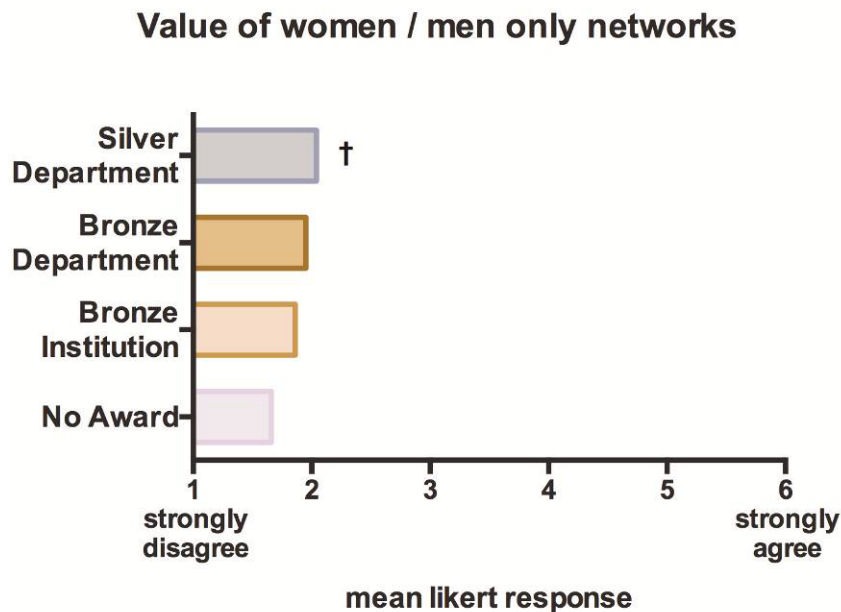
Formal social events were more valued by academic staff and researchers in Silver Award departments than in no award departments (Figure 27), but there was no difference in the rating across Athena SWAN categories for informal social events. Women and men valued formal and informal social events equally.

**Figure 27.** Ratings given by female and male academic/researcher staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'Formal social events are useful to me' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

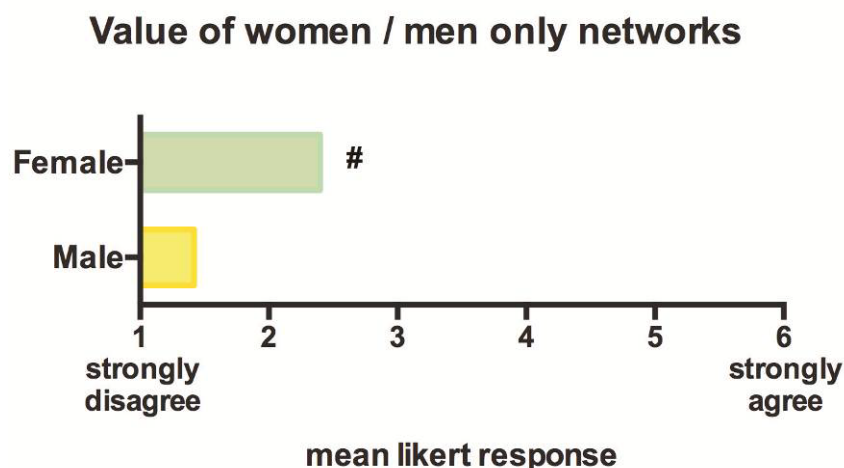


Women-only and men-only networks were rated rather low in terms of their value, but were valued more in Silver Award departments in comparison with no award departments, and were more valued by women than by men (Figures 28 and 29).

**Figure 28.** Ratings given by female and male academics/researchers in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'Women-only/men-only network groups are useful to me' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



**Figure 29.** Ratings given by female and male academic/research staff to the statement 'Women-only/men-only only network groups are useful to me' (female vs male comparison: # =  $P < 0.05$ , t-test.).



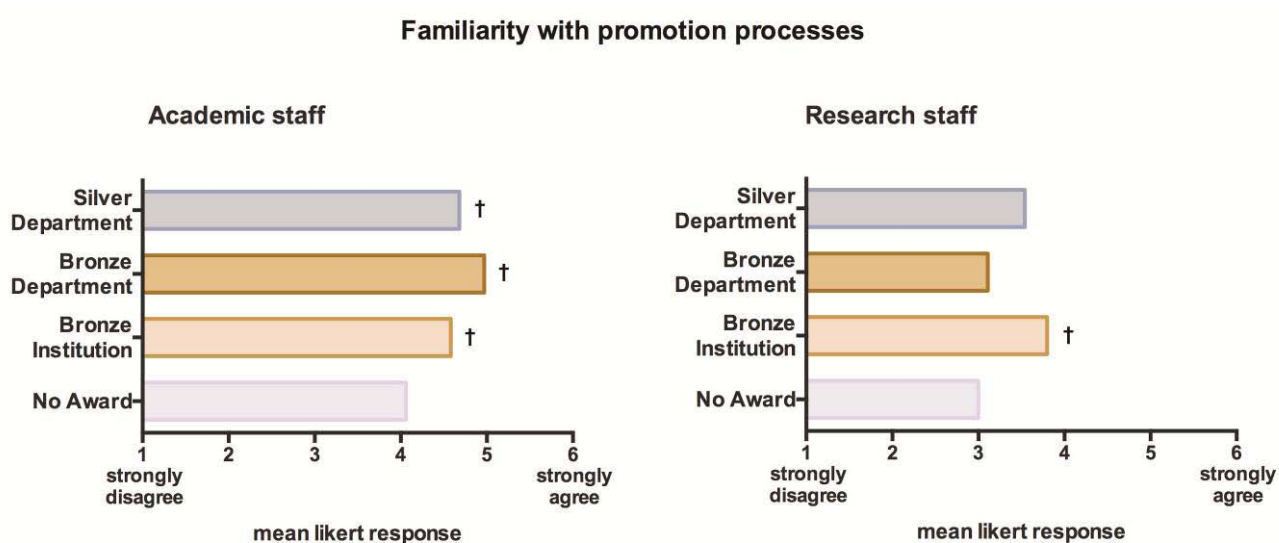
Further information for this section is provided in the Appendix A (Tables 13a and 13b).

#### 5.1.14 Differences in responses between academic staff and research staff

Broadly the pattern of response to statements was similar for academic staff and research staff, but there were fewer statistically significant differences for research staff, and often lower ratings to statements which may reflect less impact in the

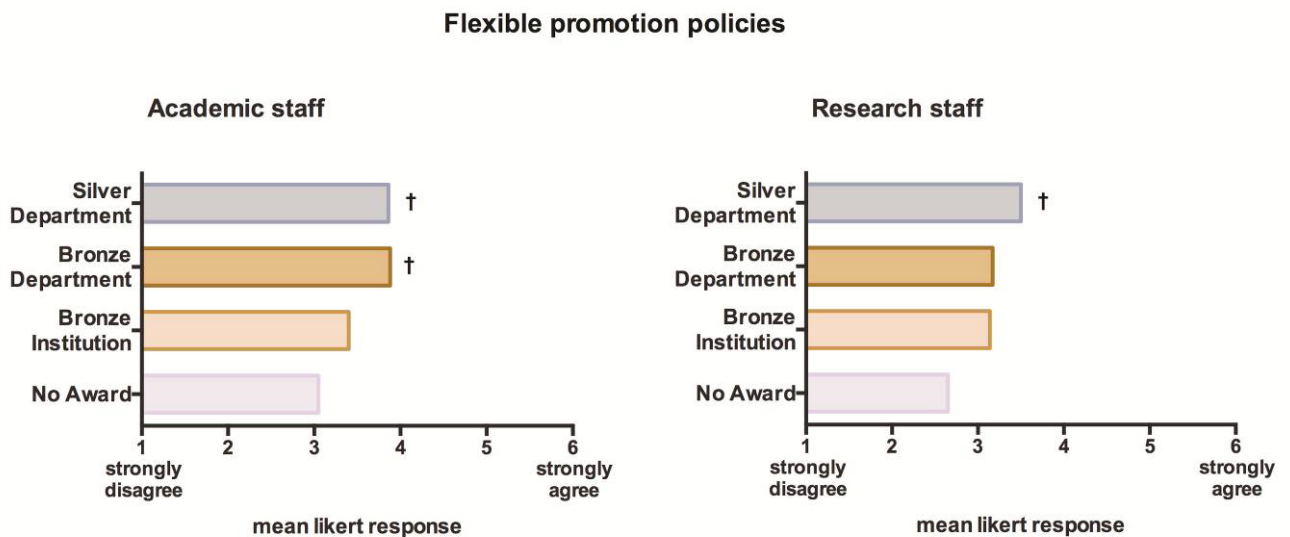
research staff grouping (Appendix A, Tables 14a, 14b, 14c–Tables 26a, 26b, 26c). In particular, for knowledge relating to promotion, the existence of flexible promotion policies and the availability of rewards and incentives, both academic staff and research staff from Silver Award and sometimes Bronze Award departments gave higher ratings in comparison with staff from no award departments (Figures 30, 31 and 32).

**Figure 30.** Ratings given by female and male academic staff and researcher staff separately in Silver, Bronze, institutional Bronze Award and no award departments to the statement ‘I am familiar with the university’s criteria and processes for promotion’ (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

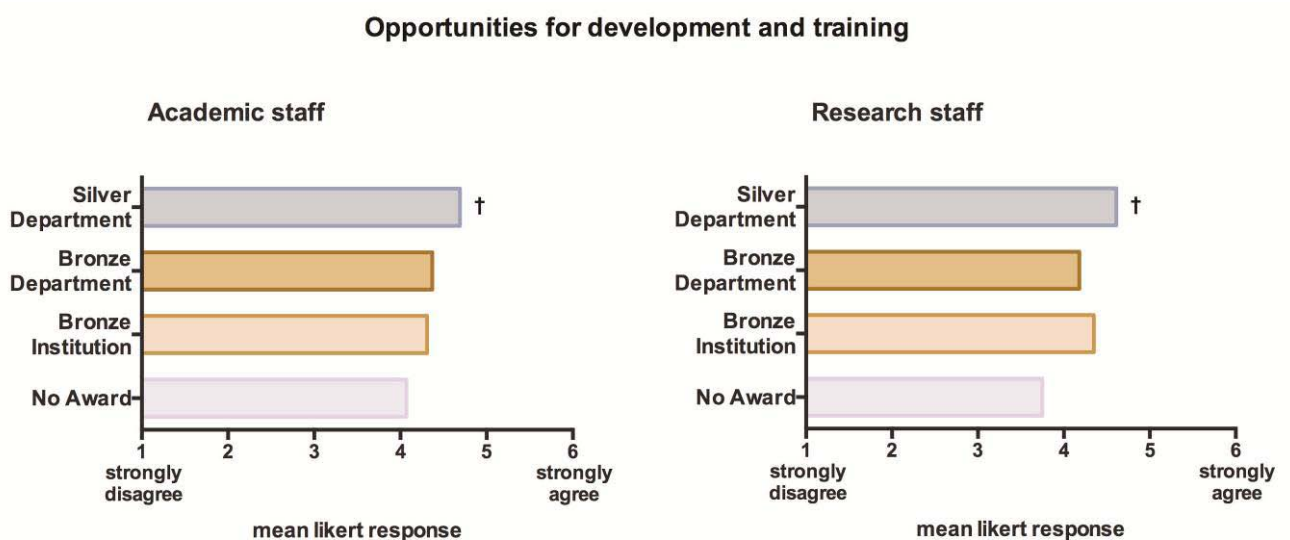




**Figure 31.** Ratings given by female and male academic staff and research staff separately in Silver, Bronze, institutional Bronze Award and no award departments to the statement ‘There are flexible promotion policies (e.g. take into account part-time work, career breaks, etc.) at my Institution’ (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



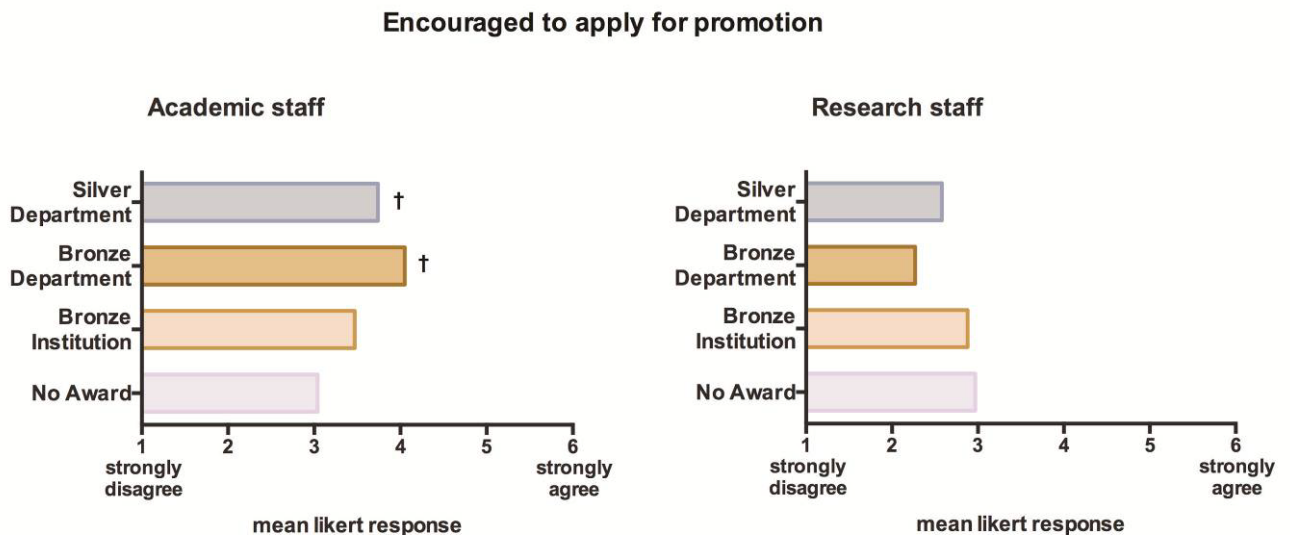
**Figure 32.** Ratings given by female and male academic and researcher staff separately in Silver, Bronze, institutional Bronze Award and no award departments to the statement ‘Adequate opportunities exist within my university for personal development and training’ (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



An exception to this pattern was that academic staff had been encouraged to apply for promotion and to a greater extent in Silver and Bronze Award departments, whereas research staff gave this statement a low rating with no difference between Athena SWAN categories (Figure 33).



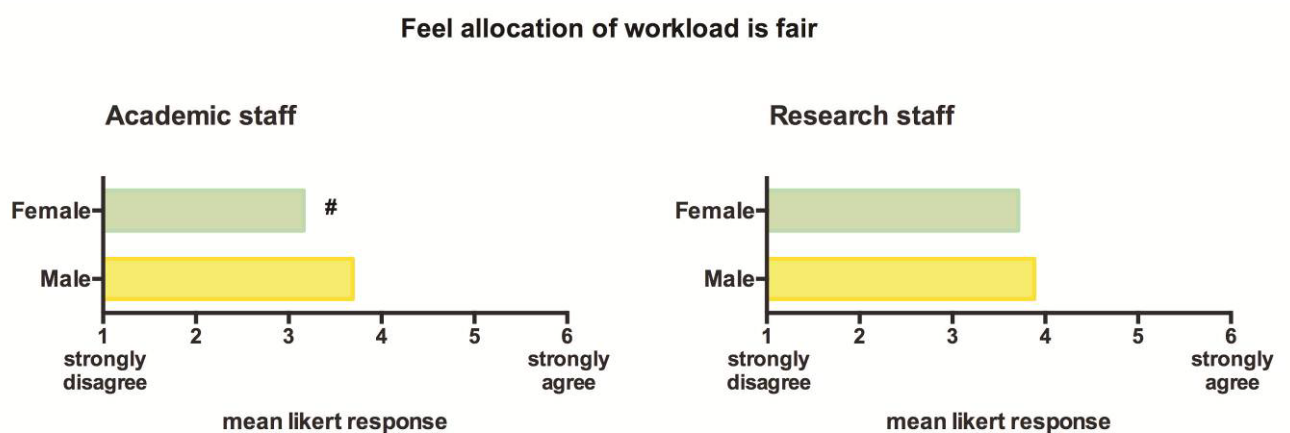
**Figure 33.** Ratings given by female and male academic and researcher staff separately in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I have been encouraged to apply for promotion' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



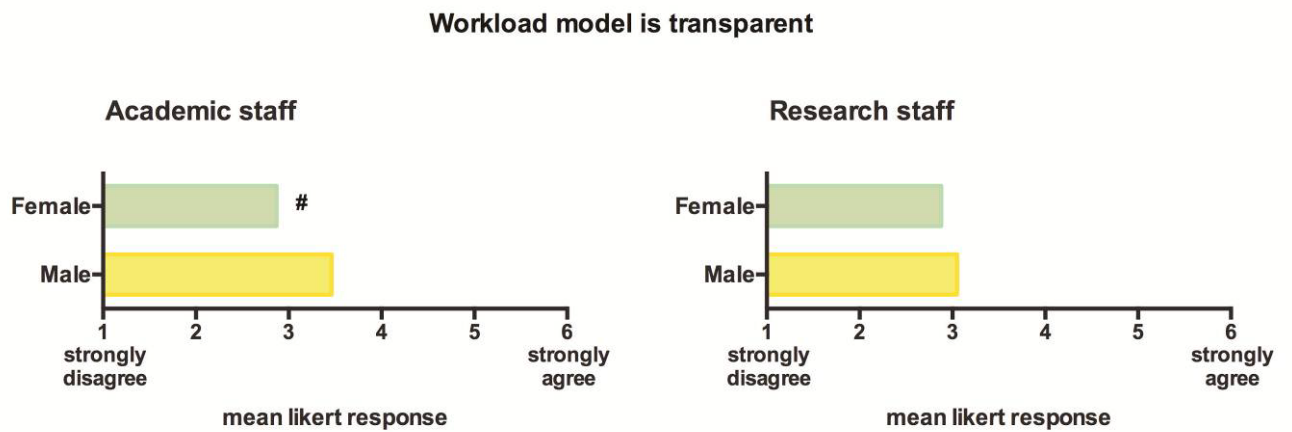
Thus, overall Athena SWAN Charter activities were having a great impact on academic staff than on research staff.

However, differences between females and males were greater amongst academic staff than amongst researchers in that most female academics gave a more negative response to statements than male academics, whereas there were fewer differences between female researchers and male researchers (Figures 34 and 35).

**Figure 34.** Ratings given by female and male academic staff and research staff separately to the statement 'I feel that the allocation of the workload in the school is fair' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 35.** Ratings given by female and male academic staff and research staff separately to the statement 'The school's/department's workload model is transparent' (female vs male comparison: # =  $P < 0.05$ , t-test.).



## 5.2 Athena SWAN administrative/technical staff survey

### *Summary of key findings – administrative/technical staff survey*

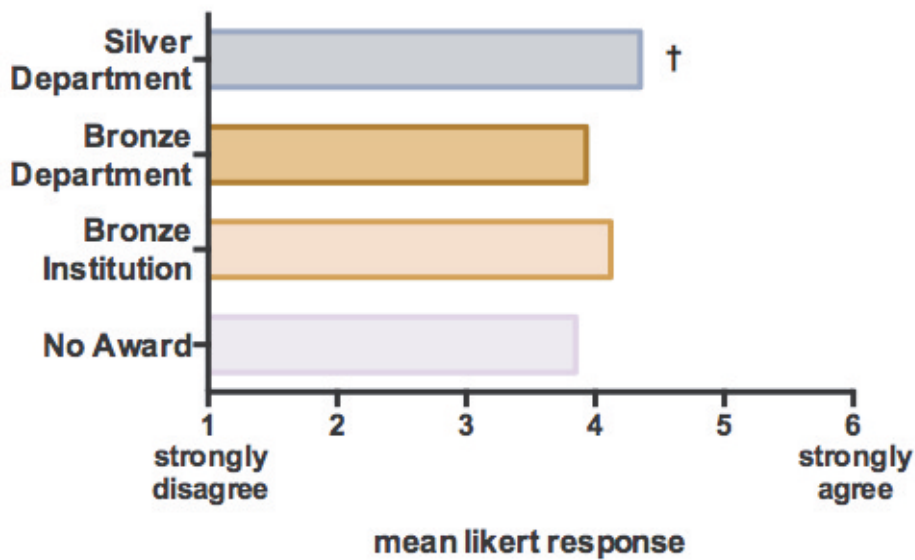
- There were no differences in satisfaction by Athena SWAN group or between females and males amongst administrative/technical staff with their career performance and development review.
- Perceptions of support from their university and their school/department for career development and progression were more positive in departments with a Silver Award than in no award departments.
- Women agreed more strongly than men that it is more difficult for women than men to reach the top employment positions in the field.
- Staff in Silver Award schools/departments in comparison with no award departments made more use of flexible working, and staff in all Athena SWAN categories rated their department higher than staff in no award departments for the statement 'The school/department actively promotes a healthy work-life balance'.
- Staff in Silver Award departments gave a higher rating than staff in institutional Bronze Award departments to the statements that the Athena SWAN process and awards had had a positive impact on the work environment and work practices of their school/department.
- Administrative and technical staff felt a greater sense of belonging in all Athena SWAN category departments than in no award departments.
- There were fewer differences in responses across all survey questions between female and male administrative/technical staff than there were between female and male academic/research staff.

### 5.2.1 *Career performance/development reviews, training and encouragement to progress for administrative/technical staff*

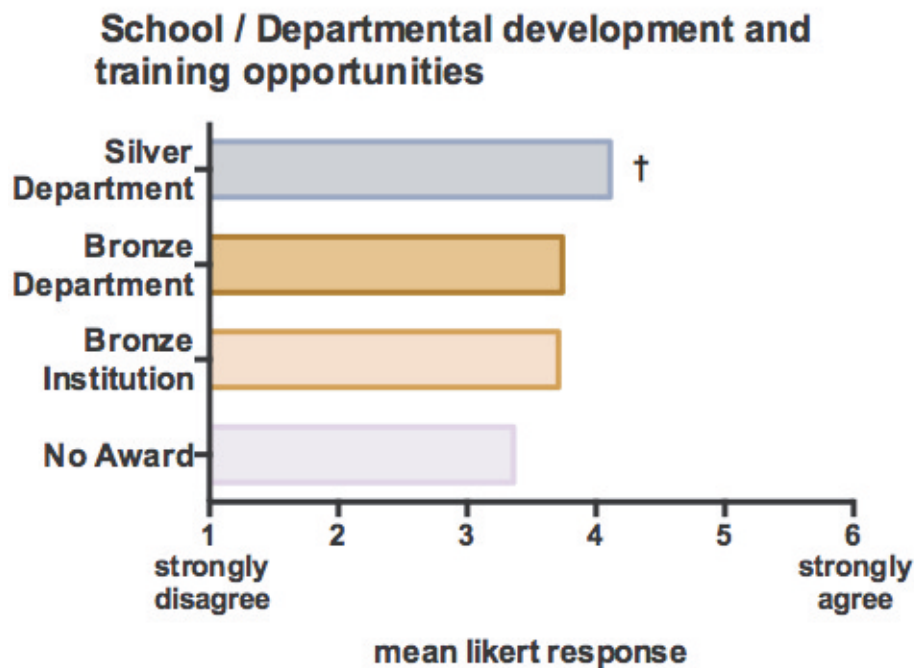
There were no differences in satisfaction by Athena SWAN group or between females and males amongst administrative/technical staff with their career performance and development review (Appendix A, Tables 27a and 27b). However, perception of support from their university and their school/department for career development and progression was more positive in departments with a Silver Award than in no award departments (Figures 36 and 37, Appendix A, Tables 28a, 28b, 29a and 29b). Female administrative/technical staff gave a higher rating than males to the statement 'It is more difficult for women than for men to reach the most senior employment positions in my field' (Figure 38).

**Figure 36.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'Adequate opportunities exist within the university for personal development and training' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

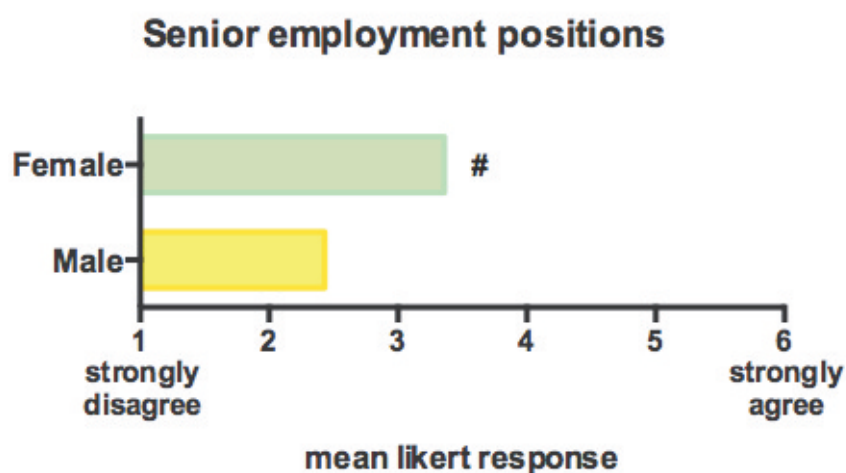
### University development and training opportunities



**Figure 37.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'Adequate opportunities exist within my school/department for personal development and training' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



**Figure 38.** Ratings given by female and male administrative/technical staff to the statement 'It is more difficult for women than men to reach the most senior employment positions in my field' (female vs male comparison: # =  $P < 0.05$ , t-test.).

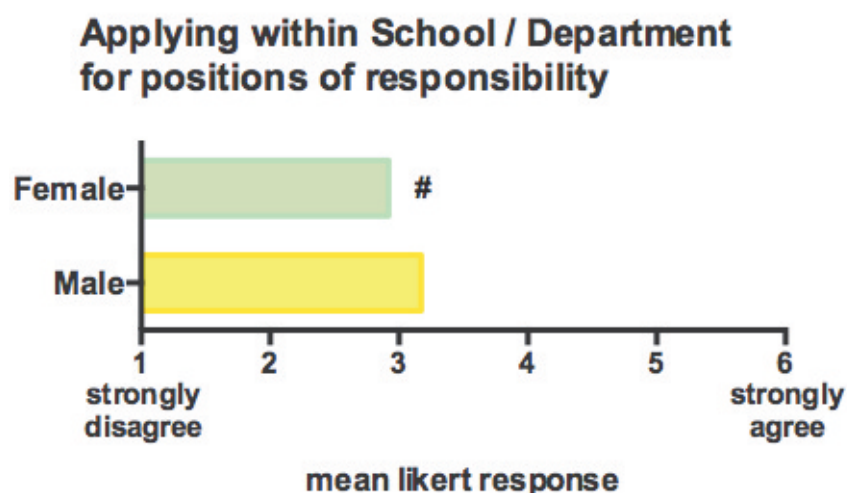


### 5.2.2 Career satisfaction for administrative/technical staff and confidence

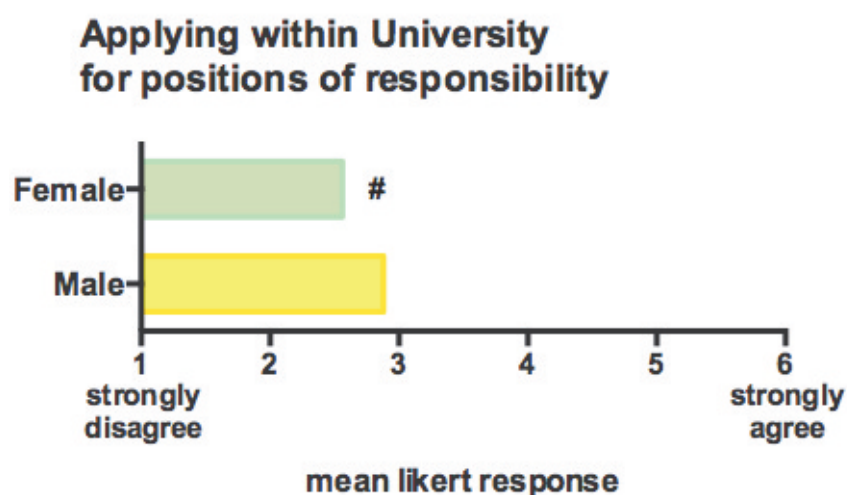
Career satisfaction was similar across Athena SWAN and no award categories and in females and males (Appendix A, Tables 30a and 30b). Confidence amongst staff to

put themselves forward for positions of responsibility with their school/department and within the university was also similar across Athena SWAN and no award categories, but was lower for females than for males (Figures 39 and 40).

**Figure 39.** Ratings given by female and male administrative/technical staff to the question 'How confident do you feel about putting yourself forward for positions of responsibility within the school/department?' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 40.** Ratings given by female and male administrative/technical staff to the question 'How confident do you feel about putting yourself forward for positions of responsibility within the university?' (female vs male comparison: # =  $P < 0.05$ , t-test.).

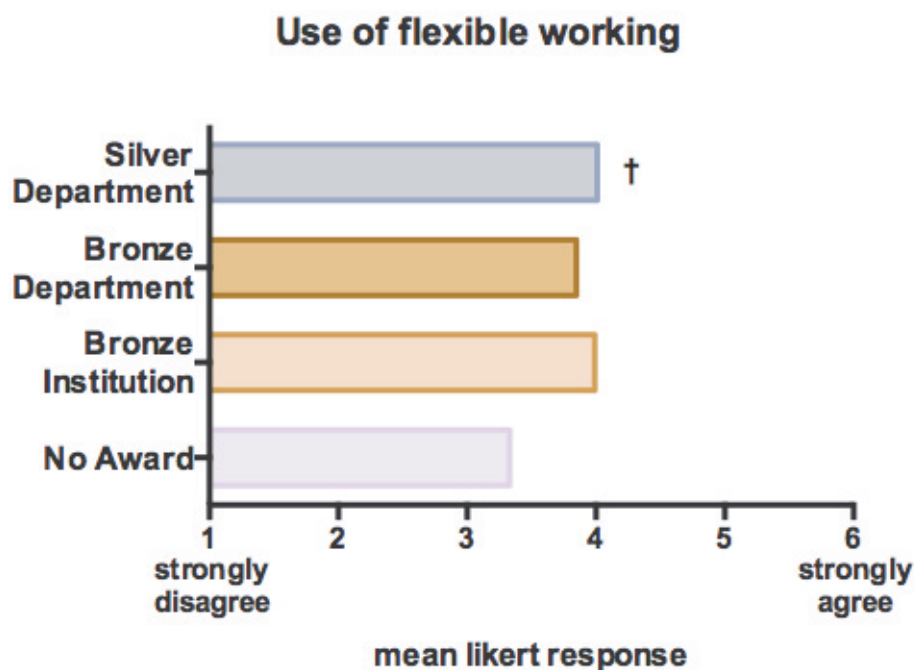


### 5.2.3 Workload management and work-life balance for administrative/technical staff

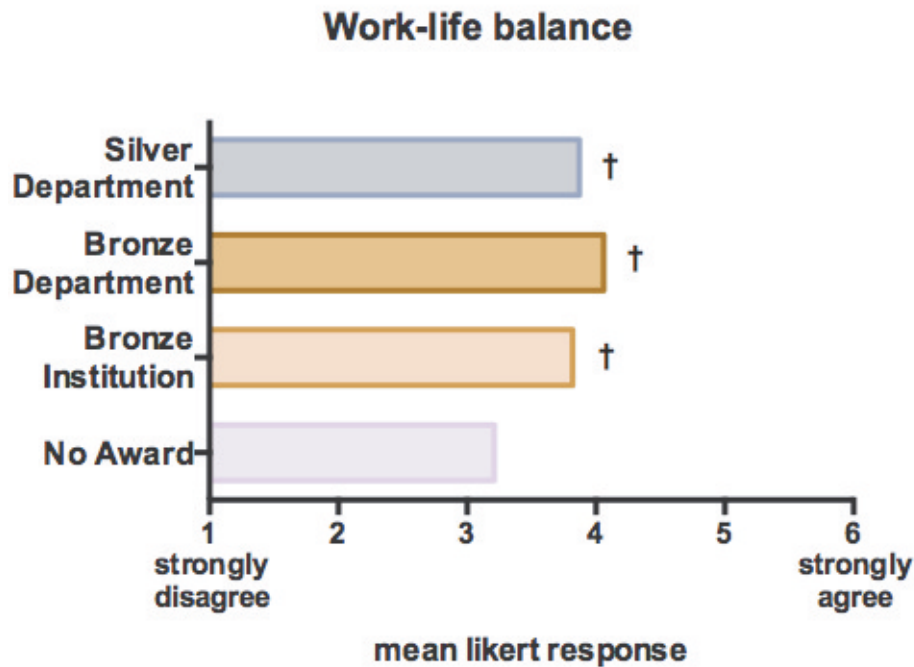
There were no differences in the ability to manage workload in the time available across Athena SWAN categories and no award departments or in females and males (Appendix A, Tables 32a and 32b). However, staff in Silver Award schools/departments in comparison with no award departments made more use of

flexible working (Figure 41). Furthermore, staff in all Athena SWAN categories rated their department higher than staff in no award departments for the statement 'The school/department actively promotes a healthy work-life balance (Figure 42, Appendix A, Tables 32a and 32b).

**Figure 41.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I make use of flexible working hours' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



**Figure 42.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'The school/department actively promotes a healthy work-life balance' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

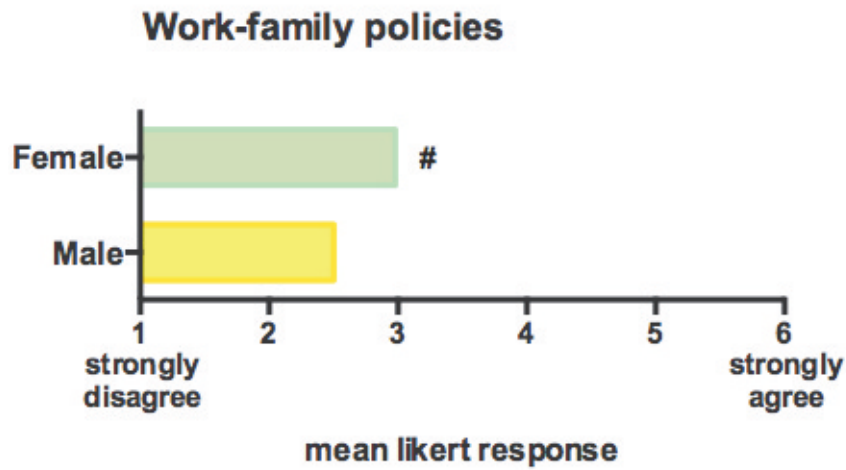


#### 5.2.4 Work-life balance culture and gender attitudes for administrative/technical staff

As perceived by administrative/research staff, there were no differences in work-life balance culture or gender attitudes across Athena SWAN and no award categories (Appendix A, Tables 33a and 33b). However, more women than men agreed that staff who use work family policies (e.g. job sharing) 'are considered to be less serious about their careers than those who do not use these policies' (Figure 43).



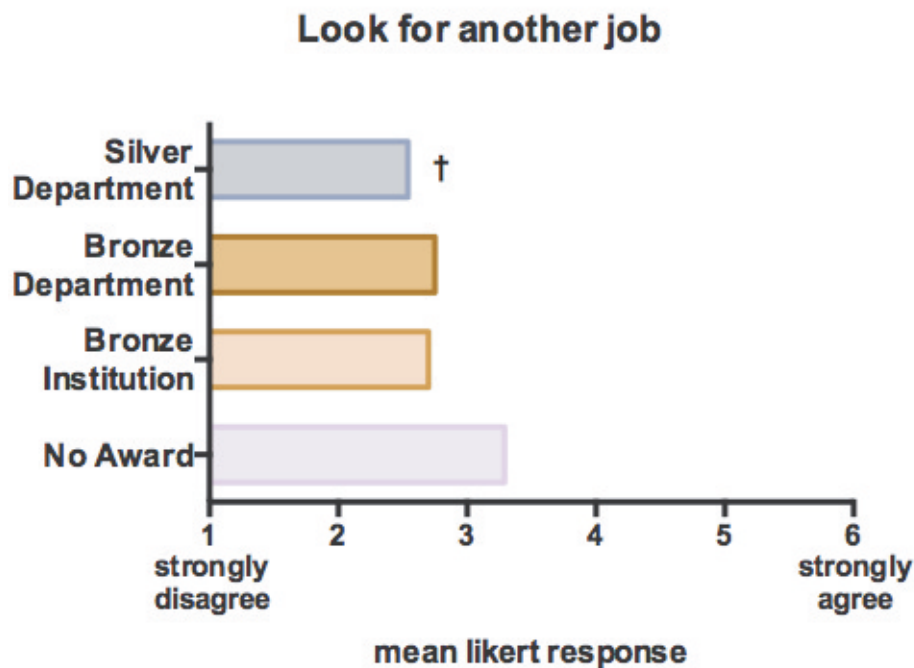
**Figure 43.** Ratings given by female and male administrative/technical staff to the statement 'In this school/department staff who use work-family policies (e.g. job sharing, part-time work, etc.) are considered to be less serious about their careers than those who do not use these policies' (female vs male comparison: # =  $P < 0.05$ , t-test.).



#### 5.2.5 Intention to leave for administrative/technical staff

Administrative/technical staff in Silver Award departments were less likely to be searching for a job at another university or in a different department than staff in no award departments (Figure 44, Appendix A, Tables 33a and 33b).

