University of Cambridge

Department of Computer Science and Technology

Athena Swan

Application for Bronze Award

31 May 2024

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Section 1: An overview of the department and its approach to gender equality

1.   Letter of endorsement from the head of the department

Alastair Beresford
Professor of Computer Security
Head of Department

29 May 2024

Ms Dani Glazzard
Head of Athena Swan
Advance HE
London WC1V 6AZ

Dear Ms Glazzard

I would like to offer my strongest support for our Athena Swan renewal application.

Since taking over as Head of Department in October 2023, we have redoubled our efforts on equality, diversity and inclusion, including restarting more regular Equality, Diversity and Inclusion Committee meetings, and also undertaking a substantial reassessment of our progress.

I am very pleased by our measurable, positive progress in several areas, including increasing numbers (and an increased proportion) of female graduate students studying with us compared with five years ago. Similarly, we have seen a rise in the number of female academics at the most senior levels over the last five years. We are, however, very far from parity by almost any metric, and we therefore still have significant work to do.

In recent years I've been particularly impressed with our event and engagement activities. We celebrated the 20th anniversary of women@CL earlier this year [1] with a significant one-day event which included eight distinguished female professors in computer science who joined us from across the UK and took part in presentations, discussions and panel sessions. women@CL also hosted the GirlsWhoML workshop [2] in March and co-organised the long-standing annual Oxbridge Women in Computer Science Conference which took place in Oxford this year in May. The latter can be seen in the photograph on p9, alongside a photograph of the conference held in Cambridge the previous year [3], when we hosted it.

Our new Women in CS programme runs over 5 months and gives female and non-binary students in the penultimate year of school an insight into what studying Computer Science at university is like [4]. Participants take part in online discussion groups, are assigned a mentor, can take part in a research project, and may attend a short residential hosted in a Cambridge College over the summer.

These events would not have been possible without the support of our graduate student community, our Outreach Committee and our recently appointed inaugural Outreach Coordinator.

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These activities demonstrate our commitment to focused interventions as well as investment by the Department in the resources needed to execute them.

- Covid and other factors have prevented us from meeting some of our previous objectives. We have reviewed these and have defined six clear priorities and an action plan for the next five years. These are:
- Improved awareness and training relating to sexual harassment reports.
- Improved information gathering on gender.
- Continued improvement in visibility for women within and beyond the department.
- Improved HR processes and career lifecycle support.
- Understanding differences between student and staff experiences.
- Investigating and addressing the student award gap.

Our new plan is simpler, clearer, achievable and I hope will also help us obtain better outcomes in the fundamental areas we care about most. We are fully committed to delivering this plan and look forward to reporting back on our progress in due course.

 Yours sincerely,

Professor Alastair Beresford

HEAD OF DEPARTMENT

[1]   https://www.cst.cam.ac.uk/twentieth-anniversary-womencl
[2]   https://twitter.com/Cambridge_CL/status/GirlsWhoMLWorskhop
[3]   https://www.cs.ox.ac.uk/conferences/Oxbridge2024/
[4]   https://www.oxwocs.com/events/oxbridge-women-in-computer-science-conference-2023
[5]   https://www.cst.cam.ac.uk/outreach/women-in-cs-programme

2.   Description of the department and its context

The Department of Computer Science & Technology is an academic department that encompasses Computer Science (CS), along with many aspects of Engineering, Technology, and Mathematics, within the University's School of Technology, as well as strong cross-disciplinary connections with the School of Humanities and Social Sciences. The Department sustains active research across the breadth of computer science and encourages the development of new technologies and applications. Professor Alastair Beresford is Head of Department (HoD) as of October 2023, succeeding Professor Ann Copestake who had been HoD since May 2018. Key elements of the Department's ethos are our support for a diverse range of research topics and approaches, focus on impact, and openness to working closely with both academic and non-academic organisations.

The number of staff and students on 31 October 2023 can be found in the table below. Both undergraduate and postgraduate students have a strong voice in the department and in our research community.

Numbers of staff and students

In 2023-2024, our current staff numbers (drawn from HR data) and student numbers (drawn from departmental data) are:

Staff and Student Categories	Total	%Other *	% Female	% Male
Permanent Academic Staff	52	Data not available	21%	79%
Contract Researchers - Research Assistant or Research Associate (RA), Senior Research Associate (SRA), Research Software Engineer (RSE), and Senior Research Software Engineer (SRSE)	113	Data not available	18%	82%
Core Professional Services Staff (PSS)	39	Data not available	67%	33%
Project-specific Professional Services Staff	10	Data not available	80%	20%
Undergraduate Students	388	2%	20%	78%
Master's Students	98	1%	20%	79%
PhD Students	189	1%	31%	68%
* HESA and HRMC requirements limits HR data collection to binary gender				

The senior management team comprises the HoD, two Deputy Heads of Department (DHOD) and the Secretary of the Department (DS). This team oversees the work of the Department including workload allocation and quality assessment.

All academic members of the Department contribute to undergraduate lecturing and examining; research staff and research students also have teaching opportunities. Academic staff may join a college following their appointment. College work (additional teaching, undergraduate admissions, administration, pastoral care) is contracted and remunerated separately, through the colleges.

We hold regular events for staff and research students to bring them together in a social environment, including induction events for students, quiz nights and the very popular Departmental Garden Party.

Redacted: Photo of the Department's annual garden party, 8 September 2023

Organisation Chart

Department of Computer Science and Technology Organisation Chart

Head of Department
Alastair Beresford
MALE

- **Deputy Heads of Department x 2** — 1 FEMALE, 1 MALE
- **Other Faculty x 49** — 11 FEMALE, 38 MALE
  - **Research Staff x 108** — 20 FEMALE, 88 MALE

Departmental Secretary — FEMALE

Undergraduate Education Office
- Undergraduate Teaching Manager — FEMALE
- Undergraduate Course Administrator — MALE
- Undergraduate Course Administrator — FEMALE

Postgraduate Education Office
- Postgraduate Education Manager — FEMALE
- Postgraduate Education Assistant — FEMALE
- Postgrad Course Administrator — FEMALE
- Postgrad Course Administrator — FEMALE

Finance and Research Grants
- Finance Administration Manager — FEMALE
- Finance Assistant — FEMALE
- Senior Research Grants Coordinator — FEMALE
- Research Grants Coordinator — MALE

Research Strategy Team
- Research Strategy Manager — FEMALE
- Communications Manager — FEMALE
- Outreach Administrator — FEMALE
- Impact Facilitator — FEMALE
- Senior Research Strategy Coordinator — MALE
- Research Strategy Coordinator — FEMALE

HoD Support and Reception Team
- Executive Assistant — FEMALE
- Finance Analyst — FEMALE
- Reception Supervisor — FEMALE
- Receptionist — FEMALE
- Receptionist — FEMALE

Human Resources
- HR Manager — FEMALE
- HR Administrator — FEMALE
- HR Administrator — FEMALE
- **Research Project Staff X 9** — 7 FEMALE, 2 MALE

Faculty Board & Committees
- Faculty Administrator — FEMALE

IT Services
- IT Infrastructure Specialist — MALE
- IT Support Manager Daniel Porter — MALE
- Computer Officer — MALE
- Computer Officer — MALE
- Hardware Lab Manager — MALE
- Computer Associate — FEMALE
- Chief Teaching/Gen Lab Technician — MALE
- IT Technician — MALE

Building Services Team
- Building Services Manager — FEMALE
- Building Services Coordinator — MALE
- Senior Stores Technician — MALE
- IT Specialist – Web and Moodle — MALE

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The field of computer science faces substantial challenges with respect to diversity. The British Computer Society (BCS) analysed UK undergraduate application statistics in a February 2024 article, reflecting on the improvement from a 4.4:1 female to male application ratio to 4.1:1 in 2024.[1] This and other diversity imbalances in CS continue throughout the undergraduate, postgraduate, and academic and industrial careers – and are very visible in our department's own environment. We therefore undertake a number of initiatives aimed at: (a) increasing our diversity including gender balance, and (b) better supporting communities within the lab, such as:

- the LGBTQ+@CL network
- the Accelerate Programme providing young researchers with specialised training in AI techniques, equipping them with the skills to use machine learning and AI in their research
- women@CL, a support network for women and non-binary people in computing research
- Outreach activities, to engage the public, enthuse prospective students and encourage wider participation.

3.   Athena Swan self-assessment process

Members of the Equality, Diversity and Inclusion Committee (ED&IC) form the Athena Swan (AS) Self-Assessment Team (SAT) and collaborated to make this application. Members of ED&IC are largely those who have expressed an interest in ED&I matters and wished to serve on the Committee, although within this group, we have also encouraged membership where we saw gaps across members of the Department. The ED&IC includes members whose role involves governance of the Department (HoD, DS and Faculty Administrator (FA)).

While committee membership represents a range of career stages and roles, it is less representative with respect to gender balance, with roughly 60% women and 40% men. This is for two reasons:

- PSS in the department are predominantly women; and
- To enable direct representation of our women@CL group, and at least one female member of senior academic staff, on the committee.

The Committee operates under terms of reference (approved by the Faculty Board (FB) in 2023) synthesised from best practice terms across the University and tailored to our specific needs and activities.

Participation in the Committee is taken into account in the department's academic work allocation model, but no reduction in teaching or other obligations was given to the Chair. Given the experience of this application cycle, it is the firm recommendation of the ED&IC that, during future AS renewal or application processes, such a reduction be given to allow SAT academic members to avoid tension between competing obligations, and to improve their work-life balance. It should also be recorded in appraisals for PSS, where it is not part of their routine

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[1]https://www.bcs.org/articles-opinion-and-research/women-are-applying-for-computing-degrees-in-record-numbers-and-slowly-narrowing-the-diversity-gap-new-data-shows/

duties, and for research staff, whose workload is managed by their line manager. These practices are already adopted in several other departments in the University.

Membership

Member	Role	Brief description	Gender
Celia Burns	FA	Secretary of ED&IC	Female
Professor Alastair Beresford	HoD		Male
Rachel Gardner	Communications Manager	Member of the Outreach Committee.	Female
Professor Alice Hutchings	Academic Staff	Co-Chair of the Ethics Committee. Member of the University Research Ethics Committee.	Female
Jessica Man	PhD Student	Chair of women@CL.	Female
Aga Niewiadomska	Outreach Administrator	Secretary of Outreach Committee	Female
Dr Peter Ochieng	DeepMind Academic Fellow in Computer Science	Member of the Outreach Committee.	Male
James Sharkey	Senior Research Software Engineer	Chair of the Research Staff Forum.	Male
Caroline Stewart	DS and Secretary of Faculty Board	Serves on a number of Departmental Committees.	Female
Gina Warren	ED&I Consultant, University of Cambridge	Member of the University's EDI Team.	Female
Professor Robert Watson	Academic Staff	Chair of SAT and ED&IC.	Male
Konrad Witaszczyk	Research Staff and PhD student	Member of the Postgraduate Students' Forum.	Male

How the application was prepared

Following substantial disruption to the ED&IC during the COVID-19 pandemic (see Section 2), a new ED&IC chair was appointed in mid-2023. Committee membership was solicited over the summer break, and initial meetings and planning for our 2024 application took place before the 2023-2024 academic term. The full ED&IC met twice a term to set an agenda for the application process, to create staff and student surveys, review the prior action plan and datasets, and brainstorm new actions.

We drew on a number of data sources, including data provided by the University's central HR department, from our undergraduate and postgraduate education offices, and from staff and student culture surveys performed in late 2023 and early 2024. Subgroups of the SAT met informally but regularly throughout early 2024 to analyse

the data in more detail, to identify key priorities and develop the action plan, and to write the application itself. Professor Thomas Sauerwald joined this process to assist the ED&IC with data analysis and presentation.

The committee interacted through shared documents and gave feedback on the action plan and application material prior to submission, which was shared with central HR for review, and then submitted to the HoD and FB for feedback and approval.

Plans in place to support the department's future gender equality work

Our 2024 AS application represents a "reset" in our approach to both consideration of gender issues and certification for Athena Swan. Our 2018 action plan has left us with a tricky application legacy in terms of an unfulfilled action plan with many ambitious but unactionable (or unactioned) goals and difficult- or impossible-to-measure metrics for success. The COVID-19 pandemic also seriously interrupted department-level engagement following our last application, despite motivating actual improvements in important areas such as support for flexible working and increased awareness of caring responsibilities.

Over the last year, with a refreshed ED&IC and chair, we have used our renewal application to motivate data collection, analysis, and response to a variety of issues. New data collection (based on staff and student culture surveys and gathered from the central university) and workshopping within the ED&IC has allowed us to build a more focused and measurable 2024 action plan. This plan has the firm and committed support of the HoD, with dedicated staffing allocated to implement the action plan under the direction of the ED&IC.

Key priorities and actions revolve around cycles of information gathering and intervention. This includes improving education around how to report and handle sexual harassment given mixed survey results on understanding of those processes – with careful monitoring to understand impact, understanding and improving career lifecycle support, exploring and addressing gaps in degree awards for undergraduates, and understanding and improving differences between staff and student experiences given results from our survey. These are explored in detail in Section 2.