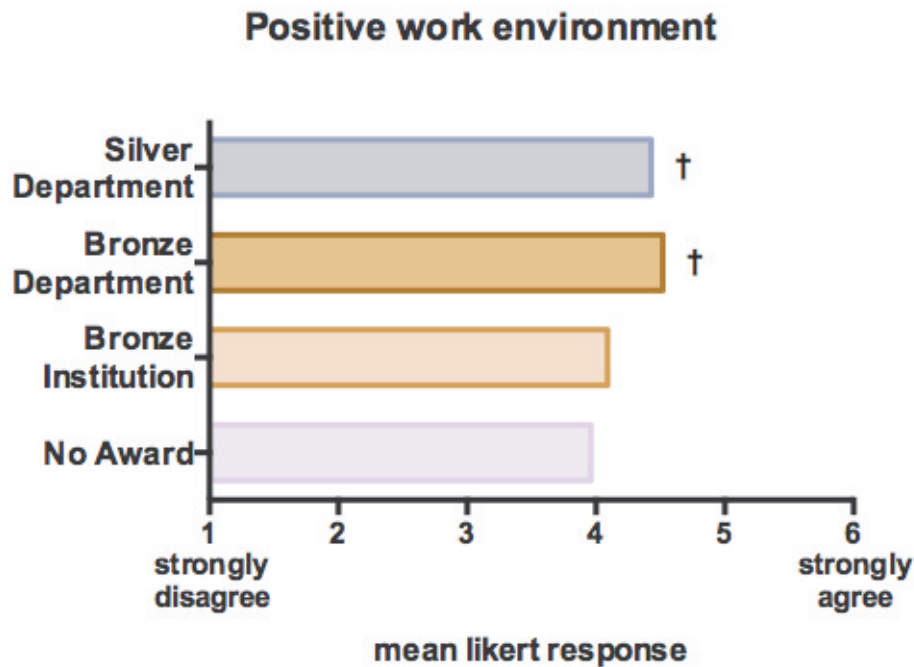
**Figure 44.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I will actively look for a job at another university or school department in the next year' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



### 5.2.6 Gender climate

Administrative/technical staff in Silver and Bronze Award departments gave higher ratings than staff in no award departments for the statement 'My school/department has a positive work environment' (Figure 45, Appendix A, Tables 34a and 34b). Similarly, staff in Silver Award departments gave a higher rating than staff in no award departments to the statement 'My school/department has a more positive work environment than a few years ago' (Figure 46, Appendix A, Tables 34a and 34b).

**Figure 45.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'My school/department has a positive work environment' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

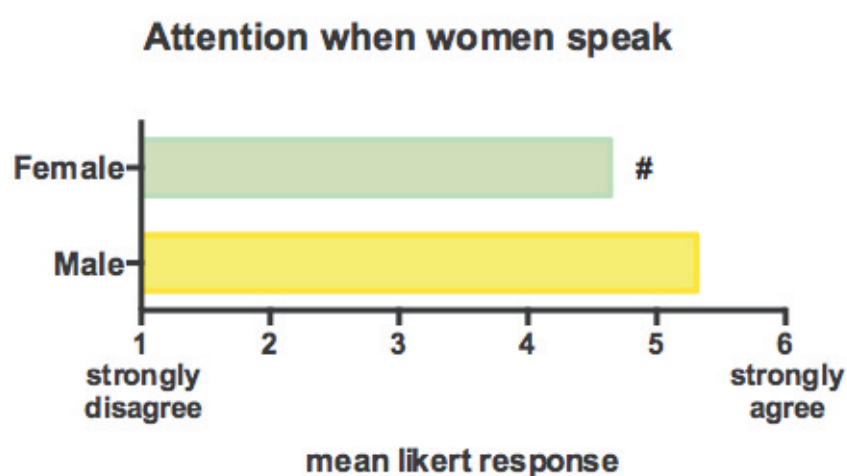


**Figure 46.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'My school/department has a more positive work environment than a few years ago' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

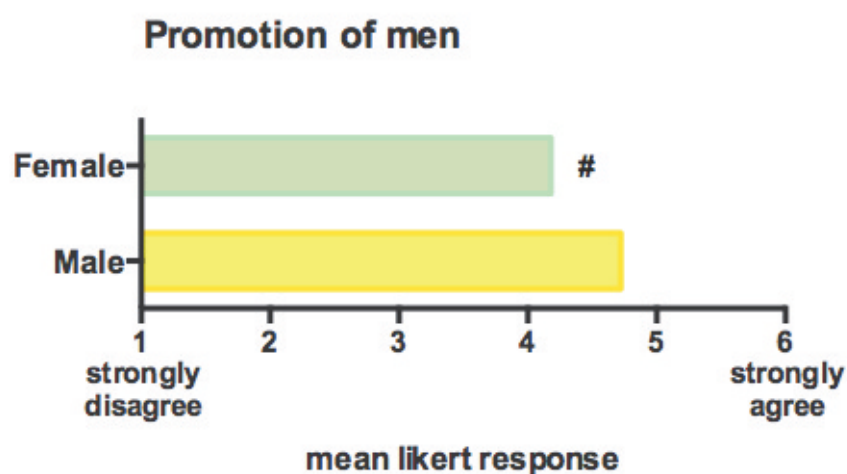


However, women across all Athena SWAN categories felt that staff and managers paid less attention in meetings when women were speaking, in comparison with men (Figure 47, Appendix A, Tables 34a and 34b). Furthermore women disagreed to a greater extent than men with the statements that 'Men do not receive preferential access to resources in my school/department', that 'Men do not receive preferential treatment in promotion in my school/department' (although all ratings were high), and that 'There is appropriate representation of women on major committees in my school' (Figures 48 and 49, Appendix A, Tables 34a and 34b).

**Figure 47.** Ratings given by female and male administrative/technical staff to the statement 'In meetings in my school/department staff pay just as much attention when women speak as when men do' (female vs male comparison: # =  $P < 0.05$ , t-test.).

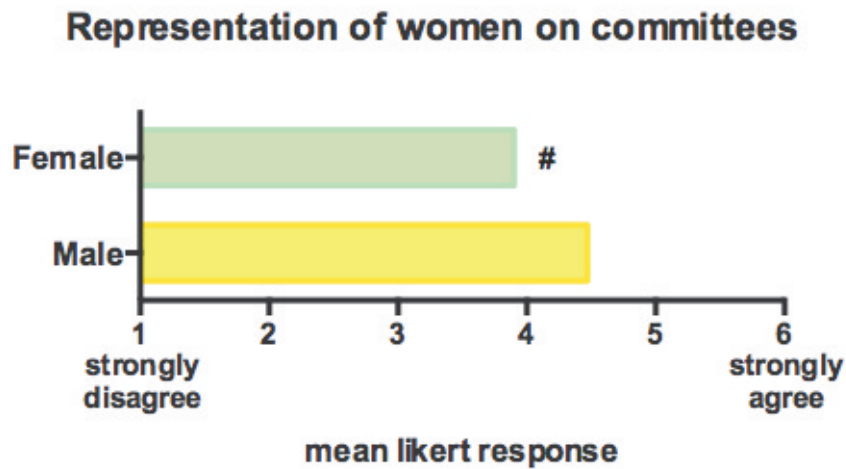


**Figure 48.** Ratings given by female and male administrative/technical staff to the statement 'Men do not receive preferential treatment in promotion in my school/department' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 49.** Ratings given by female and male administrative/technical staff to the statement 'There is appropriate representation of women on major

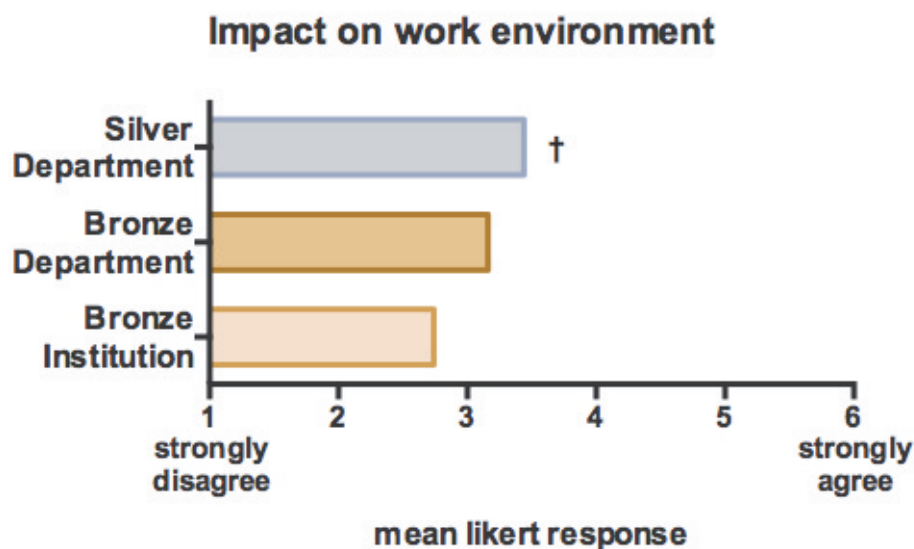
committees in my school/department' (female vs male comparison: # =  $P < 0.05$ , t-test.).



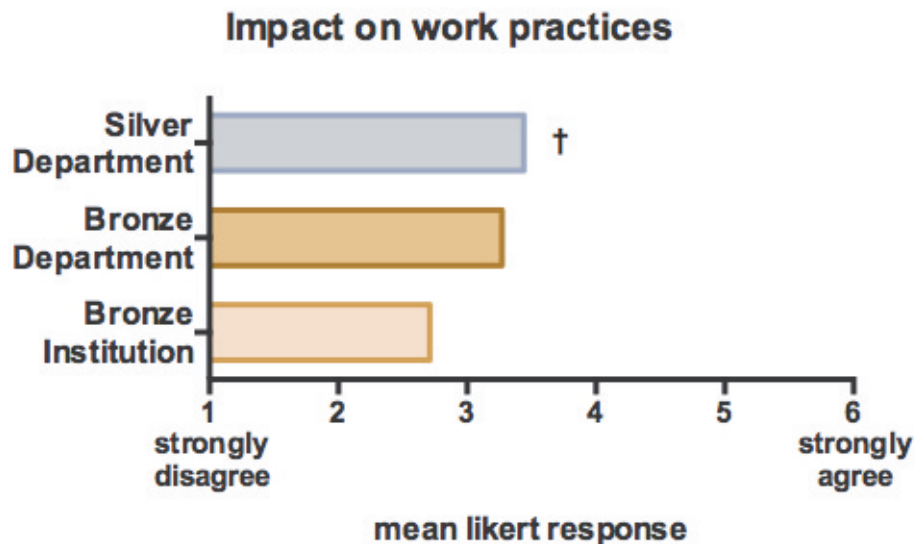
### 5.2.7 *Impact of Athena SWAN as perceived by administrative/technical staff*

Administrative/technical staff in Silver Award departments gave a higher rating than staff in institutional Bronze Award departments to the statements that the Athena SWAN process and awards had had a positive impact on the work environment and the work practices of their school/department (Figures 50 and 51, Appendix A, Tables 35a and 35b).

**Figure 50.** Ratings given by female and male administrative/technical staff in Silver, Bronze and institutional Bronze Award departments to the statement 'The Athena SWAN process and award has had a positive impact on the work environment of the school/department' (Athena SWAN status comparison: † =  $P < 0.05$  vs bronze institution, one-way ANOVA with post-hoc Games-Howell procedure).



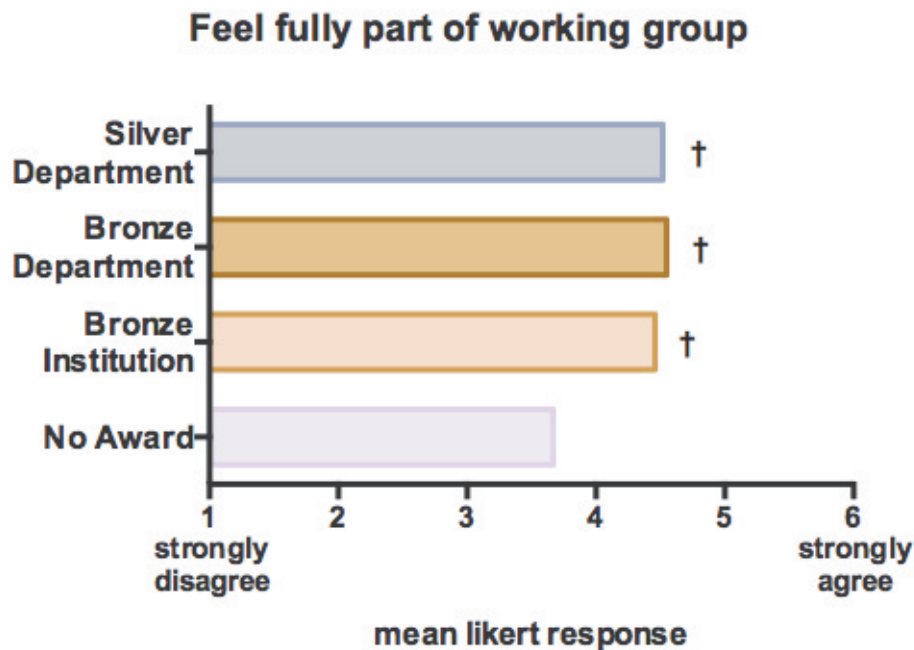
**Figure 51.** Ratings given by female and male administrative/technical staff in Silver, Bronze and institutional Bronze Award departments to the statement ‘The Athena SWAN process and award has had a positive impact on the work practices of the school/department’ (Athena SWAN status comparison: † =  $P < 0.05$  vs bronze institution, one-way ANOVA with post-hoc Games-Howell procedure).



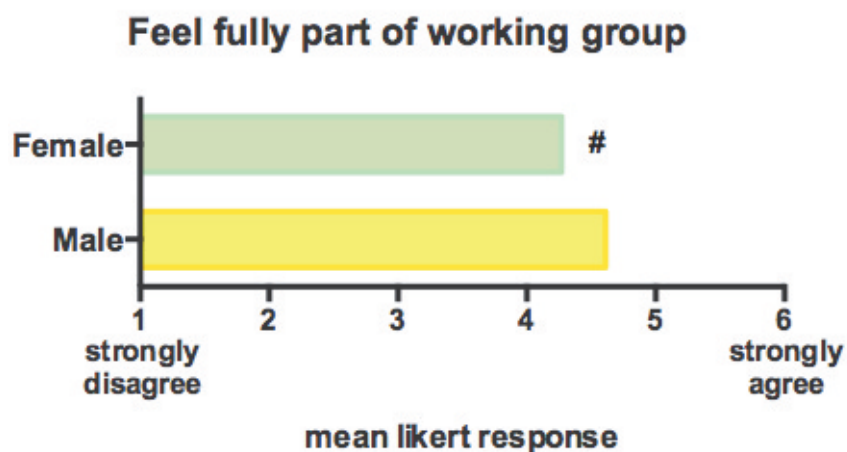
#### 5.2.8 Sense of belonging for administrative/technical staff and value of administrative/technical groups and women-only/ men-only networks

Administrative/technical staff in all Athena SWAN category departments were more likely to feel fully part of their administrative/technical group than staff in no award departments (Figure 52, Appendix A, Table 36a). However, women were less likely than men to feel fully part of their administrative/technical group, although all ratings were high (Figure 53, Appendix A, Tables 36a and 36b). In contrast women were more likely than men to find single sex networks useful, although all ratings were low (Figure 54, Appendix A, Tables 36a and 36b).

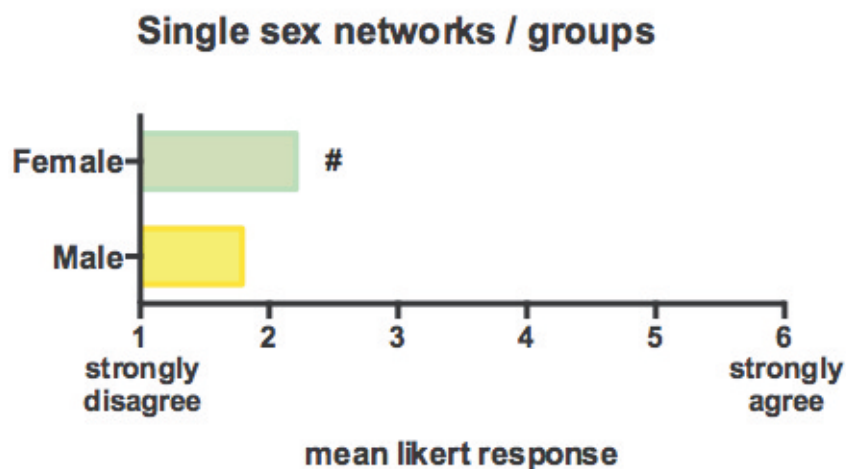
**Figure 52.** Ratings given by female and male administrative/technical staff in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I feel fully part of my administrative/technical group' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



**Figure 53.** Ratings given by female and male administrative/technical staff to the statement 'I feel fully part of my administrative/technical group' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 54.** Ratings given by female and male administrative/technical staff to the statement 'Women-only/men-only networks/groups are useful to me' (female vs male comparison: # =  $P < 0.05$ , t-test.).



### 5.3 Athena SWAN postgraduate student survey

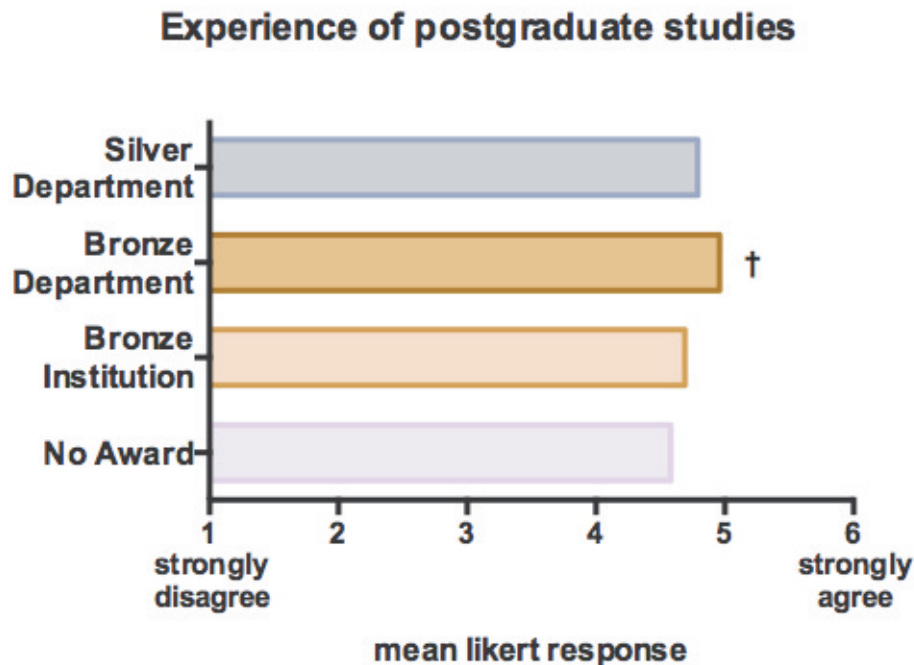
#### *Summary of key findings – postgraduate student survey*

- There was some limited evidence that postgraduate students in some Athena SWAN award departments had a better experience of their postgraduate studies, felt more strongly that they had increased their knowledge of science and research, and had better access to academic role models than in no award departments.
- Female postgraduate students in all departments felt less confident than male students in approaching male members of staff for support, and felt less confident about their career prospects in the field than male postgraduate students.
- Female students were less optimistic about their prospects of successfully combining family life with a career in their field.

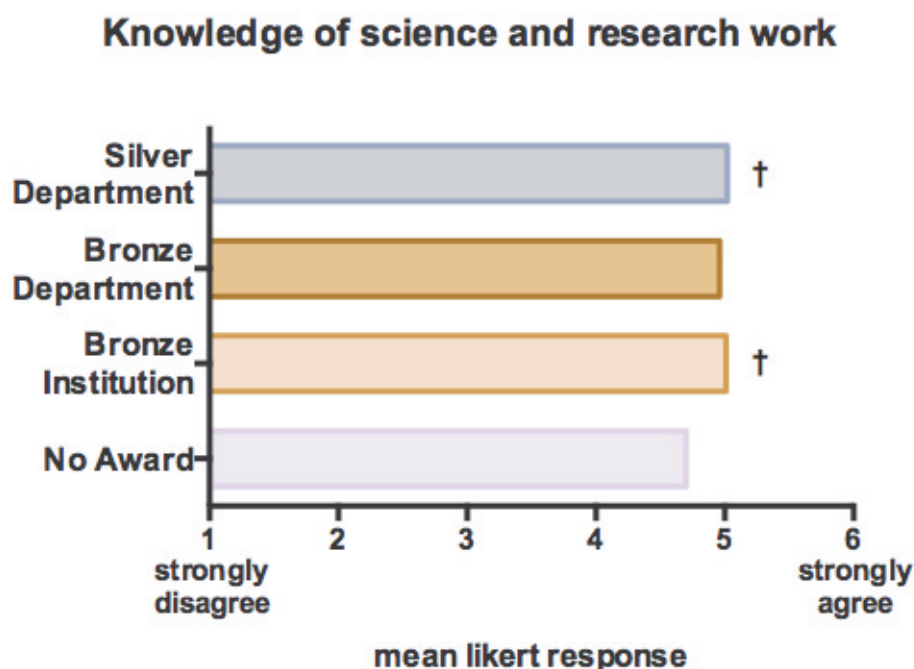
Postgraduate students studying in departments with a Bronze Award rated their 'overall academic experience' higher than students studying in no award departments (Tables 37a and 37b, Figure 55). In addition, postgraduate students studying in departments and institutions with an Athena SWAN award rated statements relating to increased understanding and knowledge of science and research and to there being good academic/career role models higher than students in no award departments (Figures 56 and 57, Appendix A, Tables 38a and 38b).



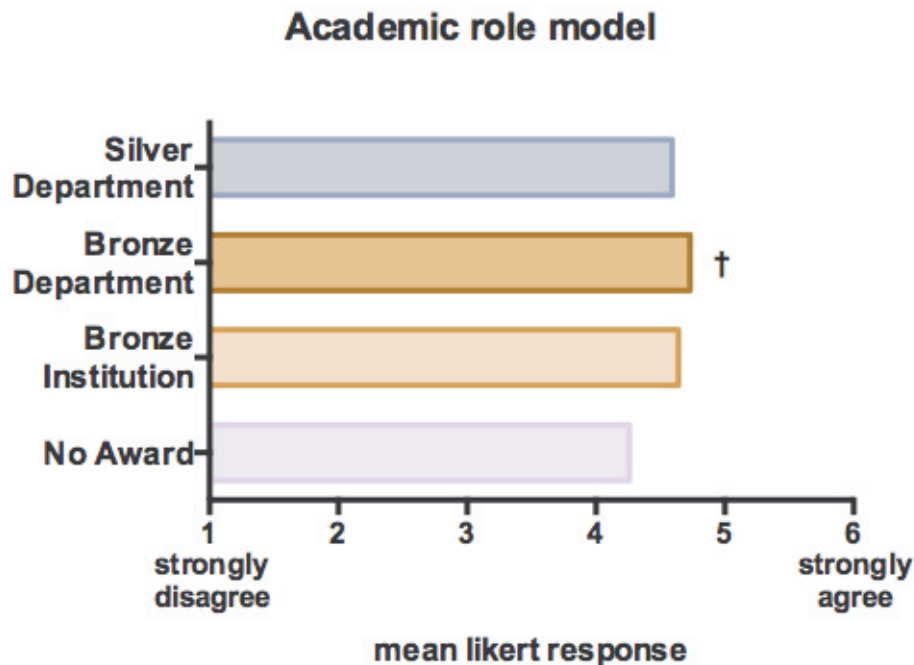
**Figure 55.** Ratings given by female and male postgraduate students in Silver, Bronze, institutional Bronze Award and no award departments to the question 'How would you describe your overall experience of your postgraduate studies?' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).



**Figure 56.** Ratings given by female and male postgraduate students in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'I have increased understanding and knowledge of science and research work since starting my postgraduate degree programme' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

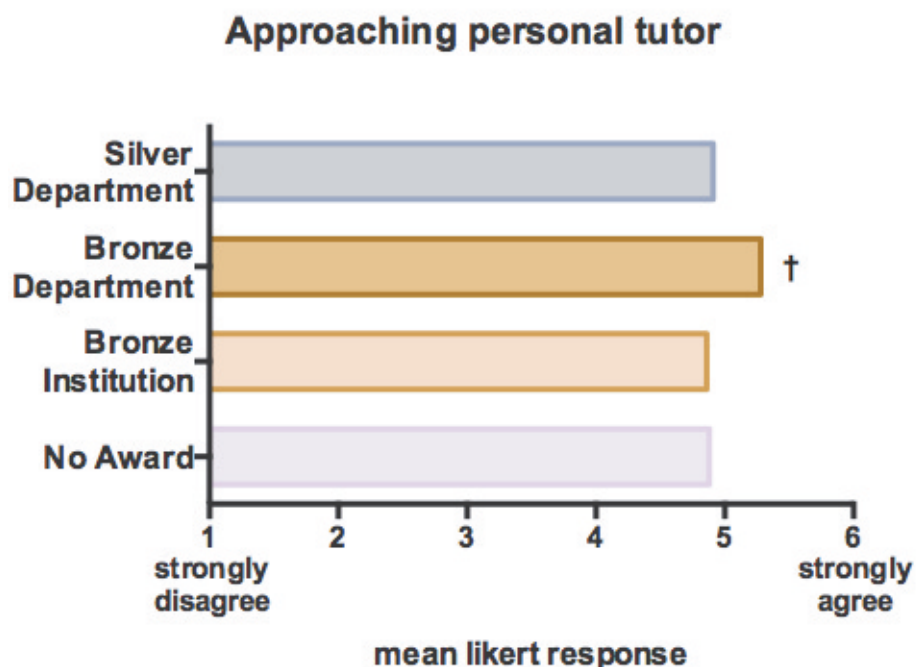


**Figure 57.** Ratings given by female and male postgraduate students in Silver, Bronze, institutional Bronze Award and no award departments to the statement 'There is a good academic/career role model for me in my school/department' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

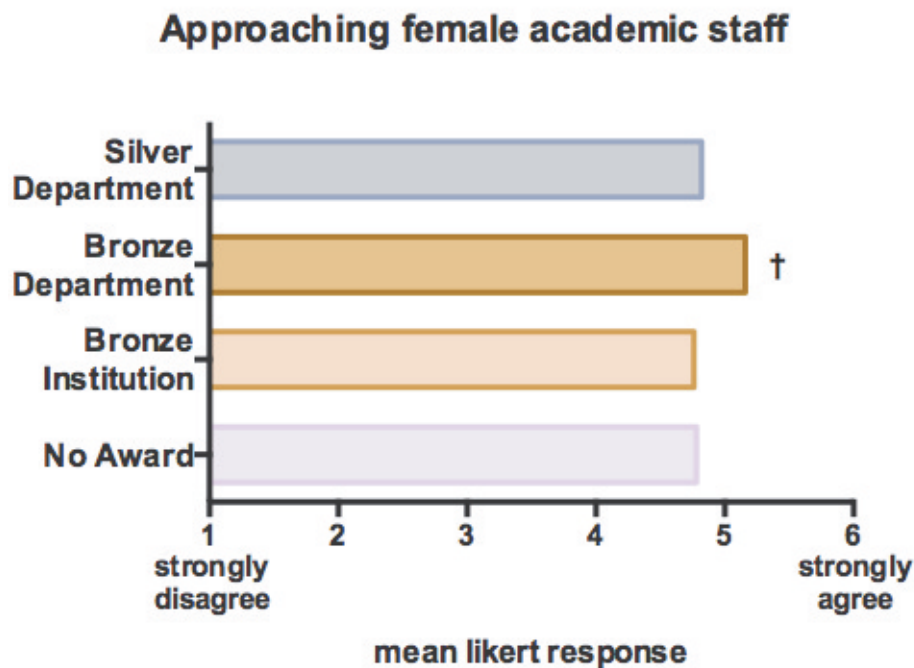


There was also some limited evidence from the data that postgraduate students in Bronze Award departments felt more comfortable approaching staff for academic advice and female staff for advice than postgraduate students in no award departments, but the main findings were that female postgraduate students in all departments felt less confident than male students in approaching male members of staff for support, and felt less confident about their career prospects in the field than male postgraduate students. In addition, female students were less optimistic about their prospects of successfully combining family life with a career in their field (Figures 58, 59, 60, 61 and 62, Appendix A, Tables 38a, 38b, 39a, 39b, 40a and 40b).

**Figure 58.** Ratings given by female and male postgraduate students in Silver, Bronze, institutional Bronze Award and no award departments to the question 'How comfortable do you feel about approaching your personal tutor for academic advice?' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

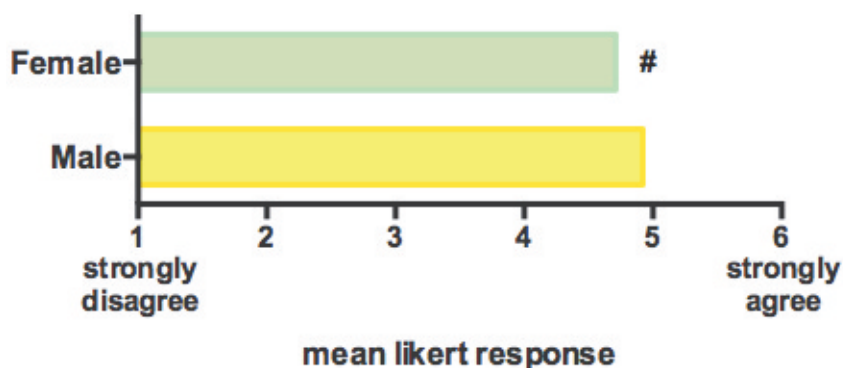


**Figure 59.** Ratings given by female and male postgraduate students in Silver, Bronze, institutional Bronze Award and no award departments to the question 'How comfortable do you feel about approaching a female member of academic staff for academic advice?' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).

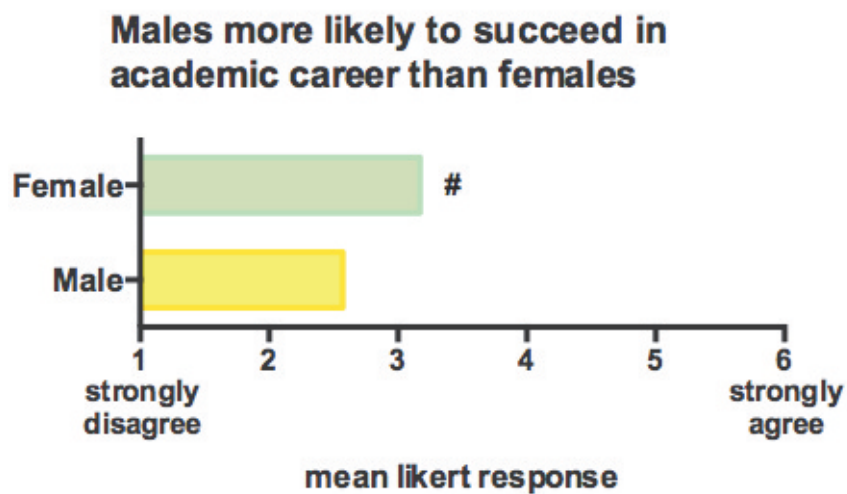


**Figure 60.** Ratings given by female and male postgraduate students to the question 'How comfortable do you feel about approaching a male member of academic staff for academic advice?' (female vs male comparison: # =  $P < 0.05$ , t-test.).

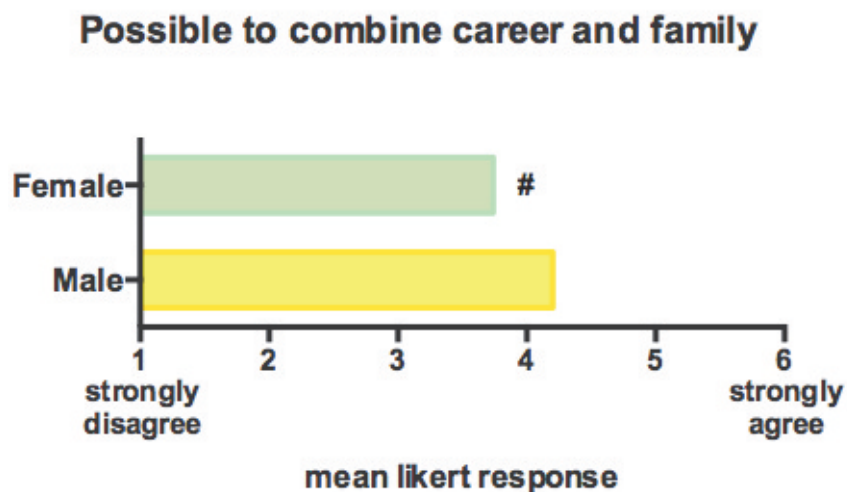
### Comfort in approaching male academic staff



**Figure 61.** Ratings given by female and male postgraduate students to the statement 'Males are more likely to succeed in an academic career related to my field than females' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 62.** Ratings given by female and male postgraduate students to the statement 'It will be possible for me to combine career and family life in a career related to my degree' (female vs male comparison: # =  $P < 0.05$ , t-test.).



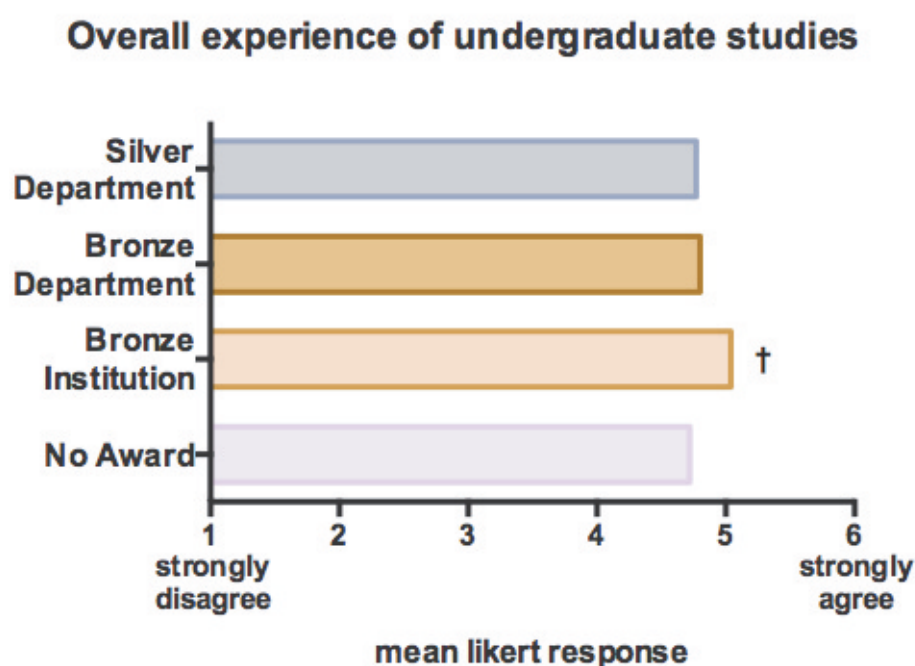
## 5.4 Athena SWAN undergraduate student survey

### *Summary of key findings – undergraduate student survey*

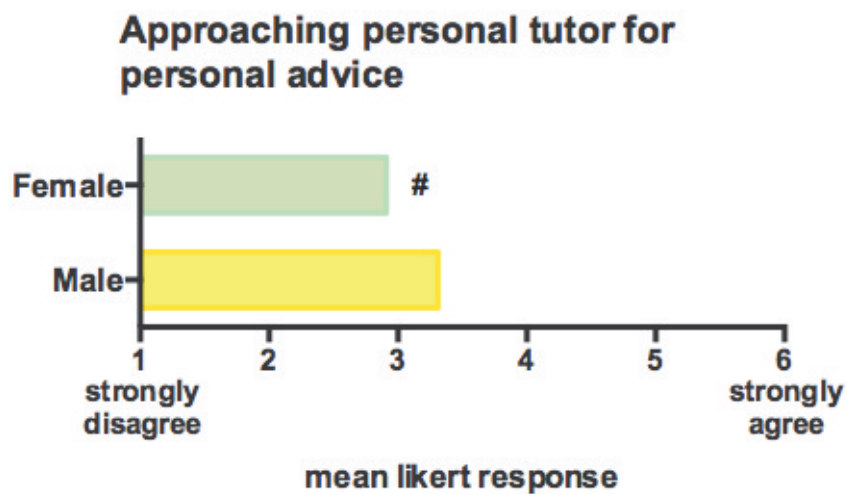
- The Athena SWAN award process did not yet seem to have impacted upon undergraduate students based on the lack of differences in responses across Athena SWAN and no award categories to nearly all questions on the undergraduate survey.
- Female undergraduates though were less confident than male undergraduates in approaching staff, and male staff in particular, for advice and were less confident about their career prospects in the field than male undergraduates.

Undergraduate students studying in departments with an institutional Bronze Award rated their 'overall academic experience' higher than students studying in no award departments (Figure 63 and Appendix A, Tables 41a and 41b,). However, on the whole the Athena SWAN award process did not yet seem to have impacted upon undergraduate students based on the lack of differences in responses across Athena SWAN and no award categories to nearly all questions on the undergraduate survey. Female undergraduates though were less confident than male undergraduates in approaching staff, and male staff in particular, for advice, and were less confident about their career prospects in the field than male undergraduates (Figures 64 and 65, Appendix A, Tables 41a, 41b, 42a, 42b, 43a, 43b, 44a and 44b).

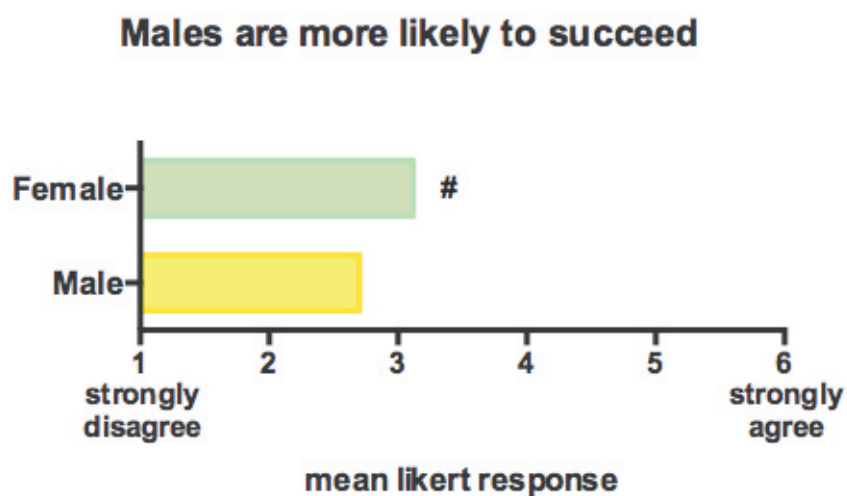
**Figure 63.** *Ratings given by female and male undergraduate students in Silver, Bronze, institutional Bronze Award and no award departments to the question 'How would you describe your overall experience of your undergraduate studies?' (Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure).*



**Figure 64.** Ratings given by female and male undergraduate students to the question 'How comfortable do you feel about approaching your personal tutor for personal advice?' (female vs male comparison: # =  $P < 0.05$ , t-test.).