This work will be supported by (a) sustaining and extending work of the ED&IC, and (b) utilising the new departmental HR, outreach, and communications staff recruited since our 2018 application. Staff and student surveys will be performed annually, and direct reporting by teaching, HR, and other committees on ED&I topics will enable further interventions as areas of concern inevitably come to light (Priority B). Increased weighting in departmental work allocation will be given to ED&IC committee leadership, allowing us to better develop senior academic roles and engagement. We hope that, with acceptance of our Bronze renewal application, and this sustained commitment, we will be able to lay the groundwork for a future Silver application.

Redacted: Photo of Oxbridge Women in Computer Science Conference, May 2024

Redacted: Photo of Oxbridge Women in Computer Science Conference, April 2023

Section 2: An evaluation of the department's progress and issues

1.   Evaluating progress against the previous action plan

Following a pandemic-induced hiatus for our ED&IC (see later in this section), the past year has involved reinvigoration of the ED&I agenda. In this section, we review our 2018 action plan, and identify priorities that inform our 2024 plan. Of 36 high-level actions identified in our 2018 plan, we assessed 15 (42%) as green, 13 (36%) as

amber, and 8 (22%) as red, with an awareness that there is considerable subjectivity in that process.

Of particular note, our successes include the creation of a new summer school for female and non-binary students in Year 12 to teach them about computer science, improvement in the gender balance for PhD students, and hiring a new HR Manager and a new Communications Coordinator that have enabled significant improvements in our environment that are important to supporting female role models and career progression for women and non-binary staff members. We have also substantially enhanced our support for flexible and remote working due to both our prior Athena Swan application (introducing core hours for the department) and the pandemic (enabling greater acceptance of hybrid meetings).

Action Plan - Strong Positive Results (Green)

Objective (2018)	Success Criteria (2018)	Evaluation (2024)
1.2 Further develop women@CL	- Increase women@CL awareness to 100% of female students, at least 80% of events considered valuable, and at least 80% of female students and undergraduates attending events annually. 50% increased awareness of women@CL outside of the Department. - Partnerships with sister organisations.	women@CL is a thriving organisation, hosting regular seminars and events. Our 2018 success criteria proved problematic: "Valuable" is hard to quantify. - The proposed attendance rate was unrealistic. "Awareness" beyond the Department is unmeasurable. women@CL topics and women researchers have featured prominently on our website and social media. We have seen considerable success with sister organisations: - OxBridge Women in Computer Science Conference - Joint outreach activities, e.g. GirlsWhoML (support for female and non-binary students in machine learning).
2.1 Collecting and making visible information about outreach activities and resources	- Website updates with women-directed outreach activities, at least monthly. - Delivery of new website with increased prominence for women-directed activities, by 2019 - Outreach Remit discussed at Faculty Board in 2018	- There are regular updates on outreach activities by and for women on the Department website. These feature in the main news, women@CL, and Outreach webpages (https://www.cst.cam.ac.uk/news, https://www.cst.cam.ac.uk/women/news, and https://www.cam.ac.uk/outreach). - women@CL has its own section on the Department website. https://www.cst.cam.ac.uk/women

	1	- The Outreach Committee is now a standing item for FB. - A (female) Outreach Administrator was appointed in 2023 and has instigated a [Women in Computer Science programme](#) for female and non-binary students in Year 12, running for the first time in 2024.
2.2 Improve visibility of women within the department.	- Webpages are kept up-to-date and actively used. - At least 20% female lectures for the undergraduate course, annually by 2019. - At least 50% female speakers for Departmental seminars, by 2021.	Activities have been generally successful, but do not always correspond to proposed success criteria. In some areas, goals were not achieved. - We recruited a (female) Communications Manager in 2020 whose aim is to increase the visibility of the Department's female computer scientists. - In 2017-2018, 10% of first-year undergraduate lectures were given by women. In 2023-2024, 18% were. - Of the 12 Wheeler Lectures (our annual distinguished lecture series), six have been presented by men and five by women. - Departmental Wednesday seminars have 12% women speakers per academic year (October 2019-April 2024). 100% of speakers at women@CL Tech Talks and the Annual women@CL Oxbridge Conference are female or non-binary.
2.4 Increase external visibility of women@CL via social media, blogging, and other channels.	- Active women@CL Facebook and Twitter accounts, by 2019. - Increase of visibility in the pre-arrival feedback, 2020 intake	- women@CL has an active website and social media presence, advertising activities including the women@CL 20th Anniversary celebration and the GirlsWhoML workshop. - We do not have measurements for the impact of women@CL on PhD applications, but anecdotally we are aware successful applications have referenced the material.
3.3 Improved monitoring of student admissions and performance.	Relevant data reported to Directors of Studies (DoS), at least termly and ongoing.	The CST DoS Forum has an annual agenda item to discuss UG admissions. No increase in

		the rate of admission of women has been seen (Appendix 2:1). ● Examiner meetings review student performance and consider outcomes by gender.
4.4 Monitor and analyse RA promotion and recruitment process.	● Monitoring of promotion processes (Action 3.5) shows consistent procedures applied in promotion and recruitment, annually. ● Promotion success rates by gender are in line with Staff gender ratios, annually. ● Recruitment practices continue to improve to meet population statistics, ongoing.	● Promotion demographics are reported by central HR, and our RA to SRA promotion process has been formalised and is monitored. ● Since August 2019 we have seen 8 female and 7 male promotions to SRA – significantly above the 20% gender ratio for RAs. ● We have not observed a substantial change in gender balance (20%) for RA recruitment since 2018.
5.1 Improve undergraduate admissions support in conjunction with Colleges.	● Uptake of Admissions Training to reach 30% by 2019/20. ● Review as part of Tripos Management Committee (TMC)/FB analysis of performance by gender, annually.	● While the Colleges perform admissions for undergraduates, admissions training for CS is a collaboration with the department; uptake is believed to be around 100%. ● Gender balance in undergraduate admissions is considered by the TMC, FB, and now the ED&IC.
5.5 Timing of meetings.	● Improve support by recording Departmental seminars for remote attendance at meetings where appropriate, by 2019.	Of 15 weekly public research-group seminars / meetings, and faculty meeting: ● 10 within core hours of 9:00-15:00. ● 2 within 15:00-16:00. ● 2 within 16:00-17:00. ● 1 (the weekly happy hour) from 17:00-18:00. This improves dramatically on 2018 but leaves room for further improvement. The vast majority of meetings and seminars, including the weekly department meeting, are run in hybrid format, enabling flexible working.
5.9 Remove barriers to success of academic staff, senior and junior, by increasing availability of PhD funding.	● Funding for 10 extra PhD places, by 2020	● New academic staff now receive the underwriting of one PhD student. ● From 2023, the Department's "Hopper Studentship" increases PhD student funding.

5.10 Increase opportunities for Research Staff development.	● Three research staff have successfully shadowed an academic colleague by 2020. ● Three research staff leavers have taken up academic posts, by 2021.	● We have not initiated a staff shadowing programme. ● 31 leavers have achieved academic posts from 2019-2023, 11 of which were women (Appendix 2, 2:11).
5.11 Support early career academics, and eligible research staff, in producing funding proposals.	● 100% proposals are internally reviewed where the PI wishes feedback.	A Research Strategy Manager (RSM) was appointed in 2019 to lead a Research Strategy Team (RST): ● Calls are circulated to academics; calls for early career researchers are highlighted. We have seen an increase of female applicants since the previous AS application. ● The RST supports the application and review process. ● Applicants called to a funder interview will have two mock interviews. ● Since the recruitment of the RSM, we have had success in schemes where we have previously not received awards.
6.2 Introduce Summer School for girls.	● 100% participants in the Sutton Trust Summer School accepted to the undergraduate course should have found the Summer School useful, using data gathered during the "pre-arrival course". ● Continue to support the University's Sutton Trust programme and Cambridge Admissions Office to widen participation in Outreach. ● By arrangement with Cambridge Coding Academy, guarantee 10 places on that coding summer school.	● We continued to take part in the annual Sutton Trust Summer School. ● We have supported widening participation programmes led by the Cambridge Admissions Office (e.g., by providing speakers). ● Instead of creating a coding summer school, we introduced a sustained programme for female and non-binary students in Year 12 to gain an insight into studying computer science at university. This is running for the first time in 2024, has 20 places and involves a residential element.
6.3 Restructuring of undergraduate course.	● Continue to monitor impact of course restructuring and increased presence of female lecturers, particularly to first years, ongoing.	● In 2017-2018, 10% of first-year undergraduate lectures were given jointly or entirely by women lecturers. In 2023-2024, the percentage was 18%.
6.4 Increasing numbers of female students on taught postgraduate courses.	● To be in the top quartile of comparable UK courses for percentage of female students admitted in the 2018/19 academic year.	● The proportion of female students admitted to the MPhil programme has increased from 14% in 2018 to 22% in 2023.

Objective (2018)	Success Criteria (2018)	Evaluation (2024)
6.5 Increasing numbers of female PhD students.	• 30% increase in numbers of female applicants by 2018.	• The number of female PhD applicants has increased 78% from 36 in 2018-2019 to 64 in 2023-2024. • The proportion of female PhD students has increased from 21% in 2019-2020 to 29% in 2023-2024.

Action Plan - Mixed Results (Amber)

Objective (2018)	Success Criteria (2018)	Evaluation (2024)
2.3 External profile of the Department includes recognition of its initiatives to support women.	• 50% female industrial speakers at technical events by 2020. • 15% female attendees from the Department and the Industrial Supporters Club at the annual dinner and awards ceremony, by 2021.	• 10% of 10 industrial speakers at Department tech talks were female in 2023-2024. • The percentage of women at Supporters' Club Dinners since 2019 has been: 24% in 2019, 11.8% in 2020, 21.3% in 2022, and 17.8% in 2023 (no dinner in 2021 due to Covid).
3.5 Regular review of staff recruitment and promotion.	• Provide up-to-date and accurate data for annual reports and to support other actions, ongoing. • Ratio of promotion applications at all levels should track the underlying staff gender ratios, by 2019.	• HR collects recruitment data by gender for all levels. • HR collects promotion application data and success rates for all levels. • Promotion application rates by gender have not been monitored.
4.2 Increase admissions and recruitment training impact.	• 100% DOSs are aware of gender balance and the importance of taking it into account during admissions, annually. • 50% of those involved in admissions interviewing have received Department training, by 2019. • Require all MPhil and PhD Admissions Interviewers to attend the Admissions Training course. • 40% female attendees to the Admissions Training course, by 2019. • All staff involved in recruitment to have attended workshop and relevant training, by 2020. • Review uptake, annually	• Undergraduate admissions are the responsibility of the colleges, limiting both oversight and measurement. • There is now both CS-specific and general admissions training; colleges ensure that this training is taken up. • Gender balance is discussed throughout the admissions cycle, and is a DoS Forum agenda item. • Undergraduate interviews are performed by the colleges, not by the department. • There is no admissions training course for postgraduates. The Director of Postgraduate Education runs an annual session to explain the admissions interview process;

		reviewers are asked to read the guidelines. ● See 4.3 bespoke training bullet point.
4.3 Extension and maintenance of Unconscious Bias (UB) training.	● At least 90% of those involved in selecting students have received Unconscious Bias training, 2019. ● 100% Staff have received UB training, by 2020. ● 80% of Staff will have completed the Recruitment and UB online training, by 2020.	● We do not believe that the Colleges require UB training. For postgraduate admissions, we have data on uptake levels for University training; this is not currently monitored. ● The improved induction process asks all staff to complete the Equality & Diversity and UB training. The DS sends an annual reminder. Monthly reports on uptake are sent to HR staff. ● Bespoke Recruitment Training, which considered UB training was held for Selection Committees in the last round of academic recruitment in 2022.
4.5 Effective communication about Athena SWAN.	● Continue to develop presence on website, ongoing. ● Measure awareness of Athena SWAN in staff and student surveys, ongoing.	● In 2021, we redesigned the Department's website to include AS as a dedicated section on ED&I. It includes advice on career support and development, with details of parental leave, family-friendly policies, and links to targeted funding to support female researchers, including those returning to the workplace after a career break. ● Staff and student culture surveys were not routinely performed. However, it is not clear to what extent awareness of AS (vs its outcomes) is useful to measure.
4.6 Improved awareness of internal promotions processes, particularly the senior academic promotions process.	● Increased numbers of staff submitting promotion cases, by 2020.	● Academic promotions are monitored by the HoD and DS. All eligible candidates meet with the HoD to discuss their readiness to make an application. ● The small number of applications makes it difficult to generalise.
4.8 Improve gender balance of committees.	● Balanced membership of all Departmental committees, by 2020.	● Committee gender balance is complex: We want to ensure that women are represented,

		but "balanced" representation risks over-burdening female staff. Our aim has been a minimum 20% representation, and at least one female senior academic per committee. ● Results have been mixed (Appendix 2, 2:12). Of 15 committees, all but one (Awards Committee) have at least 20% female composition. However, only 60% have at least one female senior academic member.
5.3 Review and update induction process.	● Seek feedback from new Staff, ongoing.	● We have introduced a formal induction, which is regularly updated. HR have substantially improved their welcome letter. ● Feedback has not been sought consistently from arriving staff.
5.4 Improved appraisal satisfaction.	● Continue to monitor appraisal rate and gather feedback annually. ● Ensure staff requests for an appraisal are met within 3 months. ● 95% appraisal satisfaction rate from feedback by 2020.	● Increased HR staffing has enabled "rebooting" our appraisal process, with 38% of academics having appraisals in the last two years. ● Not all appraisal requests are processed in a timely manner, but we are investing new HR staffing in improving responsiveness. ● The department has not collected appraisal satisfaction feedback, but is developing plans to do so.
5.6 Underwriting maternity leave for contract research staff.	● 100% Staff aware that their maternity/paternity leave will be in line with the University policy.	● It is Departmental policy that no employment contract is shortened due to a period of maternity leave. If this is not covered by the funder, the department will cover costs directly. This is documented on our policy page but needs further advertising.
5.8 Effective workload distribution for established academic staff.	● 100% Staff workload collated and surfaced, by 2019. ● 100% Staff appraisals include review of workload, ongoing.	● A new workload model based on detailed information of administrative roles for academic staff has been introduced for 2024/25. ● The HR Manager is undertaking a review of PSS and researchers appraisal with the intention of re-launching it in May 2024.