**Figure 65.** Ratings given by female and male undergraduate students to the statement 'Males are more likely to succeed in a career related to my degree than females' (female vs male comparison: # =  $P < 0.05$ , t-test.).



## 5.5 Athena SWAN institutional and departmental Champions surveys

### *Summary of key findings – institutional and departmental Champions surveys*

- Institutional Champions had been in post for 1–2 years (40%) or more than 3 years (29%) and were generally female (73%), white British (92%), senior academics or senior administrators with an equality and diversity role.
- Departmental Champions were generally female (80%), white British (75%) or white other (19%) with their main role most commonly cited as reader (26%), senior lecturer (23%) or professor (20%).
- The time for completion of the paperwork for the most recent university submission was 6–12 months (39%), and less than 6 months (44%) or 6–12 months (38%) for the most recent departmental submission.
- University and departmental self-assessment teams met on an average of six and seven occasions respectively, with ‘a great deal of work being undertaken in between meetings’.
- At the time of the survey 100% of university and 95% of departmental self-assessment teams were ongoing/currently active, with most formally embedded within the respective university and departmental committee structures.
- The burden of the workload of the submission was considered to fall on the Champions and on human resources staff with university Champions considering the workload ‘appropriate’, and departmental Champions split between considering the workload ‘excessive’ (49%) and ‘appropriate’ (49%).
- The Athena SWAN process and award were considered to be of great value ‘It’s [Athena SWAN] the most effective standard/process/lever for change I’ve come across in 12 years of equality work, including impact assessment’.
- Suggestions for improvements to the Athena SWAN process included clearer guidance or a template for the presentation of quantitative data, the removal of replication and repetition across sections, the need for a question concerning the proportion of staff attending equality and diversity training and some subject-specific points, particularly for medicine.
- Suggestions for improvements to the Athena SWAN assessment process included providing clearer guidelines for the assessment team and assessor training, considering the possibility of some visits, particularly for Gold Awards, asking more probing questions concerning the funding of maternity cover and maternity cover for short-term contracts, and to provide clearer assessment criteria.
- The most important actions since receiving an Athena SWAN institutional award were increased departmental engagement in the process, the



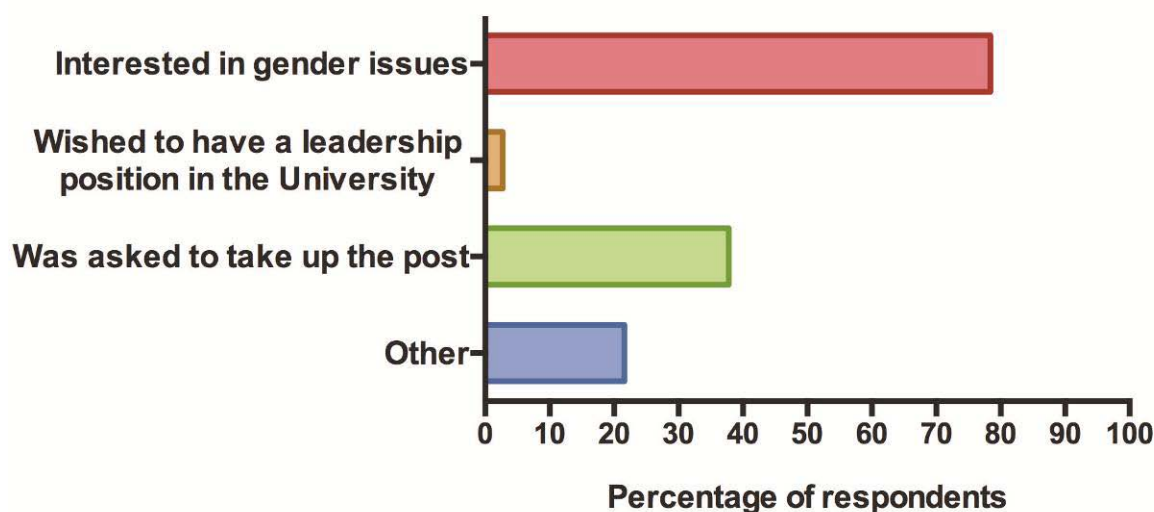
putting in place of structures and data-collection systems, increased engagement of university senior management in the process, improved processes for promotion and reward/review panels, the development of mentoring systems targeted at women, the appointment of designated Athena SWAN officers, changes to the maternity leave cover process, and the development of women's networking and leadership training events.

- The most important actions since receiving an Athena SWAN departmental award were enhanced communication within the department concerning equality and diversity matters, in particular, the sharing of survey findings and proposed solutions, support and encouragement for women academics to apply for promotion, and ensuring the voice of postdoctoral researchers is heard and acted upon.
- Overwhelmingly institutions reported that they had applied for an Athena SWAN award because it was the 'right thing to do' and because of their commitment to gender equality.
- Nearly all (90%) of Athena SWAN institutional Champions and the vast majority of departmental Champions (81%) agreed Athena SWAN had had a positive impact on gender issues.
- Most institutional Champions (65%) and about half (52%) of departmental Champions agreed that there had been a positive impact on women's career progression.
- The most commonly cited barriers to women's progression were caring responsibilities, unconscious bias and the tendency for university senior management to be male dominated.

### 5.5.1 *Characteristics of the institutional Champions*

Institutional Champions had been in post most commonly for 1–2 years (40%) with 29% having served 3 years or more and the remainder less than 1 year. Champions were generally female (73%), white British (92%), and their main role within their university was cited most commonly as professor (36%) and second most commonly as equality and diversity manager (24%). The main reason cited from the choices offered for taking up the position of Athena Champion was 'interested in gender issues' (Figure 66), with the main 'other' reasons provided without prompt being 'part of my job', often as the university equality and diversity manager, and also 'senior member of staff in the university' (e.g. member of university senior management, dean of faculty, etc.) wishing to 'signal our top-level commitment to equality and diversity'. Their university had most recently applied for an institutional Bronze Award (50%) or Bronze Renewal (38%), with 84% being successful in their most recent application.

**Figure 66.** *Main reasons for becoming university Athena SWAN institutional Champion.*



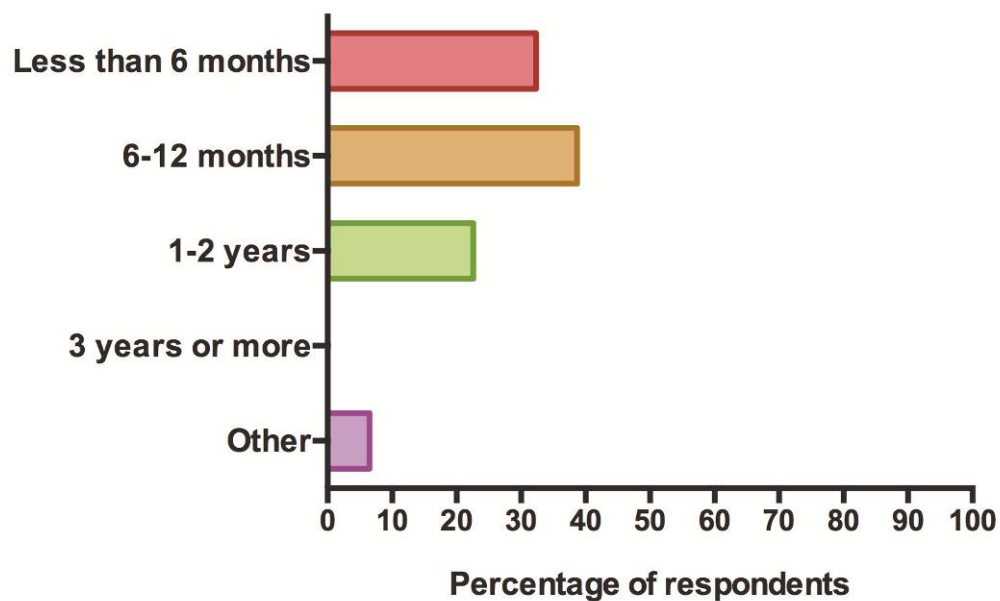
### 5.5.2 *Characteristics of the departmental Champions*

The most commonly cited subject areas for the departmental Champions who returned the survey were biological sciences (24%), physics (24%), engineering (19%), medicine (14%) and chemistry (14%), with some Champions being responsible for Athena SWAN work in more than one subject area. Champions were generally female (80%), white British (75%) or white other (19%), and their main role in the university was most commonly cited as reader (26%), senior lecturer (23%), professor (20%) or Athena SWAN Champion (17%). Their department had most recently submitted for a departmental Silver Award (46%), Silver Renewal (22%) or Bronze Award (22%). The application was successful in 71% of cases. The main reasons for becoming Athena Champion were ‘interested in gender issues’ (74%), and ‘was asked to take up the post’ (63%), with Champions being able to cite more than one reason.

### 5.5.3 *The workload for the application process*

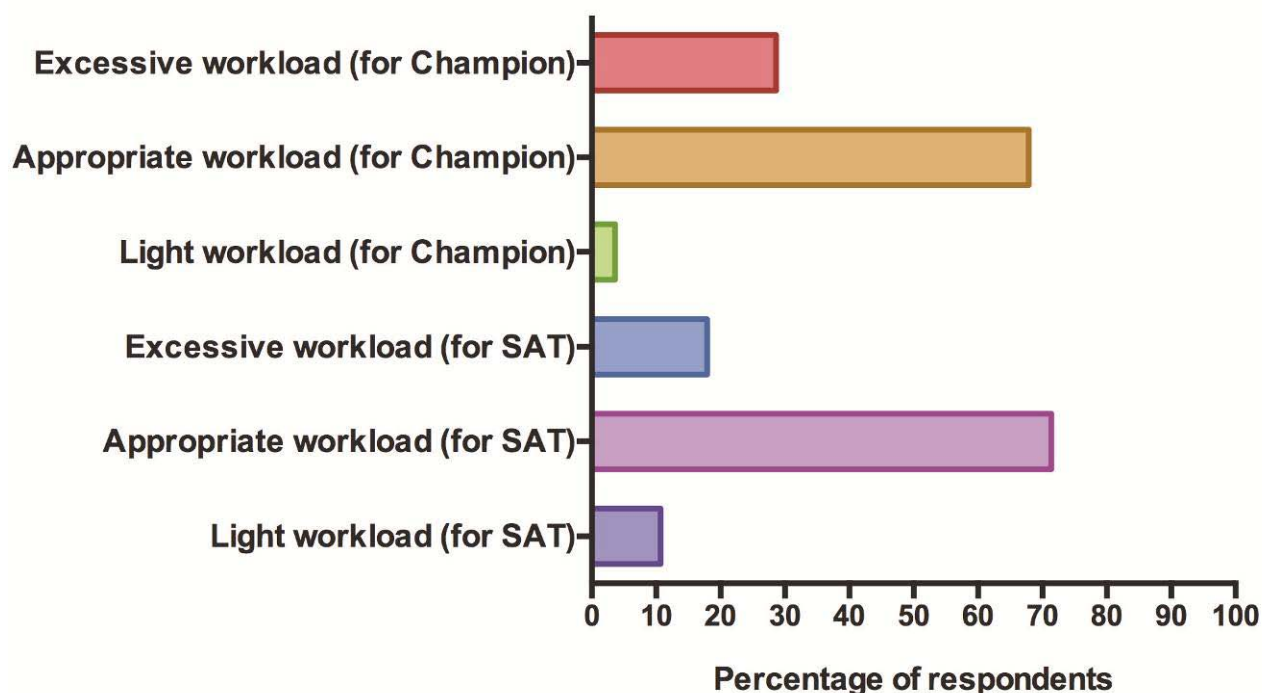
The most common estimate of time taken for completion of paperwork for the most recent university submission was 6–12 months (39 %), and less than 6 months (44%) or 6–12 months (38%) for departmental submissions (Figure 67). The university self-assessment team (or similar) met on an average of six occasions with several sub-committee meetings, whereas the departmental self-assessment team or similar met on an average of seven times, but ‘a great deal of work was undertaken in between meetings’. The typical university self-assessment team meeting lasted 91–120 minutes (41%), whereas the departmental meetings were shorter with most lasting 31–60 minutes (36%) or 61–90 minutes (34%). An average of 11 members of staff were members of each university self-assessment team and an estimated eight members of staff attended each meeting. There were also 11 members for the departmental self-assessment teams with an estimated six members of staff attending each meeting. At the time of the survey, 100% of university and 95% of departmental self-assessment teams were ongoing/currently active, with 67% of the university and 82% of the departmental self-assessment teams formally embedded within the university’s and department’s respective committee structures.

**Figure 67.** *Time taken to complete the paperwork for the most recent Athena SWAN submission.*



When the university Champions were asked about the burden of collecting and analysing the data and completing the paperwork for different individuals or staff groups (on a scale of 1–6 where 1 was considered no burden at all and 6 was considered to be an excessive burden), the ratings were  $4.1 \pm 1.3$  for the Athena SWAN institutional Champion,  $3.3 \pm 0.9$  for the self-assessment team,  $3.2 \pm 1.4$  for the university planning office or similar and  $4.2 \pm 1.2$  for the human resources department or similar, illustrating that the major burden fell on the Champion and on human resources staff. However, the institutional Champions' overwhelming opinion was that, given the importance of the issues being addressed, the workload for themselves and the self-assessment team was considered to be appropriate (Figure 68). The departmental Champions were split in their opinions between considering the workload 'excessive' (49%) and 'appropriate' (49%) for themselves.

**Figure 68.** *The institutional Champions' responses to the question 'Given the importance of the issues being addressed, how would you describe the workload for you/the self-assessment team in the whole process of applying for your most recent Athena SWAN award?'.*



The qualitative comments added by institutional and departmental Champions reflected the feeling that the application for an Athena SWAN Award was an extremely important process and should be given necessary time, but that for some smaller institutions and some departmental Champions the burden was considered excessive and impacted negatively on other aspects of their work. Good data-collection practices, though, lessened the burden.

*'I don't think 'burdensome' is an appropriate term to use. The process is time-consuming, but it's necessary to go through a process to achieve a satisfactory end-result.'* (Institutional Champion)

*'The process of writing an Athena SWAN application can be considered equivalent to writing an MPhil thesis.'* (Institutional Champion)

*'We have created a data repository which covers information required for both university and departmental submissions and now that is in place the burden of work has lessened.'* (Institutional Champion)

*'Small or medium-sized institutions will find the bid preparation disproportionately burdensome. They are unable to invest substantial amounts of time and money into this unlike larger institutions. We, for instance, do not have a dedicated Athena SWAN officer, many large institutions do.'* (Institutional Champion)

*'Completion of the submission paperwork for the Athena SWAN awards scheme is a substantial burden on my time. It effectively prevents me from submitting a grant application during the period ... it is a massive job and extremely stressful.'* (Departmental Champion)

#### 5.5.4 *Barriers faced in completing the Athena SWAN application process*

The major barrier in completing the application process, in the opinion of the institutional Champions (45%) and departmental Champions (60%), was in obtaining data from the planning office/human resources or similar (45%). A small proportion of institutional Champions (10%) and departmental Champions (22%) felt that the unwillingness of colleagues to come forward for the self-assessment team was an issue, and an even smaller proportion (7%) reported that lack of support from university senior management (7% of institutional Champions) or departmental senior management (14%) was a barrier. Many institutional Champions (45%) and some departmental Champions (45%) felt there were no significant barriers.

#### 5.5.5 *Suggestions for improvements to the Athena SWAN application process*

The major points related to the provision of clearer guidance for the presentation of quantitative data or a template for the presentation of quantitative data, the removal of duplication and repetition across sections, guidance as to the meaning of the term 'turnover', the need for a question concerning the proportion of staff attending at equality and diversity training and some subject-specific points, particularly in relation to medical schools.

*'Clearer guidance on how to present the data would be appreciated, i.e. a standard format. This would greatly assist the judging panels who would not then be having to spend time trying to decipher trends from many different graphical/tabular forms.'* (Institutional Champion)

*'The data-heavy section for staff data needs to be more streamlined with better guidance on how to present the data sensibly.'* (Institutional Champion)

*'A template of the tables required would have been very useful.'* (Departmental Champion)

*'I think the career development (section 5) and organisation and culture (section 6?) could really be combined – there is some overlap, and both require a lot of detail which could perhaps be condensed.'* (Institutional Champion)

*'There is considerable repetition ... and the numbering system [needs to be] simplified.'* (Institutional Champion)

*'I found that I wanted to write the same thing in several sub-sections ... I would rather sections cover particular topics, e.g. undergraduate number and performance, postgraduate numbers and completion rates, mentoring ... etc., and then the structure for each section be 1) presentation of data; 2) interpretation of data; 3) proposed way forward with actions.'* (Institutional Champion)

*'Turnover by grade and gender – it may be prudent to specify what turnover means – does that mean the number of staff who leave due to their contract ending (i.e. not through choice) or those who resign to take*

*up employment elsewhere. Our suggestion would be that both are included.’ (Institutional Champion)*

*‘Questions relating to turnover were very difficult to answer. Could be made much more simple – how many women have left the school in the last 3 years – at various grades?’. (Departmental Champion)*

*‘One key thing that we believe is missing from the data is departments being asked how many of their staff complete E&D awareness training.’ (Institutional Champion)*

*‘Degree classification by gender – we would recommend that this section is revised...as medical degrees do not have a traditional academic classification.’ (Institutional Champion)*

### 5.5.6 Suggestions for improvements to the Athena SWAN assessment process

There were some very positive comments about the Athena SWAN process.

*‘It’s [Athena SWAN] the most effective standard/process/lever for change I’ve come across in 12 years of equality work, including impact assessment.’ (Institutional Champion)*

*‘We found the process to be quite straightforward and the staff at Athena SWAN very helpful when we had queries.’ (Departmental Champion)*

However, there were also several observations and recommendations for changes to the judgement process including:

- the assessment process was rather subjective and the panel views could be swayed by one strong-willed individual on the panel and thus clearer guidelines for the assessment team and assessor training were recommended

*‘I am always surprised at how subjective the process can become and this is reflected in the feedback, where terms such as ‘the panel felt’ are often used. It would be more helpful for the feedback to be listed under strengths and weaknesses for each section.’ (Institutional Champion)*

- the ECU Athena SWAN team could be more engaged in the process, possibly including visits to some Institutions

*‘Lack of engagement with the ECU Athena SWAN team. Why don’t they visit or at least have discussion with universities/departments where strengths/weaknesses of the applications can be addressed ... certainly for Gold.’ (Institutional Champion)*

- that some questions needed to be more probing, particularly in relation to how maternity cover is paid for

*‘I think that some of the questions need more probing – in particular in terms of how maternity cover is paid for and the way that maternity leave is managed for those on fixed-term contracts.’ (Institutional Champion)*

- that the goal-posts are moving and clearer assessment criteria are needed

*'It is disheartening that so many applications are now being rejected and/or returned for additional information. The goal-posts keep moving ... we would appreciate some clearer assessment criteria from Athena SWAN.'* (Departmental Champion)

### 5.5.7 *The most important actions since receiving an Athena SWAN institutional award*

The institutional Champions were asked to describe the three most important actions that had been taken since receiving their first Athena SWAN institutional award. The most frequently mentioned actions were:

- increased departmental engagement in the Athena SWAN process, including the encouragement of department submissions and the putting in place of structures and data-collection systems to assist in departmental submissions

*'Individual departments have been encouraged to apply.'* (Institutional Champion)

*'Analysing and sharing the data for the university and departmental applications which has heightened awareness in an incredibly positive way and driven forward culture change.'* (Institutional Champion)

- increased engagement of university senior management in the Athena SWAN process

*'Increased senior management buy-in to the whole process.'* (Institutional Champion)

*'Engaging senior leaders.'* (Institutional Champion)

*'Establishing Athena SWAN as a regular item on senior management committee.'* (Institutional Champion)

- improved processes for promotion and reward/review meetings

*'Better training for those going for promotion, more transparent promotion criteria.'* (Institutional Champion)

*'Amendments to the annual review (academic promotions) process.'* (Institutional Champion)

- the development of mentoring systems targeted at women

*'Setting up a women's mentoring system.'* (Institutional Champion)

*'Instigation of a mentoring programme for female academics wishing to progress to professor status.'* (Institutional Champion)

- the appointment of a designated Athena SWAN officer

*'Appointment of a full-time Athena SWAN officer.'* (Institutional Champion)

*'Central funding has been found to fund the individual who leads on all Athena SWAN work.'* (Institutional Champion)

- changes to the maternity leave cover process and the workload management on return from maternity leave

*'Better information about entitlements regarding maternity leave.'* (Institutional Champion)

*'Review of workload allocation, establishing awards to support women coming back from maternity leave.'* (Institutional Champion)

- The development of women's networking and leadership training events

*'Re-instigation of our women professors' network and associated activities such as international women's day celebrations and workshops.'* (Institutional Champion)

*'Women's networking events, these have proved very popular and a programme has been put in place to facilitate more.'* (Institutional Champion)

Other actions included amongst the three most important were:

- changes to the composition of interview panels sometimes with a minimum female proportion such as 25%
- equal pay audits
- raising the profile of women scientists
- changes to recruitment practices including the use of the Athena SWAN logo
- actions to change the gender balance of senior committees within the university
- increased awareness of the availability of flexible working
- moving of meeting times to fall within 'core hours'
- The chairing of significant equality and diversity committees by the vice-chancellor

#### **5.5.8      *The most important actions since receiving an Athena SWAN departmental award***

Overall these actions were much more variable from department to department than the actions cited by institutional Champions across different institutions. This seems to reflect the real attempts of departmental Champions to address issues of particular importance to their own department. However, frequently mentioned actions included:



- enhanced communication within the department generally and concerning equality and diversity matters, in particular the sharing of survey findings and proposed solutions with information disseminated via newsletters, websites and presentations

*'Improved communications within the department in the form of a weekly newsletter.'* (Departmental Champion)

*'Presentation to the whole school of the Athena SWAN survey findings ... so that the whole school – women and men – is on board.'* (Departmental Champion)

*'The department now has updated pages for equality and diversity which include policies, submission documents, profiles of women in physics and details of new women in the physics network, plus support for female undergraduate students.'* (Departmental Champion)

- support and encouragement for women academics to apply for promotion

*'Promotion applications proactively sought.'* (Departmental Champion)

*'In all adverts for senior positions it is made clear that applications from women are particularly welcome. Promotion seminars are now run each year to encourage women to apply.'* (Departmental Champion)

- ensuring that the voice of postdoctoral researchers is heard and acted upon within departments

*'The formation of the research staff forum to enable ... research staff to have a voice in the department.'* (Departmental Champion)

*'Establishing an early careers researchers' forum and embedding Athena SWAN principles into this.'* (Departmental Champion)

### 5.5.9 Reasons for applying for an Athena SWAN award

Overwhelmingly institutions reported that they had applied for an Athena SWAN award because it was the 'right thing to do' and because of their commitment to gender equality.

*'There is strong commitment to gender equality from the very top of the university and Athena SWAN is viewed as a valuable tool for achieving change. We have now reached such momentum at departmental level that it is unthinkable that we would lose our institutional award.'* (Institutional Champion)

*'Because it is the right thing to do and we believe in gender equality.'* (Institutional Champion)

*'It is in line with our aims to recruit and retain a diverse range of talent.'* (Institutional Champion)

*'Signal the type of institution we are and wish to be.'* (Institutional Champion)

A small number of institutions also stated that they felt they had little option as to whether or not to become involved because of the link to research funding.

*'Because it is linked to funding, there is no option.'* (Institutional Champion)

*'Concern around becoming a research council requirement.'* (Institutional Champion)

Departments were in line with institutions in terms of the reasons for applying, but in addition also mentioned prestige in gaining an award, under-representation of women in their departments and occasionally because university senior management had asked them to become involved.

*'Prestige, target within university to get awards and also for external recognition and for NIHR grant applications.'* (Departmental Champion)

*'The AS principles align with, and provide a mechanism through which to ... deliver our strategy ... which aims to provide an environment that encourages scientific excellence for all ... additionally it was believed that external recognition of our achievements would have a further positive impact/benefit for our staff.'* (Departmental Champion)

*'Recognition that under-representation in physics is a vital issue to address for the overall health of the subject, and the school.'* (Departmental Champion)

*'Asked to by the VC.'* (Departmental Champion)

#### **5.5.10      *Relative standing of the Athena SWAN award process in comparison with other schemes***

The institutional and departmental Athena SWAN Champions were asked to name other schemes promoting equality and diversity or/and the career progression of women in their universities and departments. A total of 59% of institutional and 29% of departmental Champions named another scheme. The most commonly mentioned 'other scheme' by both institutional and departmental Champions was Juno, which is a very highly valued physics subject-specific award. Although some staff raised the issue that they were not quite sure what was meant by the term 'scheme' the other initiatives mentioned included the 'Daphne Jackson Trust Fellowships', 'L'Oreal Awards', 'Stonewall', the 'HR Excellence Concordat', the 'Research Integrity Concordat', the UK Research Centre (UKRC) 1-day development course 'Managing your academic career for women', the London Mathematical Society guidance and support for departments of mathematics, 'Leadership Foundation' courses, for example, Aurora, and the 'PERCAT' programme for postdoctoral researchers.

Athena SWAN was considered to be of more value than other named schemes by the institutional Champions (more value 59%, similar value 21%, less value 21%), but of similar value to other schemes by the departmental Champions (more value 43%, similar value 43%, less value 14%). Comments added by the Champions included:

*'The university has multiple accreditations at both institutional and subject-specific levels. All of them to some extent have an expectation of*

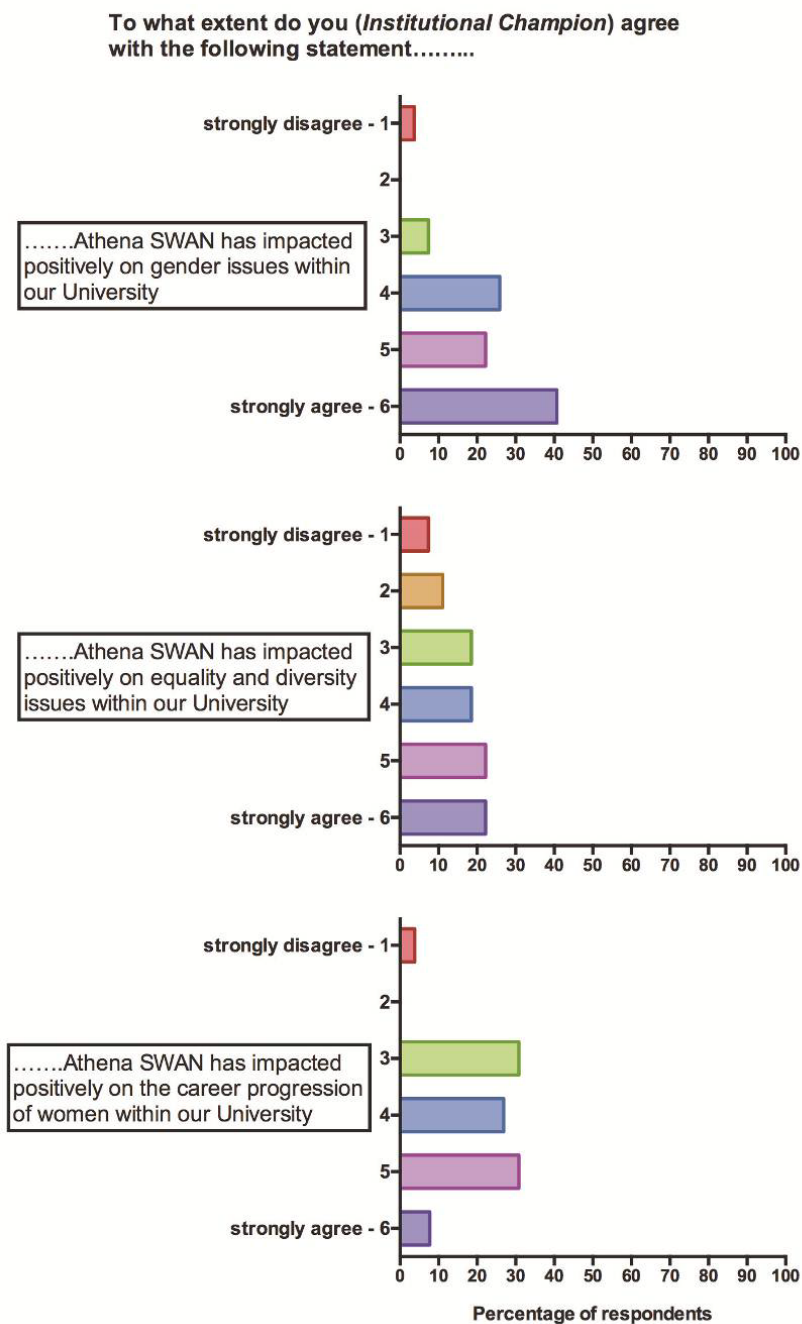
*equality and diversity. However, Athena SWAN is the most specifically focused on these issues.’ (Institutional Champion)*

*‘Each of these schemes has greater benefits at an individual level, whereas Athena SWAN has bigger impact organisationally and culturally.’ (Institutional Champion)*

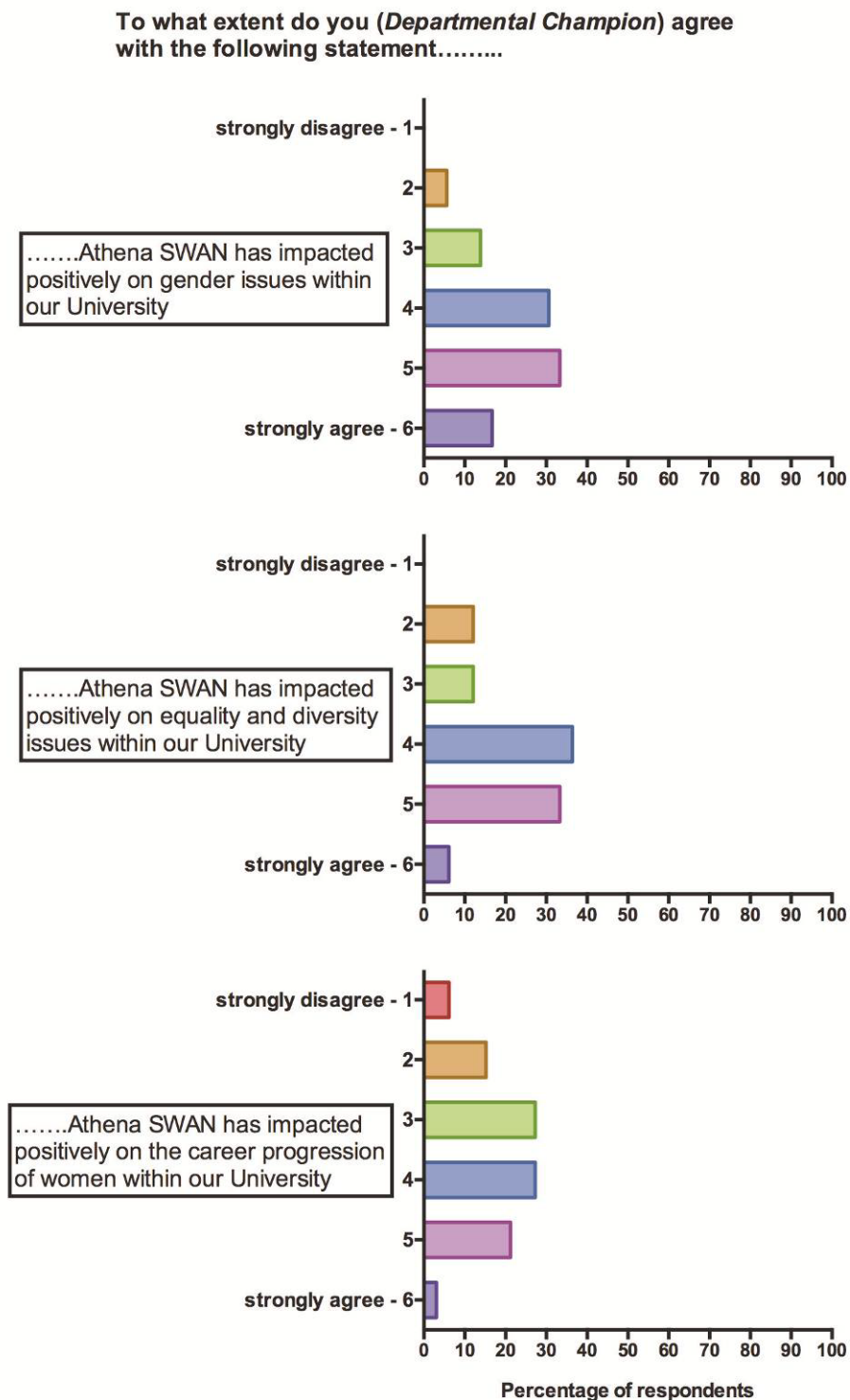
#### **5.5.11      *Perceptions of the overall impact of the Athena SWAN Charter Award Scheme***

Nearly all of the Athena SWAN institutional Champions agreed that Athena SWAN had impacted positively on gender issues (90%), equality and diversity issues (63%) and the career progression of women in their universities (65%) (Figure 69). Similarly departmental Champions agreed that Athena SWAN had impacted positively on gender issues (81%) and equality and diversity issues (76%) in their departments, but there were mixed feelings as to whether or not there had been a positive impact on the career progression of women in their departments (52% agreed that there had been a positive impact) (Figure 70).

**Figure 69.** Perceptions of the institutional Champions on the overall impact of Athena SWAN.



**Figure 70.** Perceptions of the departmental Champions on the overall impact of Athena SWAN.



### 5.5.12 Perceptions of the barriers to women's progression

A total of 67% of institutional Champions and 86% of departmental Champions felt that it was more difficult for women than for men to reach the top employment positions in their field.

The most commonly cited barriers/reasons presented by institutional Champions were:

- caring responsibilities for children and elderly relatives combined with the long hours working culture of academia
- unconscious bias

*'I have three children who are now grown-up and two elderly parents for whom I was the sole carer for years until they died. Taking on these responsibilities from your 20s, you become highly aware that a successful career is only possible if you play the long game. For many women, the sheer exhausting effort, and the inability to pursue any kind of hobbies, interests or even a social life beyond work and family, is too high a price.'* (Institutional Champion)

*'Unconscious bias means that men automatically assume that men make better high-level physicists and so women need to be exceptional to get to the top.'* (Institutional Champion)

The departmental Champions also cited caring responsibilities and unconscious bias, but in addition raised the following issues:

- university senior management tends to be male dominated and networking opportunities are not so available to women

*'Universities are run by ... men. Promotion depends as much on networking as academic ability and output.'* (Departmental Champion)

- women are considered to be team players and may not prioritise their own work above the needs of students for example and that there are some negative perceptions (by women) of women in senior positions

*'Women may be more often team players and may not prioritise their own work over the experience of students and the wider tasks of the school. Our society and work environment expects women to be team players and stigmatises women who do prioritise their own work.'* (Departmental Champion)

*'Young women in the field ... see that many senior women who have made it in the field have had to sacrifice all (e.g. often no children, divorced) and therefore opt out of the field early into careers where it is more possible to achieve a work/life balance.'* (Departmental Champion)

## 6 Research Findings: Case Studies

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### 6.1 Overview

The qualitative findings (from face-to-face interviews and focus groups and a small number of telephone interviews) are organised under the following headings which are consistent with the research aims and objectives identified for the project:

- the effectiveness of the Charter in advancing women's careers in STEMM (6.2)
- the permeation, quality and longevity of engagement with the Athena SWAN Charter in participating institutions (6.3)
- the impact of the Athena SWAN Charter in changing the culture and attitudes across the participating HEIs to address inequality and unequal representation (6.4)
- evidence of differences in practice and outcomes related to the career opportunities of women in STEMM between HEIs which are members of Athena SWAN and those which are not (6.5)
- the correlation between the progress evidenced by institutions in their Athena SWAN submissions and the experiences of female staff working in STEMM (6.6)
- the suitability of Athena SWAN processes for use in complex and busy institutional environments (6.7)
- the standing and health of the Athena SWAN Charter amongst comparative benchmarking/recognition schemes in the STEMM and equality and diversity fields (6.8)
- persistent barriers to gender equality (6.9)
- future challenges for HEIs wishing to promote gender equality (6.10)
- future challenges for ECU (6.11)

Summaries of the key findings for each sub-heading are included at the start of each sub-section.

## **6.2 The effectiveness of the Charter in advancing women's careers in STEMM**

### **6.2.1 *The impact of the Athena SWAN Charter on institutional practices designed to increase the number, level, career progression and employment experiences of women in STEMM in higher education since its launch in 2005***

#### *Summary of key findings – institutional practice*

- The Athena SWAN application process and award has provided credibility, focus and impetus for gender work that was already taking place within HEIs.
- The data-collection processes for Athena SWAN submissions enabled HEIs to identify challenges to gender equality that were relevant to their HEI and departments.
- In some HEIs the practices developed through Athena SWAN have impacted on departments beyond STEMM.
- Changes to institutional practice identified through involvement with Athena SWAN include efforts focused on promotion, supporting women returners, improved communication systems to ensure all voices are heard and scheduling meetings to accommodate part-time staff.
- Facilitating factors for delivering institutional change include the involvement of senior committed individuals who exert influence and are visible role models.
- Linking Athena SWAN to research funding was a contentious issue with some interviewees suggesting this was needed in some HEIs in order to motivate involvement with gender equality issues, whilst other interviewees felt that this link was problematic, particularly because Athena SWAN awards are not standard based.
- Persistent barriers impacting on delivering institutional change included recognition that delivering cultural change remains extremely challenging in any HEI.

#### **Providing credibility, focus and impetus for the gender work that was underway within HEIs**

Within the HEIs that had engaged with the Athena SWAN process there was inevitably equality and diversity work in STEMM (and beyond) that pre-dated involvement with Athena SWAN. Identifying the specific impact that Athena SWAN has had is necessarily challenging because the works sits within a complex context where HEIs are in a constant change of flux. Interviewees within the case studies were asked to try and identify where they believed Athena SWAN had impacted directly on institutional practices designed to increase the number, level, career progression and employment experiences of women in STEMM in higher education.



Interviewees typically stated that the Athena Award process was important because it had provided credibility to the gender-equality work that was previously taking place within HEIs.

*'So I think the kind of ethos and the ambition to kind of work with the principles of Athena SWAN were already there. I think what it potentially does do is it has made these issues a lot more salient across the department and a lot more focal and has, I suppose, galvanised us.'*  
(Female Senior Lecturer)

*'I think Athena SWAN, like the equal rights act of 2010, makes people aware that they have to behave.'* (Female Lecturer)

Applying for, and obtaining, the Athena SWAN awards, also provided an impetus for change and importantly for cultural change within HEIs.

*'We needed culture change ... a catalyst to the culture change. We needed involvement of all staff because equality and diversity is always there but not everybody is involved. So by having Athena SWAN ... having local steering groups and also getting schools and colleges ... to look at the implementation of the data, to look at promotion data and stuff like that, made them very much aware of what's happening in their schools, and made them also aware that ... it's time to change if there is anything that needs to be changed.'* (Athena SWAN Champion)

*'I think that there is a realisation that there are unconscious biases and it's just even being aware of that, and a realisation that we are coming from a different perspective. It's not that we want alliances to be made or we want special treatment, but it is just things like realising that you have a lot of competing priorities and therefore having flexible working within the university is a great help. Having meetings that aren't scheduled at five o'clock every day when you have little ones to pick up is a great help, so it's just, I think, changing those policies and the day-to-day working arrangements to become more female friendly .... It creates awareness. It creates discussion, and even if it is a bit of eyebrow raising and a bit of scoffing at least its raising it in people's minds I think'* (Female Senior Lecturer)

A number of female interviewees expressed concerns that their interest in gender equality would be dismissed as 'feminist' and there were concerns that their viewpoints would be undermined if this was how they were perceived. Interviewees commented that Athena SWAN provided them with an outlet through which they felt they could legitimately seek gender equality without being perceived as feminist. Of course some interviewees were more than happy to be perceived as feminist, but this was not true for all women, particularly those located within very traditional and male-dominated departments.

*'I didn't want to be flying the flag for feminism at that stage in my career.'*  
(Female Professor 28 years into her career)

In addition some interviewees believed that Athena SWAN contributed to the pace of change.

*'I think it's unclear, if it [Athena SWAN] didn't exist, whether or not it would have happened anyway. For my impression I think it might have done, but might not have happened quite as quickly or quite as well.'*  
(Male Lecturer)

A key way in which Athena SWAN has impacted on changes in institutional practice is by facilitating the collection of data which allowed, and indeed necessitated, HEIs to identify the gender issues that they needed to address. Many interviewees reported that this process was powerful because it meant that gender issues could be examined using more neutral and objective data. It was also apparent that in a number of HEIs the data revealed issues that had previously been overlooked or had not received any attention.

*'I think it was a kind of information-gathering exercise, it was when a few things got brought out, became more obvious, where people had never noticed before. No one ever noticed that all the women were on the ethics committee until basically someone calculated all the numbers.'*  
(Female Professor)

The data collection required for the submission process and the surveys and focus groups conducted by departments/schools as part of this process, facilitated careful identification of challenges relevant to gender equality in higher education and, in particular, departments/schools, resulting in targeted action plans.

*'[We have] a majority of female PhD students, a majority of female postdocs, at lecturer level we're just over 50% female, and then we drop to 20% senior lecturer, reader and professor, so it becomes an 80/20 split, and that's where our action plan is targeted, to try and retain women and to progress them.'* (Athena SWAN Champion)

It is important to note that not all interviewees felt that their HEI needed cultural change.

*'Since I've been here I feel like the department has been as, or more, inclusive than any other organisation I've ever worked with and they have not changed that approach. So they've got a lot of policies in place that are helpful from part-time to maternity leave to the way they support the women within the department, and that has not changed from the time that I've arrived. So when you say it's part of the culture it absolutely is, I arrived, that's the way it was, that's the way it is and this is where I am, so I can't really see much of a trajectory myself. All I see is that there's a consistent support there to make sure the people are being aided in their careers.'* (Male Lecturer)

The time-limited nature of the awards was considered by one interviewee to be vital to ensuring the initial desire for change was maintained in the longer term.

*'And the beauty, the absolutely beauty of this is it gets taken away, so once you've pushed that ball down the hill, and that was the importance of the first decision, it doesn't actually matter what the quality of that was, of the reluctance of people to do it, the minute the ball was pushed down the hill, we were off. And once you get someone who has an aspiration to do something with it, then things start to improve. So yeah it's phenomenally important for women in science, in academia, in*

*universities, and they will be better because of it, for that reason.'*  
(Female Professor)

The impact of Athena SWAN has reached beyond the STEMM departments involved.

*'And it's not just for this school, it's like the whole of academia is now changing. I go to meetings and people are talking about Athena SWAN. People are doing Athena SWAN, people are talking about gender issues. You know I see it on Twitter, I see people talking about gender, it's vital.'*  
(Athena SWAN Champion)

*'Athena SWAN and applying for Athena SWAN awards has raised the workload question in all schools and all schools have adopted more transparent workload allocation models as a result. Now [this HEI] was moving in that direction, but different schools had different ways of managing it and Athena has enabled us to formalise the transparency of it, so that's been very helpful.'* (Athena SWAN Champion)

### **Changes in institutional practice resulting from Athena SWAN**

Changes in institutional practice have frequently arisen as a result of a particular problem being identified that was perceived to impact negatively on women's career progression and employment experiences. These issues were usually identified, at least in part, through the Athena SWAN application process. Areas that HEIs have focused on include promotion, supporting women returners, improved communication systems to ensure all voices are heard and scheduling meetings to accommodate part-time staff.

An area that has been a particular focus for those wishing to achieve greater gender equality is promotion. Women were perceived by interviewees to be less likely to apply for promotion than their male colleagues and to be more cautious about applying for promotion.

*'What I have observed has been increased encouragement for women to apply for promotions, so I think that women sit back probably and think "Well, I'll apply when I'm sure I tick every single box on that list" rather than "Well I'm going to apply because I might as well see what they say and get some feedback and work on it".'* (Female Senior Lecturer)

*'Women get promoted when they apply but they often don't apply and we have been very aggressive, I suppose, in making sure that during the year we run enough events for women. We try and build their confidence. We have a group of people who go round and give promotional talks and will engage with groups of women for example, and talk to them about what sort of things you should put in your CV and what sort of things you shouldn't put in your CV, what sort of roles you should.'* (Chair, University Athena SWAN Committee)

It was common within Athena HEIs to provide training and mentoring to prepare women for promotion.

*'We do run workshops for women in advance of promotion so they can come to that and discuss and hear general talks about how promotion works.'* (Chair, Athena SWAN University Committee)

*'At the moment we have a mentoring programme ... people are self-selecting they apply to it and they can either be matched with a mentor within the school or within the university, and that's been very successful university wide and ... evidence at the [...] office shows that this is linked to successful outcomes when people apply for promotions. So we would like to increase the uptake, and again we won't have forced mentoring but we will advertise it and show the advantages to people and encourage them to take it up.'* (Athena SWAN Champion)

A number of interviewees felt that the Athena SWAN award process had resulted in female staff being encouraged to apply for promotion.

*'I think because of the Athena SWAN ... there's been more encouragement [to apply for promotion]. That awareness has been raised, that awareness amongst women has been raised, that you might as well give it a go and the statistics from [this university] and the school of medicine are showing that when you give it a go women are as likely to be promoted as men.'* (Female Senior Lecturer)

*'... we're very strongly encouraging everybody to think of the default setting that you should be putting yourself forward for promotion and thinking about who isn't, and so it should be a sort of everybody goes forward if they wish to rather than it to be at the unexpected situation that you put yourself forward. That culture change seems to have been reflected in a lot more people successfully being promoted. So just trying to increase the transparency and support around the time people are thinking about that promotion.'* (Female Professor and Athena SWAN Champion)

Furthermore, academic institutions holding Athena SWAN awards seem to have attracted more well-qualified women to their departments.

*'I've lived in many different environments in terms of attitudes towards women and a lot can be really principal investigator directed or centre directed, but I have to say one of the things that I did really look at [at this university] hard before deciding to come here, because there were other places that I interviewed, was the Athena SWAN record and just the culture in general and seeing that women are promoted up within the department and within the university as a whole, and that's something that I looked quite hard at before deciding to come.'* (Female Lecturer)

*'When I saw the job here ... I then noticed that biology had their Athena SWAN and that was one of the things that kind of attracted me, as well as the fact that [this university] is a fantastic university.'* (Female Postdoctoral Researcher)

Interestingly a very tangible way in which Athena SWAN is assisting women with promotion is by providing recognition for being an Athena SWAN Champion within promotion criteria.

*'One of the things we've done is to formally recognise being a SWAN Champion in the promotion criteria, so it's a role now that an individual can do and it's recognised right across the whole university.'*

One Champion stated that for them it was the transition between postdoctoral stage and lecturer that was considered to be key to ensuring equity in progression within their department.

*'Well really the key things that we focused on was the transition between the postdoctoral stage and the lecturer stage, and that group of people have definitely, well we've targeted them and they, I think, generally seem appreciative of the fact that we've spent some money on them and we've had this series of, I think we called them workshops, but essentially lectures, where we talked about applying for grants and career development and things like that. It wasn't exclusively for women, all postdoctoral researchers and PhDs were allowed to go along but it was definitely flagged up as being sort of funded under the scheme.'*  
(Athena SWAN Champion)

Supporting women returners was also seen as an important issue to address that was identified through the Athena SWAN application process.

*'It did make us sit up and think about how we treat women that come back from maternity leave and how those are treated, and that was a very positive effect. And yes, of course you're going for an award, but going for the award and writing the application, that's almost the end of the process. Actually all the thought that goes into them actually thinking "What are we doing right and what are we doing wrong" and that came out most definitely, so that was a very positive effect.'* (Male Professor)

A small number of universities had clearly attempted to support women in every aspect of the progression process as illustrated by the following example of best practice.

*Appointment, development, promotion and continued progression An example of best practice in supporting the career progression of women*

This university has introduced a fully comprehensive support system for the progression of women within STEMM subjects. This support commences with a gender balance in search and appointment committees and the inclusion of women on short-lists, and continues with a comprehensive system of staff development including:

- mentoring
- teaching relief for maternity returners
- family-friendly core hours meeting times
- advice on the promotion process and encouragement to apply for promotion
- consideration of the impact of career gaps in the promotion process
- experience in senior committee positions

This comprehensive support system leads to more women applying for promotion, at which stage they have similar success rates to men. More recently, serious consideration is being given by the university as to how women professors can continue to progress to the highest salaried and prestigious positions in their field.

*'We do run workshops for women in advance of promotion so they can come to that and discuss and hear general talks about how promotion works, [...] how a CV should be put together, the sort of things that we, well, we've just in the last year gone to an electronic CV system, people populate some software, it doesn't present stuff in the most positive way but there's personal statements that individuals can write alongside it, so it's really drawing out to individuals the importance of that personal statement and the sort of things that should go into it. We do talk to them about success rates of women at promotion, so it's very good.'* (Chair, University Athena SWAN Committee)

Often HEIs were able to make adaptations to try and ensure that women were not disadvantaged as a result of taking maternity leave.

*'I think it was actually directly related to Athena SWAN that I got my job because my ranking was changed for shortlisting based when they took away my two maternity leaves ... and then it looked like I had more publications than other people because they usually calculate the number of papers since bench to PhD.'* (Female Academic)

*'Well that is where the university-wide Athena SWAN approach has been hugely beneficial in that the university decided that, even though they wouldn't pay for it, they requested that heads of school give women returning from maternity leave... six months research only, funded by ourselves. So we made a commitment to do that.'* (Female Professor)

*'This is where the policy comes in. When a woman is pregnant and going on maternity leave she discusses with her head of school the logistics of all of that. There is a particular form that the head of school and the woman signs and there are reminders on this form to speak about a number of issues.'* (Athena SWAN Champion)

Importantly though some HEIs had extended this support to both men and women and to other kinds of returners, including those who have returned after a long break.

*'So the head of school said 'Well the sensible thing to do is to carve out space for them to re-engage with their research', and so this notion of the research-only semester came about, very informally, and out of an action that arose from kind of the SWAN looking at and identifying issues in that school. That then leaked out into other schools all around, some were more interested in adopting it than others, but psychology took it on board and so "Ok, we're going to have this as maternity returners research-only semester, but we're also going to make it available to women or men who are returning from a long period away from research".'* (Athena SWAN Champion)

*'My situation's different in that I was lost for 20 years and I've come back in. I was very surprised actually to get back in and to get the support that I got when I did come back in because ... I had my PhD from 25 years ago where I had my publications then I had nothing for 20 years so I had to start again, so I have been building up my publication record ... I've been supported really, really well since I've come back in here.'* (Female Lecturer)

An interviewee from one HEI noted that these considerations had also been extended to students.

*'The university has, as a consequence of Athena SWAN, went back and looked at its maternity policies ... at the last university Athena meeting that I went to it was clear that the maternity policies had been put in place for staff and still needed to be looked at for students and I think [this university] doesn't have a lot of mature undergraduate students, so hadn't thought that it was necessary to look into maternity provision for undergraduates, and they're now looking into it.'* (Female Professor, also Athena SWAN Champion)

Athena SWAN was also attributed to leading to better communication paths, which in turn have facilitated a more efficient system and ensured more equal representation in decision-making forums.

*'We think that now maybe voices are heard. There are PhD representatives, there are postdocs coming to our school board, it does seem to be that every group now has representation within the school and that's down to SWAN and trying to get forums set-up and it is about communicating and nobody being left out, we think it's quite important.'* (Female Academic)

In some HEIs interviewees reported that Athena SWAN has resulted in a greater feeling of collegiality.

*'... there are lots of other outcomes [as a result of being involved in the Athena SWAN award process], there's core hours working, there's a greater sense of collegiality.'* (Athena SWAN champion)

Improved communication within departments about the impact of poor practice and the benefits of good practice are also seen as important factors in changing the culture of a department.

*'We're very clear that our approach is to highlight and improve practices across the department with the expectation that any bad practices are going to proportionately be affecting women, that good practices are good for everybody, and we make that very clear that the reason that we're ensuring good practice is that everybody will benefit so that people don't think we're just doing it for women. And hopefully that message has got through that there's no sort of specifically positive actions for women, there's positive actions in relation to groups, everybody that we see is an issue in the department.'* (Athena SWAN Champion)

It was recognised by a number of interviewees that the timing of meetings can be a key consideration when promoting gender equality. A number of interviewees suggested that their departments have adopted core hours in which meetings should ideally be arranged in order to ensure that staff are not disadvantaged by part-time working.

*'Well we have a core time that you're supposed to schedule the meetings between ten and four or something ... supposed to be ten to four Monday to Thursday I think.'* (Female Lecturer)

Some HEIs have recognised that within their institution there was a need to prioritise greater inclusion of PhD students. In one HEI the approach had been to ensure that PhD students were invited to the presentations of prospective new lecturing staff in the belief that this would allow students to appreciate what was required of them in order to become an academic member of staff in the future.

*'One of the good things it has done it's given them a voice, so we've set up within schools, there are committees or groups that now can meet and discuss issues around being a postgraduate in a particular school and some of those will be gender related and some will be not so gender related. It's given them a voice and an avenue to report through the SWAN groups up into head of school into the school management board. We have ensured that when we've set up school SWAN committees that we include postgraduates in those committees as well as postdocs, so it's been very important I think for giving them a voice for them. I think also understanding that we take gender issues seriously, they may go on to leave the university or they may go on to work in another university after their PhD, but I think one of the messages we want to send to them in [this university], we take these things very seriously, and that they can have an important input into action plans for example, so a lot of our action plan, items in the action plans will revolve around postgraduate students.'* (Chair, University Athena SWAN Committee)

Some interviewees noted that being involved with Athena SWAN has resulted in greater transparency in processes and in decision making. An area where this transparency has been welcomed was in terms of the workload model.



*'Athena SWAN and applying for Athena SWAN awards has raised the workload question in all schools and all schools have adopted more transparent workload allocation models as a result. Now [...] was moving in that direction, but different schools had different ways of managing it and Athena has enabled us to formalise the transparency of it, so that's been very helpful.'* (Chair, University Athena SWAN Committee)

At one HEI there was greater recognition of the reasons why staff may benefit from sabbatical leave as this was identified as an issue during the Athena SWAN application process.

*'We've now got into place sabbaticals, so there's a very clear application form and guidelines as to who might be, what types of previous activities might be favoured in terms of sabbaticals, so like a very onerous admin job that's come to an end, a period of illness or coming back after maternity leave would be reasons why we would encourage people to take sabbaticals, so that's something that hadn't been transparent before, and now is.'* (Female Professor and Athena SWAN Champion)

Ensuring that opportunities for advancement or promotion are made visible is another way of enhancing transparency.

*'Everything that we do goes through HR and it is advertised and, you know, staff apply for it and we go through the proper, rigorous processes of an external panel member, make sure there's mixed sex on the panel to make sure it's not unfair, so I'm pretty sure the high-level appointments are, you know, spot on and equitable. And also underneath that the core things like course leaders and year tutors, everything we do goes out to expressions of interest. So we send out an email to the whole group saying "If you're interested in this course leader role express your interest in that", and if we have more than one person applying, then generally we'll have a kind of mini-interview process to do that. So as much as possible we do everything as fairly as possible.'* (Head of Department)

## **Factors facilitating changes in institutional practice**

The effectiveness of the Athena SWAN Charter in advancing women's careers in STEMM, and more specifically the impact of the Charter on institutional practices designed to increase the number, level, career progression and employment experiences of women in STEMM in HEIs, was enhanced by the presence of a number of facilitating factors.

The involvement of senior committed individuals who were able to promote both Athena SWAN and gender equality more widely was vital to ensuring the success of cultural change within HEIs. The identification of these key individuals was based on their ability to both influence and communicate with others within the HEI about equality issues.

*'You know we have equality champions, we have equality and diversity contacts within schools and we have support networks. So the whole university is engaged in equality and diversity and specifically the VC and people in senior management roles, they are really champions for equality and diversity. If we didn't have that, I don't think we would have*

*achieved the change that we've achieved so far.' (Athena SWAN Champion)*

In a similar vein the impact of Athena SWAN within departments was perceived by interviewees to be very much influenced by the attitudes and behaviour of the head of department. The impact of involvement in Athena SWAN was perceived to be greatest where the head of department was committed to gender equality and, conversely, where the head of department was less interested this impacted negatively on impact within departments.

*'I think that comes down to is a reluctance from the head of school, I think the head of school is absolutely imperative in this. They have to make to want this happen, they have to make the school want to make it happen and it has to be done for the right reasons.'* (Female Professor)

*'Our new head of school is much more engaged in this process and this is part of what he wants to achieve. Now he wants to achieve it partially for career progression but that, in some sense it doesn't matter because he wants to achieve it.'* (Female Professor)

Importantly the Athena SWAN award was perceived to provide an impetus and lever with which to persuade reluctant heads of department to engage in promoting gender equality within their departments.

*'When I came in as the director I saw that Athena SWAN would provide me with the leverage to be able to get heads of schools to commit to this issue, that's the huge benefit that Athena SWAN has had, has been mainstreaming gender equality at local level across the university, so that it isn't about what the university does, it's about what people do within their own schools.'* (University Athena SWAN Champion)

Having visible role models within HEIs was considered to be another important factor in facilitating the desired impact of engaging with Athena SWAN. Interviewees believed that the visibility of successful women within HEIs helped to bring about cultural change within those HEIs.

*'We have women role models, we have gay, lesbian and bisexual role models, and that helps the change within the institution.'* (Athena SWAN Champion)

Similarly PhD students felt that role models, and particularly role models with a life outside of work, were very important for their sustained progression in the field.

*'Seeing whether someone's done it before, you're talking about role models, if you can see that there's a female ... a female head of department or head of school or whatever... but if you can see that they can also have a life, like outside of work.'* (Female PhD Student)

The absence of such role models is conversely perceived to be problematic.

*'There are no, very few role models. I mean we do have a female deputy VC and actually I have to admit in this, since we have a new VC, there are women you know ... more visibly, but I can't see any, there are no*

*women in senior research management jobs in this university, not one.'*  
(Female Professor)

A number of interviewees from different HEIs commented that the linking of Athena SWAN to funding awards was very significant in ensuring that the award was taken seriously within HEIs.

*'Athena SWAN have made things very helpful for medical schools by linking an award to the ability to apply for NIHR funding. If that was rolled out to research council funding and Wellcome Trust, people would sit up and take notice.'*

Conversely some interviewees also commented that linking Athena SWAN to funding was problematic, because the award is evidence based and does not actually equate to a standard, in contrast to other awards.

### **Persistent barriers impacting on delivering institutional change**

Whilst there was general agreement amongst interviewees that involvement in Athena SWAN was effective and instrumental in bringing about change, it was also noted by some interviewees that effecting cultural change was hugely challenging and complex for any HEI. It was noted by one interviewee that whilst identifying the issues to be addressed is incredibly important and is a necessary step towards changing culture, this process in itself does not identify what the solutions might be and how issues may best be resolved within individual HEIs.

*'What does it mean to create an environment in which things are equal, and where you believe that people have equal opportunity and equal skills ... what are the key problems that are creating that culture and [how do you] deal with it, and actually I don't think the school is doing that.'* (Female Professor)

Some interviewees suggested that whilst submitting the Athena SWAN application and being granted an award was the starting point for effecting cultural change, it in no way guaranteed that change would happen.

*'There has never been a meeting in the school where a head of school has stood up and said, this is important to me, here's why this is important to me, and here's the things we have to discuss as part of this. There's never, ever been that.'* (Female Professor)

Whilst wanting to appear supportive towards women might act as the driver behind policy changes, some male academics suggested that the implications of such policies were not always thought through and that this may impact on the sustainability of the changes. When trying to accommodate the needs of female staff on maternity leave or returning from leave, for example, a male academic felt that not enough consideration was given to planning so that other colleagues were not disadvantaged.

*'There is a complete lack of transparency and a lot of things that happen are purely reactions. There's no proactivity [...] there seems to be a lack of forward planning to deal with the actions that the SWAN award allows the school to take with respect to extended leave and research recovery time if you like. People get a knock on the door a week before the*

*semester begins, being asked to cover teaching for large classes, etc. .... If members of staff were given more time to allow them to prepare I think that would solve a major problem.’ (Male Academic)*

Other interviewees suggested that some colleagues remained resistant to change and that Athena SWAN may have had a limited impact on such colleagues.

*‘I think there is still, amongst some people, an attitude of “Oh, we don’t really need it ... and why does the school of medicine need a committee of its own?”.’ (Female Senior Lecturer)*

## 6.2.2 *The sustainability of the changes that HEIs are making as a result of their participation in Athena SWAN*

This sub-section examines the extent to which Athena SWAN practices and learning have been incorporated into mainstream strategies and processes in participating HEIs.

### *Summary of key findings – sustainability*

- Athena SWAN practices were incorporated at both strategic and operational level within participating HEIs.
- At a strategic level incorporation of Athena SWAN principles within key HEI strategy documents was believed to enhance sustainability.
- Championing of practices by senior people within the HEIs was considered to be important in ensuring mainstreaming and sustainability.
- HEIs had dedicated staff resources for managing the Athena SWAN process, which reflected their commitment to the process and the embedding of Athena SWAN within normal HEI practice.
- As HEIs became more experienced with Athena SWAN they developed more sophisticated data-collection processes to identify key issues and to monitor progress against action plans.
- Departments also sought to identify ways in which resources could be best dedicated to support Athena SWAN and this is reflected in the formation of sub-groups and in some HEIs this work was reflected in the workload model.
- Collaborations and networks were instigated or re-invigorated through Athena SWAN as HEI staff sought to complete the submission process and to identify and deliver effective practice in promoting gender equality.
- Revisions to existing practices and processes within HEIs have arisen as a result of involvement with Athena SWAN, including revisions to promotion processes and the development of new avenues for staff to acquire the skills they require for promotion.

Athena SWAN has been incorporated within HEIs at a strategic level. Interviewees typically felt that embedding Athena SWAN within strategic-level plans and procedures was instrumental in ensuring sustainability. The ways in which this was achieved included Athena SWAN targets being laid down in corporate plans and

strategy, and Athena SWAN practices being championed by senior people within the HEI (vice-chancellor, pro-vice-chancellor, deans, etc.).

*'In terms of a high-level group I think we've got quite a nice balance between people who do the work on the ground, who are responsible, the heads of school and the chair of the SWAN Champions' group who again knows exactly what's happening in all the different schools, they've got the director of HR who's got resource, so if issues in particular come up that we need to throw resource at a problem he's got the authority to do that. I'm formally given the role of reporting not only to the university management board that the vice chancellor chairs, but also as part of my annual appraisals I report to the vice-chancellor on SWAN.'* (Chair, Athena SWAN Committee)

*'SWAN again has allowed senior people across the university to be seen in school committees and turning up at SWAN events and so on, whereas they wouldn't have done in the past. I think probably the final thing around real cultural differences is giving the whole university a great deal of pride in the change and now when you have a SWAN event all kinds of people will turn up who again three years ago wouldn't have bothered because it wasn't seen to be that important or that critical.'* (Chair, University Athena SWAN Committee)

Mainstreaming of Athena SWAN practices has been accompanied by the emergence of dedicated staff within many HEIs. Human resource staff were noted by interviewees as being vitally important in providing their support for Athena SWAN at both the submission phase and in implementing the resulting action plans. Interviewees reported that resources within HEIs dedicated specifically to managing Athena SWAN, both at institutional and departmental/school level have continued to expand (e.g. institutional Champions, department/school Champions in an increased number and range of departments/schools, and dedicated Athena SWAN officers).

*'Then more recently the school of medicine has developed its own [office and staff] for gender-equality issues.'* (Female Senior Lecturer)

*'One of our pro-vice-chancellors is the university Athena SWAN Champion.'* (Female Senior Lecturer)

An area that departmental/school staff have found challenging is acquiring data in order to submit their application and also to investigate gender-equality issues. In most cases new procedures have been adopted for both data collection and analysis. More experienced HEIs have become adept at planning ahead to ensure that the required data is in place before departments begin their application process.

*'Through our steering group we look for who's going to be applying for renewal in the next six months and indeed the next year and we will set dates for data to be provided to the schools by the planning office or by HR.'* (Chair, Athena SWAN University Committee)

*'I know at some universities they're actually hiring people, for example a support person to help different schools write these reports, and I think that's a very good idea.'* (Athena SWAN Champion)

In recognition of the support that departments need to develop their application one HEI has developed an Athena SWAN guide for all departments in their institution in an attempt to minimise the burden on departments wishing to apply for an award.

In some cases departments have also made the decision to allocate additional resources to supporting Athena SWAN.

*'In the gender-equality office we've implemented schemes like work shadowing the women's early career academic network, some things you will have heard about from other staff, so I've asked for an administrator to help with this and the school has given me an administrator at grade 5 clerical level paid for by the school two days a week. So the commitment at head of school level and school management level is excellent, they're behind this because they believe in it and they want to be leading in gender equality.'* (Athena SWAN Champion)

Another way in which departments have dedicated human resource to Athena SWAN is through the formation of sub-groups to deal with the Athena SWAN action plans.

*'Now we've divided into more sub-groups because essentially I think if you just have the whole self-assessment team all addressing all the actions you just have sort of confusion and inaction. So we've tried to break things up, so for example, we've got a group who are going to try to engage staff more in feedback so they will for example ask people would they like to table things for the agenda for the next self-assessment meeting. They'll make sure that people are more aware of where the minutes are on the shared drive, they'll attempt to consult people individually and confidentially but they'll also try and create some formal feedback mechanisms.'* (Champion Biological Sciences)

Another clear indicator of the permeation of Athena SWAN within some HEIs is that self-assessment team and champion duties are incorporated into the workload model thus indicating the importance of the duties.

*'This [the self-assessment team] is one of the committee's that's in the workload model, so sitting and working on it is officially recognised as working for the school.'* (Athena SWAN Champion)

*'They do get an allocation yes, we've made that very plain to the schools. All our schools have workload models which vary quite a bit in the way they're treated in schools, but all of them know the SWAN Champion is an important job and it should be reflected as such in the work. We don't go into particular school models and say how much time or points particular individuals have and compare them, but we would certainly be aware of a case for example if a SWAN Champion came and said the amount of work is much more than is being allocated in the school workload model and if they weren't getting anywhere in the school we would take those sort of issues up with the head of school.'* (Chair, University Athena SWAN Committee)

## **Collaborations and networks**

Engagement within the Athena SWAN process has resulted in the initiation of new and strengthening/re-invigoration of existing networks and collaborations both within

and beyond individual HEIs. Examples of external networks are the regional networks that have developed whereby HEIs involved in Athena SWAN come together to share best practice and support each other in submissions, for example. Additionally some HEIs have created links with other HEIs beyond their region in order to share their learning about Athena SWAN and about gender equality.

Within HEIs there were also examples of an initiation or re-invigoration of networks designed to link women with other women, which were perceived by interviewees to be particularly valuable.

*'So we go out and the minute we come together as a group we all felt kind of stronger and more vocal about these issues. And what's clear is that every one of us felt the same. And if we hadn't actually talked to each other, what I felt was isolated.'* (Female Professor)

*'I mean actually the best thing that came from our leadership course was the mentoring, I got mentoring from the director of IT here, who's a woman. And it was you know, at that point I was feeling a bit kind of miserable and actually she just gave me a kick up the backside and said just stop moaning, if you want these things, go and get them. And instead, I had been waiting for people to say ... Yeah, you know actually we've noticed you're quite good at this, how about you, we think you could do that .... And I was sitting back .... She said well did you ask for it, you know did you put yourself up for head of school when they were interviewing? ... And I'm like, well I didn't feel I had to. And she was like well of course you have to! ... I walked out and I remember thinking, you know, these are going to be awful ... and then she said I think you and I need to talk more, so I'm going to see you every month, would you like to be seen every month? ... And we did, and we met and we talked ... And she was ... And actually I just needed someone to kick my backside, say just go and fight for it ... but it is very hard to do that.'* (Female Professor)

Other links were described by interviewees as being created in order or to promote work that would enhance greater gender equality. The women professors' groups are an example of such networks found in a number of HEIs.

Another example of linking together to promote gender equality was two departments linking in order to address challenges that impacted on gender issues. An example of this was one department struggled to achieve female representation on interview panels because there were so few women in the department. This issue was addressed by linking with another department in the HEI who struggled to find male representatives in a female-dominated department in order to swap representatives.

### **Revisions to existing processes and procedures to enhance greater equality**

A number of issues were identified by case-study HEIs that were considered to contribute to gender inequality and, therefore, HEIs revised their existing processes and procedures in order to enhance greater gender equality. An example of such an issue was the lack of equality within promotion applications. Ensuring greater gender equality in promotion processes was seen by many interviewees as being an important issue to be addressed within HEIs.

HEIs have tackled this issue in a number of ways, including promotion criteria being made clearer and more visible. Another change intended to make the process of

gaining promotion more equitable in the longer term being considered at one HEI included staff appraisers being more proactive in encouraging women to go for promotion (e.g. including a question about promotion plans on the annual review form). Ensuring that part-time workers were not disadvantaged in promotion was also another way of promoting greater equality.

*'The other thing that's been very helpful with Athena SWAN is changing, not changing but clarifying, that in the promotions process women who are working on flexible contracts don't have to wait for longer before they can apply and can be considered for promotion [after the same time in post] as women who are here full time.'* (Athena SWAN Champion)

It was recognised by a number of interviewees that staff development and training opportunities were useful in trying to equip staff with both the skills and opportunities to progress within HEIs. Some examples of the opportunities that were offered on a regular basis (usually annually) and therefore had become sustainable within HEIs were:

- UKRC Women in Leadership training
- sessions provided for people early in their careers about what is required for advancement
- invitations to attend regional network events

Interviewees reported that gender equality in representation on all decision-making groups was paramount to ensuring the permeation of Athena SWAN practices within HEIs. In some instances equal gender representation was difficult to achieve, but it was recognised that this was desirable in all decision-making groups.

*'We also have an independent chairperson present at all of our vivas so if the internal and the external are both male and have to be by subject area and merit, we will insist that we have female chairperson, whether or not it's a male or a female candidate, just to set a balance to the room.'* (Chair of Department)

*'I think what we've seen over the last five years is the more senior positions, there has been an evening out of the senior positions with more females moving into them and certainly when you look at the younger end of the spectrum of staff there's a more even balance.'* (Male PhD Student)



### 6.3 The permeation, quality and longevity of engagement with the Athena SWAN Charter in participating institutions

#### *Summary of key findings – permeation*

- The permeation, quality and longevity of engagement with the Athena SWAN Charter was demonstrated by HEIs' commitment to renewing their awards and to expand the reach of Athena SWAN to an increasing number of departments.
- The competitive context that HEIs operate within means that HEIs value ways to demonstrate their success and achievements both internally and externally, and Athena SWAN is regarded as a useful vehicle for promoting the gender-equality achievements of HEIs and departments within the HEIs.
- Athena SWAN provides HEIs with an opportunity to share good practice across the HEI and, in some cases, this impact has gone beyond STEM departments.

The permeation, quality and longevity of engagement with the Athena SWAN Charter in participating institutions is perhaps best demonstrated by the HEIs' commitment to renewing their awards and by continuing to expand the reach of Athena SWAN to an increasing number of departments. Athena SWAN provides an impetus and rationale to bring together existing good practice that happens within HEIs and also provides an opportunity to involve other departments where gender-equality work may be less well established.

*'While we had pockets of good practice everywhere in the university, our action plan consolidated that and brought it all in one place and implemented it throughout the university.'* (Athena SWAN Champion)

*'It has certainly alerted them to the male-dominated nature of the university and has made them actually quite determined to change that ... We have 20 schools. Six or seven years ago we had one female head of school, now we have five female heads of school and a couple of those schools had female heads who went out to other places and were replaced by female heads, so it's becoming sustainable.'* (Athena SWAN Champion)

The competitive context that HEIs operate within means that they value ways to demonstrate their success and achievements and Athena SWAN is regarded as a useful vehicle for this. Some interviewees noted that involvement with Athena SWAN provided a number of positive opportunities to celebrate gender-equality work and keep the achievement within the public domain. As the HEIs apply for new awards and have awards renewed there are numerous possibilities to create news items to share and keep gender equality on the agenda and keep it visible both internally within the HEI and beyond.

*'It's also on all our communications. It also went on the webpage, so every time a school achieved an award, we'll have that and have a news article that goes on the web.'* (Athena SWAN Champion)

*'The change is happening. People have started to see the benefit of the award and wanting to use it as a catalyst for change and, culture change and also ... communicating the good work that we've got.'* (Athena SWAN Champion)

Interviewees were able to suggest a number of ways in which the permeation of the impact of Athena SWAN could be identified within their HEI at both school and institutional level.

*'Has it affected at school level? It definitely has highlighted the fact that women's promotional opportunities needed to be attended to and need probably a little bit of additional nurturing than would normally be the case .... What we find is that women are applying for promotions, not quite at the same rate as men, but nonetheless that rate is increasing, and they are getting their promotion at a greater rate than men, a greater proportion of them are being promoted. So it suggests that encouraging their promotion ambitions, their career ambitions, at school level, because of Athena SWAN, is actually having a beneficial effect. Now, for example, we have moved from, let say, about ten years ago, 11% of our professors were female and today 22% of our professors are female, and that, I think, has significantly come about through Athena SWAN working at school level.'* (Athena SWAN Champion)

*'From the stats we've doubled our percentage of women professors in ten years .... We've far more women heads of school than we had in the past so I think when I came we had one out of 21 and now I think we have five out of 20. We have, again part in terms of thinking about promotions, we have been very active in making sure that women get on to some of the very senior committees in the university so the deans typically would chair some of the senior cross-university committees and we have worked hard over the last three years in making sure that we're getting women on to those, so some of the percentages there have moved from being 15–20% female to being 50–55% female and because they're senior committees there's a lot of responsibility on them, again women can use those in terms of promotions and so on. We have a kind of structure in the university that in schools the school management board is composed of the head of school, the school manager and then directors of education and research, you've probably heard talk about. Again over the last five or six years we've increased quite a bit the number of females who are directors of education or research.'* (Chair, University Athena SWAN Committee)

There was some evidence that the impact of Athena SWAN was permeating beyond the STEMM departments. In one HEI, for example, representatives from non-STEMM departments had attended working group meetings at some institutions and consequently they were beginning to introduce some Athena SWAN policies into their schools.

*'Yes, it [the working group] has been up until July in fact. It was more or less every month, and that's a representative from each STEMM department. We've had a couple of non-STEMM departments have also been involved.'* (Female, Equality and Diversity Director)

## 6.4 The impact of the Athena SWAN Charter in changing the culture and attitudes across the participating HEIs to address inequality and unequal representation

### *Summary of key findings – changing culture and attitudes*

- Interviewees from all HEIs involved with Athena SWAN identified some changes that indicated a cultural change within the HEI. There was variation in both the nature and the extent of the changes between HEIs.
- The visible representation of more women in key positions and senior roles were changes reported as being most visible within HEIs.
- Interviewees within different HEIs prioritised different indicators as evidence of progress made towards culture change.
- Some interviewees reported that they had witnessed positive changes within their HEIs in terms of staff recruitment as a result of being involved with Athena SWAN.