	17	Academic appraisals continue to take place, with gaps in take-up.
6.1 Increase numbers of female undergraduates.	• Continuing year-on-year increase in numbers of girls expressing interest in Computer Science at Cambridge, including attending Open Days and number of applications. • 50% women helpers at events and outreach events, by 2019. • To be in the top quartile of comparable UK courses for percentage of female students admitted in the 2018/19 academic year (see 6.3).	• From 2018-2019 to 2023-2024, the proportion of female first-year through third-year undergraduates remained roughly constant. The proportion of female fourth-year undergraduates increased from 4% to 15%. • We have not monitored the gender of helpers. • We have not compared with national statistics.
6.6 Proactive staff recruitment process to improve diversity of applicants.	• At least 35% female shortlisted candidates for both Academic and Research posts, by 2020.	• Significant effort has been put into constructing job ads and developing a recruitment process that encourage and support applications from diverse candidates. Reaching out to a broad range of potential candidates to encourage applications has been a key focus. • Our approach to researcher recruitment has been less focused, but some recent improvements have been made. This will be reviewed by our ED&IC. • Setting specific target rates for shortlisting is inconsistent with University HR policies, and the proposed threshold (35%) has not been achieved.

Action Plan - Weak Results (Red)

Objective (2018)	Success Criteria (2018)	Evaluation (2024)
1.1 Integrate Athena SWAN self-assessment into Departmental activities	● ED&I consideration in meeting minutes, reviewed annually.	● Achieved only in certain committees (e.g. Degree, ED&I, HR). Replaced by 2024 Action 2 to increase ED&I engagement as part of committee annual reporting.
2.5 Increased Student Consultation.	● Focus groups to be repeated in 2019/20 and 2020/21, and feedback given to TMC and the Equality and Diversity Committee (EDC). ● Although outside the Department's direct control for first and second years, DOSs will be asked to ensure 100% College supervisors have completed the University's online UB training, and the Department's Supervisor Training, by 2020. ● Require 100% supervisors for third years have undertaken UB and Dignity at Study training as part of the Department's Supervisor Training, by 2019.	● Focus groups were not held. ● When supervisors sign up for the supervisor training, they are asked to watch the Implicit Bias Module before the workshop. We are not currently able to monitor compliance.
3.2 Improve Staff Consultation.	● 100% academics in first two years of employment have participated in focus groups, by 2020 and ongoing. ● 85% response rate from new annual survey. ● Review outcomes of survey and feed into actions of EDC, annually. ● Review outcomes of focus groups and feed into actions of EDC, annually.	● No focus groups took place. ● 48% response. Target missed due to survey timing. ● Annual surveys were not performed from 2018-2022. These were renewed in 2023 and will continue annually. In 2023, survey results were reviewed by the ED&IC.
3.4 Collect and monitor destination data for Staff and Students.	● At least 70% response rate for Student destination survey, by 2019. ● Female role models highlighted on website, subject to permission of individuals involved, by 2019.	● We have not conducted a Student Destination Survey. ● Case studies highlighting successful graduates, female or otherwise, have not been collected or published. ● We have highlighted successful current female students on our website.
4.1 Increase equality and diversity (E&D) training completion rate across all staff groups.	● 100% of Academic Staff have completed E&D training, by 2020. ● 80% of all Staff have completed	● ED&I training is offered by the University, and requested of all staff, but we are not able to reliably monitor. 80% uptake is

		E&D training, by 2020.	unlikely.
4.7 Improve awareness of career development and job opportunities.	●	At least 30% research staff engaged with these new mechanisms, by 2019.	● No specific actions were taken; it is unclear how to measure this.
5.2 Improve performance of female undergraduates.	●	Percentage of Firsts shows less than 5% divergence, by 2021.	● In 2017-2018, the award gap for firsts in Part II was 20.1% (Appendix 2, 2:2). In 2022-2023 that gap was 6.3%, a noticeable improvement. As average marks are far closer (1.7%) and the gap has persisted in Part II throughout the last 5 years, this is continued in our new action plan.
5.7 Active promotion of family leave policies.	●	100% Staff aware of family leave policies, by 2018. ● 100% recruiting adverts direct applicants towards family friendly policies, by 2019. ● 100% members of the Industrial Supporters' Club aware of the Department's policies regarding family leave, with the aim of open discussion on the matter, by 2019.	● There has been some effort to inform staff about leave policies; awareness has not been measured. ● Further Particulars now advertise flexible working, but this does not routinely appear on adverts. ● Some effort has been made to educate Supporters' Club members on our family leave policies and their aims.

Discussion

Our 2018 action plan contained many detailed proposals and metrics. We have seen some significant successes:

- Improvements in flexible working via remote participation in meetings and defined core hours for staff, as well as recorded lectures and increased remote participation flexibility for students,
- Increases in professional services that enable new outreach activities, research grant support, and increased appraisals,
- Strong senior academic promotion success rates regardless of gender, as well as high satisfaction amongst both male and female staff members that their career progression was well supported by line managers,
- Creation of a new pre-admissions computer-science programme for women and non-binary students launching this year, and
- A substantive improvement in gender balance in our PhD programme.

Our culture survey showed that a significant majority of staff (78%; 73% for female and non-binary; Appendix 1, 2:2, Q13) and large proportion of students (60%; 59% for female and non-binary; Appendix 1, 1:1, Q6) agreed or strongly agreed that the department actively supported gender equality. Over 80% of both male and female staff members felt that career support from their line managers was good (Appendix

1, 2:2, Q15). We have also widely implemented UB training and improved our hiring and promotion processes.

On the other hand, we also observe a significant number of areas where achievement of its goals was limited (or entirely unsuccessful) due to various factors, including:

- Lack of realism regarding achievable success given the resources available – even without a pandemic that consumed substantial resources and hampered effective collaboration.
- Lack of realism regarding non-departmental responsibilities (e.g., undergraduate admissions, which is governed by the central university and implemented by the colleges, not by the department).
- Lack of focus in our action plan, not least in having 37 separate (often multi-part) action items, the overwhelming majority rated as high priority.
- Lack of realism in proposed success criteria, many of which proved difficult to measure in practice, or were ancillary to the goals.
- Lack of care to ensure that proposed actions would not impose disproportionate burdens on female staff members in the interests of achieving gender balance (e.g., in lecturing or committee membership).
- Less effective support for students than staff, visible in our culture survey results by clear differential results in a number of questions relating to topics such as bullying, harassment, and discrimination, as well as career support; and
- Pandemic-related disruptions to departmental activity that were poorly fielded with respect to ED&I concerns, including discontinuation of the ED&IC itself (see below).

Significant lessons have been learned from this experience, which are taken into account in priorities and actions proposed in our 2024 application. In particular, it has been our aim to create a focused action plan that is realistic and measurable, while also remaining ambitious with respect to improving gender equality within our department.

Impact of the Covid-19 pandemic

The effects of the Covid-19 pandemic on University and departmental operations were profound. During this period, our primary focus was on safely and successfully delivering our academic programmes for students via online teaching. Our secondary focus was on continuing research and other departmental activities. The shift to online teaching went smoothly, with high student engagement and generally positive feedback. The post-pandemic availability of lecture recordings continues to prove popular with students, supplementing restored in-person delivery.

Because of a broad range of support requirements for students and staff – including those adversely affected by travel restrictions, and also those who for medical or caring reasons were forced to return more slowly to the workplace – we adopted an adaptive approach tailoring responses to individuals. We introduced a Wellbeing Committee that met through the pandemic, assessing concerns via individual conversations and regular departmental surveys.

However, there was also significant interruption due to shifted focuses and uneven staffing availability due to increased caring obligations. Unfortunately, one of those activities particularly affected was our ED&IC, which paused from early 2020 to mid-2023. A new chair of the committee, Professor Watson, was appointed in 2023 to reconvene the committee, restructure department ED&I concerns, and lead the AS renewal application. The current ED&IC and SAT has experienced almost complete turnover in membership since our last application, with only the DS carried forward.

There were other significant impacts to the operation of the University. Most noteworthy was a suspension of academic promotions for one year, and introduction of a staff redeployment scheme offering preference to staff completing fixed-term contracts in applying into newly created posts. When restored, the senior academic promotion process was extended to consider pandemic impacts. It is difficult to assess the impact of the pandemic on our department, but a differential effect was likely to have been felt by staff members with caring responsibilities, most significantly women.

One positive note is a significant improvement in the Department's continued support for flexible and remote working post-pandemic.

2.   Key priorities for future action

Mixed success in fulfilling our prior action plan – in terms of value, measurability, and practicality of actions – has informed our new priorities and action plan. With our new action plan, we have sought to identify key strategic priorities which focus on achievable and effective interventions. We believe these evidence-driven actions will lead to real positive change for our staff and students.

A key step in preparing this application was significant data collection, including from:

- Our restored staff and student culture surveys,
- Department HR (such as application and promotion rates), and
- Undergraduate and graduate education offices (such as admissions and degree award data).

Appendix 1 of this report includes culture-survey questions and results, as well as data tables and plots drawn from HR and student data. We have proposed expanded information-gathering activities that will go alongside concrete initial actions, which will support the creation of longer-term strategies for intervention. The following priorities were identified by the ED&IC for particular attention in the initial period.

Priority A: Improved awareness, handling, and training relating to discrimination, sexual harassment, and bullying reports

Our staff culture survey generally showed a low level of observed discrimination, sexual harassment, and bullying (Appendix 1, 2:2, Q7 and Q9). However, the Department will not tolerate any behaviour of this nature, and so addressing these concerns remains a key priority. One area of concern was the self-reported low awareness of reporting procedures (Appendix 1, 2:2, Q13), and some staff members reported that our handling was unsatisfactory (Appendix 1, 2:2, Q11). We learned from informal discussions within the SAT that relatively few line managers have

formal training in fielding reports. Improving awareness of reporting procedures and improving our fielding of reports will be key focuses.

Another area we particularly wish to understand and target is the higher level of reported problems for students, relative to staff, apparent in the student culture survey (Appendix 1, 1:1, Q10 and Q12). This survey also reported weak understanding of reporting procedures (Appendix 1, 1:1, Q16), and some respondents had poor confidence in the handling of reports (Appendix 1:1, Q4). This is a complex issue because students' time is split between the department and college, and we will need to investigate further to understand the nature of the problem – and hence what interventions may be most effective.

We will also seek to understand this better, developing a departmental strategy to address remaining discrimination, harassment, and bullying, to improve awareness of reporting issues, and to improve handling of harassment reports. **(Action Plan #1)**

Priority B: Improved (but realistic) information gathering on gender

Although a significant number of success criteria identified in our 2018 plan relied on unrealistic measurement, evidence-based policy remains essential to continuing to improve the department's environment. In our new action plan, we have sought to focus on measurable criteria that can be assessed through reasonable information gathering – and also support further strategy development.