Interviewees from all HEIs involved with Athena SWAN were able to identify some changes that they were aware of that indicated cultural change within the HEI, although there was variation in both the nature and the extent of the changes between HEIs. The visible representation of more equal women in key positions and senior roles were changes that were reported as being most visible within HEIs.

*'Awareness. Increased insight, some concrete policies, which are now more obvious.'* (Female Professor)

*'Well I mean concrete changes, women on the senior management team. We have a management team now, we have women on it ... there are less women on the ethics committee. There are still no women on the research committee.'* (Female Professor)

*'I think if you were to speak to people who've been here ten years and they can see that there's way more women than there were before, then clearly there's been a long-term culture change and I think it's been accelerated over the last three years for sure.'* (Athena Champion Biological Sciences)

*'When I started in 2008 I felt, well the only place that everybody met as a group was at the school board meetings and it felt very male dominated, the ratio has changed.'* (Female Academic)

*'It has certainly alerted them to the male-dominated nature of the university and has made them actually quite determined to change that ... We have 20 schools, six or seven years ago we had one female head of school, now we have five female heads of school and a couple of those schools had female heads who went out to other places and were replaced by female heads, so it's becoming sustainable.'* (Athena SWAN Champion)

Some interviewees reported that they had noticed other colleagues paying attention to gender-equality issues who may previously not have done so. For these

interviewees such experiences provided clear evidence that cultural change was apparent and that this shift in attitudes was impacting on addressing inequality and unequal representation.

*'This is the type of difference it does make ... because I'm director of finance I have to sign off the costings .... And I went in to see the director of postgraduates after they had this interview process. They had counted up the gender, but it was 50/50. But they would never have noticed the gender before, but he did now justify to me the gender. And that would never have happened .... So I think people notice now. People notice gender where before they may never have.'* (Female Professor)

*'But now [since Athena SWAN] ... it would make people stop in their tracks "Hold on a minute, that doesn't seem quite right" that that would be an automatic expectation, that if someone has children and, obviously the women are the ones who will go off on maternity leave and have their career interrupted, that that should necessarily prolong their advancement and make it much more protracted than it would otherwise be. So I think there's more questioning of that and going "That doesn't seem quite right".'* (Female Senior Lecturer)

Interviewees reported that the cultural changes that had resulted from involvement with Athena SWAN were visible within the quantitative data collated by HEIs as part of their ongoing commitment to delivering the Athena SWAN action plans.

*'We have our staff survey that goes out as part of our positive working environment. We do look at feedback from schools and we ... feedback to heads of schools and you could see that some of the feedback started to show that there is culture change. I do staff training, mandatory training to all staff. I can see the feedback and the discussions that I have in my training that shows culture change. Also we look at statistics, so when we're doing Athena SWAN, we look at statistics and the change in that for example, in recruitment, retention, progression, of women and that's quite visible.'* (Athena SWAN Champion)

Interviewees within different HEIs necessarily prioritised different indicators as evidence of progress made towards changing culture depending on their action-plan priorities. The following interviewee believed that their success in delivering cultural change was evidenced by having a consistent gender ratio at all grades within the department, for example.

*'For academic staff in biology across the different grades we looked flat and I thought that was looking very good. So my perception is, and the data seemed to support that, that the gender ratios across the different levels don't show much tailing off at senior grades.'* (Female Professor, also Athena SWAN Champion)

Some interviewees also reported that they felt they had witnessed positive changes within their HEIs in terms of staff recruitment as a result of being involved with Athena SWAN.

*'It's been a very good recruitment tool for us as well. Women see that [this HEI] has an award, that schools have an award, that we're taking gender issues seriously and so we find again that's certainly helped us*

*when we have conversations with individuals. They know they're coming to schools where there's a decent work-life balance, or at least, where people are trying to be serious about making sure it's a good work-life balance.'* (Chair, University Athena SWAN Committee)

## **6.5 Evidence of differences in practice and outcomes related to the career opportunities of women in STEMM between HEIs that are members of Athena SWAN and those that are not**

This sub-section contrasts the findings from the three case-study HEIs that were not, at the time of the visit, involved with Athena SWAN with the experiences of the case studies that held Athena SWAN awards.

### *Summary of key findings – similarities and differences between HEIs involved, and not involved, in Athena SWAN*

#### **Similarities**

- Those institutions not involved in Athena SWAN reported being involved in some other family-friendly or gender-equality initiatives.
- Some challenges identified by non-Athena SWAN participants were similar to those identified by those holding an award and included a long-working hours culture and a lack of flexible arrangements for maternity returners and fewer women on decision-making committees.
- For non-Athena SWAN holders, low confidence to apply for promotion or for increments was considered a barrier to progress.
- Some non-Athena Institutions, particularly those with a strong national reputation, were trying hard to address issues relating to gender equality.

#### **Differences**

- Some participants in non-Athena SWAN HEIs expressed feeling that it was impossible to change existing practice, in particular the long-working hours culture.
- There was a lack of formal policies in place to assist heads of departments, for example with regard to staff returning from maternity leave.
- Staff openly admitted they had sacrificed having children for their careers, which was not openly stated in Athena SWAN HEIs.
- There was a feeling that the situation was getting worse (in terms of the representation of women), which was not the case in Athena SWAN HEIs.

Those institutions not involved in Athena SWAN reported being involved in some other family-friendly or gender-equality initiatives.

*'HR is involved in the Two Ticks applications ... awards for best employers for families ... and paying attention to flexible working conditions ... [the university] has its own nursery which is about two minutes walk.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

Interviewees within two non-Athena SWAN institutions reported a number of challenges faced by staff that were similar to those that the other case-study HEIs reported as being areas of focus for them within their Athena SWAN action plans. An example of this was interviewees who considered their environment to be collegial but reported that the research-driven environment led to a long-working hours culture and excessive pressure on staff.

*'As a department we are generally collegial... the school itself is quite output driven, research driven ... which leads to pressure on our working and practices .... I think it personally has led to a succession of long working hours yes, and being available at strange and not normal times.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

*'The practice of spending long hours is kind of endemic .... There's a whole... I think the university has quite fair promotion, official procedures in practice but, if you're not making the hours it's hard.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

A lack of flexible arrangements for maternity returners and few women on decision-making committees were also identified as challenges within the non-Athena SWAN institutions.

*'Formally little ... I must say, I mean we've only had the first case of maternity leave in a long time, at least as far as I know, maternity leave this summer. As head of department ... I started informally implementing with her a reduced teaching load and I asked HR if there was any formal support ... and it was not available. Formally the [university] is very weak, we're learning as a department.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

*'When asked about women on senior committees in the department, it was reported that many decisions in the department were made by a professorial committee ... all the women are quite junior ... it's unfortunate because it is a committee which has as its major role advising on promotions.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

The long-working hours culture combined with lack of flexibility were said to have made it difficult for academics to combine family life with a successful academic career.

*'Actually my partner is an academic as well and we have no children, so it's surprising quite a number of my colleagues are in a similar situation, it's the way it's solved is by not having them, traditional family.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

*'I mean when I was doing my PhD and shortly after that I saw a lot more women around me than I have the feeling that I am now, junior positions,*

*I think it's going backwards.... I think the hardening of all academic environments has been a major influence on that.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

Similarly, particularly in departments not holding an Athena SWAN award, confidence to come forward for promotion or for additional increments and the perceptions of assertive women who do put themselves forward was considered a further barrier to progress.

*'And confidence, often it's a confidence thing ... and the pay inequality is probably a reflection of the confidence thing that women tend not to ask for more money ... and if we do people don't like us, I mean the scientific analysis of the difference in pay shows that when men ask for more money they're seen in a positive light as being assertive, that's not how women are viewed. So we know that, we know that by being assertive we're not going to be perceived well, so that is an issue.'* (Female Academic, Non-Athena SWAN Institution)

*'I think in this room somebody says that if a man sees a job advertised and he fits 20% of the job specs, he says "Right, I can go for that", whereas a woman fits 80% and says "Well obviously because of that 20% I don't fit, I shouldn't do it, even apply".* (Female Postdoctoral Researcher, Non-Athena SWAN Institution)

When interviewees in non-Athena SWAN award-holding departments were asked about Athena SWAN there were different reactions. For example, one interviewee knew very little about Athena SWAN, but was interested in the scheme, whilst another interviewee felt that the scheme was not practical for a small department such as mathematics.

*'There is also a feeling in the maths department that kind of the Athena SWAN procedure is quite bureaucratic and maths departments are in general small ... I mean until recently we were a department of about 12. We had no teaching committee ... For a small department with a small number of PhD students, which maths generally has compared to engineering or physics, certain aspects are just too much, you ask too much from us, too much of a burden.'* (Male Professor and Head of Department, Non-Athena SWAN Institution)

*'I had heard of it [Athena SWAN] but I didn't know much about it ... it's very good to be made more aware of it.'* (Male Senior University Management, Non-Athena SWAN Institution)

Some non-Athena SWAN institutions, particularly those with a strong national reputation, were trying hard to address issues relating to gender equality and some valuable processes were being implemented such as pay and promotion audits. The processes/policies however were not formalised across the university to the same extent, as was evident in institutions with Athena SWAN awards and therefore, outcomes were variable and some senior staff did not feel there were policies in place to support actions that they would like to take.

*'We're doing a big audit of gender equality when it comes to pay and promotion at the moment, that the secretary of the school has been leading and what we're committed to doing there is building up a*

*database that's reliable and then sharing it with faculty.'* (Male Senior University Management, Non-Athena SWAN Institution)

*'The question is to what extent are pay differentials really a function of subjects and to what extent are they disguising gender issues and possibly gender discrimination, so we need to get to grips with this urgently.'* (Male Senior University Management, Non-Athena SWAN Institution)

When comparing her present institution to one she had worked at previously, which did have an Athena SWAN award, a head of school stated:

*'You had a group of very, very strong female academics [at my previous Athena SWAN institution] who forced a change in culture. You have a significant portion of female members of staff who brought those issues to the fore very, very early on.'* (Head of School, Non-Athena SWAN Institution)

The interviewee, a female head of school, reported concerns that Athena SWAN was simply a badge and did not necessarily reflect culture change. However, this perception was not voiced by any interviewees within Athena SWAN award-holding departments.

*'The Athena SWAN has become such a badge you know [...] I worry that there's a certain [...] counter-productive because everybody wants to get the badge but we don't actually change the culture'.* (Head of School, Non-Athena SWAN Institution)

Similarly there was a cynical attitude expressed by a male professor at the no award HEI towards Athena SWAN which was not apparent in award-holding departments.

*'I think really the only, to be deeply cynical, I think the only reason the university is now considering it is because the research councils are saying if you don't engage with Athena SWAN then that may affect whether or not we give you money.'* (Male Professor, Non-Athena SWAN Institution)

In departments that did not have an Athena SWAN award there seemed almost to be a feeling of helplessness amongst some interviewees, a feeling that it was impossible to change existing practice, in particular the long-working hours culture, and that even perhaps one should not be trying to attempt to change the existing situation.

*'To me I can hardly see wherever to fit, not the feminine life, but just a life, but it has been like that for me since when I started doing research because the postdoc market is very competitive so if you work 12 hours per day, including all the weekends completely non-stop, I don't see any room for anything else, having said that I feel much privileged that I can do what I like.'* (Female Professor, Non-Athena SWAN Institution)

*'Anything that exists anything else beyond work, impossible. It is for me, maybe I'm not extremely good at optimising time and things like that, but I mean I really keep working until midnight and as in the worst days when I was hunting for a postdoc.'* (Female Academic, Non-Athena SWAN Institution)



The long-working hours culture was particularly challenging for participants who were parents who again did not seem to feel that change would occur within their institution.

*'I get up most days at four or five and I do about three hours of work before my children get up and then I'm usually at work by nine. My husband is a stay-at-home dad. So I get home about seven so that gives me about ten hours, 10–11 hours, and it's not enough, and I really struggle to give up my weekends as well ... if I've a deadline I give up everything and ... my family just has to wait. I wasn't at my daughter's first day of school, I was at a meeting. I worry that down the road I will regret some of this, but having children, for the first time in my life means I go home and I turn off work.'* (Female Academic, Non-Athena SWAN Institution)

In some departments without an Athena SWAN award it was perceived that over the last five years, things had got worse, or, at minimum, have remained unchanged, which was not an opinion voiced by interviewees in Athena SWAN departments.

*'So I just think it is really difficult and I think the change in REF has been a game changer. It's got worse, much worse.'* (Female Academic, Non-Athena SWAN Institution)

*'It's not only that the research has got more competitive, it's that the teaching and admin have become far more irritating and burdensome. We used to do things in perhaps a less professional way but it got done quickly and without any stress, and now everything you do is stressful, even finding the right room to give your lecture is a stressful time-consuming process, whereas when things were done more locally in a more informal way with more personal contact with administrators things just ran much more smoothly. Now it's all centralised and bureaucratic and you fill in endless forms and you have to write endless reports on everything you do and it just all takes far longer, at the same time as they're increasing pressure to be productive in research.'* (Female Academic, Non-Athena SWAN Institution)

## **6.6 Progress evidenced by institutions in their Athena SWAN submissions and the experiences of female staff working in STEMM**

### **6.6.1 Overview**

Whilst many interviewees were able to articulate a number of positive changes arising from Athena SWAN, which have been reflected in women's working experiences, some interviewees also alluded to the complexity and ingrained nature of the challenges that women continue to face, despite the progress that has been made as a result of engaging in Athena SWAN. This is perhaps unsurprising given the assertion made by Bagilhole *et al.* (2007) that:

*'There is a complex interplay of individualised, sexualised and gendered cultures which combine to shape women's career opportunities.'* (page iv)

Some of these experiences are described within this sub-section under the headings of individualised culture, sexualised culture and single-gendered culture recognising that there is considerable overlap between the issues.

## 6.6.2 *Individualised culture*

### *Summary of key findings - Individualised Culture*

- Senior interviewees and champions were clear that Athena SWAN was aimed at ensuring equality for all within STEMM departments, but some male staff were concerned that promoting better equality for women may impact negatively on the experiences of men
- Some of those interviewed described school policies which they felt favoured women. A small minority reported that females were sometimes sceptical about the outcomes of Athena Swan initiatives and this was attributed to a lack of understanding about Athena SWAN

Bagilhole *et al.* (2007) argue that SET organisations are increasingly competitive and individualised and this has resulted in equality being promoted in terms of ‘business need’ rather than on the basis of ‘inclusive culture’. As a result, within these organisations economic efficiency has been prioritised over employee well-being. They argue that HEI cultures replicate the commercial world and that women are disadvantaged by the increasing dependence on workplace relationships (networks) and by the focus on competition.

Among the interviewees, a number of women reported being denied the same organisational opportunities as their male counterparts.

*‘One of the things when I came here was that nothing I’d done before seemed relevant to anything I could do here. And you know I had people saying well you have to earn your stripes to get to do jobs and you know I, like no one believes I could lead until I did the leadership course here.’  
(Female Professor)*

*‘In that environment I was you know mentored, supported, given jobs, even though I was probably too early to have them, and told go off and make this happen. Here, I’ve had to fight for every option I’ve had ....’  
(Female Professor)*

Interestingly one interviewee described how they believed that one of the factors underpinning the success of Athena SWAN was that it was rooted in a competitive environment.

*‘I think the Athena SWAN has really raised publicity and awareness and it impacts the student recruitment, it impacts staff recruitment and that cannot be over-estimated in terms of when you give people, particularly academics who are competitive by nature, something to shoot for, they’re all going to shoot for it, and so I think that you can’t under-estimate the impact that it has culturally and that it does make a difference.’ (Female Lecturer)*

Senior interviewees and champions were very clear in interviews that Athena SWAN was aimed at ensuring equality for all within STEMM departments, as noted by the following interviewee.

*'We wanted to be seen as having a culture that was friendly to both males and females in their career progressions.'* (Athena SWAN Department Champion)

However, an issue that was raised by some interviewees was that some male staff were concerned that by promoting better equality for women, this may impact negatively on the experiences of men.

*'I certainly benefit from flexible hours, but I would say that it very much targets women, as it's supposed to, but I think that it does leave men out of a number of discussions that they could usefully be a part of, so the best example I can think of is paternity leavers, maternity leave.'* (Male Lecturer)

*'Yes, in terms of certainly the senior women in the school, it's given them a voice and there's more females in power I guess, on the other hand it's actually put male staff off, actually we feel a wee bit threatened by it.'* (Male Professor)

Some of those interviewed described school policies which they felt favoured women. For example, one male academic stated:

*'What happened here was new lecturers who were female were co-opted on to the school management board which is, at least in theory, the decision-making body of the school and there was no consideration given with regard to new male lecturers, so this to me looked a bit like affirmative action ... [...] Now I have absolutely no problem with that being done but I do think that this opportunity should be open to all members of staff regardless of gender.'* (Male Academic)

Another male interviewee stated:

*'Any mentoring for men is unofficial, but it's official for women.'* (Male Academic)

This interviewee went on to describe a number of school policies that he felt had led to positive policy changes for females but he added that such policies were not necessarily fair.

*'Clear benefits to them with respect to extended maternity leave, with respect to consideration given to their research careers, when they start back, particularly by allowing them not to teach for a period of, I believe it's six months, that's a clear benefit, but at the same time that has impacted negatively upon some male members of staff because somebody has to pick up the slack.'* (Male Academic)

Another male explained how he felt his personal life had 'suffered' as a result of his focus on his career.

*'I don't mind sharing with this group that the girl I was seeing at the time dumped me because she was sick of me not being available, so these*

*are not family-friendly policies for some members of staff because like [...] I'm not married, I haven't had any children, it's something I've not had the opportunity to do because I've been concentrating on my career for a number of years. These initiatives are actually having a negative impact on my opportunity to have a family life and I do feel very strongly about this.'* (Male Academic)

However, male interviewees were not necessarily against family-friendly policies. Their concern was more about parity in work load.

*'One of the case studies involved a male member of staff who was allowed to effectively, well not take a sabbatical, but take time off to go and start a family. He wasn't covered. That position wasn't covered, now he did a lot of teaching, particularly field courses, things that are a lot of hands-on time. Other people had to pick up the slack [...] I mean he gave lectures on my module which I just had to take up the slack on, again had this been better organised or had been funds available we could have worked round this in a lot better way.'* (Male Academic)

A further example was provided where some policies related to equality were actually women specific.

*'[there is mentoring all the way up to professorial level and above for female members of staff and I don't think there's an equivalent there for male members of staff.'* (Male Academic)

Reports of backlash were not confined to males though. A small minority of interviewees reported that females were sometimes sceptical about the outcomes of Athena SWAN initiatives and this was attributed to a lack of understanding by women who are sceptical about the possibilities of change. A female postdoctoral researcher stated:

*'We've also got an awful lot of negative females who just do this "Oh it makes no difference, they're not going to change anything anyway", I don't think they realise that the actual process itself is change and it's bringing about change and maybe if they knew more about it.'* (Female Postdoctoral Researcher)

Clear communication about the aims and ethos of Athena SWAN was considered to be paramount in addressing the concerns of both women and men.

*'The danger is positive discrimination, they're getting overly focused on women and women's issues, it needs to focus on equality and improving work-life balance for everyone, and I think it does, but it needs to be careful, that's how I'm feeling.'* (Male Lecturer)

*'We've actually avoided doing this so that it's just for women, because we felt this [male backlash] could be an issue, so if there's been mentorship has been picked out as, it's not been mentorship for women, it's been mentorship for staff, and we've had quite a few discussions about whether we should flag up seminars, specifically invite women to give Athena SWAN seminars, and we don't actually want to do that. If we were going to have an Athena SWAN badged activity it would be for everybody, so we have thought about that quite carefully and hopefully*

*all staff realise that what we're doing is benefiting everybody, but I'm aware that [male backlash] can be an issue.'* (Female Professor also Athena SWAN Champion)

Another important approach to addressing concerns about Athena SWAN being too female focused was for men to share their experiences of how Athena SWAN had benefited their experiences.

*'I mean there have been some good things, like some of the senior male staff have sort of made it sort of public, sort of not exactly publicised but made people aware that they're going on paternity leave. And I think there's things like that which sometimes you know men feel like they can't do that kind of thing. And so by them setting an example, saying look we're going on paternity leave, that's the kind of thing that I think is helpful.'* (Male Research Fellow)

### 6.6.3 Sexualised culture

#### *Summary of key findings – sexualised culture*

- Equality of representation on committees continued to present challenges with some HEIs participants also suggesting that women's voices were less likely to be heard than men's.
- A number of interviewees expressed a real, or implied, belief that women need to temper their behaviour and speech because they believed that male colleagues will respond unfavourably.

Bagilhole *et al.* (2007) also argue that often women are seen as women first and professionals second by male colleagues and additionally that successful female professionals may not be perceived to be feminine. They suggest that there are strong and persistent norms within STEM that undermine women's professional status and women do not challenge this in order not to be further alienated. Ironically the sexualisation and objectification of women can mean women are both invisible (as successful professionals) and visible (as they are in a minority). Some female interviewees indicated that despite the progress that has been made as a result of Athena SWAN they still experience the workplace differently to male colleagues as suggested by this interviewee:

*'I mean it's small things, for meetings that it is merely assumed that the female will organise the meeting or the catering, they're just unconscious things that I don't think they're even realising that they're doing.'* (Female Senior Lecturer)

Despite being a clear aim of Athena SWAN equality of representation on committees continued to present challenges with some HEIs, particularly in terms of the roles that women played when they were represented on committees.

*'There are no women on our research committee in this school, despite the fact that we have an Athena SWAN process. So it comes back to this same issue which is about if you have aspirations to develop teaching or aspirations to develop you know HR, you know, development of people, I think you may have more opportunity than if you wish to develop you*

*know finance, research, strategic leadership planning, because I don't think that people think that women do that.'* (Female Professor)

There were also comments from some of those interviewed that suggested that women's voices were less likely to be heard than men's.

*'You know something I don't understand is, you know, I suggest things the school should do and then there's a huge hoo ha about that and then six months later we do those. Yet I don't get, no one ever notices that actually I suggested these things to start with.'* (Female Professor)

An issue that was spoken about by a number of interviewees in describing their experiences in male-dominated environments was the real, or implied, belief that women need to temper their behaviour and speech because they believe that male colleagues will respond negatively. An example of this was a professor who was head of her research group who was the only female in the group. She reported being aware that she must conduct herself in a certain way to ensure that her male colleagues did not react unfavourably because she is female.

Having an Athena SWAN award was reported to facilitate discussion of factors affecting female members of staff and gave female staff the confidence to highlight issues they may not have raised previously. A female researcher stated:

*'Having the SWAN award and the Charter [...] has given a structure to that and given a way of being able to raise issues that maybe in the past you would have been a bit wary of raising, that you would have thought "Am I just going to be seen as a complaining female?" sort of thing.'* (Female Postdoctoral Researcher)

However other comments suggested that a number of female interviewees also felt conflicted about being identified as a feminist.

*'I mean I've encountered people who've said "Oh well you don't want to be termed as a feminist" and I was actually told that, and culturally it was perceived as quite a bad thing, and I was given that advice by a mentor like "Oh well whatever you do you don't really want, maybe take that off your CV because you don't want to be thought of as a feminist" and I thought "Really, wow, ok".'* (Female Postdoctoral Researcher)

It was also suggested that Athena SWAN had impacted on how individual women think about themselves, their ambitions and their careers. A female professor described a change in thinking among women within her school.

*'...the university wrote out to us as heads of schools saying "Would you like to nominate anyone for Aurora?" (a leadership programme). It should really be someone who's at least senior lecturer or reader level. ... I wrote out to all (senior lecturers and readers) and ... two out of four or five have already said yes, and that I think is very interesting because I'm not sure that we would have seen that in the past. I mean if I was offered a leadership course in the past, ... I have been "No, I don't want to waste my time, I've better things to do, I'm very busy".'* (Female Professor)

The same professor described the impact on her own career, attributing her appointment as Head of School to Athena SWAN :

*'I mean me being head of school definitely has, I mean let me tell you without a doubt I became head of school because of Athena SWAN and that's literally the case. No other way, I mean it's a very hard job being head of school, it involves enormous amounts of self-sacrifice of my well-being, like I'm ill like everyone else, I mean I'm not really ill to be honest ... but the stress levels, they're hard to cope with and it's kind of, you know what it's like it can leave you feeling a bit like "Why do I do this?" I did feel like giving up in the first three months but then I couldn't have put my name forward if I was going to chicken out that easily, so you have to be stubborn at that kind of stuff. So because of Athena SWAN I put myself forward to be head of school.'* (Female Professor)

#### 6.6.4 Single-gendered culture

##### *Summary of key findings – Single-gendered culture*

- Some disciplines and subject areas continue to be dominated by one gender and where this is the case both women and men can feel isolated even in HEIs where Athena SWAN has been well received and is considered to be successful
- Where individuals feel isolated as a result of single-gendered working groups they can feel that the responsibility of promoting gender equality is overwhelming

Bagilhole et al. (2007) argue that the dominant SET culture is long-working, task or project oriented work and the expectation of total availability. Failing to meet these expectations is seen as a lack of commitment and this failure is more significant for women who typically have more domestic responsibilities than men. Significantly women can reinforce the masculine norms as they assimilate themselves into occupational cultures. Despite the importance of networks in predominantly single-gendered cultures women can be excluded from professional and social networking opportunities but this exclusion is not always explicit. There was evidence that some women (and men) continue to feel isolated within the workplace as a result of working in single-gendered groups.

Clearly there were certain disciplines which continue to be heavily dominated by one gender despite the progress of Athena SWAN and this creates problems for individuals as the following quotes indicate:

*'The issue of isolation is very important, so you know there's a possibility that I might move to (another HEI), and one of the attractions with that, there was lots of ... problems, but one of the attractions is that I could see lots and lots and lots of female senior role models that ... I could collaborate with, I could talk to, just go for a coffee.'* (Female Professor)

Where women are isolated they can feel exhausted or overwhelmed by the responsibility for implementing change that will promote equity:

*'I find it tiring constantly going in and having to you know fight my own battles ... I wouldn't have to do it (promote equity) if there were more senior women who were doing hard science and were there to fight alongside me.'* (Female Professor)

## **6.7 The suitability of Athena SWAN processes for use in complex and busy institutional environments**

### **6.7.1 The experience of HEIs in implementing the Athena SWAN Charter and awards process**

#### *Summary of findings – experience of HEIs in implementing the Athena SWAN Charter and awards process*

- Participants reported that both the process leading up to submission and the award itself were regarded as very valuable.
- Interviewees regarded the Athena SWAN awards process to be a challenging, resource-intensive process.
- Some interviewees raised the issue that there was not always enough clarity about the way in which data was required to be presented.
- Some interviewees reported that they found it difficult to document the progress made when applying for renewals.

Typically, although the process leading up to the award was considered arduous, both the process and the award itself were regarded as very valuable by interviewees.

*'So with regards to the bureaucratic process and the amount of what happened, it was very time consuming ... but it was very, very valuable.'* (Female Professor)

*'Achieving the award is a huge thing, in the sense of achievement and success. The process itself, I think it's quite motivating.'* (Athena SWAN Champion)

Understanding the concept of equality can be challenging and this was summarised by a female professor.

*'There is a lot of sort of topsy-turvy stuff like the school of nursing for example, they're very, very heavily female biased, so what are they trying to achieve? I mean equality would mean taking on more men, so there are weirdnesses about the whole SWAN thing, and it is quite hard to get your head around it.'* (Female Professor)

An Athena SWAN award was valued for a number of reasons, including:

- the link with funding
- it formalises and celebrates the good work achieved by the HEI



- it provides external validation for those outside the HEI, including potential new staff and students, that the institution takes equality and diversity seriously

This was summarised by an Athena SWAN Champion.

*'I thought it would be really worthwhile to get a recognition that would go on the web that staff would see or ... prospective staff and students, and realise the good work that we do that's not really communicated.'* (Athena SWAN Champion)

The same Champion though thought that a visit from ECU or a judging body on behalf of ECU would also be valuable.

*'I think they should maybe come out because some people can write a good document, but not in reality have a very good show on the ground, and when you come and speak to experienced students and staff they will tell you, if they're not happy with something people will let you know so I think that will be very useful.'* (Athena SWAN Champion)

Consistently interviewees regarded the Athena SWAN award process to be a challenging, resource-intensive process. The majority of interviewees believed that the process was challenging because it requires HEIs to collate, examine and analyse complex data that may be difficult to obtain, but that this process was invariably illuminating. It was suggested that if the process was less onerous it could undermine the value of undertaking the work.

*'The sheer bulk of information required is very onerous, particularly at the outset, so it's one of those things that adding each year to the existing database is ok, but if you've got to generate it from the outset, so the first sort of new system, the first time we put in for Gold was a huge amount of work and now we just need to keep updating information it's far less onerous. The other key to it was we got more resource put behind it by the head of department and by HR, they just realised that it wasn't something that an academic could do on their own. It needed support, so a combination of a lot of information being available centrally and having a member of staff and admin support staff to be doing this and collecting information and for all of the colleagues in the department to know that they were going to be asked for it, and we now have, I think there's now a mind-set in the department that they just know they're going to be asked for it, and they're going to be asked for data, and they're going to be asked for data split by gender, and I think staff just know now that they're going to be asked for it so they've got their own processes in place.'* (Female Professor also Athena SWAN Champion)

Some interviewees raised the issue that there was not always enough clarity about the way in which data within an award submission was required to be presented and suggested a template could be made available for presentation of data relevant to different issues.

*'I think it would be helpful, and we have had a discussion with ECU about this, it would be helpful if there were a master template for the presentation of the statistics. I think that would be really helpful because*

*it would mean that we could use one template for every submission, everything.'* (Athena SWAN Champion)

Some interviewees expressed concerns that some of the feedback from ECU on award submissions was inconsistent. By way of example, two departments in different HEIs had three attempts to get an award and reported that what they were praised for in the first submission, they were criticised for in the second. They were eventually awarded a Bronze Award on the third attempt. Interviewees were also concerned that such inconsistency potentially undermined the credibility of the process.

There were also concerns expressed that the criteria for awards were not necessarily consistent with a tougher requirement for re-submission, so that two HEIs with a Bronze Award can actually be at very different levels in terms of their equality and diversity work, which is potentially problematic.

A further concern was raised by some male academics that the process of applying for an Athena SWAN award detracted from other important research agendas and alienated some staff, particularly some men.

*'When I first arrived here four years ago with a flush of enthusiasm to be beginning a job as an academic, things seemed to be a little bit more laid back, things were run a lot more efficiently under the previous head of school, that's purely my opinion. It seems that under the current head of school the be all and end all of her tenure to date has been to obtain this [...] SWAN award and everything else has suffered badly because of that, it has damaged morale; I think its damaged collegiality.'* (Male Academic)

*'I can say from my experience, I'm a separate research cluster from the rest of these guys and many of us feel that our preparation for REF has been nowhere near as thorough as it could have been. Several people have said, to various degrees, that they think that it's because the head of school has taken her eye off the ball in terms of REF purely because she's been blinkered looking at this [...] SWAN award.'* (Male Academic)

Whilst some positive reflections on Athena SWAN were reported, concerns were also raised as to the sustainability of some areas.

*'The second thing that's good is the routine nature of it and the fact that awards have to be renewed. Now, as Athena SWAN becomes more and more popular whether there is the capacity to cope with renewing them every three years is something I think that needs to be looked at. Maybe renewed every five years or something like that might be something to be looked at and, in terms of our institution, I know that because all our SET schools now have awards that we are now in a cycle of application after application.'* (Athena SWAN Champion)

ECU was acknowledged as the main source of advice and guidance in putting an award submission together. Some interviewees felt that it was important to keep national-led group meetings with ECU taking the lead, in addition to the regional support.

*'The regional groupings that I've been to have been much more about peer support and sharing of experiences, whereas the central ones that I went to were, it's not that they were sort of telling us what to do, that's the wrong impression, but the information was flowing more in one direction, so I think the role of the different groups is different, I quite like the regional support.'* (Professor, Biology Department)

*'So the action plan has been developed with the self-assessment team and then we reflect on it and look to see what progress is being made at our regular meetings. So it was, and I suppose I'm thinking about what other activities we might do, I'll discuss at each of the meetings as well, so the group help decide what activities we might wish to focus on and then at our regular meetings we give feedback on where we are with it and then to think about new activities that we can add. And the most helpful meeting I went to was a meeting run by Athena SWAN London a few years ago where I happened to be sitting on a table with somebody who was involved with developing an action plan at that point and I found that very helpful, and I think some of that information was then available on the Athena website, but I think we'd have struggled a bit without that.'* (Athena SWAN Champion)

Some interviewees suggested that they found it difficult to document the progress made when applying for renewals, for example, one interviewee stated:

*'There's no space in the form where you can clearly say "Last time this was our action plan, this is what we've done and this is how we're moving forward", there's no clear space on the form or a word count to allow us to do that.'* (Athena SWAN Champion)

Other interviewees were keen to find out more about the criteria for an institutional Gold Award, which had not yet been provided.

*'We'd like the criteria for an institutional Gold, we've asked for that several times and we would have a realistic chance of being able to go for that given the work that's been done over the last 10–12 years.'* (Athena SWAN Champion)

Some interviewees suggested that it would be more useful to consider a shift in emphasis towards a change to a gender imbalance award.

*'I think if Athena SWAN could be seen as addressing imbalance for males and females that would make my job a lot easier with the folks who haven't bought in but are individually very supportive of women. If SWAN would be developed to address imbalance, for example the school of nursing where it's largely female, so their imbalance is the other way, I think we would have less hostility. Hostility is too strong a word, but less resistance to SWAN from people who are uncomfortable with positive affirmation, SWAN's about women but perhaps it could be about gender imbalance, which is largely about women, but not always.'* (Athena SWAN Champion)

## 6.8 Standing and health of the Athena SWAN Charter amongst comparative benchmarking/recognition schemes in the STEMM and equality and diversity fields

### *Summary of findings – standing and health of the Athena SWAN Charter*

- There were some very positive comments made by interviewees about the standing and health of the Athena SWAN charter, with the general perception that it was the most sought-after institutional award.
- Athena SWAN is regarded as being different to most awards in that it requires self-assessment of current position.

There were some very positive comments made by interviewees about the standing and health of the Athena SWAN charter.

*‘So we get a huge amount of goodwill from our political community and business and industry because of what we do and we’re able to use those individuals, there’s some very senior individual females out there, to come into the university and talk, talk to students, talk to staff. As I say we’ve been appointing more women, we’ve been promoting more women, the culture has changed, is changing, will change. We’re very proud of what we’ve done and what we know we’ve got a lot further to go and that we’re, as a university, completely committed. The pro-chancellors down to the vice-chancellor to the senior team and heads of schools, it’s been great for us, it’s been really, to have a framework to work to as an academic is now very easy to persuade people of their value.’ (Chair, University Athena SWAN Committee)*

*‘The Athena awards have gained such credibility and acceptance across the higher education sector in the way they’ve eclipsed pretty much most of the other awards, for an institution they have.’ (Athena SWAN Champion)*

Athena SWAN is regarded as being different to most awards in that it requires self-assessment of current position (not based on a position relative to other HEIs like Stonewall).

## 6.9 Persistent barriers to gender equality

### *Summary of findings – barriers to gender equality*

- Participants reported that the pervasiveness of the long-working hours culture is detrimental to both men and women.
- Some women feel they have to work 'twice as hard' as men to gain recognition.
- A number of interviewees felt that the criteria against which academics within HEIs are judged for promotion disadvantages females.
- A recurrent issue mentioned by some interviewees was the challenge of women being isolated in male-dominated environments.

The pervasiveness of the long-working hours culture is arguably detrimental to both men and women, however some women feel they have to work 'twice as hard' as men to gain recognition.

*'One of my other supervisors, a very senior woman in her department, and she works every hour under the sun and in my mind she does a lot more than the men in her role, and she would even tell you like because she's a little bit older now, and she says when she was coming up she had to work doubly as hard and that's still expected of her. She says if she worked as much as some of her male colleagues she would lose her job simply because she'd be working far less than what she currently is, and I see the same thing here, you look up in our department, the women at the top they do phenomenal hours.'* (Female Postgraduate Student)

*'But there is a culture of that, it does become the norm and you tell yourself "Oh it's just while I'm working on this grant, it's just while I'm teaching", but you'll get emails from your superiors at 11 o'clock at night or four o'clock in the morning.'* (Female Academic)

*'We have a boss who is 24/7, if you send an email at 12 o'clock at night it'll be back within half an hour, he's always working.'* (Female Academic)

It was recognised by a number of interviewees that the criteria against which academics within HEIs are judged for promotion disadvantages females. This was highlighted by a male head of school.

*'The biggest problem though with any university when it comes to it with promotion and women is as you know, you're at your position as your track record, it's not because of your competence, it's track record, and maternity kills that, well it doesn't kill it but it can detain and delay it.'* (Male Professor)

Some women in the early stages of their career demonstrated that they had considered a career in research but were aware of how the nature of securing a postdoctoral research position contrasted with family life.

*'I mean if I'd have stayed at my job working in [name] city centre in an office it wouldn't have been an issue, I could have had a family, a partner*

*here, there was maybe like a little bit of travel where you have to go away here for a week every couple of months, but that's pretty normal, it's like you have to move country every two years or whatever to get your postdoc sorted, a big ask.'* (Female Postdoctoral Researcher)

Some interviewees suggested that there were colleagues who challenged gender equality because they chose to deliberately ignore the prevailing policies and practice that HEIs had developed in order to promote gender equality.

*'There's still a culture in this school of men arranging meetings out of work hours and at weekends when they know that some of their key female collaborators can't come and we've had some pretty outright fights about that.'* (Biological Sciences Champion)

Being a working parent was seen as particularly problematic for women within academia because it impacts on a number of the activities that are conducive to progression within an academic institution.

*'I've heard this said...well if you're female and you want to go off and have kids you just have to accept that you're not going to get promoted for ten years rather than get promoted in five years.'* (Female Senior Lecturer)

Continuing with this theme, some interviewees suggested that there was a commonly held perception that to succeed in academia (whether a man or woman) requires one partner to stay at home and that often this resulted in a lack of equal sharing of child-care responsibilities. Sacrificing family life for the sake of an academic career was also suggested as a viewpoint still maintained by some academics of which interviewees had personal experience.