We hope that this will prove more achievable, but also directly inform further ED&I actions. **(Action Plan #1-6)**

Priority C: Continued improvement in visibility for women within and beyond the department

The department has invested significantly in improved communication and outreach over the past few years, bringing on dedicated PSS to support these activities. In both areas, gender consideration has been integral to choices about promoting research, seeking to improve balance in admissions, and so on. However, we have a persisting application gap, and resulting gender imbalance, across all of our degree programmes (Appendix 2, 2:2), as well as teaching and research staff (Appendix 2, 2:3). In our outreach activities to prospective applicants, we will aim to better highlight the contributions of women and non-binary staff members and students, providing clear indications that our department welcomes and celebrates the successes of all of its members, as well as highlighting role models. In this period, we will also expand our remit to include supporting women and non-binary staff and students in applying for awards and fellowships, which play an essential role in job seeking and career progression at all levels. **(Action Plan #3, #6, #7)**

Priority D: Improved HR processes and career lifecycle support

In our culture surveys and data collection, several clear gaps arose in our HR processes and career lifecycle support, including around harassment and bullying reporting (see Priority A), exit interview processes (which were not implemented), and more generally around supporting career development where there was a clear gender difference in feelings of support by the department (Appendix 1, 2.2, Q14). While both male and female staff members generally felt well supported by the line managers regarding career support by their line managers, staff members identifying

as other in our culture survey felt substantially less well supported (86% for male staff members, 83% for female, and 48% for other, respectively; Appendix 1, 2:2, Q15). There was also substantially lower confidence amongst female and other students that they were well supported (70% for male students, 58% for female, and 48% for other, respective; Appendix 1, 1:1, Q18). We plan joint work between the ED&I, education, and HR committees to specifically investigate and address these gaps. We hope that these activities will both improve our environment, improve career progression, and also, through information gathering, allow us to develop better strategies and action plans in the future. **(Action Plan #4, #5, #7, #8)**

Priority E: Understanding differences between student and staff experiences

Our student and staff surveys revealed a measurable difference in satisfaction, equality of experience, and career support – for example, as relates to feeling that the department values their contributions: 83% for staff members (Appendix 1, 2.2, Q1) and 34% for students (Appendix 1, 1.1, Q1), and as discussed in Priority D. It is not clear to what extent this reflects a substantive difference in departmental experience (students participate in the life of the University in many other ways, including significant aspects of teaching and social lives in their colleges). This will need to be explored through a variety of mechanisms, including clarification of surveys to better understand the effect in future years, including better targeting different student categories (e.g., graduate vs. undergraduate), as well as work with student representatives and committees. Where problems originate in the department, we will develop a strategy to address those issues. **(Action Plan #3, #4, #6, #8)**

Priority F: Investigating and addressing the student award gap

Throughout the last 5 years, a persisting degree award gap has occurred between male and female students (Appendix 2, 2:2). Despite Part II average marks being almost identical over the last five years, with a 1.7% difference, female students have consistently received fewer first-class Part II degrees, with a 20.1% difference in 2017-2018 and a reduced, but still very visible, 6.3% difference in 2022-2023. While that improvement is substantial, there is also considerable variability year-on-year, and further investigation and action is necessary. **(Action Plan #6)**

Section 3: Future action plan

1. Action plan

Ref.	Action	Planned action / objective	Rationale	Key output / milestone	Responsible	Timeframe	Success measures
1	Improve student and staff understanding of bullying and harassment reporting, handling.	(1) Update new start information for students, staff to include procedures/content relating to bullying and harassment. (2) Ensure there is clear guidance on the department website on who to contact. (3) Broadcast this information to ensure all current students and staff are aware of it. (4) Expect current and new line managers to undertake basic training in handling bullying and harassment reports and follow Dignity at Work training that includes an Active Bystander aspect. (5) Continue to monitor both levels of bullying/harassment and awareness of procedures as part of future surveys.	Students and staff surveys showed relatively low levels of bullying and harassment. However, significant numbers of student and staff members indicated in our surveys that they did not know how to report instances, which means that when they occur, they may not be reported. We are also concerned that when reports are made, that they be handled well, hence needing to engage comprehensively with line managers who may be the first point of contact regardless of other contact information provided.	Measurable improvements in survey responses regarding awareness of procedures, and possibly also reduced instances of bullying and harassment due to improved awareness and handling.	ED&IC, HR	6 months to introduce, with ongoing support to maintain	90% of students and staff responding positively to awareness of reporting procedures as measured through annual surveys. 90% take up on take up of Dignity at Work and Active Bystander in-person training by line managers within three years, with a refresher every three years. New line managers to undertake the training (on-line if in-person training

						is not available) within one year.
2	All departmental committees to consider ED&I as part of their work.	As part of a departmental introduction of annual committee reports to the faculty board, add a section requiring a consideration of ED&I concerns. Work with specific committees, such as teaching committees, to establish any other areas of our work requiring ED&I considerations. Introduce in-person reporting and discussion of ED&I concerns from other committee members to the ED&IC to occur intermittently to allow review and brainstorming.	Currently, the department has limited centralised insight into ED&I concerns and opportunities for intervention. While many committees already consider ED&I topics as part of their work, there is no centralised reporting or monitoring, and there may be some committees not considering ED&I with the potential for missed opportunities to improve experiences for women and non-binary members of the department. Joint meetings / brainstorming sessions performed intermittently may help ED&IC members spread best practice / encourage the creation of new practices.	Inclusion of ED&I considerations on all committee agendas.	FB, ED&IC, Committee Secretaries	Introduced over a one-year time frame.	100% of committees reporting to ED&IC and FB on ED&I considerations at least annually.

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3.1	Regular monitoring of gender and other diversity in departmental events such as seminars	Where possible, collect information on inclusivity for speakers and participants at departmental and research group seminars and other events, with the aim of improving inclusivity.	While we believe that these events are rarely gender balanced, we lack non-anecdotal evidence and require that to properly target and plan potential interventions.	Annual reporting by the ED&IC on inclusivity of events.	FA, ED&IC	Introduced over a one-year time frame, with initial reporting at the end of the first year.	80% reporting for departmental events that require registration, 50% reporting for group and local talks and seminars, with an awareness that it may not be possible to collect data where attendee information is not collected, and depending on the nature of the event.
3.2	Improve the diversity of speakers at departmental events such as seminars.	Drawing on results from 3.1, develop and implement a strategy to improve speaker diversity. This will include (a) Improving the availability of funds to support speaker travel to ensure that lack of support is not an impediment to speaking, and (b) brainstorming sessions at regular intervals to identify	As part of this activity, we will explore causes and propose specific interventions. This will provide role models for female students. Potential interventions include working with seminar and event organisers to improve awareness of gender in speaker selection, as well as, if there are differential uptake	Annual reporting by the ED&IC on inclusivity of events.	RST, ED&IC	Implement speaker support and organisational encouragement on a similar timescale. Assess success over a multi-year period.	Aim to achieve at least 20% female speakers in all seminar series, and a greater ratio for the Department's Wednesday seminar series. 80%

		potential speakers and assist with their invitation to events.	rates, exploring barriers such as lack of childcare.				reporting on the gender of speakers at all seminars/talks. Once we have improved reporting, we can refine specific targets for improvement where required.
4	Continue regular student and staff surveys annually	This action will continue our culture survey annually, refining questions and approaches, and attempt to achieve improved response levels.	The survey performed for our AS application substantially informed the current action plan, turning up a number of ED&I-related issues requiring attention (e.g., relating to understanding on how to report bullying and harassment, concerns about career support).	Annual reporting by the ED&IC on student/staff views, and development of new potential actions, submitted to the FB.	FA, ED&IC	Surveys performed annually	Surveys completed with 70% uptake for staff and 50% uptake for students. Results of surveys to be analysed and reported to the FB annually.
5	Exit interviews and career trajectory monitoring	Increase the rate of exit interviews performed and follow up with a sample of departed research staff members in the longer term to track career trajectories. Measure, and where needed, improve, staff	In preparing our AS application, we realised that the department only infrequently performs exit interviews, which are a good opportunity to look for potential ED&I issues. We also realised that we are not	Annual reporting on ED&I issues in exit interviews, and, in the longer term, strategy plan to collect data on departing career trajectories to understand potential ED&I issues where departmental intervention	HR, ED&IC, HoD team	Exit interview improvements over one year; long-term studies over 1, 5, and 10 years. Promotion	50% exit interview rate within two years. Early results from career follow-ups within two years.

		promotion application rates. Understand survey results showing that women and non-binary staff members feel a lower level of support for career progression.	routinely tracking later career trajectories of departing research staff. This makes it hard to know if ED&I issues lead to premature staff departure, and the extent to which we are supporting research staff in their longer-term careers. We also found that, although promotion success rates were tracked, promotion application rates were not, leaving us unable to understand whether there is a differential application rate – and act on it if required. Our culture survey also suggested inconsistent experiences for staff and students regarding confidence in their career support.	would be helpful. Through focus groups, seek to understand lower feelings of career development support by female staff members. The appropriate team should collect and analyse promotion application rates, e.g. academic promotion to be considered by the HoD team.		application data collection by the appropriate teams annually. Focus groups conducted within a year to explore career support problems. These will feed into Action 8 to develop specific intervention strategies.	Feedback sought on the promotion process within one year. Reporting on application rates within one year.
6	Gender awards gap review	Perform a detailed study of current and historic degree classes intersected with gender, race, and other factors. Complement with surveys and/or focus groups. Develop strategies to address discovered gaps and concerns.	The department sees an award gap in the granting of first-class degrees across a number of axes including gender, which has persisted for many years despite equivalent entry qualifications with respect to A-levels and other factors. There are a number of ideas	Study report to the FB at 2 years with proposed interventions for review by the FB.	ED&IC in collaboration with TMC and PEC.	2 years to produce recommendations, with the aim of eliminating the gap within 5 years.	Specific, concrete, implementable strategies at 2 years to be achieved.

			about why this is the case, but we wish to explore this at a departmental level, gathering data to look at potential interventions.				
7	Nominate female senior research staff and faculty for awards	The newly established Awards Committee will nominate UTO and SRAs in the Department for academic awards, prizes, and Fellowships. Examples include various ACM, IEEE, and AAAI awards; Fellowship in the ACM, IEEE, Royal Academy of Engineering and Royal Society; and elevation to Distinguished or Senior Member of these professional societies.	Awards, prizes and fellowships are important for recognition and career progression. Culture survey results and consultations with staff suggest that women and non-binary members feel they have a lower level of support for career progression. This may contribute to reduced self-nomination for awards, leading to a skewed distribution of award nominations. The Awards Committee will maintain a list of recognitions and nomination deadlines and meet annually to review the list of potential nominees and to match them with potential recognitions and nominators. Many awards have specific criteria (e.g. career stage, membership of awarding bodies), therefore	An annual report to FB shall be made, listing the names of successful awardees, number of cases considered, number (but not names) of unsuccessful submissions made, as well as the number of applications currently in progress. This report will include a breakdown by gender.	Awards Committee	First nominations to be made in late 2024 for a small number of awarding bodies (IEEE, ACM). Expand to include additional awards in subsequent years.	Nominate all women UTOs/SRAs who are eligible for awards (according to self-declaration) each year.

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			self-declarations of eligibility will be obtained.				
8	Improve career progression support	Building on results from action 5 (data collection and focus groups) and 7 (improve award rate for female and non-binary staff members), develop and implement plans for further career progression support.	While it is difficult to draw generalised conclusions from our current promotion data, there is a clear concern across the field about career support for female and non-binary students. Culture survey data illustrates weaker confidence by female students that they are well supported, and likewise for non-binary staff. At the very least, we need to ensure that promotion rates remain at their current levels but given concerns about (for example) differential levels of support for women and non-binary members of the Department from our culture survey, there is the opportunity to review this.	Developing specific actions requires us to complete data collection. However, one key deliverable will be a specific plan for improved career progression support, which would in turn identify further goals during the next 5-year period.	HR, DS, and ED&IC	In the first year, gather data and develop strategies for intervention. By year two, achieve initial interventions, with a goal of reaching parity of confidence within five years.	For male and female staff members, maintain at least 80% agreement regarding line-manager support, and for non-binary staff members raise to 80%. For students, achieve equal confidence in career support for male, female and other.

Appendix 1: Culture survey data

1.1   Staff Culture Survey 2023 – Questions

Staff Culture Survey 2023 – Questions

Theme 1: Belonging and Inclusion
Q1   My contributions are valued at work.
Q2   Please add any additional comments you may have.

Theme 2: Gender Equality
Q3   Departmental leadership actively supports gender equality.
Q4   Please add any additional comments you may have.

Theme 3: Work-Life Balance
Q5   The timing of departmental meetings, seminars, and other events takes into consideration those with caring responsibilities.
Q6   Please add any additional comments you may have.

Theme 4: Bullying and Harassment
Q7   I have experienced discrimination, bullying and/or harassment in the past 12 months.
Q8   Please add any additional comments you may have.
Q9   I have witnessed discrimination, bullying and/or harassment in the past 12 months.
Q10   Please add any additional comments you may have.
Q11   I am satisfied with how discrimination, bullying and harassment are addressed.
Q12   Please add any additional comments you may have.
Q13   I am aware how and to whom bullying and harassment cases should be reported.
Q14   Please add any additional comments you may have.

Theme 5: Career Development
Q15   My line manager supports my career development.
Q16   Please add any additional comments you may have.
Q17   Other people in my department support my career development.
Q18   Please add any additional comments you may have.

Theme 6: Wellbeing
Q19   My current workload is manageable.
Q20   Please add any additional comments you may have.
Q21   My mental health and/or wellbeing are supported in my department.
Q22   Please add any additional comments you may have.
Q23   I feel welcome at the department's social events.
Q24   Please add any additional comments you may have.

About You
Q25   What is your staff group?
Q26   As well as being a staff member, are you also a currently registered student at the University?
Q27   In addition to a role, your employment contract assigns you to a grade reflecting seniority and salary scale. If you know your grade, select it here, or choose 'Don't know'.
Q28   How would you describe your gender?
Q29   Are you trans or do you have a trans history?
Q30   How would you describe your sexual orientation? (Select all that apply)
Q31   What is your religion or belief? (Select all that apply)

Q32   How would you describe your ethnicity or ethnic background?