*'It's always about what women have to do and one of the most striking statistics in this department is if you look at the number of children that men have, you know, male academics have compared to the female academics, and it's really, really different. No prizes for guessing which way round. So there is a difference in perceptions.'* (Female Lecturer)

*'I think what's happened in academia is as long as you are willing to give 100% of your time then you are rewarded, male or female, in this department that seems to be the case, but what has not changed particularly well is any alternate way of approaching the system if you're a primary-care giver, if you've got different priorities that lead you to do other things over working, 120-hour work weeks then excellence under those conditions is not recognised particularly well.'* (Male Lecturer)

Within the non-Athena SWAN HEIs the PhD students were very aware of the difficulty of combining family with academia and the perception (and often reality) that senior women who had achieved great success in their careers had sacrificed family to do so.

*'The other women that are higher up, they don't have children, they've put all their time into work.'* (Female PhD Student, Non-Athena SWAN Institution)

*'When I've finished my PhD I would like to stay in academia but I don't think I can if I want to have a family as well. That's my feeling.'* (Female PhD Student, Non-Athena SWAN Institution)

External pressures also contributed to making gender equality a challenging target. The impact of the Research Excellence Framework (REF), for example, was thought by some to have had a negative impact on equality issues in that academics external to the organisation were recruited purely to enhance the REF return.

*'I think the REF's got a huge amount to answer for because we've got an increase in the number of professors and a decrease in the proportion of women because basically, as far as I can tell, the school's gone and hired a whole load of bigwig male professors on sort of 20% positions to bulk up our REF return and I just think this is demoralising. I think that if the school and the university seriously wanted to sustain careers they would be investing in the longer term in the staff they've got and not bringing in these 20% people that are just totally transient.'* (Athena SWAN Champion)

The need for travel for numerous postdoctoral positions, for research and for international conferences was considered to be a barrier to progress for many women.

*'It's very difficult for me to see how I would be able to stay in academia and be able to get any kind of realistic balance, especially when I was looking at postdocs and all the ones in my area are in America and there's quite a few academics, some female, mostly male, going "Well you'll just have to move", no, I'm not, it's not just me, I have my husband and I don't want to up and move to America, "Well you'll just have to go, he'll be fine, he'll stay behind".'* (Female PhD Student, Non-Athena SWAN Institution)

## **6.10 Future challenges for HEIs wishing to promote gender equality**

### *Summary of findings – future challenges for HEIs*

- A persistent challenge to gender equality is the culture of short-term research contracts which interviewees believed disadvantage women.
- There was evidence of a lack of awareness among postgraduates of university and department policies relating to Athena SWAN.
- Timetabling of meetings and accommodating part-time workers remains a challenge in a number of HEIs.
- Athena SWAN did not yet seem to have impacted upon the undergraduate population where women already perceived that they have a lower chance of success in science than men.

A persistent challenge to gender equality is the culture of short-term research contracts which interviewees believed particularly disadvantage women.

*'I think the careers of contract researchers, many of whom, in fact the majority of contract researchers are female, I think, well in fact have their careers. They have a career from one contract to the next, I think that needs to be looked at. I think they're unequal, the gender-pay gap at professorial level needs to be looked at, and it is being looked at and we've had discussions about this, but I think that's a challenge, and I think that more generally making sure that practices that Athena SWAN puts in place are sustainable so that if there was no Athena SWAN in the morning that those practices would still be in place.'* (Athena SWAN Champion)

Short-term contracts also offer a complication in relation to family planning. A postdoctoral researcher explained:

*'I've actually looked at it all because I was trying to think "When can you actually have a child on these contracts?". So of a two-year contract you'd nearly have to be pregnant within the first six months to then have nine months of the pregnancy and then enough time to get paid your maternity leave after. So you'd literally have to get your contract and then go "right", so that's a bit of a barrier I think.'* (Female Postdoctoral Researcher)

Another challenge for HEIs wishing to promote gender equality is ensuring that Athena SWAN impacts on more junior staff and students. Much of the focus of HEIs involved in Athena SWAN has revolved around more senior staff which reflects a desire to ensure greater female representation in decision-making bodies. There was evidence of a lack of awareness among postgraduates of university and department policies relating to Athena SWAN. An example of this was that it was suggested that there was a greater need for wider dissemination of maternity-leave policies for students.

*'I think it's really good, I've been at other institutes and things where I've had not great things said about women and I've never heard anything like that here and I always feel like if I present my science and things like that to the academics it's never treated any differently than any of the other students. But, having said that, a point just came up then, if I was to get pregnant now I would have no idea what was available to me, whether there was money available to me for this, how I would even go about that, whether that impacted my PhD, those things aren't discussed at all.'* (Female PhD Student)

*'I've talked to a few people and they've never heard of it [Athena SWAN], so I wonder if you just start becoming aware of it when you get to the point where you start thinking "Actually, I want promotion and I want this".'* (Female Postdoctoral Researcher)

Athena SWAN was seen by some interviewees as providing hope that things may improve in the future and that this may impact favourably on future generations.

*'It does change things and I know colleagues like in [another university] they were like "Yes, we're going for the Silver this year" and they actually attained it which I was really pleased because work needed to be done there, and the fact that it raised awareness there gives me more hope for it and I think that that's so important that keep doing the good work*



*because I mean it's for the next generations and for ourselves.' (Female Lecturer)*

Lack of support for postdoctoral researchers was also considered an ongoing challenge by some interviewees.

*'I think academic staff are the people who have primarily benefited from it [Athena SWAN] but I don't think that they're the group that really need to be benefited from it. I think the people who really need to benefit from this kind of thing is the postdoctoral researchers because still the problem in academia, which is I think why you get the under-representation is the classic crunch moment which happens sometimes in your late 20s, early 30s, where basically what you've got to do is pump out a Nature paper, show that you're an independent researcher, show that you are able to win funds, collaborate, network, go to every conference, do the best headline conference paper and have children. It's not going to happen, so at the exact crunch moment of when your career is in the balance is exactly the moment when most people have children these days, and Athena SWAN needs to somehow smooth that over, and the problem is that it's just a really brutal moment. It's brutal for everybody, even if you've got no children, so how people do it when they've got children as well, and that obviously slightly biases against women more than men, and that's what Athena SWAN really needs to target, and I feel somehow making us PIs, nice and cosy when we've already got a position is lovely, I like it very much, but that's not where the nib is, it really isn't, it's not where the attention really needs to be paid, it's postdocs that really need the support.'* (Male Lecturer)

Ensuring that Athena SWAN impacts favourably on undergraduate students was also an issue that was raised by some interviewees who were concerned that undergraduates may perceive that women are less likely to succeed in a career in science.

Timetabling of meetings and accommodating part-time workers remained a challenge in a number of HEIs.

*'I think we're doing as much as we can do. I think some of the challenges that we face are outside of our departmental control now. I think we can do what we can do within the department, but there's things like timetable where we – and it's a combination of timetable and facilities – where we've got a certain amount of, you know, teaching space, teaching resource and then we've got a lot of students. So it's us now kind of working hard with the timetable to try and do some of the things that we need to do around kind of things like staff availability and, you know, making sure people have appropriate teaching time, etc. That is the key kind of issue at the moment. I think the university's engaged in it, but it's balancing that with the resource and what we need to do.'* (Head of Department)

Given the challenges already identified within this sub-section it is perhaps not surprising that some interviewees referred to the issues which contributed to the persistence of the problem of the 'leaky pipeline'.

*'Postdocs tend to be female, but of course the problem comes later on as they progress through their career and then, even though you're in a female-dominated workforce at this stage, as you progress through you find that oh, actually, it's the men who seem to be progressing quicker.'* (Female Senior Lecturer)

The nature of employment within academia was reported by some female PhD students as an obstacle to their wanting to continue with an academic career. One PhD student explained:

*'It's an underlying passion for those things, I do like the science but I don't want to be in academia, it's put me off sort of seeing how things work, lack of funding, real struggle for postdoc jobs, short-term contracts, just lack of job security, takes forever to get a promotion to a lectureship and then no matter what level you're at it's just a constant struggle it seems from what you hear, even people at the highest levels.'* (Female PhD Student)

## 6.11 Future challenges for ECU

### *Summary of findings – future challenges for ECU*

- It was suggested that departments are currently judged in isolation, i.e. they are not benchmarked against similar departments.
- Some interviewees suggested that the current Athena SWAN processes reflect a constant drive for improvement yet these processes do not reward consistency.
- Some interviewees suggested that there was an implied pressure for HEIs to evoke positive discrimination procedures in order to achieve objectives.
- Assessing the impact of Athena SWAN remains challenging because of the considerable variation between HEIs, and within individual departments within HEIs.

### **Departments are judged in isolation in that they are not benchmarked against similar departments**

Some interviewees suggested that it would be useful for departments to be able to benchmark themselves against other departments in other HEIs because this would prevent departments from focusing on the positive data only. An interviewee felt a recommendation for improvement would be for Athena SWAN to provide a baseline dataset.

*'I think it's absolutely crucial that they say this is for baseline data because otherwise you can sort of pick and choose can't you, and as a scientist our control group should be the same across the different departments, so Athena SWAN should be saying "This is your biology department, this is what the other groups are doing".'* (Female Professor also Athena SWAN Champion)

## **Improvement vs consistency**

Some interviewees suggested that the current Athena SWAN processes reflect a constant drive for improvement yet this process does not reward consistency.

*'One of the things that I do worry about with the Athena SWAN award is that you're constantly being forced into improving when you may already be doing best practice in some areas and so it doesn't seem to reward consistent good behaviour as opposed to ... the trajectory is the important thing, not the excellence.'* (Male Lecturer)

*'I do worry that that's an issue that from the discussions that I've heard within the department in away days and things like that, that's always been a thing because it's basically unattainable after a certain level if we ever reach true equality then you can't continue to improve on that so it seems like the award as it is currently is structured seems like a bit of a fantasy.'* (Male Lecturer)

## **Positive discrimination**

Some interviewees suggested that there was an implied pressure for HEIs to evoke positive discrimination procedures in order to achieve objectives that would otherwise take a long timeframe to achieve. The same interviewees were clearly not in favour of adopting such procedures and positive discrimination was perceived to be a controversial strategy.

*'I don't want to preach into these things, I very much think you've just got to let the time solve the equality issues and .... If you've got the right policies in place then yes I do, and I think you have to be very careful of trying to not solve things that time is the only solution to otherwise you end up with worse situations, which is, I'm very, very anti positive discrimination because of that, you can actually do more damage than good.'* (Male Lecturer)

*'This is not to be complacent, the thing is not to say "Oh well, we're great so now we can stop", but to say "There is going to be a point in time at which we are equal and we've reached the target that we want to be at" and continuing to prove then well and truly moves into that positive discrimination territory that is not helpful and in fact takes us in a path we don't want to go.'* (Male Lecturer)

## **Variation between HEIs in terms of culture**

Assessing the impact of Athena SWAN remains a challenge because of the considerable variation between HEIs, and within individual departments in HEIs, in terms of their prevailing culture. Some departments are much more open to change than others and this necessarily impacts on the success of the department in promoting gender equality.

*'I came here I kept expecting the veil to drop. Honestly, because when people are recruiting you they put on a brave face, they act one way, and then when you arrive sometimes it is quite different, and I kept waiting for the veil to drop and it really hasn't, and I don't know if they're just really*

*good at keeping that up, but there's quite an incentive to cross boundaries, there's all of the grants, all the PhD studentships, everything, you're forced to go into different niches and get outside your comfort zone, talk to people, it's all about collaborations and it's such a collaborative atmosphere. I mean I'm meeting today with a collaborator from the physics department, I have another collaborator who's a full professor in chemistry and there's no feeling at all like "Oh well, you're just junior faculty, we're doing you a favour", and there was no, I was encountering somebody to at least ignore my email for a week or two, and there wasn't any of this, and if anything they really should reach out to you and that doesn't necessarily happen starting new on the, low on the totem pole type status, so it's quite unique. And there are these away days and I'd say within the [...] culture there's seminars that reach different groups, also every so often there's a party, there's a leaving do, there's a welcome thing, you guys have with your seminars, you have cakes, we come up with a lot of excuses for cakes, it's not good for the waistline, but its good at getting people out.'* (Female Postdoctoral Researcher)

## **Discipline-specific issues**

It was apparent from interviews that some disciplines faced much greater challenges when trying to promote gender equality than other disciplines. These challenges were identified in the main by physicists and electronic engineers, which may also be pertinent in other fields, particularly where the pool of women from which to recruit within the UK is very small. Many of these quotes arise from HEIs that do not currently hold Athena SWAN awards which indicates that it may be the shortage of women within these disciplines that disadvantages the HEIs in considering or applying for Athena SWAN rather than a lack of motivation.

Low representation of women in disciplines such as electronic engineering remains a challenge.

*'In the department there are about five members of staff who are female I would say, so about 10%.'* (Male Professor, Non-Athena SWAN HEI)

In electronic engineering there were a high proportion of overseas students in PhD and postdoctoral positions and a senior male academic felt that cultural issues were more influential in this group and thus, they were more likely to stop working after having children than staff who had been schooled in the UK.

*'Those students who take a career break [due] to pregnancy, they've all actually been overseas [students] that I'm aware of, and a whole different associated set of cultural issues, with how they deal with that, so in some senses that experience is kind of different to the traditional UK experience for someone who's gone through the UK school system.'* (Male Reader, Non-Athena SWAN HEI)

Low representation of women in physics, was considered to be rather different to biology for example, because in physics, in contrast with biology, very few females enrol on to undergraduate programmes.

*'So as an undergraduate there were 25 out of 150 women on my undergraduate course, at school level the representation is low so the*

*number of women feeding into the field in the first place is already low, but there is probably some attrition extra to that. (Male Professor Physics, Non-Athena SWAN HEI)*

*'So you know, they do very well at A level and then they don't feed into university, and so then already at the undergraduate level in physics there's a massive gender imbalance.'* (Male Professor, Non-Athena SWAN HEI)

A male reader put forward some arguments as to why women might drop out of physics following PhD.

*'I'd be very curious how PhDs are trained in the social sciences versus physics because we almost deliberately massively over-train, so we have far more PhD students than could ever, ever plausibly be employed in the country and so there's going to have to be a massive attrition rate and that may make the whole field far more competitive. And the other point is that it may be that because we are in this science, mathematics and physical quantitative discipline, there may be more career options if you choose to leave academia, so it may be that when you're sitting there thinking "Oh wow, the path to faculty looks difficult" then you look at what the other options are and you think "Well, that looks even less appealing so I'm not going to do that", whereas with a physics degree you really have a large number of options, and it doesn't have to be academia, and most of the other options pay a lot better frankly.'* (Male Reader)

In disciplines where women were heavily under-represented, such as physics, it was noted that many of the women on undergraduate and postgraduate programmes were from countries other than the UK, and they were required to return to their home country because of the funding they had received once their degree was completed. Thus, there was a cultural dimension to the under-representation of women in some disciplines.

*'In my physics year, I think it was a class of 45 when we started, there were two English females, four Malaysian women and that was it. That was all the women in the class.'* (Male PhD Student, Non-Athena SWAN HEI)

## 7 Recommendations

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### 7.1 Recommendations for ECU

A key strength of the Athena SWAN process is that it facilitates more collaborative work, both within and across HEIs. It is apparent that those involved with Athena SWAN very much appreciate these opportunities to collaborate.

- It is therefore recommended that ECU continue to support, promote and publicise these collaborative opportunities.

Another key strength of the Athena SWAN process is that the process is data led and this again is valued by those involved. However, many interviewees suggested that whilst identifying the challenges within their school or HEI was very useful this did not always result in HEIs knowing how to address these challenges.

- It is therefore recommended that ECU continue to share examples of effective practice in meeting the challenges to promoting gender equality.

This study has confirmed that gender-equality work within academia is predominantly characterised as being driven by women with the assistance of some men. This is reflected in the finding that of the Athena SWAN institutional Champions 73% of those that responded to the survey were female and for the departmental Champions 80% (of those responding) were female.

- It is recommended that this is an issue that is given consideration by ECU.

Gender-equality work is considered by some academic staff, both male and female, to focus on pursuing improvements for women rather than addressing inequality for both males and females.

- It is recommended that ECU consider ways in which this misconception can be addressed and it is suggested that examples of HEIs which have been successful in promoting equality for both genders are shared.

A persistent challenge for Athena SWAN is engaging staff, departments and HEIs that face particular challenges in promoting gender equality. An example of such challenges are departments that have very few staff or disciplines which struggle to attract women due to issues of supply.

- It is therefore recommended that ECU continue to seek ways in which these more challenging groups can be engaged within Athena SWAN, perhaps by considering the introduction of a 'Pre-bronze' or 'Small Department Award'. Again it is likely that sharing examples of successful applications that have addressed these challenges will also be beneficial.

The link between Athena SWAN and research funding is a controversial issue, particularly because Athena SWAN is not a standard-based award (i.e. two HEIs with a Bronze Award may be at very different stages in their progress, especially where one of the awards is a renewal).

- It is therefore recommended that ECU continue to consider how this tension can be addressed satisfactorily.

Suggestions for improvements to the Athena SWAN process included clearer guidance or a template for the presentation of quantitative data, the removal of replication and repetition across sections, the need for a question concerning the proportion of staff attending equality and diversity training and some subject-specific points, particularly for medicine.

- It is recommended that ECU consider these suggestions made by HEI staff for improvements to the Athena SWAN process.

Suggestions for improvements to the Athena SWAN assessment process included providing clearer guidelines for the assessment team and assessor training, considering the possibility of some visits, particularly for Gold Awards, asking more probing questions in terms of the funding of maternity cover and maternity cover for short-term contracts, and to provide clearer assessment criteria.

- It is recommended that ECU consider these suggestions made by HEI staff for improvements to the Athena SWAN assessment process.

## **7.2 Recommendations for HEIs**

For HEIs and departments relatively new to the Athena SWAN process or looking to move up to the next award level, it is suggested it might be helpful to consider the most important actions taken in the Athena SWAN process as stated by institutional and departmental Champions.

- The most important actions since receiving an Athena SWAN institutional award were increased departmental engagement in the process, the putting in place of structures and data-collection systems, increased engagement of university senior management in the process, improved processes for promotion and reward/review panels, the development of mentoring systems targeted at women, the appointment of designated Athena SWAN officers, changes to the maternity leave cover process, and the development of women's networking and leadership-training events.
- The most important actions since receiving an Athena SWAN departmental award were enhanced communication within the department concerning equality and diversity matters, in particular the sharing of survey findings and proposed solutions, support and encouragement for women academics to apply for promotion, and ensuring the voice of postdoctoral researchers is heard and acted upon.

For more experienced HEIs and departments looking towards Silver and Gold Awards, it is recommended consideration is given to the example of best practice summarised below.

*Appointment, development, promotion and continued progression*  
*An example of best practice in supporting the career progression of women*

This university has introduced a fully comprehensive support system for the progression of women within STEMM subjects. This support commences with a gender balance in search and appointment committees and the inclusion of women on short-lists, and continues with a comprehensive system of staff development including:

- mentoring
- teaching relief for maternity returners
- family-friendly core hours meeting times
- advice on the promotion process and encouragement to apply for promotion
- consideration of the impact of career gaps in the promotion process
- experience in senior committee positions

This comprehensive support system leads to more women applying for promotion, at which stage they have similar success rates to men. More recently serious consideration is being given by the university as to how women professors can continue to progress to the highest salaried and prestigious positions in their field.



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# Appendix A: Technical appendices

**Table 1b.** Career performance/development reviews, training and promotion for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I was satisfied with my career performance/development review.								
4.44	4.17	4.12	4.13	4.59	4.77	4.47	4.21	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: I am familiar with the university's criteria and processes for promotion.								
3.92	4.21	4.03	3.47	4.46	4.41	4.47	4.05	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: I have been encouraged to apply for promotion.								
2.86	3.10	2.94	2.97	3.64	3.60	3.45	3.05	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: Adequate opportunities exist within my university for personal development and training.								
4.59	4.09	4.40	4.00	4.69	4.37	4.29	4.24	group, $P < 0.01$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: My university encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.36	3.79	3.99	3.88	4.42	4.12	4.11	3.99	group, $P < 0.01$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: There are rewards, incentives and awards available to me at my university.								
3.38	2.99	3.12	2.73	3.88	3.67	3.42	3.14	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: I have received awards incentives or awards from my university for my work.								
2.76	2.57	2.63	2.37	3.52	3.18	3.15	2.57	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: There are flexible promotion policies (e.g. take into account part-time work, career breaks, etc.) at my university.								
3.49	3.48	3.12	2.90	3.92	3.73	3.46	3.10	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: There is real commitment at my university to promote equality and diversity.								
4.05	3.96	3.84	3.38	4.58	4.54	4.21	3.88	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 2b.** Departmental/school encouragement to progress for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
<b>QU:</b> It is more difficult for women than men to reach the most senior employment positions in my field (e.g. biological sciences, chemistry, computing/ICT, engineering, food science/nutrition, mathematics, medicine, physics, psychology, pharmacy/pharmacology).								
4.53	4.43	4.53	3.93	2.88	3.10	3.05	3.00	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = 0.059$
<b>QU:</b> My line manager or appraiser encourages me to progress in my career.								
4.43	4.16	4.18	3.76	4.53	4.36	4.26	4.23	group, $P < 0.01$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> My line manager or appraiser encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.13	3.95	3.85	3.74	4.08	3.87	3.85	3.97	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> My line manager or appraiser gives me helpful feedback about my performance.								
4.13	4.00	3.75	3.74	4.20	4.08	3.90	3.91	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> My line manager or appraiser encourages me to have a strategic plan for promotion.								
3.46	3.23	3.13	2.94	3.77	3.54	3.56	3.33	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> My line manager or appraiser has encouraged me to apply for university rewards, incentives or awards.								
2.93	2.73	2.46	2.57	3.48	3.07	2.97	2.89	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> Adequate opportunities exist in my school/department for personal development and training.								
4.16	3.62	3.71	3.66	4.27	4.04	3.81	3.80	group, $P < 0.01$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> My school/department takes part-time work and/or career breaks into account when putting staff forward for promotion.								
3.41	3.49	3.14	2.77	3.97	4.03	3.47	3.24	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> I would find a sabbatical beneficial.								
3.72	3.69	3.73	3.76	4.12	4.17	4.24	4.16	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 3b.** Career satisfaction for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am satisfied with the success I have achieved in my career.								
3.73	3.80	3.74	4.01	4.15	4.18	4.05	4.09	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I am satisfied with the progress I have made to meeting my overall career goals.								
3.76	3.67	3.66	3.83	4.04	4.14	4.03	4.00	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I am satisfied with the progress I have made towards meeting my goals for salary.								
3.52	3.56	3.59	3.46	3.90	3.97	3.80	3.99	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I am satisfied with the progress I have made towards meeting my goals for the development of new skills.								
4.07	3.82	3.79	4.05	4.16	4.22	3.99	4.08	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 4b.** Workload allocation for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
<b>QU:</b> I feel that the allocation of workload in the school/department is fair (i.e. teaching, administrative duties, pastoral care, laboratory work, etc.).								
3.62	3.50	3.41	3.23	3.96	3.86	3.64	3.47	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
<b>QU:</b> I can manage my workload in the time available to me.								
3.66	3.46	3.74	3.42	3.70	3.69	3.62	3.62	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
<b>QU:</b> The school's department workload model is transparent.								
3.09	2.89	2.63	2.75	3.45	3.46	3.21	3.37	group, $P < 0.05$ sex, $P < 0.01$ group x sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 5b.** *Work-life balance policies and practice for all academic/research staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: Meetings and events are seldom scheduled outside of 10 am and 4 pm.								
3.61	3.80	3.59	3.32	3.55	4.12	3.81	3.59	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I make use of flexible working hours.								
4.40	4.30	4.59	3.95	4.42	4.45	4.65	4.22	group, $P < 0.01$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My line manager is quite accommodating of family-related needs.								
4.82	4.77	4.63	4.32	4.80	4.90	4.77	4.71	group, $P < 0.05$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: The school/department actively promotes a healthy work-life balance.								
3.32	3.19	3.33	2.95	3.55	3.51	3.29	3.29	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: My career break was not detrimental to my career.								
2.92	3.08	2.92	2.69	3.11	3.80	3.14	3.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: During my career break, the level of contact with/from the school/department was appropriate.								
3.83	3.74	3.64	3.46	3.22	4.75	4.00	4.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 6b.** *Personal work-life balance for all academic/research staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am successful at balancing my paid work and my personal life.								
3.51	3.41	3.56	3.59	3.50	3.76	3.53	3.70	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I face much conflict in balancing my work and personal life.								
3.41	3.49	3.53	3.52	3.38	3.32	3.52	3.52	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.



**Table 7a.** *Work-life balance culture for all academic/research staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> In this school/department, staff who use work-family policies (e.g. job-sharing) are considered to be less serious about their career than those who do not use these policies.					
3.44 #	2.73	3.01	3.05	3.14	3.17
<b>QU:</b> In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time.					
3.24 #	2.69	2.99	2.95	2.85	3.05
<b>QU:</b> Staff are regularly expected to put their jobs before their families.					
3.21 #	2.93	3.06	2.78 †	3.17	3.23
<b>QU:</b> To be viewed favourably by the school/department, staff must constantly put their jobs ahead of their families or personal lives.					
3.37 #	2.86	3.07	2.93	3.21	3.25
<b>QU:</b> Staff are often expected to take work home at night and weekends.					
4.26 #	4.06	4.16	4.12	4.20	4.27
<b>QU:</b> To get ahead, staff are expected to work more than 50 hours a week.					
3.91	3.75	3.86	3.65	3.86	3.88
<b>QU:</b> To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.					
3.65 #	3.14	3.41	3.19	3.42	3.52
<b>QU:</b> Many staff are resentful when men in my school/department take extended leave to care for newborn or adopted children.					
2.18	2.13	2.14	2.10	2.14	2.23
<b>QU:</b> Many staff are resentful when women in this school/department take extended leave to care for newborn or adopted children.					
2.48 #	1.95	2.18	2.24	2.16	2.28

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 7b.** Work-life balance culture for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: In this school/department, staff who use work-family policies (e.g. job-sharing) are considered to be less serious about their career than those who do not use these policies.								
3.44	3.41	3.43	3.39	2.55	2.72	2.90	2.90	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$
QU: In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time.								
3.35	3.15	3.16	3.18	2.63	2.78	2.60	2.88	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Staff are regularly expected to put their jobs before their families.								
3.24	2.93	3.29	3.28	2.86	2.64	3.03	3.19	group, $P < 0.05$ sex, $P < 0.01$ group x sex, $P = NS$
QU: To be viewed favourably by the school/department, staff must constantly put their jobs ahead of their families or personal lives.								
3.33	3.20	3.42	3.41	2.77	2.68	2.99	3.08	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Staff are often expected to take work home at night and weekends.								
4.35	4.27	4.31	4.14	3.93	3.98	4.05	4.40	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: To get ahead, staff are expected to work more than 50 hours a week.								
4.10	3.66	3.89	3.75	3.58	3.65	3.77	4.04	group, $P = NS$ sex, $P = NS$ group x sex, $P < 0.05$
QU: To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.								
3.76	3.42	3.60	3.71	3.03	2.98	3.24	3.33	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Many staff are resentful when men in my school/department take extended leave to care for newborn or adopted children.								
2.21	2.04	2.20	2.04	2.03	2.13	2.07	2.44	group, $P = NS$ sex, $P = NS$ group x sex, $P = 0.06$
QU: Many staff are resentful when women in this school/department take extended leave to care for newborn or adopted children.								
2.53	2.28	2.56	2.37	1.79	2.18	1.85	2.17	group, $P = NS$ sex, $P < 0.01$ group x sex, $P < 0.05$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 8a.** Gender climate for all academic/research staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> My school/department has a positive work environment.					
4.06 #	4.29	4.27 †	4.36 †	4.12	3.89
<b>QU:</b> My school/department has a more positive work environment now than a few years ago.					
3.43	3.46	3.50	3.71	3.23	3.40
<b>QU:</b> Men have preferential access to lab/research space and resources in my school/department.					
2.08 #	1.58	1.77	1.74	1.86	1.99
<b>QU:</b> Men do not receive preferential treatment in promotion in my school/department.					
3.92 #	4.89	4.47	4.50	4.40	4.18
<b>QU:</b> Women do not receive preferential treatment in promotion in my school/department.					
4.58	4.60	4.62	4.55	4.54	4.67
<b>QU:</b> In meetings in my school/department staff pay just as much attention when women speak as when men do.					
4.37 #	5.27	4.82	4.89	4.75	4.91
<b>QU:</b> In meetings in my school/department managers pay as much attention when women speak as when men do.					
4.32 #	5.19	4.78	4.88	4.69	4.77
<b>QU:</b> Women have preferential access to lab/research space and resources in my school/department.					
1.81	1.79	1.74	1.71	1.79	1.80
<b>QU:</b> There is appropriate representation of women on major committees in my school/department.					
3.46 #	4.49	4.01	4.04	3.92	4.01

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 8b.** Gender climate for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My school/department has a positive work environment.								
4.14	4.23	4.00	3.75	4.43	4.50	4.27	4.05	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: My school/department has a more positive work environment now than a few years ago.								
3.47	3.75	3.25	3.34	3.54	3.68	3.22	3.46	group, $P < 0.01$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Men have preferential access to lab/research space and resources in my school/department.								
2.04	1.96	2.14	2.18	1.47	1.54	1.62	1.79	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: Men do not receive preferential treatment in promotion in my school/department.								
3.95	4.10	3.80	3.82	4.98	4.85	4.92	4.59	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: Women do not receive preferential treatment in promotion in my school/department.								
4.60	4.51	4.46	4.73	4.64	4.60	4.61	4.62	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: In meetings in my school/department staff pay just as much attention when women speak as when men do.								
4.36	4.45	4.19	4.64	5.27	5.29	5.25	5.27	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: In meetings in my school/department managers pay as much attention when women speak as when men do.								
4.34	4.51	4.14	4.46	5.20	5.23	5.16	5.17	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: Women have preferential access to lab/research space and resources in my school/department.								
1.72	1.71	1.79	1.90	1.78	1.69	1.80	1.69	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: There is appropriate representation of women on major committees in my school/department.								
3.45	3.73	3.37	3.47	4.60	4.33	4.40	4.58	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 9b.** *Intention to leave for all academic/research staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I will actively look for a job at another university or school/department in the next year.								
2.56	2.66	2.65	2.97	2.53	2.44	2.60	2.41	group, <i>P</i> = NS sex, <i>P</i> = 0.054 group x sex, <i>P</i> = NS
QU: I am considering leaving my job and pursuing a different career.								
2.73	2.69	2.66	2.66	2.18	2.38	2.32	2.07	group, <i>P</i> = NS sex, <i>P</i> < 0.01 group x sex, <i>P</i> = NS

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 10a.** *Impact of Athena SWAN for all academic/research staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> Athena SWAN helped to improve my visibility with my school/department.					
2.84 #	2.22	2.63 †	2.70 †	2.21	
<b>QU:</b> Athena SWAN had a positive impact on the work environment of the school/department.					
3.36	3.34	3.61 †	3.48 †	2.77	
<b>QU:</b> Athena SWAN had a positive impact on work practices of the school/department.					
3.42	3.44	3.70 †	3.61 †	2.87	
<b>QU:</b> Athena SWAN helped me to think more broadly about gender issues.					
3.81 #	3.48	3.71	3.61	3.58	
<b>QU:</b> Athena SWAN had a positive impact on my career development.					
2.87 #	2.17	2.65 †	2.56	2.32	
<b>QU:</b> Athena SWAN helped me to increase my self-confidence.					
2.63 #	2.05	2.43	2.36	2.22	
<b>QU:</b> Athena SWAN helped me to develop leadership skills.					
2.56 #	2.11	2.41	2.34	2.22	
<b>QU:</b> Athena SWAN had a positive impact on my views on the advancement of women.					
3.31	3.28	3.40	3.32	3.14	

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs institutional Bronze Award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 10b.** Impact of Athena SWAN for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: Athena SWAN helped to improve my visibility within my school/department.								
2.94	2.96	2.53	.	2.32	2.47	1.92	.	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Athena SWAN had a positive impact on the work environment of the school/department.								
3.53	3.48	2.89	.	3.71	3.52	2.68	.	group, $P < 0.01$ sex, $P = NS$ group x sex, $P = NS$
QU: Athena SWAN had a positive impact on the work practices of the school/department.								
3.58	3.65	2.95	.	3.86	3.60	2.80	.	group, $P < 0.01$ sex, $P = NS$ group x sex, $P = NS$
QU: Athena SWAN helped me to think more broadly about gender issues.								
3.71	3.80	4.02	.	3.73	3.47	3.20	.	group, $P = NS$ sex, $P < 0.01$ group x sex, $P < 0.01$
QU: Athena SWAN had a positive impact on my career development.								
2.96	2.99	2.68	.	2.32	2.13	2.01	.	group, $P < 0.05$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Athena SWAN helped me to increase my self-confidence.								
2.66	2.70	2.56	.	2.19	2.03	1.92	.	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Athena SWAN helped me to develop leadership skills.								
2.62	2.62	2.47	.	2.22	2.07	1.99	.	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Athena SWAN had a positive impact on my views on the advancement of women.								
3.36	3.34	3.26	.	3.46	3.32	3.05	.	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 11b.** Sense of belonging for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel fully part of my research group.								
4.75	4.45	4.60	4.30	5.12	4.96	4.79	4.52	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
QU: I feel fully part of my school/department.								
4.06	4.29	3.95	3.95	4.56	4.60	4.40	4.33	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 12b.** Confidence in advancing work recognition for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel confident in putting myself forward for positions of responsibility within the school/department.								
3.96	4.05	3.71	4.13	4.45	4.72	4.45	4.36	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for positions of responsibility within the university.								
3.47	3.57	3.35	3.69	4.02	4.31	3.96	4.02	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward as a principal investigator on a grant.								
4.05	3.76	3.84	3.57	4.81	4.74	4.86	4.32	group, $P < 0.05$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for promotion.								
3.49	3.35	3.25	3.61	4.01	4.11	4.11	3.81	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for an additional increment/salary increase.								
3.28	3.11	3.05	3.19	3.69	3.81	3.69	3.71	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 13a.** Beneficial groups for all academic/research staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> My research group is useful to me.					
4.82 #	5.07	5.19 †	4.92	4.88	4.54
<b>QU:</b> Research seminars are useful to me.					
4.17 #	4.35	4.55 †	4.12	4.23 †	3.87
<b>QU:</b> Teaching teams are useful to me.					
3.58 #	3.77	3.69	3.74	3.48 †	3.87
<b>QU:</b> Informal social groups are useful to me.					
3.95	3.95	3.97	3.95	3.89	3.96
<b>QU:</b> Formal social events are useful to me.					
3.15	3.18	3.34 †	3.10	3.00	2.98
<b>QU:</b> Committees/working groups are useful to me.					
3.73	3.66	3.75	3.84	3.52	3.67
<b>QU:</b> Email communications are useful to me.					
4.30	4.23	4.32	4.42	4.27	4.19
<b>QU:</b> Women-only/men-only network groups are useful to me.					
2.40 #	1.42	2.04 †	1.95	1.86	1.66

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.