Disability and long-term health conditions

Q33   Using [the definition provided in the survey], do you identify as disabled?
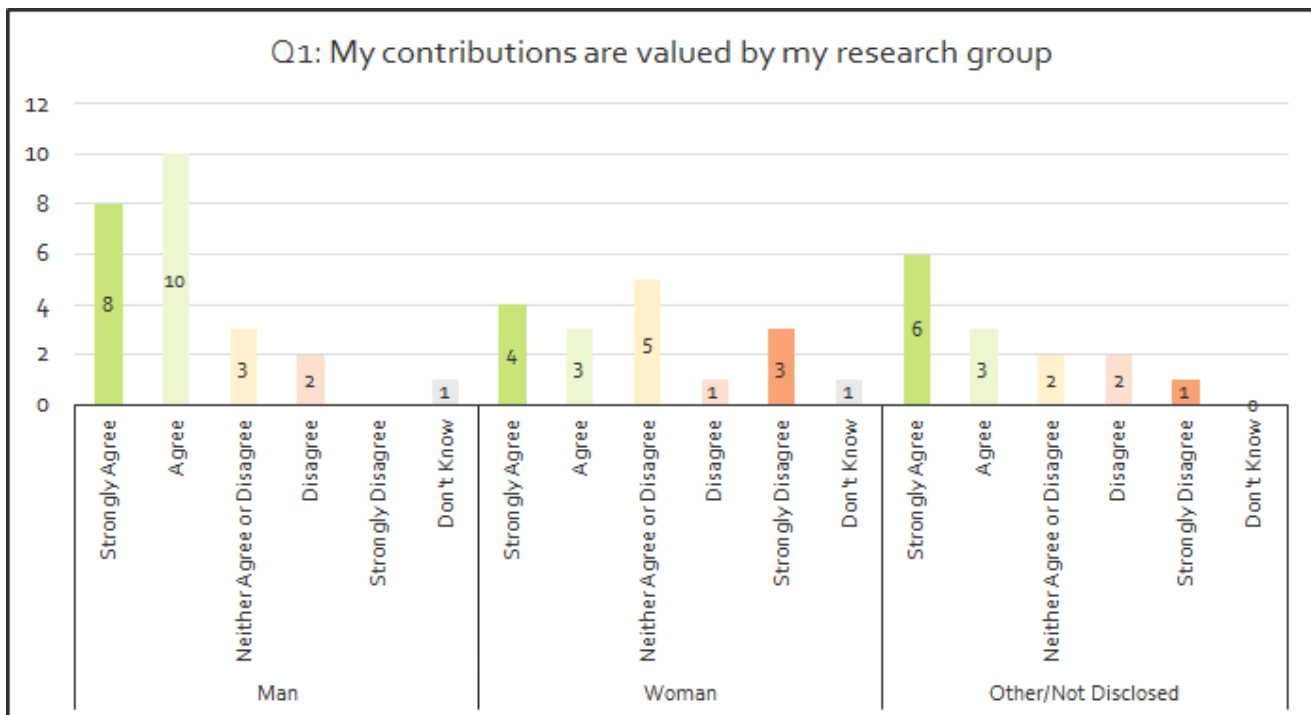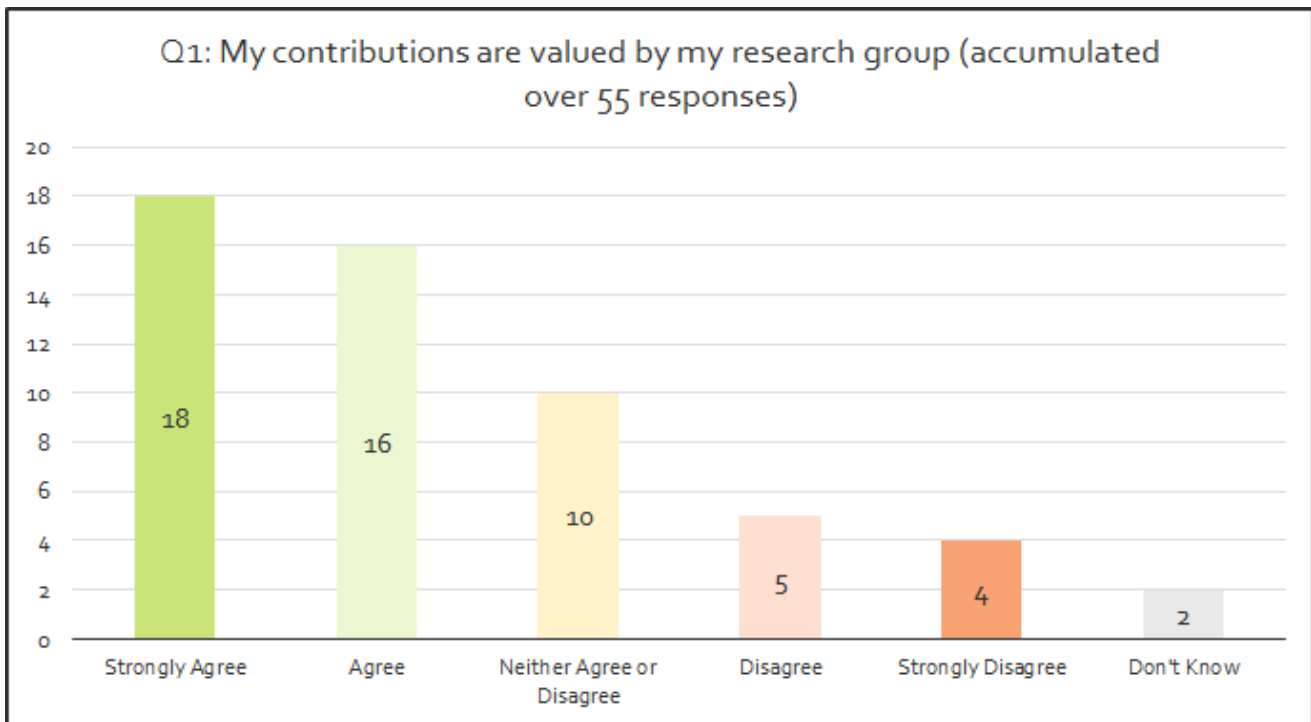
Q34   Do you have an impairment, health condition or learning difference that has a substantial or long-term impact on your ability to carry out day to day activities?

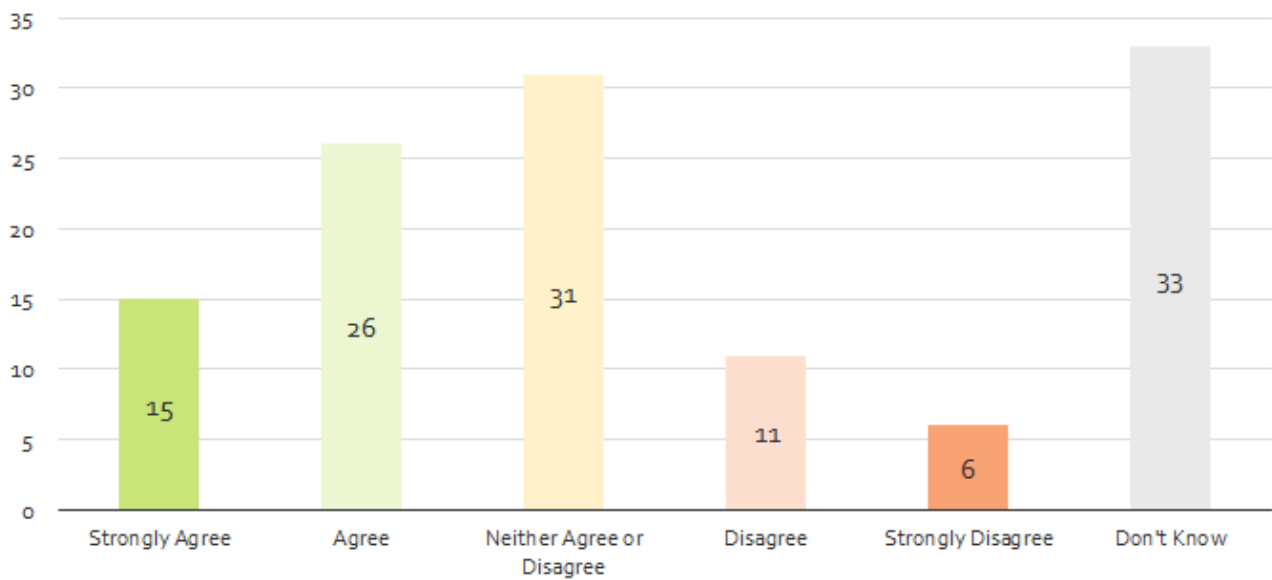Q35   Do you have any caring responsibilities? (Select as many options as may apply)

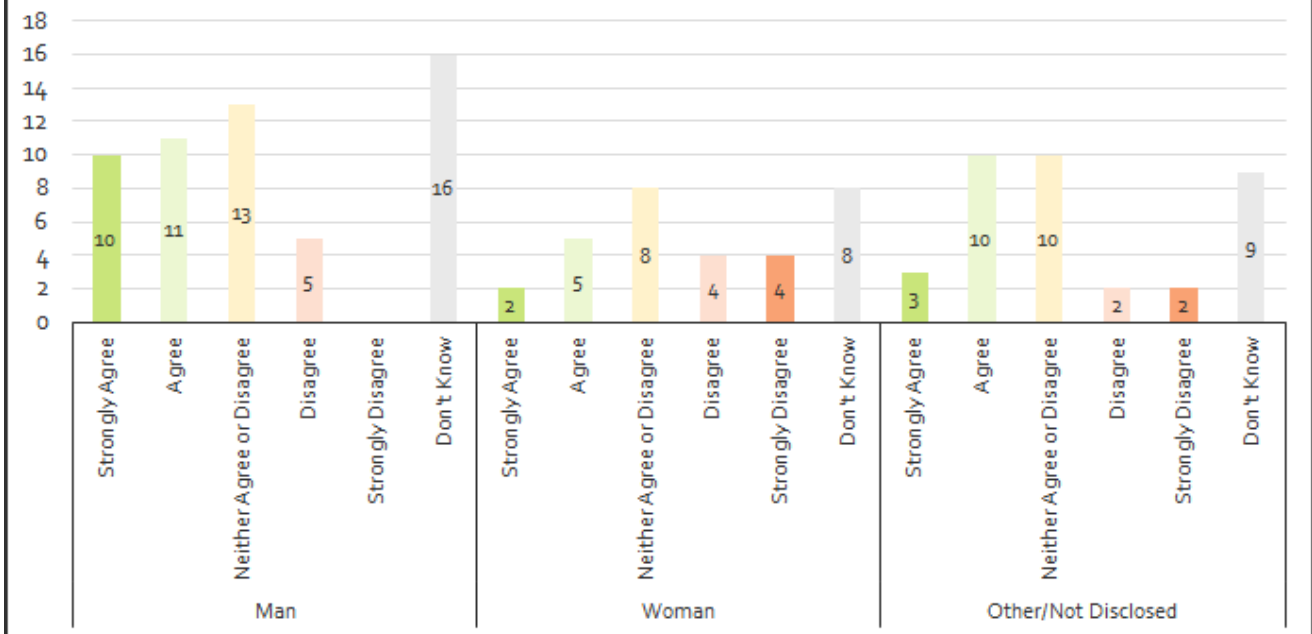**Added Qs for analysis**

Q77   Gender

1.2   Student Culture Survey 2023 – Questions

Student Culture Survey 2023 – Questions

Introduction
Q1   Introductory text

Theme 1: Belonging and Inclusion
Q2   My contributions are valued by my research group.
Q3   Please add any additional comments you may have.
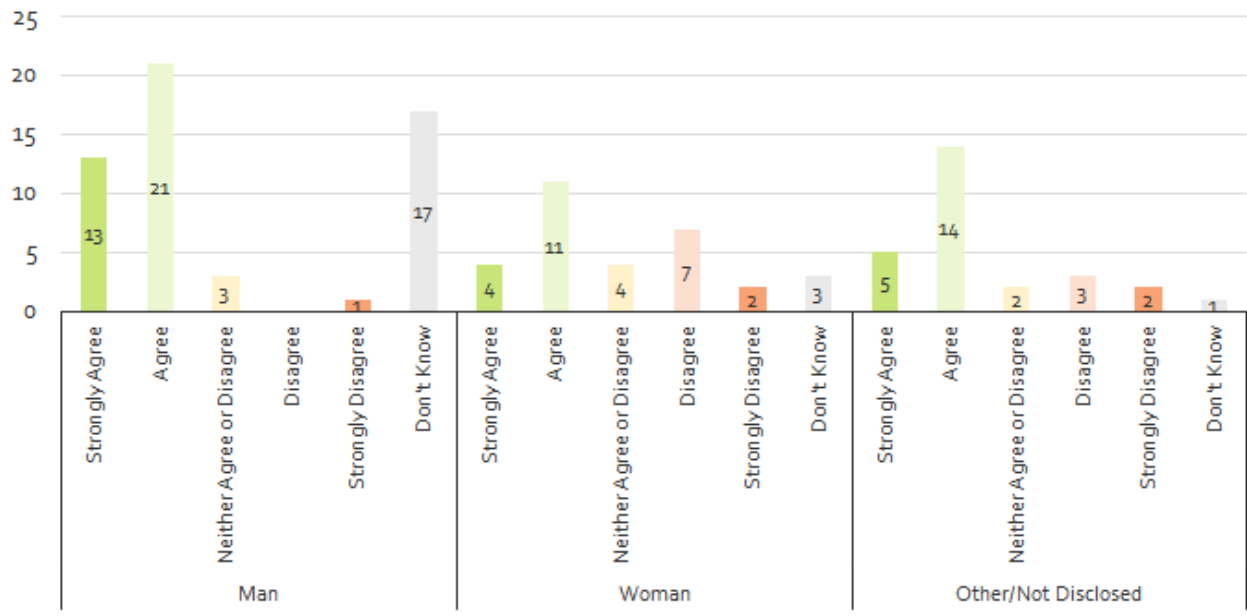Q4   My contributions are valued by the Department.
Q5   Please add any additional comments you may have.

Theme 2: Gender Equality
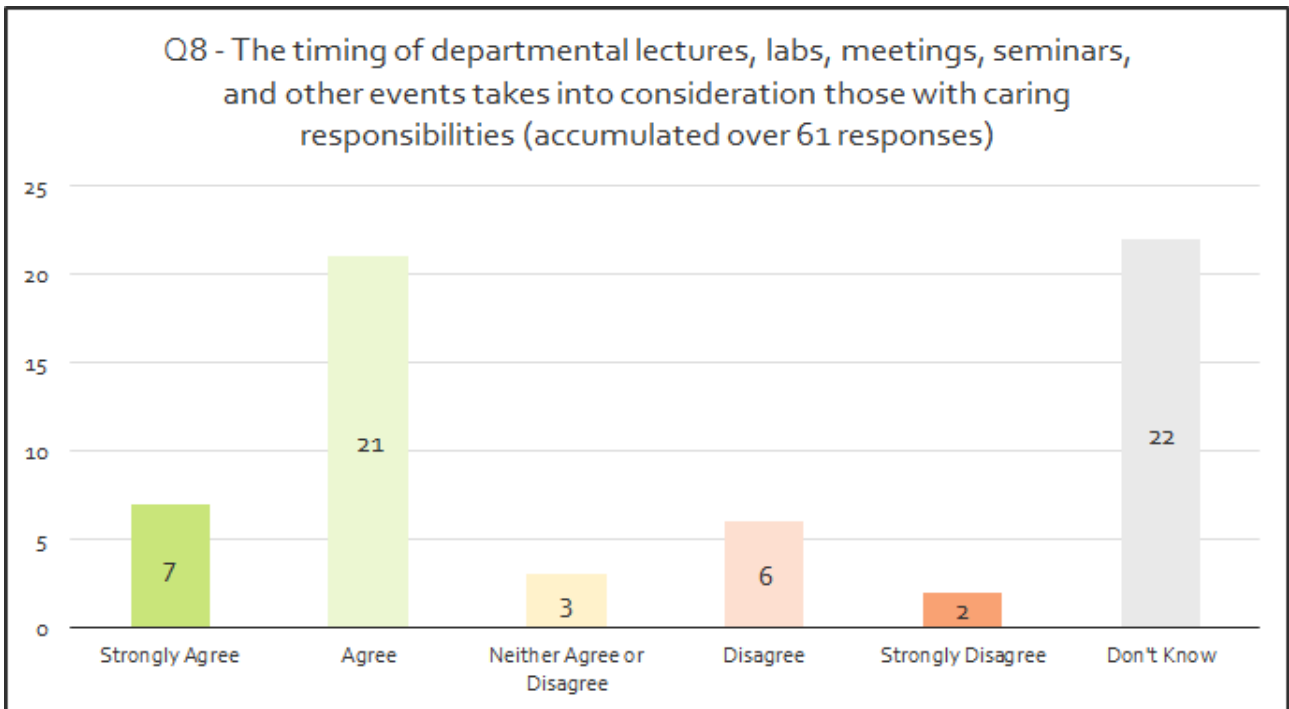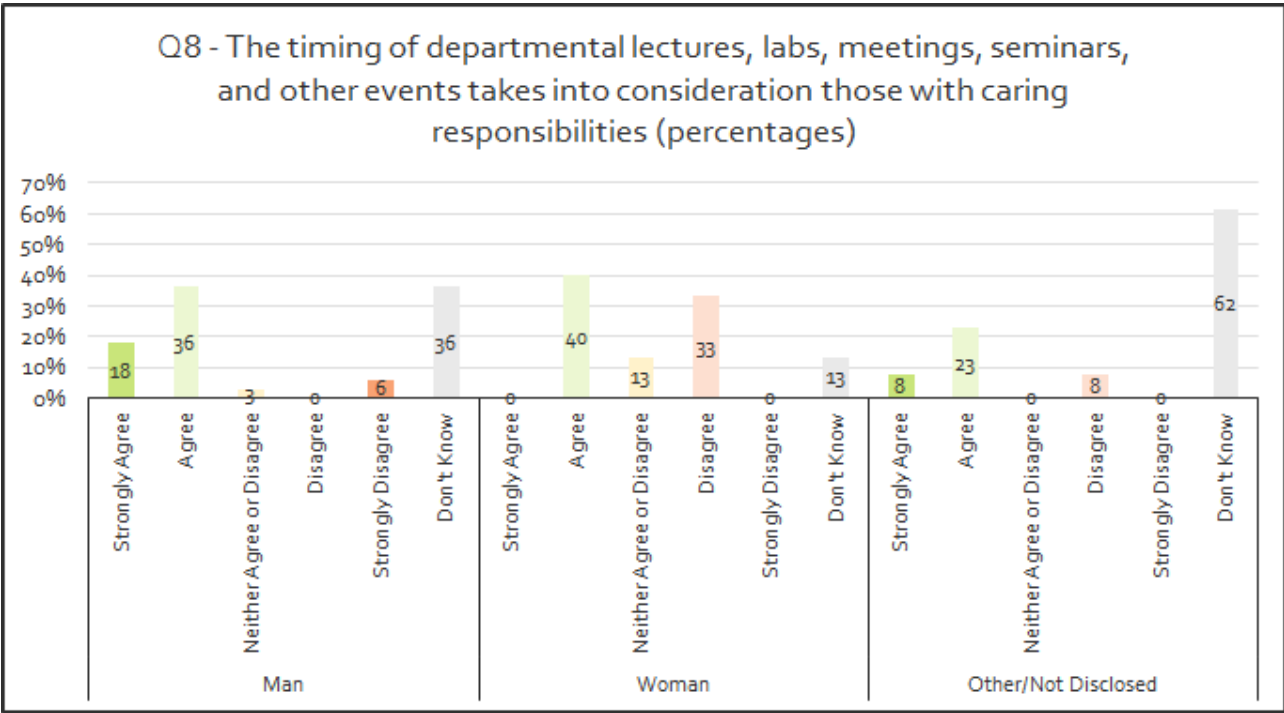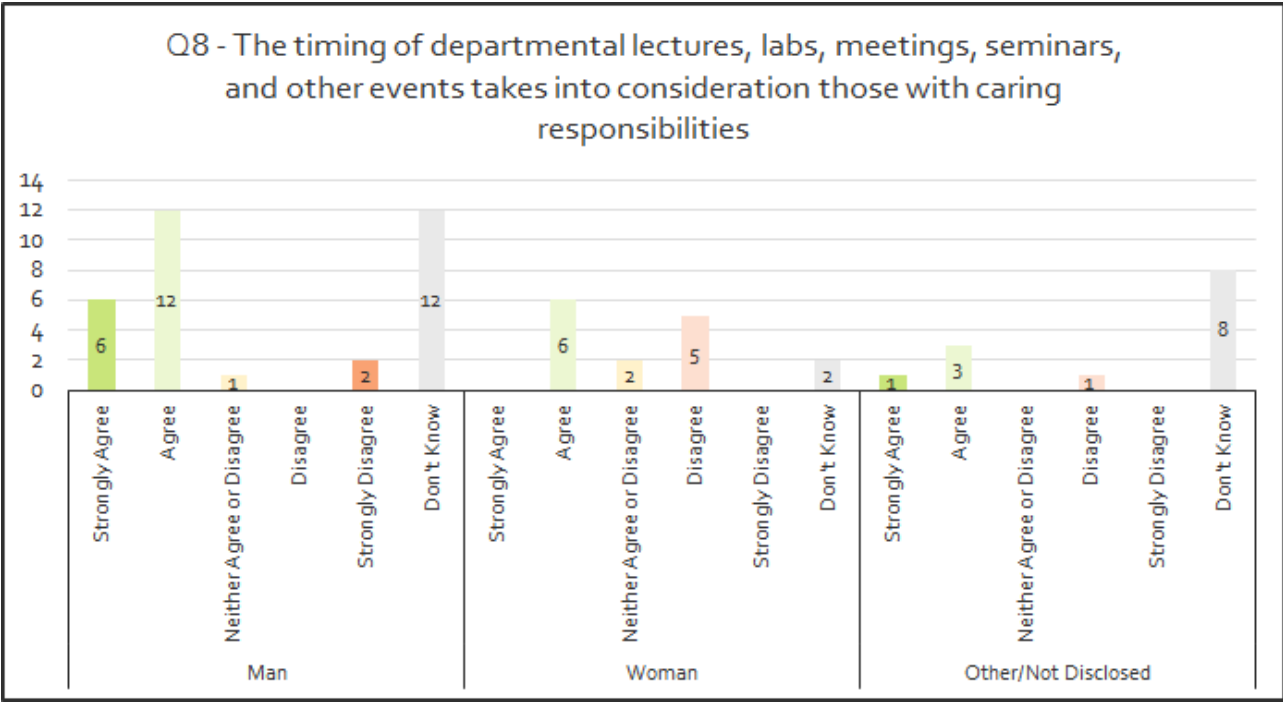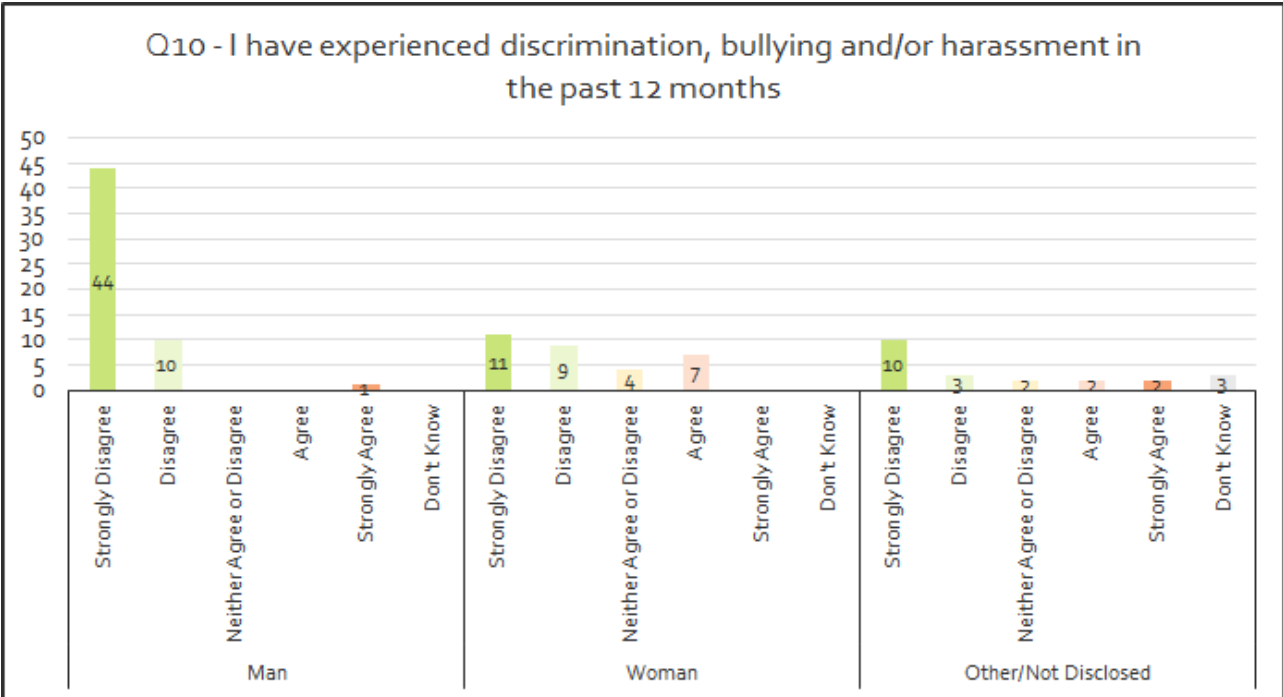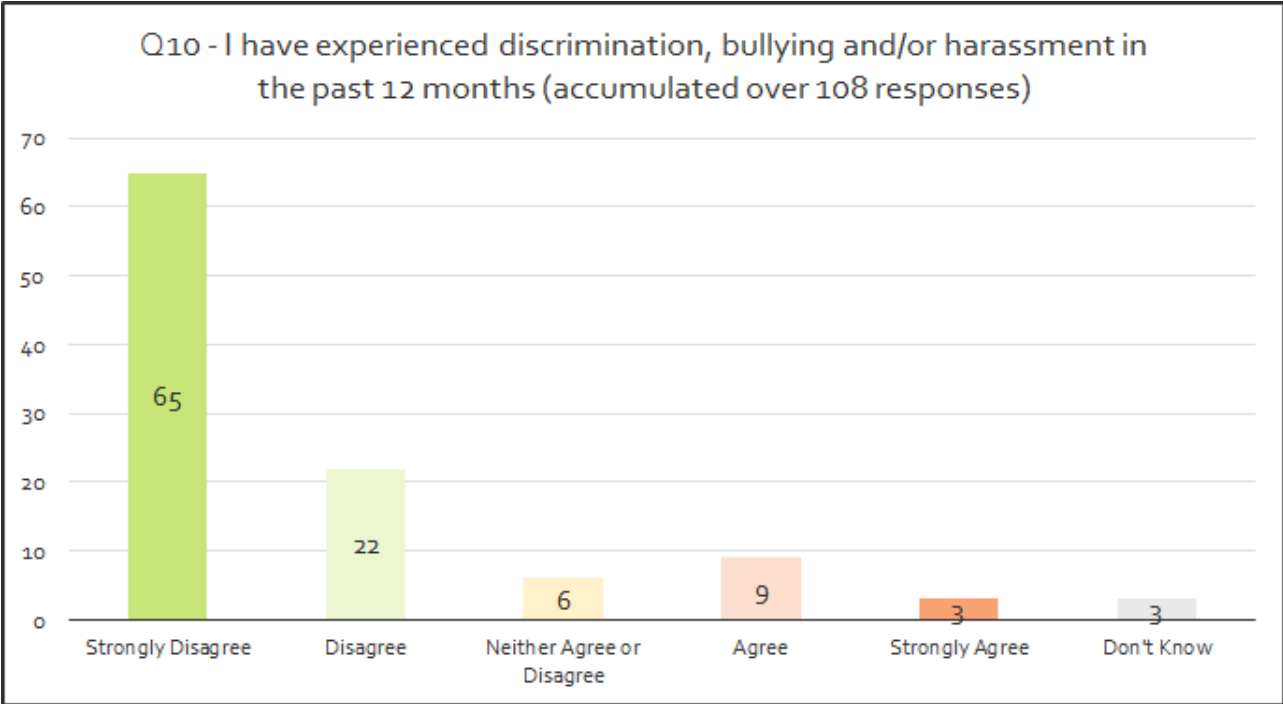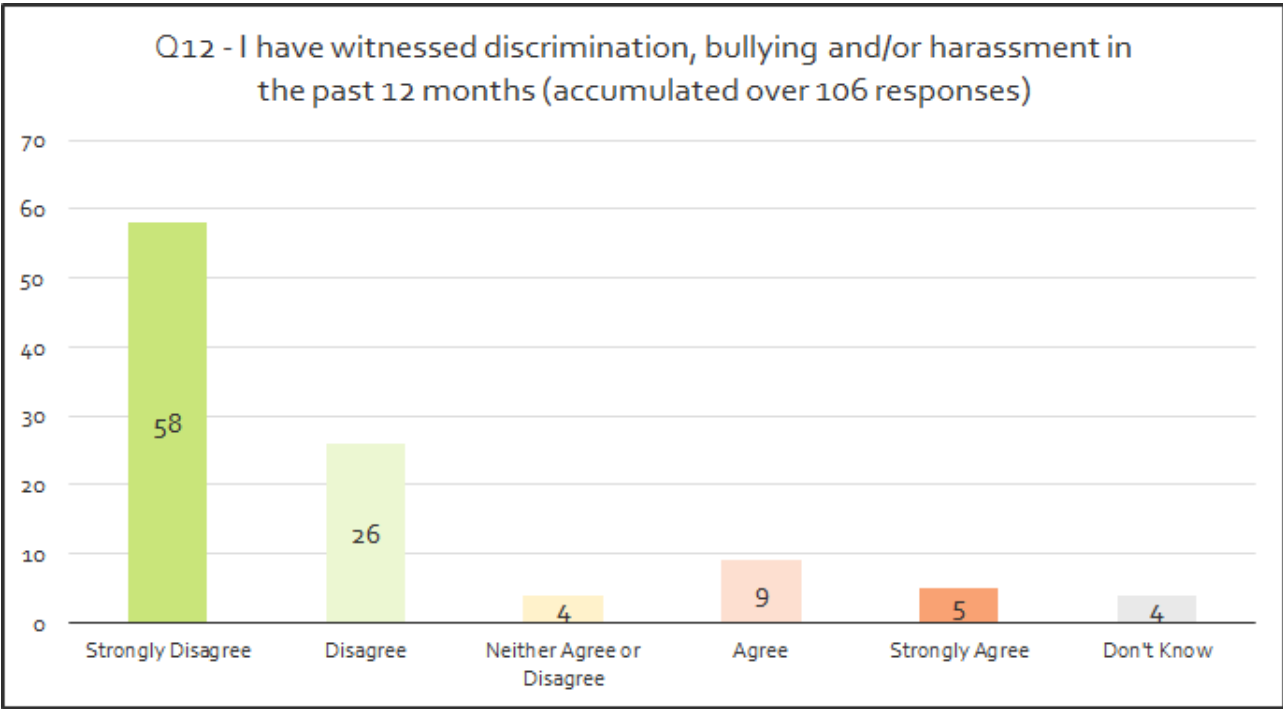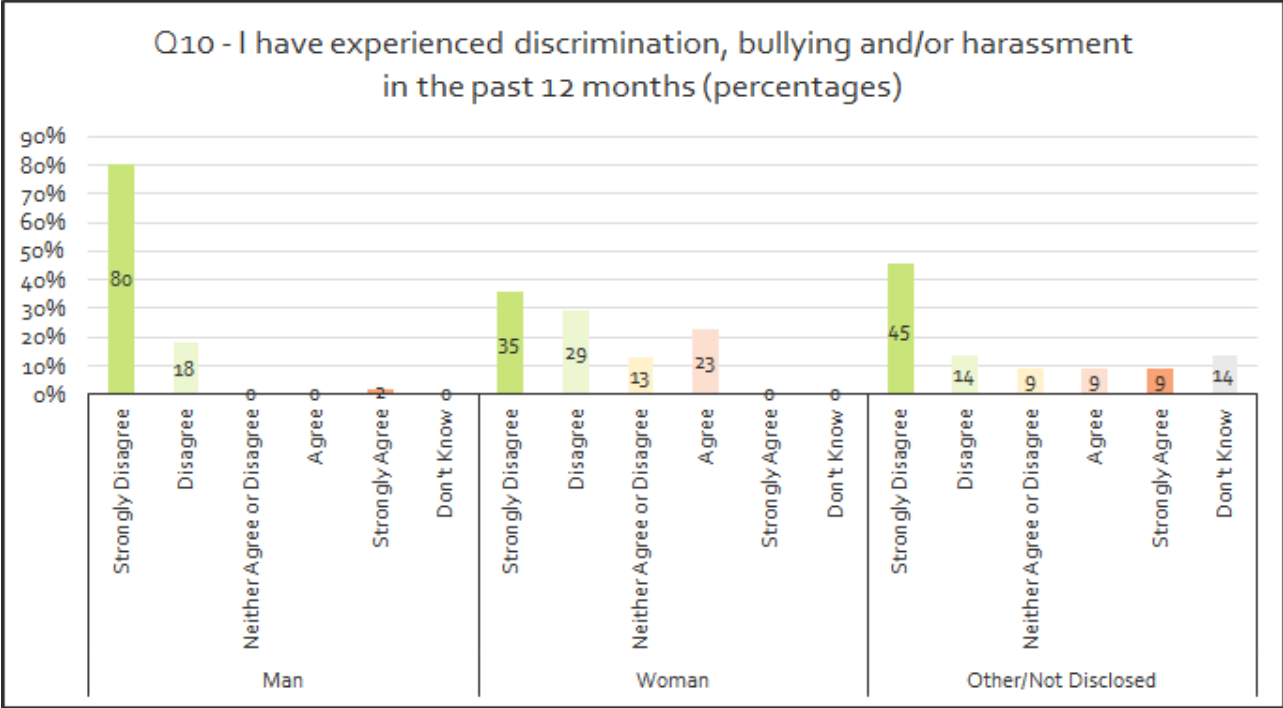Q6   