**Table 13b.** Beneficial groups for all academic/research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My research group is useful to me.								
5.02	4.60	4.82	4.43	5.36	5.19	4.95	4.64	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Research seminars are useful to me.								
4.39	3.92	4.22	3.81	4.71	4.30	4.28	3.94	group, $P < 0.01$ sex, $P < 0.05$ group x sex, $P = NS$
QU: Teaching teams are useful to me.								
3.52	3.80	3.46	3.63	3.85	3.74	3.52	4.15	group, $P < 0.05$ sex, $P < 0.05$ group x sex, $P = NS$
QU: Informal social groups are useful to me.								
3.93	3.89	3.84	3.93	3.99	4.02	3.93	3.99	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: Formal social events are useful to me.								
3.41	3.00	2.93	3.02	3.30	3.19	3.10	2.95	group, $P < 0.01$ sex, $P = NS$ group x sex, $P = NS$
QU: Committees/working groups are useful to me.								
3.68	3.94	3.61	3.77	3.87	3.80	3.49	3.53	group, $P < 0.05$ sex, $P = NS$ group x sex, $P = NS$
QU: Email communications are useful to me.								
4.29	4.40	4.29	4.25	4.37	4.46	4.26	4.11	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: Women-only/men-only network groups are useful to me.								
2.56	2.52	2.42	1.99	1.48	1.51	1.43	1.29	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 14a.** Career performance/development reviews, training and promotion for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> I was satisfied with my career performance/development review.											
4.16 #	4.58	4.60 †	4.51	4.28	4.08	4.27	4.37	4.41	4.17	4.37	4.00
<b>QU:</b> I am familiar with the university's criteria and processes for promotion.											
4.45 #	4.71	4.68 †	4.97 †	4.58 †	4.06	3.39	3.55	3.54	3.11	3.80 †	3.00
<b>QU:</b> I have been encouraged to apply for promotion.											
3.36 #	3.71	3.74 †	4.05 †	3.47	3.04	2.49	2.81	2.58	2.27	2.88	2.97
<b>QU:</b> Adequate opportunities exist within my university for personal development and training.											
4.31	4.46	4.69 †	4.37	4.31	4.07	4.31	4.39	4.61 †	4.18	4.35	3.75
<b>QU:</b> My university encourages me to undertake further training and pursue personal development opportunities relevant to my career.											
3.99 #	4.23	4.43 †	4.04	4.03	3.86	4.17	4.14	4.39 †	4.16	4.08	3.78
<b>QU:</b> There are rewards, incentives and awards available to me at my university.											
3.23 #	3.65	3.72 †	3.48	3.39	3.15	3.00 #	3.39	3.52 †	3.04 †	3.10 †	2.23
<b>QU:</b> I have received rewards, incentives or awards from my university for my work.											
2.95 #	3.35	3.41 †	3.21	3.20	2.73	2.32 #	2.74	2.72 †	2.24	2.56 †	1.79
<b>QU:</b> There are flexible promotion policies (e.g. take into account part-time work, career breaks, etc.) at my university.											
3.39 #	3.68	3.86 †	3.88 †	3.40	3.05	3.11	3.38	3.50 †	3.17	3.14	2.65
<b>QU:</b> There is real commitment at my university to promote equality and diversity.											
3.80 #	4.33	4.40 †	4.30 †	4.04	3.72	3.73 #	4.37	4.21 †	4.26 †	4.05 †	2.82

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 14b.** Career performance/development reviews, training and promotion for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I was satisfied with my career performance/development review.								
4.50	4.06	3.88	3.85	4.68	4.87	4.50	4.23	group, $P < 0.05$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: I am familiar with the university's criteria and processes for promotion.								
4.57	4.79	4.33	3.85	4.80	5.10	4.72	4.18	group, $P < 0.01$ sex, $P < 0.05$ group x sex, $P = \text{NS}$
QU: I have been encouraged to apply for promotion.								
3.33	3.81	3.15	3.09	4.05	4.20	3.70	2.98	group, $P < 0.01$ sex, $P < 0.05$ group x sex, $P = \text{NS}$
QU: Adequate opportunities exist within my university for personal development and training.								
4.62	4.30	4.38	3.80	4.78	4.42	4.28	4.28	group, $P < 0.01$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: My university encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.40	3.86	3.81	3.69	4.49	4.16	4.16	3.97	group, $P < 0.01$ sex, $P < 0.05$ group x sex, $P = \text{NS}$
QU: There are rewards, incentives and awards available to me at my university.								
3.40	3.12	3.30	2.88	3.95	3.72	3.47	3.32	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: I have received rewards, incentives or awards from my university for my work.								
2.95	2.88	2.98	2.78	3.74	3.43	3.34	2.71	group, $P < 0.05$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: There are flexible promotion policies (e.g. take into account part-time work, career breaks, etc.) at my university.								
3.57	3.79	3.32	2.96	4.08	3.95	3.47	3.13	group, $P < 0.01$ sex, $P = 0.05$ group x sex, $P = \text{NS}$
QU: There is real commitment at my university to promote equality and diversity.								
4.04	4.00	3.81	3.43	4.63	4.53	4.17	3.94	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 14c.** Career performance/development reviews, training and promotion for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I was satisfied with my career performance/development review.								
4.46	3.90	4.24	4.14	4.28	4.36	4.53	3.57	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I am familiar with the university's criteria and processes for promotion.								
3.38	3.24	3.85	2.91	3.79	2.86	3.74	3.29	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I have been encouraged to apply for promotion.								
2.38	2.00	2.87	2.91	2.85	2.64	2.88	3.14	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Adequate opportunities exist within my university for personal development and training.								
4.65	4.00	4.33	3.72	4.52	4.33	4.38	3.82	group, $P < 0.01$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My university encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.44	3.93	4.11	3.79	4.26	4.33	4.03	3.73	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: There are rewards, incentives and awards available to me at my university.								
3.39	2.67	2.93	2.21	3.70	3.43	3.34	2.27	group, $P < 0.01$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: I have received rewards, incentives or awards from my university for my work.								
2.55	1.85	2.33	1.86	2.95	2.71	2.87	1.64	group, $P < 0.01$ sex, $P = 0.056$ group $\times$ sex, $P = \text{NS}$
QU: There are flexible promotion policies (e.g. take into account part-time work, career breaks, etc.) at my university.								
3.49	3.04	2.89	2.50	3.51	3.33	3.51	3.00	group, $P = 0.060$ sex, $P = 0.056$ group $\times$ sex, $P = \text{NS}$
QU: There is real commitment at my university to promote equality and diversity.								
4.08	3.93	3.77	2.50	4.44	4.62	4.45	3.64	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 15a.** Departmental/school encouragement to progress for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> It is more difficult for women than men to reach the most senior employment positions in my field (e.g. biological sciences, chemistry, computing/ICT, engineering, food science/nutrition, mathematics, medicine, physics, psychology, pharmacy/pharmacology).											
4.42 #	3.10	3.56	3.85	3.62	3.51	4.56 #	2.75	3.89	3.65	3.86	3.92
<b>QU:</b> My line manager or appraiser encourages me to progress in my career.											
4.17	4.38	4.53 †	4.44	4.19	3.97	4.30	4.28	4.48	4.06	4.32	3.78
<b>QU:</b> My line manager or appraiser encourages me to undertake further training and pursue personal development opportunities relevant to my career.											
3.83	3.94	4.05	4.08	3.69	3.75	4.07	4.00	4.17	3.75	4.11	3.78
<b>QU:</b> My line manager or appraiser gives me helpful feedback about my performance.											
3.93	4.04	4.19	4.15	3.78	3.78	3.94	4.02	4.14	3.78	3.94	3.78
<b>QU:</b> My line manager or appraiser encourages me to have a strategic plan for promotion.											
3.47	3.69	3.90 †	3.70	3.43	3.18	3.07 #	3.46	3.32	2.98	3.34	2.88
<b>QU:</b> My line manager or appraiser has encouraged me to apply for university rewards, incentives or awards.											
2.83 #	3.22	3.32	3.13	2.85	2.82	2.68 #	3.02	3.09	2.51	2.65	2.46
<b>QU:</b> Adequate opportunities exist in my school/department for personal development and training.											
3.86	4.02	4.30 †	3.91	3.70	3.77	3.87	3.95	4.19 †	3.78	3.83	3.18
<b>QU:</b> My school/department takes part-time work and/or career breaks into account when putting staff forward for promotion.											
3.40 #	3.78	3.82 †	4.12 †	3.42	3.06	3.04 #	3.65	3.60 †	3.13	3.22	2.55
<b>QU:</b> I would find a sabbatical beneficial.											
4.53	4.53	4.48	4.51	4.58	4.40	3.13	3.33	3.28	3.00	3.05	3.44

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 15b.** Departmental/school encouragement to progress for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: It is more difficult for women than men to reach the most senior employment positions in my field (e.g. biological sciences, chemistry, computing ICT, engineering, food science/nutrition, mathematics, medicine, physics, psychology, pharmacy/pharmacology).								
4.43	4.43	4.56	4.00	2.97	3.45	3.12	3.13	group, $P = \text{NS}$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: My line manager or appraiser encourages me to progress in my career.								
4.43	4.26	4.16	3.68	4.60	4.56	4.22	4.17	group, $P < 0.01$ sex, $P = 0.054$ group x sex, $P = \text{NS}$
QU: My line manager or appraiser encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.08	3.95	3.63	3.56	4.07	4.16	3.73	3.87	group, $P < 0.05$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: My line manager or appraiser gives me helpful feedback about my performance.								
4.13	4.05	3.68	3.66	4.26	4.23	3.84	3.86	group, $P < 0.05$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: My line manager or appraiser encourages me to have a strategic plan for promotion.								
3.89	3.51	3.11	2.98	3.93	3.82	3.64	3.29	group, $P < 0.01$ sex, $P < 0.05$ group x sex, $P = \text{NS}$
QU: My line manager or appraiser has encouraged me to apply for university rewards, incentives or awards.								
3.03	2.88	2.45	2.69	3.56	3.31	3.07	2.88	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: Adequate opportunities exist in my school/department for personal development and training.								
4.21	3.63	3.61	3.66	4.38	4.10	3.75	3.84	group, $P < 0.01$ sex, $P < 0.05$ group x sex, $P = \text{NS}$
QU: My school/department takes part-time work and/or career breaks into account when putting staff forward for promotion.								
3.56	3.88	3.23	2.88	3.98	4.30	3.52	3.17	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: I would find a sabbatical beneficial.								
4.45	4.40	4.57	4.37	4.53	4.56	4.55	4.39	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**15c.** *Departmental/school encouragement to progress for all research staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: It is more difficult for women than men to reach the most senior employment positions in my field (e.g. biological sciences, chemistry, computing/ICT, engineering, food science/nutrition, mathematics, medicine, physics, psychology, pharmacy pharmacology).								
4.61	4.68	4.45	4.36	2.69	2.29	2.97	2.82	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: My line manager or appraiser encourages me to progress in my career.								
4.57	4.00	4.29	3.70	4.36	4.05	4.36	4.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My line manager or appraiser encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.24	3.89	4.05	3.70	4.07	3.48	4.18	4.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My line manager or appraiser gives me helpful feedback about my performance.								
4.22	3.57	3.84	3.70	4.04	3.90	4.08	4.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My line manager or appraiser encourages me to have a strategic plan for promotion.								
3.20	2.68	3.20	2.70	3.51	3.24	3.54	3.40	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: My line manager or appraiser has encouraged me to apply for university rewards, incentives or awards.								
2.93	2.32	2.48	2.41	3.33	2.67	2.87	2.60	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Adequate opportunities exist in my school/department for personal development and training.								
4.27	3.64	3.76	3.10	4.05	4.00	3.92	3.40	group, $P < 0.01$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My school/department takes part-time work and/or career breaks into account when putting staff forward for promotion.								
3.36	2.84	3.10	2.22	3.98	3.53	3.39	3.30	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I would find a sabbatical beneficial.								
3.24	2.92	2.96	3.48	3.41	3.00	3.19	3.33	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 16a.** Career satisfaction for all academic staff/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> I am satisfied with the success I have achieved in my career.											
4.01 #	4.25	4.18	4.24	4.17	4.11	3.50	3.76	3.73	3.53	3.44	3.66
<b>QU:</b> I am satisfied with the progress I have made to meeting my overall career goals.											
3.92 #	4.19	4.15	4.18	4.11	3.98	3.46	3.68	3.71	3.49	3.38	3.43
<b>QU:</b> I am satisfied with the progress I have made towards meeting my goals for salary.											
3.71 #	4.05	3.91	4.03	3.92	3.85	3.34	3.50	3.59	3.24	3.25	3.12
<b>QU:</b> I am satisfied with the progress I have made towards meeting my goals for the development of new skills.											
3.96	4.15	4.13	4.19	3.99	4.13	3.90	3.89	4.15	3.82	3.74	3.70

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

**Table 16b.** Career satisfaction for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am satisfied with the success I have achieved in my career.								
4.00	4.07	4.09	4.04	4.31	4.35	4.23	4.14	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: I am satisfied with the progress I have made to meeting my overall career goals.								
4.07	4.00	3.97	3.90	4.21	4.31	4.20	4.04	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: I am satisfied with the progress I have made towards meeting my goals for salary.								
3.66	3.86	3.89	3.57	4.07	4.15	3.95	4.03	group, $P = NS$ sex, $P < 0.05$ group x sex, $P = NS$
QU: I am satisfied with the progress I have made towards meeting my goals for the development of new skills.								
4.01	3.95	3.85	4.18	4.24	4.36	4.10	4.09	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.



**Table 16c.** Career satisfaction for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am satisfied with the success I have achieved in my career.								
3.67	3.32	3.30	3.63	3.83	3.86	3.64	3.73	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I am satisfied with the progress I have made to meeting my overall career goals.								
3.68	3.29	3.25	3.31	3.74	3.81	3.57	3.73	group, $P = NS$ sex, $P = 0.056$ group $\times$ sex, $P = NS$
QU: I am satisfied with the progress I have made towards meeting my goals for salary.								
3.60	3.11	3.22	2.87	3.54	3.48	3.29	3.82	group, $P = NS$ sex, $P = 0.052$ group $\times$ sex, $P = NS$
QU: I am satisfied with the progress I have made towards meeting my goals for the development of new skills.								
4.26	3.61	3.68	3.72	3.96	4.05	3.82	3.64	group, $P = 0.065$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 17a.** Workload allocation for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> I feel that the allocation of workload in the school/department is fair (i.e. teaching, administrative duties, pastoral care, laboratory work, etc.).											
3.16 #	3.69	3.70 †	3.75 †	3.39	3.15	3.71	3.88	3.97 †	3.73	3.69	3.41
<b>QU:</b> I can manage my workload in the time available to me.											
3.07 #	3.59	3.39	3.39	3.42	3.33	3.96	3.93	4.03	3.80	4.03	3.55
<b>QU:</b> The school's department workload model is transparent.											
2.87 #	3.46	3.40	3.48	3.02	3.21	2.88	3.05	3.19 †	2.69	2.85	2.54

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 17b.** Workload allocation for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
<b>QU:</b> I feel that the allocation of workload in the school/department is fair (i.e. teaching, administrative duties, pastoral care, laboratory work, etc.).								
3.32	3.41	3.19	2.73	3.96	3.95	3.54	3.47	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
<b>QU:</b> I can manage my workload in the time available to me.								
3.14	2.98	3.30	2.82	3.55	3.67	3.50	3.69	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$
<b>QU:</b> The school's department workload model is transparent.								
3.04	3.19	2.67	2.67	3.63	3.67	3.24	3.57	group, $P = NS$ sex, $P < 0.01$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 17c.** Workload allocation for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
<b>QU:</b> I feel that the allocation of workload in the school/department is fair (i.e. teaching, administrative duties, pastoral care, laboratory work, etc.).								
3.98	3.69	3.50	3.50	3.98	3.81	3.97	3.18	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> I can manage my workload in the time available to me.								
4.08	3.81	4.02	3.66	3.96	3.71	4.05	3.27	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
<b>QU:</b> The school's department workload model is transparent.								
3.18	2.60	2.58	2.73	3.20	2.86	3.25	2.09	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 18a.** *Work-life balance policies and practice for all academic/research staff in schools/departments.*

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> Meetings and events are seldom scheduled outside 10 am and 4 pm.											
3.44	3.64	3.48	3.99 †	3.65	3.27	3.59	3.90	3.73	3.60	3.78	3.60
<b>QU:</b> I make use of flexible working hours.											
4.26 #	4.52	4.39	4.45	4.66 †	3.93	4.56	4.48	4.44	4.59	4.65	4.45
<b>QU:</b> My line manager is quite accommodating of family-related needs.											
4.61	4.69	4.74	4.94 †	4.59	4.38	4.75 #	5.06	4.93	4.74	4.89	4.81
<b>QU:</b> The school/department actively promotes a healthy work-life balance.											
2.99 #	3.27	3.29	3.34	3.09	2.94	3.37 #	3.81	3.62	3.50	3.61	3.08
<b>QU:</b> My career break was not detrimental to my career.											
2.80	3.39	2.48	3.16	3.26	2.86	3.14	2.79	3.50	3.09	2.76	2.67
<b>QU:</b> During my career break, the level of contact with/from the school/department was appropriate.											
3.70	3.92	3.52	3.89	4.10	3.90	3.53	3.63	4.05	4.00	3.42	2.56

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 18b.** *Work-life balance policies and practice for all academic staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: Meetings and events are seldom scheduled outside 10 am and 4 pm.								
3.61	3.88	3.51	3.02	3.41	4.05	3.73	3.49	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I make use of flexible working hours.								
4.40	4.28	4.52	3.60	4.41	4.56	4.73	4.19	group, $P < 0.01$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: My line manager is quite accommodating of family-related needs.								
4.88	5.02	4.49	4.00	4.64	4.86	4.66	4.62	group, $P < 0.01$ sex, $P = \text{NS}$ group $\times$ sex, $P < 0.05$
QU: The school/department actively promotes a healthy work-life balance.								
3.11	3.28	3.08	2.57	3.42	3.39	3.12	3.21	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: My career break was not detrimental to my career.								
2.46	3.06	3.08	2.82	2.60	4.00	3.70	3.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: During my career break, the level of contact with/from the school/department was appropriate.								
3.64	3.80	4.05	3.88	3.00	4.33	4.33	4.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 18c.** Work-life balance policies and practice for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: Meetings and events are seldom scheduled outside 10 am and 4 pm.								
3.71	3.36	3.63	3.48	3.75	3.95	4.00	3.91	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I make use of flexible working hours.								
4.43	4.75	4.66	4.59	4.43	4.29	4.63	4.09	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My line manager is quite accommodating of family-related needs.								
4.84	4.46	4.72	4.73	5.10	5.00	5.14	5.00	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: The school/department actively promotes a healthy work-life balance.								
3.52	3.29	3.43	2.90	3.80	3.76	3.87	3.55	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: My career break was not detrimental to my career.								
3.65	3.17	3.00	2.67	3.33	3.67	1.75	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: During my career break, the level of contact with/from the school/department was appropriate.								
4.26	3.83	3.53	2.56	3.00	6.00	2.50	.	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 19a.** Personal work-life balance for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> I am successful at balancing my paid work and my personal life.											
3.14 #	3.51	3.31	3.55	3.35	3.35	3.73	3.63	3.76	3.53	3.81	3.63
<b>QU:</b> I face much conflict in balancing my work and personal life.											
3.85 #	3.56	3.45	3.67	3.82	3.79	3.32	3.22	3.37	3.22	3.11	3.36

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

**Table 19b.** Personal work-life balance for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am successful at balancing my paid work and my personal life.								
3.18	3.21	3.19	3.04	3.38	3.79	3.47	3.60	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I face much conflict in balancing my work and personal life.								
3.54	3.98	4.03	3.92	3.39	3.44	3.69	3.66	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 19c.** *Personal work-life balance for all research staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am successful at balancing my paid work and my personal life.								
3.80	3.57	3.80	3.69	3.70	3.38	3.82	3.45	group, <i>P</i> = NS sex, <i>P</i> = NS group × sex, <i>P</i> = NS
QU: I face much conflict in balancing my work and personal life.								
3.33	3.26	3.18	3.46	3.37	3.33	3.00	3.09	group, <i>P</i> = NS sex, <i>P</i> = NS group × sex, <i>P</i> = NS

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 20a.** Work-life balance culture for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> In this school/department, staff who use work-family policies (e.g. job-sharing) are considered to be less serious about their career than those who do not use these policies.											
3.42 #	2.72	2.83	2.92	3.13	3.16	3.59 #	2.80	3.23	3.20	3.26	3.82
<b>QU:</b> In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time.											
3.20 #	2.65	2.87	2.92	2.73	3.05	3.48 #	2.81	3.19	3.16	3.12	3.59
<b>QU:</b> Staff are regularly expected to put their jobs before their families.											
3.15	2.98	2.97	2.75 †	3.17	3.29	3.40 #	2.92	3.19	3.09	3.18	3.71
<b>QU:</b> To be viewed favourably by the school/department, staff must constantly put their jobs ahead of their families or personal lives.											
3.28 #	2.88	2.89	2.87	3.13	3.28	3.60 #	2.90	3.27	3.28	3.37	3.72
<b>QU:</b> Staff are often expected to take work home at night and weekends.											
4.55 #	4.18	4.36	4.20	4.40	4.52	4.11	3.79	3.90	4.21	3.89	4.19
<b>QU:</b> To get ahead, staff are expected to work more than 50 hours a week.											
4.24 #	3.85	3.98	3.76	4.16	3.99	3.75	3.52	3.72	3.67	3.39	4.05
<b>QU:</b> To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.											
3.56 #	3.13	3.22	3.09	3.35	3.52	3.86 #	3.19	3.64	3.52	3.57	3.97
<b>QU:</b> Many staff are resentful when men in my school/department take extended leave to care for newborn or adopted children.											
2.12	2.06	2.05	2.00	2.07	2.21	2.31	2.21	2.23	2.20	2.25	2.35
<b>QU:</b> Many staff are resentful when women in this school/department take extended leave to care for newborn or adopted children.											
2.40 #	1.88	2.06	2.15	1.98	2.22	2.67 #	2.03	2.35	2.23	2.49	2.63

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.



**Table 20b.** Work-life balance culture for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: In this school/department, staff who use work-family policies (e.g. job-sharing) are considered to be less serious about their career than those who do not use these policies.								
3.34	3.20	3.56	3.47	2.54	2.72	2.89	2.94	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time.								
3.36	3.07	3.13	3.20	2.57	2.82	2.52	2.94	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Staff are regularly expected to put their jobs before their families.								
3.12	2.79	3.33	3.29	2.84	2.70	3.05	3.32	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: To be viewed favourably by the school/department, staff must constantly put their jobs ahead of their families or personal lives.								
3.11	3.02	3.38	3.52	2.72	2.75	2.97	3.16	group, $P = 0.052$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Staff are often expected to take work home at night and weekends.								
4.72	4.40	4.67	4.61	4.11	4.03	4.24	4.46	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: To get ahead, staff are expected to work more than 50 hours a week.								
4.42	3.86	4.47	4.06	3.70	3.69	3.97	4.00	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.								
3.64	3.22	3.51	3.80	2.94	2.98	3.27	3.37	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Many staff are resentful when men in my school/department take extended leave to care for newborn or adopted children.								
2.11	1.88	2.23	2.02	1.99	2.07	2.00	2.35	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Many staff are resentful when women in this school/department take extended leave to care for newborn or adopted children.								
2.45	2.15	2.47	2.36	1.78	2.14	1.73	2.13	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = 0.057$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 20c.** Work-life balance culture for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: In this school/department, staff who use work-family policies (e.g. job-sharing) are considered to be less serious about their career than those who do not use these policies.								
3.55	3.68	3.36	4.04	2.53	2.58	3.11	3.22	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time.								
3.46	3.56	3.22	3.83	2.69	2.63	2.97	3.00	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Staff are regularly expected to put their jobs before their families.								
3.32	3.35	3.26	4.07	2.93	2.75	3.05	2.82	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: To be viewed favourably by the school/department, staff must constantly put their jobs ahead of their families or personal lives.								
3.52	3.65	3.52	3.96	2.75	2.80	3.16	3.10	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Staff are often expected to take work home at night and weekends.								
4.07	4.41	4.06	4.19	3.56	4.00	3.65	4.20	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: To get ahead, staff are expected to work more than 50 hours a week.								
3.91	3.70	3.43	4.00	3.33	3.67	3.32	4.20	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.								
3.86	3.96	3.74	4.27	3.18	3.00	3.31	3.20	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Many staff are resentful when men in my school/department take extended leave to care for newborn or adopted children.								
2.30	2.16	2.30	2.36	2.03	2.22	2.18	2.33	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Many staff are resentful when women in this school/department take extended leave to care for newborn or adopted children.								
2.64	2.32	2.79	2.75	1.80	2.06	2.06	2.36	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 21a.** Gender climate for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> My school/department has a positive work environment.											
3.97 #	4.24	4.20 †	4.36 †	4.17	3.75	4.12 #	4.43	4.41 †	4.36	4.11	3.70
<b>QU:</b> My school/department has a more positive work environment now than a few years ago.											
3.40	3.48	3.54	3.90 †	3.15	3.32	3.43	3.35	3.43	3.33	3.36	3.37
<b>QU:</b> Men have preferential access to lab/research space and resources in my school/department.											
2.19 #	1.55	1.79	1.81	1.74	1.97	2.01 #	1.59	1.77	1.58	2.01	2.13
<b>QU:</b> Men do not receive preferential treatment in promotion in my school/department.											
3.98 #	4.96	4.62	4.66	4.66	4.23	3.84 #	4.70	4.30	4.24	4.12	3.56
<b>QU:</b> Women do not receive preferential treatment in promotion in my school/department.											
4.76	4.75	4.70	4.81	4.74	4.80	4.42	4.16	4.51	4.00	4.13	4.33
<b>QU:</b> In meetings in my school/department staff pay just as much attention when women speak as when men do.											
4.29 #	5.27	4.78	4.92	4.94	5.01	4.40 #	5.23	4.88	4.80	4.48	4.49
<b>QU:</b> In meetings in my school/department managers pay as much attention when women speak as when men do.											
4.21 #	5.16	4.73	4.89	4.82	4.77	4.36 #	5.23	4.87	4.81	4.46	4.38
<b>QU:</b> Women have preferential access to lab/research space and resources in my school/department.											
1.80	1.72	1.68	1.69	1.77	1.80	1.84	1.94	1.86	1.76	1.79	1.94
<b>QU:</b> There is appropriate representation of women on major committees in my school/department.											
3.44 #	4.48	4.08	4.16	4.02	4.05	3.47 #	4.43	4.01	3.80	3.74	3.55

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 21b.** Gender climate for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My school/department has a positive work environment.								
3.97	4.21	4.06	3.39	4.38	4.46	4.24	3.97	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: My school/department has a more positive work environment now than a few years ago.								
3.37	4.05	3.02	3.27	3.66	3.80	3.21	3.32	group, $P < 0.01$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: Men have preferential access to lab/research space and resources in my school/department.								
2.33	2.15	2.15	2.13	1.40	1.59	1.55	1.88	group, $P = \text{NS}$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: Men do not receive preferential treatment in promotion in my school/department.								
4.01	4.24	3.87	3.82	5.02	4.95	5.05	4.55	group, $P = \text{NS}$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: Women do not receive preferential treatment in promotion in my school/department.								
4.69	4.75	4.54	5.06	4.70	4.87	4.84	4.59	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: In meetings in my school/department staff pay just as much attention when women speak as when men do.								
4.08	4.40	4.23	4.76	5.25	5.28	5.30	5.17	group, $P = \text{NS}$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: In meetings in my school/department managers pay as much attention when women speak as when men do.								
4.11	4.45	4.19	4.35	5.12	5.20	5.16	5.07	group, $P = \text{NS}$ sex, $P < 0.01$ group x sex, $P = \text{NS}$
QU: Women have preferential access to lab/research space and resources in my school/department.								
1.68	1.68	1.81	1.94	1.68	1.69	1.76	1.71	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: There is appropriate representation of women on major committees in my school/department.								
3.26	4.00	3.41	3.40	4.66	4.28	4.34	4.48	group, $P = \text{NS}$ sex, $P < 0.01$ group x sex, $P < 0.05$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 21c.** Gender climate for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My school/department has a positive work environment.								
4.36	4.22	3.92	3.59	4.52	4.62	4.37	4.00	group, $P < 0.05$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: My school/department has a more positive work environment now than a few years ago.								
3.58	3.24	3.43	3.24	3.20	3.50	3.26	3.67	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Men have preferential access to lab/research space and resources in my school/department.								
1.89	1.76	2.14	2.43	1.60	1.26	1.82	1.25	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Men do not receive preferential treatment in promotion in my school/department.								
3.96	3.79	3.77	3.44	4.83	4.81	4.73	3.82	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Women do not receive preferential treatment in promotion in my school/department.								
4.55	4.29	4.31	4.28	4.46	3.70	3.83	4.45	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: In meetings in my school/department staff pay just as much attention when women speak as when men do.								
4.59	4.44	4.13	4.17	5.33	5.33	5.00	5.40	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: In meetings in my school/department managers pay as much attention when women speak as when men do.								
4.55	4.52	4.08	4.07	5.39	5.30	5.03	5.20	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Women have preferential access to lab/research space and resources in my school/department.								
1.76	1.72	1.76	2.09	2.04	1.74	1.82	1.56	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: There is appropriate representation of women on major committees in my school/department.								
3.73	3.20	3.33	3.21	4.51	4.63	4.36	4.44	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 22a.** *Intention to leave for all academic/research staff in schools/departments.*

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> I will actively look for a job at another university or school/department in the next year.											
2.31	2.34	2.18	2.01	2.46	2.48	3.20	3.05	2.97 †	3.24	2.89 †	3.90
<b>QU:</b> I am considering leaving my job and pursuing a different career.											
2.30 #	1.98	1.95	1.86	2.21	2.23	3.30	2.96	3.07	3.55	3.05	3.18

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 22b.** *Intention to leave for all academic staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I will actively look for a job at another university or school/department in the next year.								
2.09	1.93	2.38	2.65	2.25	2.08	2.47	2.35	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: I am considering leaving my job and pursuing a different career.								
2.15	1.93	2.39	2.56	1.83	1.83	2.08	2.00	group, $P = NS$ sex, $P < 0.05$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 22c.** *Intention to leave for all research staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I will actively look for a job at another university or school/department in the next year.								
2.88	3.39	2.91	4.17	3.15	3.05	2.87	3.18	group, <i>P</i> = NS sex, <i>P</i> = NS group x sex, <i>P</i> = NS
QU: I am considering leaving my job and pursuing a different career.								
3.16	3.71	3.13	3.48	2.93	3.38	2.95	2.36	group, <i>P</i> = NS sex, <i>P</i> = 0.054 group x sex, <i>P</i> = NS

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 23a.** *Impact of Athena SWAN for all academic/research staff in schools/departments.*

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> Athena SWAN helped to improve my visibility within my school/department.											
2.92 #	2.22	2.61 †	2.65 †	2.15		2.79 #	2.20	2.73 †	2.81	2.19	
<b>QU:</b> Athena SWAN had a positive impact on the work environment of the school/department.											
3.47	3.39	3.73 †	3.49 †	2.82		3.25	3.21	3.49 †	3.55 †	2.59	
<b>QU:</b> Athena SWAN had a positive impact on the work practices of the school/department.											
3.47	3.46	3.78 †	3.63 †	2.88		3.39	3.39	3.66 †	3.61 †	2.74	
<b>QU:</b> Athena SWAN helped me to think more broadly about gender issues.											
3.92 #	3.51	3.77	3.60	3.63		3.66	3.37	3.67	3.63	3.37	
<b>QU:</b> Athena SWAN had a positive impact on my career development.											
2.92 #	2.12	2.60 †	2.39	2.25		2.83 #	2.29	2.77	2.84	2.36	
<b>QU:</b> Athena SWAN helped me to increase my self-confidence.											
2.68 #	2.00	2.40	2.26	2.15		2.56	2.24	2.54	2.47	2.27	
<b>QU:</b> Athena SWAN helped me to develop leadership skills.											
2.63 #	2.09	2.42	2.24	2.22		2.46	2.19	2.48	2.47	2.08	
<b>QU:</b> Athena SWAN had a positive impact on my views on the advancement of women.											
3.36	3.28	3.46	3.22	3.29		3.17	3.32	3.32 †	3.55 †	2.73	

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.



**Table 23b.** *Impact of Athena SWAN for all academic staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: Athena SWAN helped to improve my visibility within my school/department.								
3.06	2.97	2.57	.	2.31	2.45	1.93	.	group, $P < 0.05$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Athena SWAN had a positive impact on the work environment of the school/department.								
3.74	3.40	3.00	.	3.75	3.60	2.74	.	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Athena SWAN had a positive impact on the work practices of the school/department.								
3.68	3.60	2.98	.	3.87	3.69	2.83	.	group, $P < 0.01$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Athena SWAN helped me to think more broadly about gender issues.								
3.80	3.83	4.22	.	3.74	3.46	3.31	.	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = 0.062$
QU: Athena SWAN had a positive impact on my career development.								
3.14	2.85	2.68	.	2.24	2.06	2.02	.	group, $P = 0.05$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Athena SWAN helped me to increase my self-confidence.								
2.82	2.69	2.58	.	2.11	1.96	1.92	.	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Athena SWAN helped me to develop leadership skills.								
2.79	2.59	2.58	.	2.18	2.00	2.02	.	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Athena SWAN had a positive impact on my views on the advancement of women.								
3.45	3.40	3.48	.	3.47	3.11	3.19	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 23c.** *Impact of Athena SWAN for all research staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: Athena SWAN helped to improve my visibility within my school/department.								
2.97	2.89	2.36	.	2.25	2.67	1.85	.	group, $P = 0.064$ sex, $P < 0.05$ group $\times$ sex, $P = NS$
QU: Athena SWAN had a positive impact on the work environment of the school/department.								
3.45	3.53	2.67	.	3.55	3.64	2.45	.	group, $P < 0.01$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Athena SWAN had a positive impact on the work practices of the school/department.								
3.57	3.74	2.76	.	3.85	3.45	2.70	.	group, $P < 0.01$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Athena SWAN helped me to think more broadly about gender issues.								
3.65	3.84	3.68	.	3.68	3.33	2.75	.	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Athena SWAN had a positive impact on my career development.								
2.90	3.05	2.58	.	2.44	2.50	1.95	.	group, $P = NS$ sex, $P < 0.05$ group $\times$ sex, $P = NS$
QU: Athena SWAN helped me to increase my self-confidence.								
2.61	2.47	2.47	.	2.38	2.42	1.90	.	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Athena SWAN helped me to develop leadership skills.								
2.55	2.53	2.21	.	2.38	2.33	1.86	.	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Athena SWAN had a positive impact on my views on the advancement of women.								
3.27	3.22	2.84	.	3.45	4.08	2.52	.	group, $P < 0.01$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 24a.** Confidence in advancing work recognition for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> I feel confident in putting myself forward for positions of responsibility within the school/department.											
4.28 #	4.67	4.40	4.77	4.48	4.44	3.55 #	3.88	3.97	3.53	3.44	3.58
<b>QU:</b> I feel confident in putting myself forward for positions of responsibility within the university.											
3.83 #	4.25	4.01	4.23	3.99	4.05	3.17	3.44	3.46	3.16	3.15	3.23
<b>QU:</b> I feel confident in putting myself forward as a principal investigator on a grant.											
4.77 #	5.13	5.16 †	4.94 †	5.13 †	4.34	3.16 #	3.86	3.54	3.49	3.24	3.42
<b>QU:</b> I feel confident in putting myself forward for promotion.											
3.89 #	4.23	4.05	4.27	4.14	3.83	2.94 #	3.49	3.37	2.86	3.00	3.23
<b>QU:</b> I feel confident in putting myself forward for an additional increment/salary increase.											
3.55 #	3.87	3.69	3.90	3.75	3.62	2.77 #	3.38	3.25	2.82	2.76	2.95

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 24b.** Confidence in advancing work recognition for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel confident in putting myself forward for positions of responsibility within the school/department.								
4.16	4.42	4.06	4.40	4.60	5.00	4.70	4.43	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for positions of responsibility within the university.								
3.75	3.74	3.65	3.94	4.21	4.57	4.19	4.07	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward as a principal investigator on a grant.								
5.08	4.45	4.81	4.12	5.24	5.26	5.31	4.49	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for promotion.								
3.95	3.98	3.74	3.78	4.19	4.47	4.36	3.81	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for an additional increment/salary increase.								
3.57	3.53	3.49	3.50	3.80	4.15	3.89	3.69	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 24c.** Confidence in advancing work recognition for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel confident in putting myself forward for positions of responsibility within the school/department.								
3.80	3.29	3.34	3.52	4.25	3.86	3.58	3.73	group, $P < 0.05$ sex, $P = 0.051$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for positions of responsibility within the university.								
3.27	3.04	3.09	3.21	3.75	3.29	3.24	3.27	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward as a principal investigator on a grant.								
3.28	3.18	3.05	3.15	4.02	3.95	3.51	4.09	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for promotion.								
3.14	2.48	2.79	3.04	3.73	3.29	3.32	3.73	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel confident in putting myself forward for an additional increment/salary increase.								
3.03	2.56	2.53	2.64	3.58	3.14	3.11	3.73	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 25a.** Sense of belonging for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> I feel fully part of my research group.											
4.63 #	4.99	5.07 †	4.92	4.82	4.41	4.69	4.83	4.86	4.82	4.67	4.62
<b>QU:</b> I feel fully part of my school/department.											
4.34 #	4.66	4.60	4.94 †	4.55	4.28	3.73	3.94	3.97	3.76	3.62	3.56

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 25b.** Sense of belonging for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel fully part of my research group.								
4.74	4.53	4.82	4.17	5.27	5.18	4.81	4.55	group, $P < 0.01$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: I feel fully part of my school/department.								
4.20	4.90	4.47	4.18	4.86	4.96	4.61	4.31	group, $P < 0.05$ sex, $P = 0.054$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 25c.** Sense of belonging for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel fully part of my research group.								
4.91	4.75	4.45	4.61	4.85	4.86	4.97	4.64	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I feel fully part of my school/department.								
4.02	3.61	3.43	3.46	3.98	4.00	3.90	3.82	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 26a.** Beneficial groups for all academic/research staff in schools/departments.

Academic						Research					
Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Female	Male	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award
<b>QU:</b> My research group is useful to me.											
4.77 #	5.09	5.25 †	5.01 †	4.93 †	4.44	5.00	5.14	5.21	5.00	4.93	5.05
<b>QU:</b> Research seminars are useful to me.											
4.06 #	4.40	4.62 †	4.19	4.29 †	3.76	4.33	4.36	4.58	4.27	4.18	4.03
<b>QU:</b> Teaching teams are useful to me.											
4.08	4.01	4.02	4.23	3.85	4.18	2.87	2.98	3.18	2.69	2.59	2.94
<b>QU:</b> Informal social groups are useful to me.											
3.82	3.96	3.94	3.92	3.91	3.91	4.09	4.01	4.05	4.09	3.95	4.03
<b>QU:</b> Formal social events are useful to me.											
2.98	3.15	3.26 †	2.98	3.07	2.81	3.28	3.32	3.53	3.23	2.92	3.28
<b>QU:</b> Committees/working groups are useful to me.											
3.89	3.76	3.91	4.01	3.72	3.63	3.44	3.30	3.54	3.44	3.08	3.38
<b>QU:</b> Email communications are useful to me.											
4.10	4.21	4.21	4.33	4.23	4.07	4.45	4.33	4.48	4.67	4.34	4.18
<b>QU:</b> Women-only/men-only network groups are useful to me.											
2.37 #	1.41	1.88	1.81	1.83	1.53	2.53 #	1.51	2.28	2.33	1.98	2.03

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 26b.** Beneficial groups for all academic staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My research group is useful to me.								
5.02	4.57	4.95	4.09	5.38	5.30	4.93	4.65	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Research seminars are useful to me.								
4.38	3.81	4.24	3.54	4.78	4.46	4.35	3.88	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Teaching teams are useful to me.								
3.90	4.43	4.10	4.06	4.11	4.14	3.74	4.24	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: Informal social groups are useful to me.								
3.83	3.56	3.89	3.72	3.97	4.17	3.92	4.04	group, $P = NS$ sex, $P < 0.05$ group x sex, $P = NS$
QU: Formal social events are useful to me.								
3.18	2.88	3.03	2.68	3.34	3.03	3.10	2.90	group, $P < 0.05$ sex, $P = NS$ group x sex, $P = NS$
QU: Committees/working groups are useful to me.								
3.77	4.07	4.02	3.70	4.03	3.98	3.58	3.53	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: Email communications are useful to me.								
4.05	4.26	4.21	3.92	4.32	4.41	4.24	4.13	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: Women-only/men-only network groups are useful to me.								
2.52	2.24	2.60	1.88	1.47	1.53	1.44	1.30	group, $P < 0.05$ sex, $P < 0.01$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.