Departmental leadership actively supports gender equality.
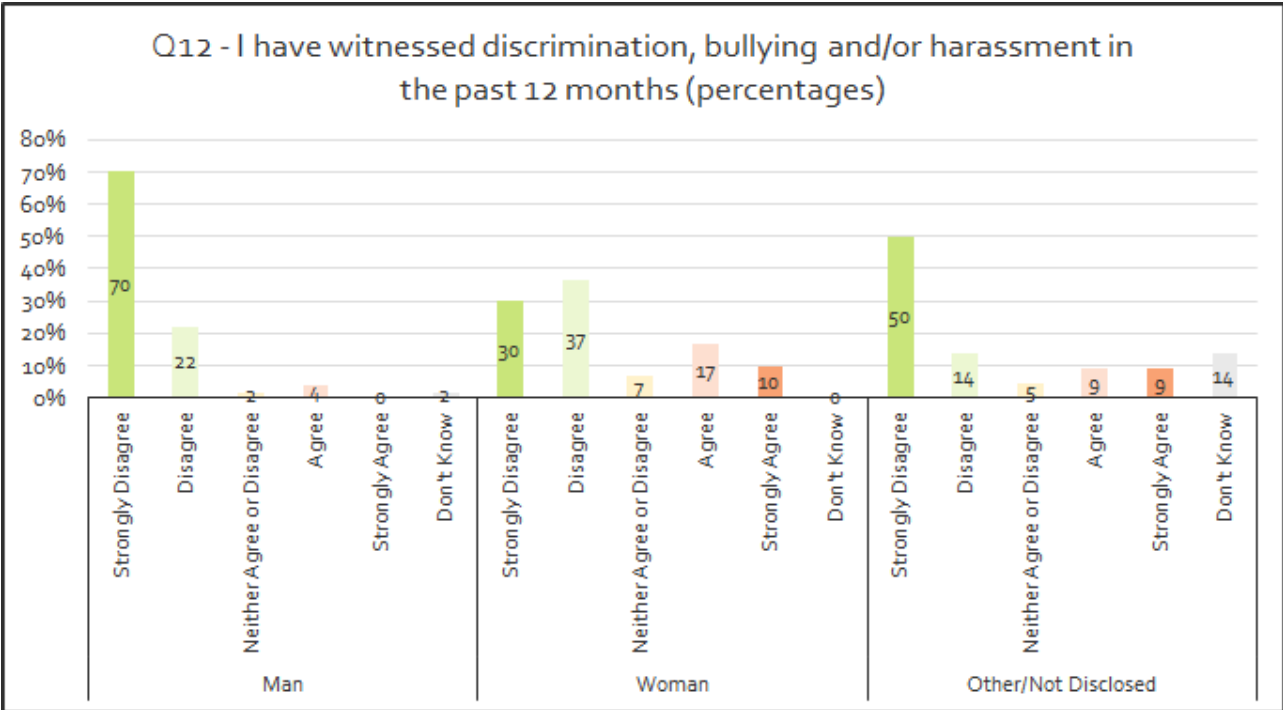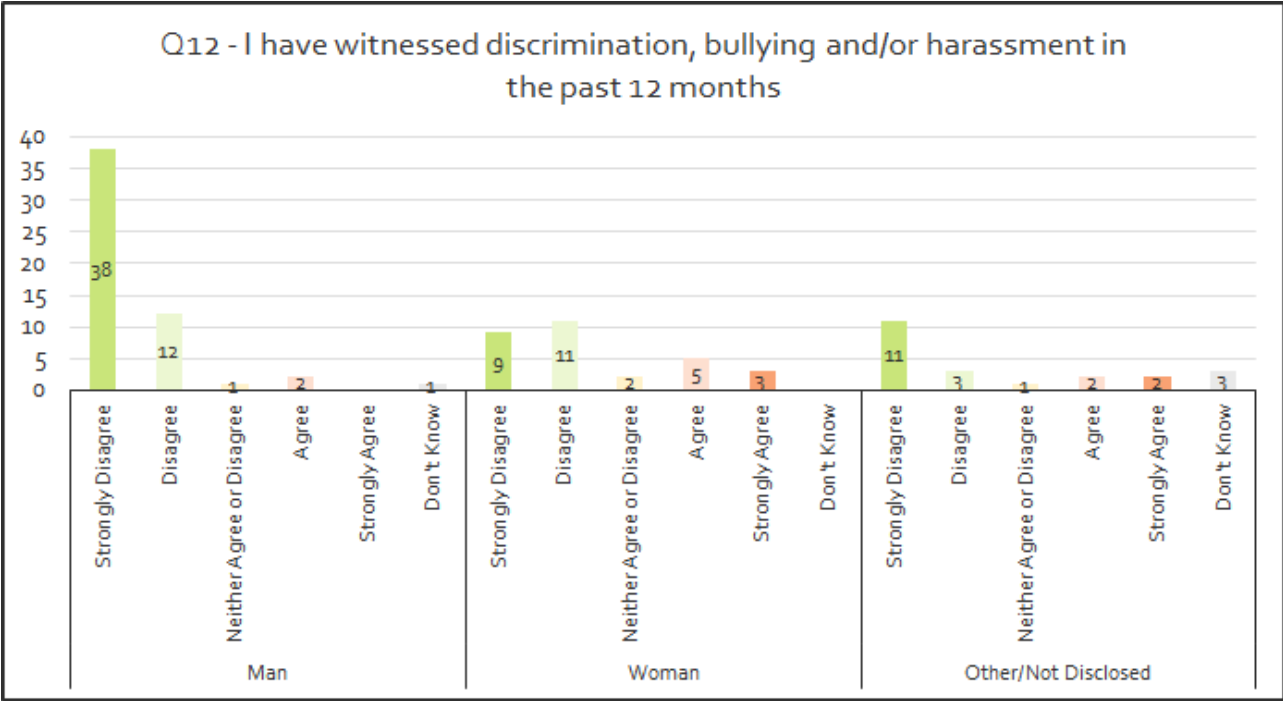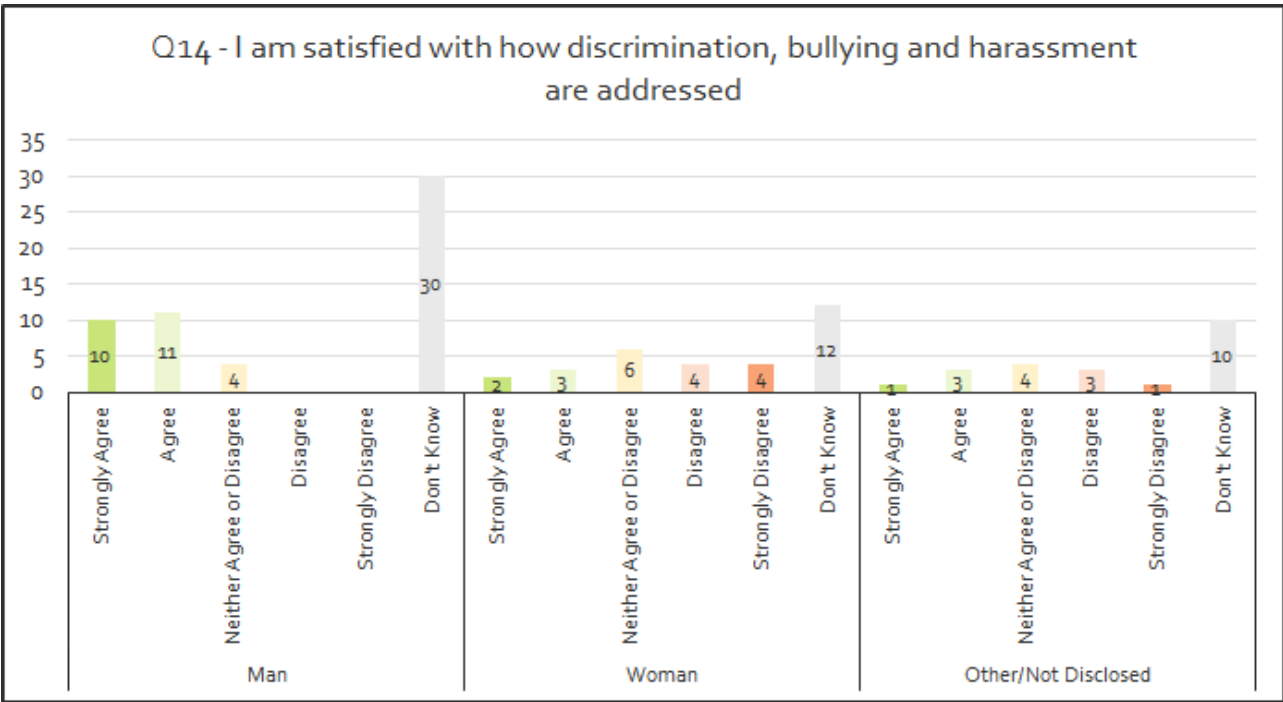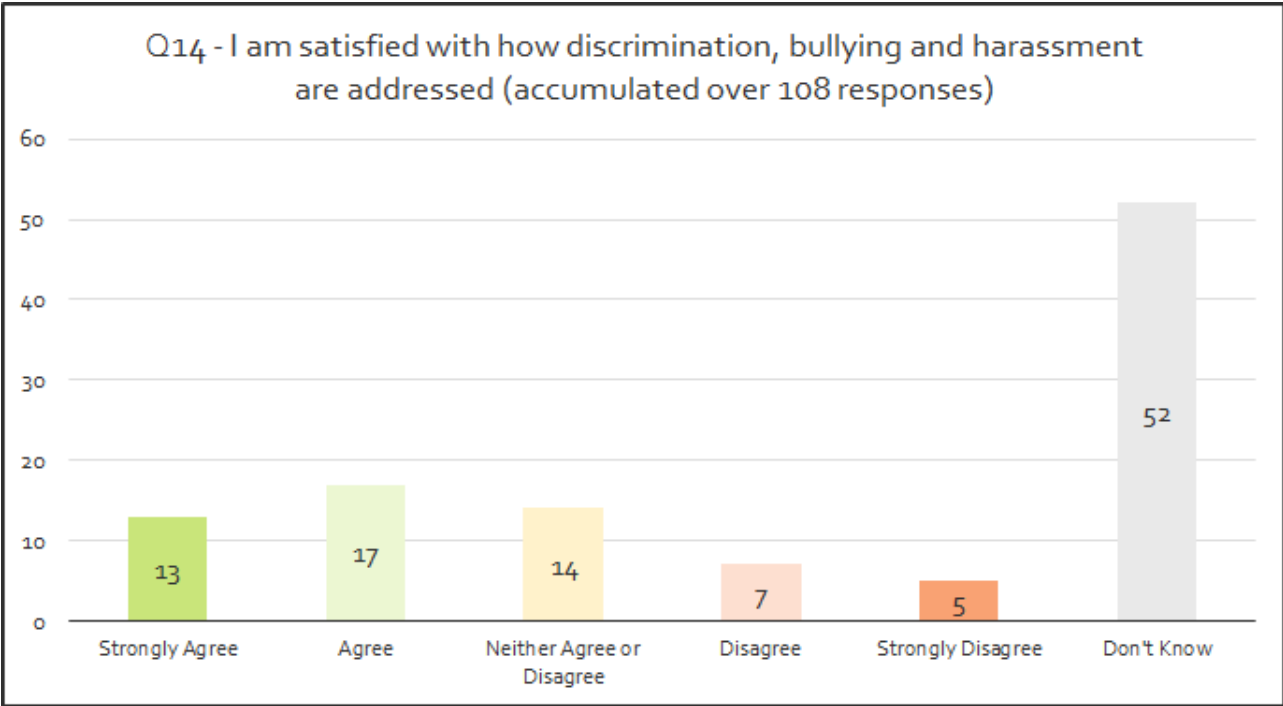Q7   Please add any additional comments you may have.