**Table 26c.** Beneficial groups for all research staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My research group is useful to me.								
5.16	4.96	4.78	5.07	5.36	5.05	5.16	5.00	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Research seminars are useful to me.								
4.55	4.26	4.16	4.04	4.67	4.30	4.21	4.00	group, $P < 0.05$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Teaching teams are useful to me.								
3.15	2.67	2.50	2.79	3.28	2.74	2.71	3.33	group, $P < 0.05$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Informal social groups are useful to me.								
4.06	4.50	3.80	4.14	4.05	3.74	4.16	3.73	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Formal social events are useful to me.								
3.58	3.10	2.80	3.31	3.46	3.45	3.11	3.20	group, $P < 0.05$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Committees/working groups are useful to me.								
3.58	3.64	3.02	3.52	3.51	3.32	3.16	3.00	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Email communications are useful to me.								
4.52	4.69	4.29	4.14	4.44	4.71	4.42	4.27	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Women-only/men-only network groups are useful to me.								
2.65	3.06	2.33	2.32	1.54	1.63	1.46	1.22	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 27a.** Career development and progression for all administrative/technical staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
QU: I was satisfied with my career performance/development review.					
4.36	4.26	4.27	4.59	4.42	4.26

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 27b.** Career development and progression for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I was satisfied with my career performance/development review.								
4.41	4.66	4.40	4.20	3.82	4.27	4.52	4.73	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 28a.** Career development and progression support from the wider university for all administrative/technical staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> Adequate opportunities exist within the university for personal development and training.					
4.13	4.01	4.35 †	3.93	4.12	3.85
<b>QU:</b> My university encourages me to undertake further training and pursue personal development opportunities relevant to my career.					
3.97	3.84	4.14	3.77	3.96	3.71
<b>QU:</b> There are flexible promotion policies (e.g. take into account part-time work, career breaks, etc.) at my university.					
3.51	3.51	3.65	3.68	3.44	3.30
<b>QU:</b> There is real commitment at my university to promote equality and diversity.					
4.07	4.36	4.27	4.09	4.15	3.90
<b>QU:</b> It is more difficult for women than men to reach the most senior employment positions in my field.					
3.36 #	2.43	3.22	2.98	3.01	3.10

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 28b.** Career development and progression support from the wider university for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: Adequate opportunities exist within the university for personal development and training.								
4.41	4.00	4.14	3.84	4.22	3.75	4.08	3.73	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My university encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.19	3.79	4.02	3.65	3.90	3.69	3.79	4.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: There are flexible promotion policies (e.g. take into account part-time work, career breaks, etc.) at my university.								
3.71	3.64	3.47	3.20	3.47	3.75	3.42	3.67	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: There is real commitment at my university to promote equality and diversity.								
4.20	3.95	4.15	3.83	4.63	4.41	4.27	4.27	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: There is a mentoring scheme available to me at my university.								
1.41	1.54	1.48	1.78	1.65	1.56	1.63	1.80	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I am currently mentored at my university.								
1.91	1.97	1.93	1.92	1.94	1.94	1.97	2.00	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I have previously been mentored at my university.								
1.86	1.89	1.88	1.98	1.94	1.88	1.97	1.87	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: It is more difficult for women than men to reach the most senior employment positions in my field.								
3.46	3.08	3.20	3.41	2.53	2.75	2.54	1.87	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 29a.** Career development and progression support from the school/department for all administrative/technical staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> My line manager/supervisor encourages me to progress in my career.					
3.92	3.85	3.98	4.21	3.93	3.56
<b>QU:</b> My line manager/supervisor encourages me to undertake further training and pursue personal development opportunities relevant to my career.					
4.08	3.93	4.08	4.18	4.13	3.78
<b>QU:</b> My line manager/supervisor gives me helpful feedback about my performance.					
3.90	3.95	4.01	4.07	3.93	3.64
<b>QU:</b> Adequate opportunities exist in my school/department for personal development and training.					
3.77	3.78	4.11 †	3.74	3.71	3.36

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 29b.** Career development and progression support from the school/department for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My line manager/supervisor encourages me to progress in my career.								
4.09	4.08	3.96	3.56	3.61	4.53	3.84	3.60	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: My line manager supervisor encourages me to undertake further training and pursue personal development opportunities relevant to my career.								
4.18	4.08	4.19	3.82	3.74	4.41	4.00	3.67	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: My line manager/supervisor gives me helpful feedback about my performance.								
4.10	3.85	3.97	3.60	3.74	4.59	3.82	3.93	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: Adequate opportunities exist in my school/department for personal development and training.								
4.15	3.79	3.69	3.34	3.97	3.63	3.76	3.53	group, $P < 0.05$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 30a.** Career satisfaction for all administrative/technical staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I am satisfied with the success I have achieved in my career.					
3.72	3.68	3.85	3.77	3.75	3.54
<b>QU:</b> I am satisfied with the progress I have made toward meeting my overall career goals.					
3.67	3.72	3.81	3.66	3.79	3.47
<b>QU:</b> I am satisfied with the progress I have made toward meeting my goals for salary.					
3.44	3.37	3.59	3.29	3.49	3.18
<b>QU:</b> I am satisfied with the progress I have made toward meeting my goals for the development of new skills.					
3.67	3.79	3.85	3.73	3.76	3.44

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 30b.** Career satisfaction for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am satisfied with the success I have achieved in my career.								
3.97	3.67	3.78	3.39	3.42	4.00	3.65	4.13	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P < 0.05$
QU: I am satisfied with the progress I have made toward meeting my overall career goals.								
3.89	3.51	3.80	3.30	3.52	4.00	3.72	4.13	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P < 0.05$
QU: I am satisfied with the progress I have made toward meeting my goals for salary.								
3.66	3.31	3.52	3.13	3.35	3.24	3.44	3.40	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I am satisfied with the progress I have made toward meeting my goals for the development of new skills.								
3.86	3.67	3.78	3.31	3.78	3.88	3.72	3.93	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 31a.** Confidence for all administrative/technical staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> How confident do you feel to in putting yourself forward for positions of responsibility within the school/department?					
2.92 #	3.17	2.93	3.04	2.99	3.01
<b>QU:</b> How confident do you feel in putting yourself forward for positions of responsibility within the university?					
2.56 #	2.88	2.54	2.83	2.63	2.68
<b>QU:</b> How confident do you feel about applying for additional salary/an additional salary increment?					
2.27	2.27	2.19	2.30	2.31	2.25

Response scale for questions: 1 = 'not at all confident'; 4 = 'very confident'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

**Table 31b.** Confidence for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: How confident do you feel in putting yourself forward for positions of responsibility within the school/department?								
2.86	2.95	2.91	3.05	3.13	3.27	3.18	3.00	group, $P = \text{NS}$ sex, $P = 0.056$ group $\times$ sex, $P = \text{NS}$
QU: How confident do you feel in putting yourself forward for positions of responsibility within the university?								
2.42	2.61	2.64	2.66	2.82	3.40	2.64	2.87	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: How confident do you feel about applying for additional salary/an additional salary increment?								
2.16	2.24	2.38	2.30	2.19	2.44	2.24	2.15	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'not at all confident'; 4 = 'very confident'.

**Table 32a.** *Workload management and work-life balance for all administrative/technical staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I can manage my workload in the time available to me.					
4.10	4.12	4.22	4.11	4.19	3.90
<b>QU:</b> The school's/department workload model is transparent.					
2.92	2.90	2.90	3.22	2.92	2.86
<b>QU:</b> Meetings and events are seldom scheduled outside 10 am and 4 pm.					
3.74	3.93	3.83	4.11	3.82	3.52
<b>QU:</b> I make use of flexible working hours.					
3.92	3.58	4.01 †	3.85	3.99	3.33
<b>QU:</b> My line manager/supervisor is quite accommodating of family-related needs.					
4.94	4.88	4.99	5.17 †	5.06	4.61
<b>QU:</b> The school/department actively promotes a healthy work-life balance.					
3.78	3.67	3.87 †	4.06 †	3.82 †	3.21
<b>QU:</b> I have taken a career break and it was not detrimental to my career (if you have not taken a career break please leave this question blank).					
3.35	2.80	3.81	2.89	3.83	3.08
<b>QU:</b> During my career break, the level of contact with/from the school/department was appropriate (if you have not taken a career break please leave this question blank).					
3.29	2.67	3.07	3.33	3.44	3.10
<b>QU:</b> I am successful at balancing my paid work and my personal life.					
4.20	4.34	4.25	4.23	4.27	4.24
<b>QU:</b> I face much conflict in balancing my work and personal life.					
2.63	2.51	2.59	2.50	2.53	2.66

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.



**Table 32b.** Workload management and work-life balance for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I can manage my workload in the time available to me.								
4.22	4.08	4.20	3.95	4.19	4.19	4.16	3.67	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: The school's/department workload model is transparent.								
2.95	3.07	2.89	2.94	2.73	3.58	3.06	2.47	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Meetings and events are seldom scheduled outside 10 am and 4 pm.								
3.73	4.23	3.78	3.57	4.03	3.82	4.00	3.53	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I make use of flexible working hours.								
4.20	3.82	4.10	3.26	3.32	3.94	3.64	3.64	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: My line manager/supervisor is quite accommodating of family-related needs.								
5.10	5.05	5.17	4.50	4.67	5.41	4.78	5.07	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P < 0.05$
QU: The school/department actively promotes a healthy work-life balance.								
3.99	4.19	3.86	3.08	3.45	3.75	3.78	3.73	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I have taken a career break and it was not detrimental to my career (if you have not taken a career break please leave this question blank).								
3.75	3.00	3.90	3.00	3.50	2.00	1.00	4.00	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: During my career break, the level of contact with/from the school/department was appropriate (if you have not taken a career break please leave this question blank).								
3.18	3.60	3.44	2.89	1.00	2.00	.	5.00	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I am successful at balancing my paid work and my personal life.								
4.17	4.36	4.26	4.18	4.38	3.94	4.37	4.40	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I face much conflict in balancing my work and personal life.								
2.66	2.24	2.62	2.75	2.54	3.13	2.34	2.43	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 33a.** *Work-life balance culture and gender attitudes for all administrative/technical staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> In this school/department, staff who use work-family policies (e.g. job sharing, part-time work, etc.) are considered to be less serious about their careers than those who do not use these policies.					
2.98 #	2.50	2.81	2.80	2.98	2.89
<b>QU:</b> In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time.					
2.74	2.44	2.63	2.52	2.71	2.78
<b>QU:</b> Staff are regularly expected to put their jobs before their families.					
2.57	2.44	2.43	2.25	2.48	2.85
<b>QU:</b> To be viewed favourably by the school/department, staff must constantly put their jobs ahead of their families or personal lives.					
2.62	2.45	2.42	2.39	2.53	2.93
<b>QU:</b> Staff are often expected to take work home at night and weekends.					
2.68	2.71	2.67	2.56	2.63	2.92
<b>QU:</b> To get ahead, staff are expected to work more than 50 hours a week.					
2.38	2.36	2.29	2.30	2.29	2.63
<b>QU:</b> To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.					
2.78	2.51	2.70	2.67	2.65	2.85
<b>QU:</b> Many staff are resentful when men in my school/department take extended leave to care for newborn or adopted children.					
1.86 #	2.16	1.81	1.94	1.89	2.07
<b>QU:</b> Many staff are resentful when women in this school/department take extended leave to care for newborn or adopted children.					
2.04	2.05	1.89	2.00	2.05	2.24
<b>QU:</b> I will actively look for a job at another university or school/department in the next year.					
2.81	2.68	2.54 †	2.75	2.70	3.29
<b>QU:</b> I am considering leaving my job and pursuing a different career.					
2.58	2.74	2.49	2.82	2.57	2.71

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 33b.** *Work-life balance culture and gender attitudes for all administrative/technical staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: In this school/department, staff who use work-family policies (e.g. job sharing, part-time work, etc.) are considered to be less serious about their careers than those who do not use these policies.								
2.92	3.05	3.01	3.05	2.47	2.24	2.83	2.29	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: In this school/department, staff who use flexi-time are less likely to advance their careers than those who do not use flexi-time.								
2.77	2.62	2.67	2.80	2.14	2.29	2.69	2.77	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Staff are regularly expected to put their jobs before their families.								
2.44	2.32	2.46	2.94	2.41	2.12	2.53	2.71	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: To be viewed favourably by the school/department, staff must constantly put their jobs ahead of their families or personal lives.								
2.48	2.51	2.46	3.03	2.23	2.12	2.68	2.67	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Staff are often expected to take work home at night and weekends.								
2.70	2.53	2.55	3.00	2.67	2.63	2.86	2.80	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: To get ahead, staff are expected to work more than 50 hours a week.								
2.35	2.14	2.21	2.78	2.23	2.69	2.47	2.14	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: To turn down career opportunities for family-related reasons will seriously hurt one's career progress in this school/department.								
2.76	2.71	2.71	3.00	2.66	2.56	2.50	2.29	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Many staff are resentful when men in my school/department take extended leave to care for newborn or adopted children.								
1.73	1.86	1.76	2.06	2.19	2.12	2.15	2.27	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: Many staff are resentful when women in this school/department take extended leave to care for newborn or adopted children.								
1.90	2.03	1.99	2.27	1.93	1.94	2.14	2.27	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I will actively look for a job at another university or school/department in the next year.								
2.57	2.74	2.71	3.37	2.47	2.76	2.68	3.07	group, $P = \text{NS}$ sex, $P = \text{NS}$

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
								group × sex, $P = NS$
<b>QU:</b> I am considering leaving my job and pursuing a different career.								
2.46	2.69	2.55	2.74	2.64	3.13	2.60	2.80	group, $P = NS$ sex, $P = NS$ group × sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 34a.** Gender climate for all administrative/technical staff in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> My school/department has a positive work environment.					
4.24	4.25	4.43 †	4.52 †	4.09	3.96
<b>QU:</b> My school/department has a more positive work environment now than a few years ago.					
3.45	3.26	3.60 †	3.55	3.33	2.95
<b>QU:</b> Men have preferential access to resources in my school/department.					
2.02 #	1.58	1.90	1.71	2.01	1.91
<b>QU:</b> Men do not receive preferential treatment in promotion in my school/department.					
4.18 #	4.72	4.51	4.35	4.33	3.95
<b>QU:</b> Women do not receive preferential treatment in promotion in my school/department.					
4.44	4.42	4.56	4.56	4.46	4.22
<b>QU:</b> In meetings in my school/department staff pay just as much attention when women speak as when men do.					
4.64 #	5.31	4.83	4.96	4.83	4.52
<b>QU:</b> In meetings in my school/department managers pay just as much attention when women speak as when men do.					
4.62 #	5.25	4.84	4.89	4.79	4.43
<b>QU:</b> Women have preferential access to resources in my school/department.					
1.95	2.05	1.97	2.09	1.98	1.89
<b>QU:</b> There is appropriate representation of women on major committees in my school/department.					
3.90 #	4.47	4.05	3.92	4.04	3.97

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 34b.** Gender climate for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: My school/department has a positive work environment.								
4.45	4.51	4.14	3.87	4.29	4.53	4.03	4.33	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My school/department has a more positive work environment now than a few years ago.								
3.66	3.56	3.34	3.00	3.32	3.53	3.33	2.46	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Men have preferential access to resources in my school/department.								
2.08	1.72	2.14	2.02	1.38	1.69	1.64	1.60	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Men do not receive preferential treatment in promotion in my school/department.								
4.38	4.32	4.27	3.65	4.82	4.41	4.56	5.29	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = 0.053$
QU: Women do not receive preferential treatment in promotion in my school/department.								
4.58	4.51	4.52	4.05	4.44	4.65	4.33	4.79	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: In meetings in my school/department staff pay just as much attention when women speak as when men do.								
4.62	4.79	4.79	4.29	5.42	5.35	5.05	5.53	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: In meetings in my school/department managers pay just as much attention when women speak as when men do.								
4.67	4.82	4.75	4.17	5.43	5.06	5.03	5.57	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P < 0.05$
QU: Women have preferential access to resources in my school/department.								
1.95	2.05	1.92	1.87	1.95	2.18	2.09	1.86	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: There is appropriate representation of women on major committees in my school/department.								
3.84	3.83	3.89	3.85	4.62	4.12	4.43	4.46	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 35a.** *Impact of the Athena SWAN Charter for all administrative/technical staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> The Athena SWAN process and award have helped to improve my visibility within my school/department.					
2.51	2.39	2.46	2.63	2.38	
<b>QU:</b> The Athena SWAN process and award have had a positive impact on the work environment of the school/department.					
3.16	3.22	3.44 †	3.16	2.74	
<b>QU:</b> The Athena SWAN process and award have had a positive impact on the work practices of the school/department.					
3.21	3.19	3.44 †	3.27	2.71	
<b>QU:</b> The Athena SWAN process and award have helped me to think more broadly about gender issues.					
3.17	3.18	3.32	3.33	2.98	
<b>QU:</b> The Athena SWAN process and award have had a positive impact on my career development.					
2.36	2.15	2.47	2.18	2.28	
<b>QU:</b> The Athena SWAN process and award have helped me to increase my self-confidence.					
2.33	2.00	2.43	2.24	2.16	
<b>QU:</b> The Athena SWAN process and award have helped me to develop leadership skills.					
2.20	2.00	2.29	2.13	2.05	
<b>QU:</b> The Athena SWAN process and award have had a positive impact on my views on the advancement of women.					
3.06	3.07	3.25	3.08	2.75	

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Athena SWAN status comparison: † =  $P < 0.05$  vs institution Bronze Award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 35b.** *Impact of the Athena SWAN Charter for all administrative/technical staff in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: The Athena SWAN process and award have helped to improve my visibility within my school/department.								
2.58	2.50	2.36	.	1.95	2.92	2.40	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: The Athena SWAN process and award have had a positive impact on the work environment of the school/department.								
3.42	3.04	2.67	.	3.43	3.42	2.93	.	group, $P < 0.05$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: The Athena SWAN process and award have had a positive impact on the work practices of the school/department.								
3.45	3.24	2.64	.	3.48	3.33	2.87	.	group, $P < 0.05$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: The Athena SWAN process and award have helped me to think more broadly about gender issues.								
3.36	3.23	2.95	.	3.18	3.54	3.07	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: The Athena SWAN process and award have had a positive impact on my career development.								
2.57	2.15	2.24	.	2.00	2.25	2.33	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: The Athena SWAN process and award have helped me to increase my self-confidence.								
2.52	2.23	2.17	.	1.85	2.25	2.07	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$
QU: The Athena SWAN process and award have helped me to develop leadership skills.								
2.39	2.08	2.00	.	1.79	2.25	2.14	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ groupxsex, $P = \text{NS}$
QU: The Athena SWAN process and award have had a positive impact on my views on the advancement of women.								
3.29	2.88	2.78	.	3.10	3.46	2.67	.	group, $P = \text{NS}$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 36a.** *Sense of belonging and usefulness of informal and formal networks for all administrative/technical staff in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I feel fully part my school/department.					
4.16	4.06	4.26	4.04	4.05	4.09
<b>QU:</b> I feel fully part of my administrative/technical group.					
4.27 #	4.61	4.52 †	4.55 †	4.46 †	3.67
<b>QU:</b> My administrative/technical team (is useful to me).					
4.97 #	5.30	5.11	5.06	5.06	4.94
<b>QU:</b> Teaching teams (are useful to me).					
3.94	4.20	3.96	4.29	3.57	4.30
<b>QU:</b> Informal social groups (are useful to me).					
4.07	3.83	4.11	4.09	3.98	3.76
<b>QU:</b> Formal social events (are useful to me).					
3.44	3.42	3.49	3.57	3.44	3.37
<b>QU:</b> Committees/working groups (are useful to me).					
3.97	3.94	3.97	4.09	3.95	3.83
<b>QU:</b> Email communications (are useful to me).					
5.04	4.91	5.08	4.94	5.06	4.99
<b>QU:</b> Women-only/men-only networks/groups (are useful to me).					
2.21 #	1.79	2.26	2.25	2.09	1.86

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.



**Table 36b.** Sense of belonging and usefulness of informal and formal networks for all administrative/technical staff in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel fully part of my school/department.								
4.31	4.29	4.04	3.97	4.03	3.50	4.08	4.67	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: I feel fully part of my administrative/technical group.								
4.51	4.56	4.36	3.50	4.45	4.53	4.71	4.57	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: My administrative/technical team (is useful to me).								
5.09	5.00	4.96	4.86	5.17	5.18	5.35	5.29	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Teaching teams (are useful to me).								
4.05	4.18	3.36	4.26	3.78	4.56	4.24	4.43	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Informal social groups (are useful to me).								
4.26	3.90	4.03	3.78	3.52	4.54	3.81	3.67	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Formal social events (are useful to me).								
3.53	3.63	3.43	3.33	3.30	3.42	3.44	3.64	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Committees/working groups (are useful to me).								
4.06	3.91	3.97	3.83	3.50	4.58	3.93	3.70	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Email communications (are useful to me).								
5.13	4.86	5.15	5.06	4.83	5.13	4.91	4.67	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: Women-only/men-only networks/groups (are useful to me).								
2.36	2.24	2.18	2.03	1.89	2.29	1.76	1.13	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 37a.** Experiences of postgraduate students while studying in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
QU: How would you describe your overall experience of your postgraduate studies so far?					
4.73	4.79	4.79	4.96 †	4.69	4.58

Response scale for questions: 1 = 'very negative'; 6 = 'very positive'.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 37b.** Experiences of postgraduate students while studying in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: How would you describe your overall experience of your postgraduate studies so far?								
4.70	4.94	4.71	4.55	4.94	5.00	4.72	4.63	group, $P < 0.05$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$

Response scale for questions: 1 = 'very negative'; 6 = 'very positive'.

**Table 38a.** *Experiences of postgraduate students on their postgraduate degree programme in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> I am aware of research opportunities within my university (e.g. research associate posts, research fellow funding/opportunities).					
3.55	3.65	3.67	3.62	3.52	3.57
<b>QU:</b> I am aware of research opportunities within my school/department (e.g. research associate posts, research fellow funding/opportunities).					
3.78	3.82	3.87	3.79	3.83	3.63
<b>QU:</b> My supervisor/tutor has encouraged me to apply for a research associate or research fellow posts.					
2.73	2.96	2.90	2.89	2.80	2.70
<b>QU:</b> I have been offered teaching opportunities by my supervisor/tutor/school/department.					
3.41	3.61	3.57	3.37	3.68	3.09
<b>QU:</b> My supervisor/tutor has encouraged me to undertake further training and pursue personal development opportunities related to my career aspirations.					
3.70	3.84	3.74	3.51	4.01	3.52
<b>QU:</b> I am confident in my ability to do research.					
4.47 #	4.63	4.59	4.54	4.60	4.41
<b>QU:</b> I am confident that my work contributes to science.					
4.44 #	4.65	4.60	4.56	4.59	4.29
<b>QU:</b> I have increased interest/enthusiasm for my field since starting my postgraduate degree programme.					
4.70	4.77	4.62	4.96	4.76	4.63
<b>QU:</b> I have a good understanding of how to approach research problems/design.					
4.39	4.52	4.46	4.56	4.49	4.38
<b>QU:</b> I have increased understanding and knowledge of science and research work since starting my postgraduate degree programme.					
4.87	5.00	5.02 †	4.96	5.01 †	4.70
<b>QU:</b> I feel fully prepared for an academic career.					
3.39 #	3.65	3.60	3.68	3.49	3.34
<b>QU:</b> I feel fully prepared for a research career.					
3.59 #	3.85	3.79	3.75	3.82	3.48
<b>QU:</b> There is a good academic/career role model for me in my school/department.					
4.48	4.65	4.59	4.73 †	4.64	4.26

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 38b.** *Experiences of postgraduate students on their postgraduate degree programme in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I am aware of research opportunities within my university (e.g. research associate posts, research fellow funding/opportunities).								
3.59	3.67	3.43	3.55	3.78	3.51	3.62	3.61	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I am aware of research opportunities within my school/department (e.g. research associate posts, research fellow funding/opportunities).								
3.85	3.83	3.77	3.67	3.90	3.71	3.92	3.59	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My supervisor/tutor has encouraged me to apply for a research associate or research fellow posts.								
2.69	2.96	2.85	2.37	3.22	2.75	2.73	3.19	group, $P = \text{NS}$ sex, $P = 0.053$ group $\times$ sex, $P < 0.05$
QU: I have been offered teaching opportunities by my supervisor/tutor/school/department.								
3.37	3.47	3.61	3.00	3.89	3.20	3.83	3.25	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: My supervisor/tutor has encouraged me to undertake further training and pursue personal development opportunities related to my career aspirations.								
3.70	3.34	3.97	3.48	3.81	3.76	4.10	3.61	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I am confident in my ability to do research.								
4.52	4.51	4.57	4.22	4.70	4.60	4.63	4.66	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: I am confident that my work contributes to science.								
4.53	4.45	4.42	4.26	4.70	4.73	4.79	4.33	group, $P < 0.05$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: I have increased interest/enthusiasm for my field since starting my postgraduate degree programme.								
4.62	4.99	4.76	4.49	4.62	4.93	4.80	4.83	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I have a good understanding of how to approach research problems/design.								
4.40	4.64	4.47	4.21	4.55	4.44	4.53	4.61	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I have increased understanding and knowledge of science and research work since starting my postgraduate degree programme.								
4.99	5.03	4.98	4.40	5.06	4.87	5.04	5.08	group, $P < 0.05$ sex, $P < 0.05$ group $\times$ sex, $P < 0.01$

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: I feel fully prepared for an academic career.								
3.51	3.59	3.43	3.06	3.73	3.86	3.54	3.70	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: I feel fully prepared for a research career.								
3.74	3.67	3.71	3.24	3.87	3.91	3.93	3.78	group, $P = \text{NS}$ sex, $P = \text{NS} < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: There is a good academic/career role model for me in my school/department.								
4.53	4.71	4.59	4.23	4.68	4.78	4.74	4.35	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 39a.** *Experiences of postgraduate students on their postgraduate degree programme in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> How comfortable you feel about approaching your personal tutor for academic advice?					
4.84 #	5.11	4.91	5.28 †	4.86	4.88
<b>QU:</b> How comfortable you feel about approaching your personal tutor for personal advice?					
3.44 #	3.76	3.60	3.67	3.48	3.62
<b>QU:</b> How comfortable you feel about approaching a male member of academic staff for academic advice?					
4.71 #	4.92	4.81	5.06	4.72	4.78
<b>QU:</b> How comfortable you feel about approaching a female member of academic staff for academic advice?					
4.81	4.86	4.82	5.16 †	4.76	4.78

Response scale for questions: 1 = 'not at all comfortable'; 6 = 'very comfortable'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 39b.** *Experiences of postgraduate students on their postgraduate degree programme in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: How comfortable you feel about approaching your personal tutor for academic advice?								
4.80	5.27	4.72	4.74	5.07	5.31	5.09	5.11	group, $P < 0.05$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: How comfortable you feel about approaching your personal tutor for personal advice?								
3.50	3.49	3.40	3.45	3.76	3.96	3.63	3.87	group, $P = NS$ sex, $P < 0.01$ group $\times$ sex, $P = NS$
QU: How comfortable you feel about approaching a male member of academic staff for academic advice?								
4.75	5.07	4.63	4.69	4.90	5.07	4.83	4.94	group, $P = NS$ sex, $P = NS$ group $\times$ sex, $P = NS$
QU: How comfortable you feel about approaching a female member of academic staff for academic advice?								
4.78	5.24	4.81	4.73	4.88	5.02	4.75	4.89	group, $P = 0.054$ sex, $P = NS$ group $\times$ sex, $P = NS$

Response scale for questions: 1 = 'not at all comfortable'; 6 = 'very comfortable'.

**Table 40a.** *Issues relating to the career plans of postgraduate students in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> It is very difficult to get an academic job related to my field.					
3.68	3.52	3.52	3.87	3.63	3.52
<b>QU:</b> Females are more likely to succeed in an academic career related to my field than males.					
2.23	2.19	2.22	2.24	2.14	2.30
<b>QU:</b> Males are more likely to succeed in an academic career related to my field than females.					
3.17 #	2.57	2.99	3.05	2.79	2.77
<b>QU:</b> It is very difficult to get a non-academic research job related to my field.					
3.40 #	3.16	3.25	3.52	3.38	3.11
<b>QU:</b> Females are more likely to succeed in a non-academic research job related to my field than males.					
2.42 #	2.20	2.41	2.34	2.20	2.38
<b>QU:</b> Males are more likely to succeed in a non-academic career related to my field than females.					
2.90 #	2.49	2.83	2.73	2.61	2.66
<b>QU:</b> Within my school/department, males are more likely to be encouraged to apply for a research post or academic position than females.					
2.37 #	1.93	2.18	2.22	2.08	2.23
<b>QU:</b> Within my school/department, females are more likely to be encouraged to apply for a post-research or academic position than males.					
2.12 #	1.95	2.03	2.16	2.01	2.01
<b>QU:</b> It will be possible for me to combine career and family life in a career related to my degree.					
3.74 #	4.20	3.88	4.12	3.88	3.86

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

**Table 40b.** Issues relating to the career plans of postgraduate students in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: It is very difficult to get an academic job related to my field.								
3.56	3.96	3.81	3.52	3.44	3.73	3.40	3.54	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Females are more likely to succeed in an academic career related to my field than males.								
2.13	2.22	2.19	2.36	2.36	2.20	2.01	2.19	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Males are more likely to succeed in an academic career related to my field than females.								
3.23	3.12	3.10	3.05	2.60	3.00	2.47	2.40	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: It is very difficult to get a non-academic research job related to my field.								
3.37	3.61	3.59	3.13	3.06	3.40	3.12	3.06	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: Females are more likely to succeed in a non-academic research job related to my field than males.								
2.46	2.46	2.35	2.49	2.32	2.18	2.00	2.22	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Males are more likely to succeed in a non-academic career related to my field than females.								
3.05	2.73	2.83	2.73	2.49	2.66	2.37	2.56	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Within my school/department, males are more likely to be encouraged to apply for a research post or academic position than females.								
2.26	2.40	2.32	2.51	2.05	1.98	1.79	1.86	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Within my school/department, females are more likely to be encouraged to apply for a research post or academic position than males.								
2.00	2.19	2.07	2.24	2.08	2.02	1.87	1.69	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P < 0.05$
QU: It will be possible for me to combine career and family life in a career related to my degree.								
3.67	3.93	3.56	3.87	4.21	4.39	4.23	3.84	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.



**Table 41a.** Experiences of undergraduate students while studying in schools/departments.

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
QU: How would you describe your overall experience of your undergraduate studies?					
4.86	4.77	4.77	4.80	5.04 †	4.72

Response scale for questions: 1 = 'very negative'; 6 = 'very positive'.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 41b.** Experiences of undergraduate students while studying in schools/departments.

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: How would you describe your overall experience of your undergraduate studies?								
4.89	4.79	4.99	4.79	4.58	4.81	5.10	4.62	group, $P < 0.01$ sex, $P = \text{NS}$ group x sex, $P = \text{NS}$

Response scale for questions: 1 = 'very negative'; 6 = 'very positive'.

**Table 42a.** *Experiences of undergraduate students on their undergraduate degree programme in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> On my degree programme, too much of the assessment is by examination.					
3.21	3.22	3.20	3.23	3.24	3.09
<b>QU:</b> I prefer laboratory tutorial-based teaching methods to lectures.					
3.75 #	4.05	3.92	3.64	3.94	3.87
<b>QU:</b> On my degree programme, too much of the assessment is by coursework.					
2.25 #	2.56	2.43	2.33	2.31	2.38
<b>QU:</b> On my degree programme, too much of the assessment uses multiple-choice questions.					
2.19	2.28	2.04	2.51	2.21	2.30
<b>QU:</b> Staff pay more attention to female students than male students during lectures and other classes on my degree programme.					
1.47 #	1.79	1.69	1.44	1.51	1.57
<b>QU:</b> Staff pay more attention to male students than female students during lectures and other classes on my degree programme.					
1.66	1.65	1.72	1.44	1.62	1.72
<b>QU:</b> There is a good academic/career role model for me in my school/department.					
4.30	4.31	4.13	4.49	4.43	4.30

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

**Table 42b.** *Experiences of undergraduate students on their undergraduate degree programme in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: On my degree programme, too much of the assessment is by examination.								
3.17	3.19	3.40	2.95	3.25	3.39	3.04	3.28	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: I prefer laboratory/tutorial-based teaching methods to lectures.								
3.83	3.60	3.78	3.88	4.07	3.82	4.18	3.85	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: On my degree programme, too much of the assessment is by coursework.								
2.26	2.29	2.09	2.44	2.69	2.45	2.59	2.31	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P < 0.05$
QU: On my degree programme, too much of the assessment uses multiple-choice questions.								
2.10	2.43	2.13	2.21	1.96	2.82	2.32	2.42	group, $P < 0.01$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: Staff pay more attention to female students than male students during lectures and other classes on my degree programme.								
1.49	1.35	1.47	1.46	1.97	1.73	1.54	1.70	group, $P = 0.062$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: Staff pay more attention to male students than female students during lectures and other classes on my degree programme.								
1.73	1.44	1.66	1.76	1.72	1.42	1.55	1.67	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$
QU: There is a good academic/career role model for me in my school/department.								
4.18	4.46	4.34	4.34	4.08	4.52	4.53	4.28	group, $P < 0.05$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

**Table 43a.** *Experiences of undergraduate students on their undergraduate degree programme in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> How comfortable do you feel about approaching your personal tutor for academic advice?					
4.28 #	4.57	4.35	4.31	4.41	4.54
<b>QU:</b> How comfortable do you feel about approaching your personal tutor for personal advice?					
2.91 #	3.31	2.98	3.08	3.00	3.34
<b>QU:</b> How comfortable do you feel about approaching a male member of academic staff for academic advice?					
4.33 #	4.55	4.28	4.42	4.57	4.45
<b>QU:</b> How comfortable do you feel about approaching a female member of academic staff for academic advice?					
4.48	4.56	4.38	4.50	4.63	4.55

Response scale for questions: 1 = 'not at all comfortable'; 6 = 'very comfortable'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

**Table 43b.** *Experiences of undergraduate students on their undergraduate degree programme in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: How comfortable do you feel about approaching your personal tutor for academic advice.								
4.23	4.32	4.13	4.46	4.54	4.24	4.74	4.66	group, $P = \text{NS}$ sex, $P < 0.05$ group $\times$ sex, $P = \text{NS}$
QU: How comfortable do you feel about approaching your personal tutor for personal advice.								
2.81	2.96	2.69	3.38	3.24	3.42	3.39	3.29	group, $P = \text{NS}$ sex, $P < 0.01$ group $\times$ sex, $P = \text{NS}$
QU: How comfortable do you feel about approaching a male member of academic staff for academic advice.								
4.20	4.38	4.38	4.46	4.42	4.55	4.82	4.45	group, $P = \text{NS}$ sex, $P = 0.055$ group $\times$ sex, $P = \text{NS}$
QU: How comfortable do you feel about approaching a female member of academic staff for academic advice.								
4.29	4.52	4.56	4.63	4.52	4.42	4.73	4.48	group, $P = \text{NS}$ sex, $P = \text{NS}$ group $\times$ sex, $P = \text{NS}$

Response scale for questions: 1 = 'not at all comfortable'; 6 = 'very comfortable'.

**Table 44a.** *Issues relating to the career plans of undergraduate students in schools/departments.*

Female	Male	Silver Award department	Bronze Award department	Bronze Award institution	No award
<b>QU:</b> It's very difficult to get a job related to my degree.					
2.82 #	2.38	2.55	3.32 †	2.40	2.58
<b>QU:</b> Other careers are more appealing than a career as an academic researcher/lecturer.					
4.07	4.07	3.97	3.92	4.31	3.98
<b>QU:</b> It will be possible for me to combine career and family life in a career related to my degree.					
4.05	4.03	3.94	4.25	4.14	3.94
<b>QU:</b> Males are more likely to succeed in a career related to my degree than females.					
3.12 #	2.70	3.22	2.45	3.03	2.82
<b>QU:</b> My tutor/other academic staff have encouraged me to apply for a higher degree.					
2.84	2.83	2.93	2.74	2.79	2.79
<b>QU:</b> Females are more likely to succeed in a career related to my degree than males.					
2.23	2.31	2.32	2.20	2.20	2.21

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.

Female vs male comparison: # =  $P < 0.05$ ,  $t$ -test.

Athena SWAN status comparison: † =  $P < 0.05$  vs no award, one-way ANOVA with post-hoc Games-Howell procedure.

**Table 44b.** *Issues relating to the career plans of undergraduate students in schools/departments.*

Female				Male				Statistical analysis
Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	Silver Award dept.	Bronze Award dept.	Bronze Award instit.	No award	
QU: It's very difficult to get a job related to my degree.								
2.62	3.33	2.62	2.85	2.45	3.27	2.12	2.21	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
QU: Other careers are more appealing than a career as an academic researcher/lecturer.								
3.88	4.15	4.26	4.04	4.10	3.18	4.35	3.90	group, $P < 0.01$ sex, $P = NS$ group x sex, $P < 0.01$
QU: It will be possible for me to combine career and family life in a career related to my degree.								
3.93	4.30	4.11	3.90	3.98	4.06	4.16	3.98	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: Males are more likely to succeed in a career related to my degree than females.								
3.43	2.52	3.33	2.86	2.89	2.15	2.60	2.78	group, $P < 0.01$ sex, $P < 0.01$ group x sex, $P = NS$
QU: My tutor/other academic staff have encouraged me to apply for a higher degree.								
2.97	2.75	2.80	2.69	2.88	2.72	2.79	2.93	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$
QU: Females are more likely to succeed in a career related to my degree than males.								
2.21	2.21	2.23	2.23	2.47	2.18	2.16	2.20	group, $P = NS$ sex, $P = NS$ group x sex, $P = NS$

Response scale for questions: 1 = 'strongly disagree'; 6 = 'strongly agree'.