Theme 3: Work-Life Balance
Q8   The timing of departmental meetings, seminars, and other events takes into consideration those with caring responsibilities.
Q9   Please add any additional comments you may have.

Theme 4: Bullying and Harassment
Q10   I have experienced discrimination, bullying and/or harassment in the past 12 months.
Q11   Please add any additional comments you may have.
Q12   I have witnessed discrimination, bullying and/or harassment in the past 12 months.
Q13   Please add any additional comments you may have.
Q14   I am satisfied with how discrimination, bullying and harassment are addressed.
Q15   Please add any additional comments you may have.
Q16   I am aware how and to whom bullying and harassment cases should be reported.
Q17   Please add any additional comments you may have.

Theme 5: Career Development
Q18   The department and/or University career services support my career development.
Q19   Please add any additional comments you may have.

Theme 6: Wellbeing
Q20   My current workload is manageable.
Q21   Please add any additional comments you may have.
Q22   My mental health and/or wellbeing are supported in my department.
Q23   Please add any additional comments you may have.
Q24   I feel welcome at the department's social events.
Q25   Please add any additional comments you may have.
Q26   Please comment on and/or share your thoughts on equality, diversity, and inclusion in the Department of Computer Science and Technology.
Q27   Do you have any concerns regarding access to and involvement in the department in terms of physical disabilities or mental health? Do you have any suggestions for how access may be improved?
Q28   With respect to your College experience, do you feel that your College is supportive with respect to issues of Equality, Diversity, and Inclusion?

About You

Q29   About you. It is voluntary to disclose the following information, but doing so will enable us to better understand the experience of students from different diversity groups and examine whether or not we are meeting the needs of all students.

            All responses are anonymous, the information disclosed will be treated in the strictest confidence, and all data stewardship will comply with GDPR regulations.

Q30   In what programme are you studying?

Q31   As well as being a student, are you also a current staff member at the University?

Q32   How would you describe your gender?

Q33   Are you trans or do you have a trans history?

Q34   How would you describe your sexual orientation? (Select all that apply)

Q35   What is your religion or belief? (Select all that apply)

Q36   How would you describe your ethnicity or ethnic background?

Disability and long-term health conditions

Q37   Using [the definition provided in the survey], do you identify as disabled?

Q38   Do you have an impairment, health condition or learning difference that has a substantial or long-term impact on your ability to carry out day to day activities?

Q39   Do you have any caring responsibilities? (Select as many options as may apply)

Added Qs for analysis

Q84   Gender

1.3   Student Survey Results

Q1: My contributions are valued by my research group (accumulated over 55 responses)

Q1: My contributions are valued by my research group

Q1: My contributions are valued by my research group (percentages)
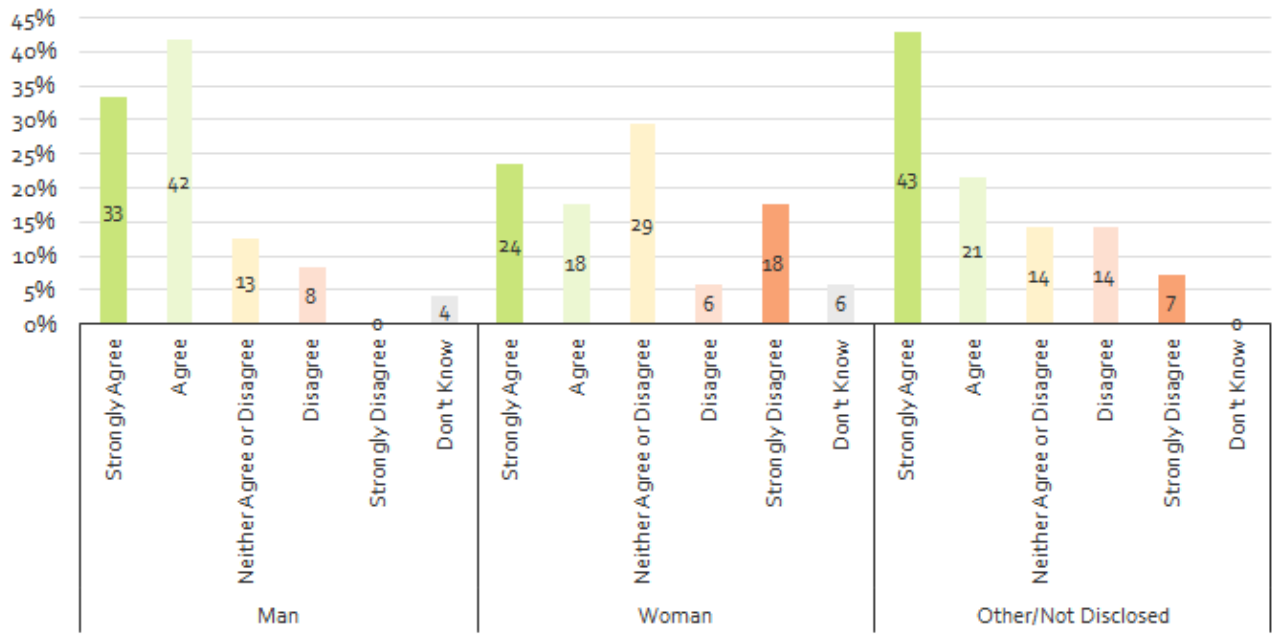
Q4 - My contributions are valued by the department (accumulated over 122 responses)

Q4 - My contributions are valued by the department

	Man						Woman						Other/Not Disclosed					
Strongly Agree	10						2						3					
Agree		11						5						10				
Neither Agree or Disagree			13						8						10			
Disagree				5						4						2		
Strongly Disagree											4						2	
Don't Know						16						8						9

Q4 - My contributions are valued by the department (percentages)

	Man						Woman						Other/Not Disclosed					
Strongly Agree	18						6						8					
Agree		20						16						28				
Neither Agree or Disagree			24						26						28			
Disagree				9						13						6		
Strongly Disagree					0						13						6	
Don't Know						29						26						25

Q6 - Departmental leadership actively supports gender equality
(accumulated over 113 responses)

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
	22	46	9	10	5	21

Q6 - Departmental leadership actively supports gender equality

Man
Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
13	21	3		1	17

Woman
Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
4	11	4	7	2	3

Other/Not Disclosed
| Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
5	14	2	3	2	1

Q6 - Departmental leadership actively supports gender equality (percentages)

Q8 - The timing of departmental lectures, labs, meetings, seminars, and other events takes into consideration those with caring responsibilities (accumulated over 61 responses)

Q8 - The timing of departmental lectures, labs, meetings, seminars, and other events takes into consideration those with caring responsibilities
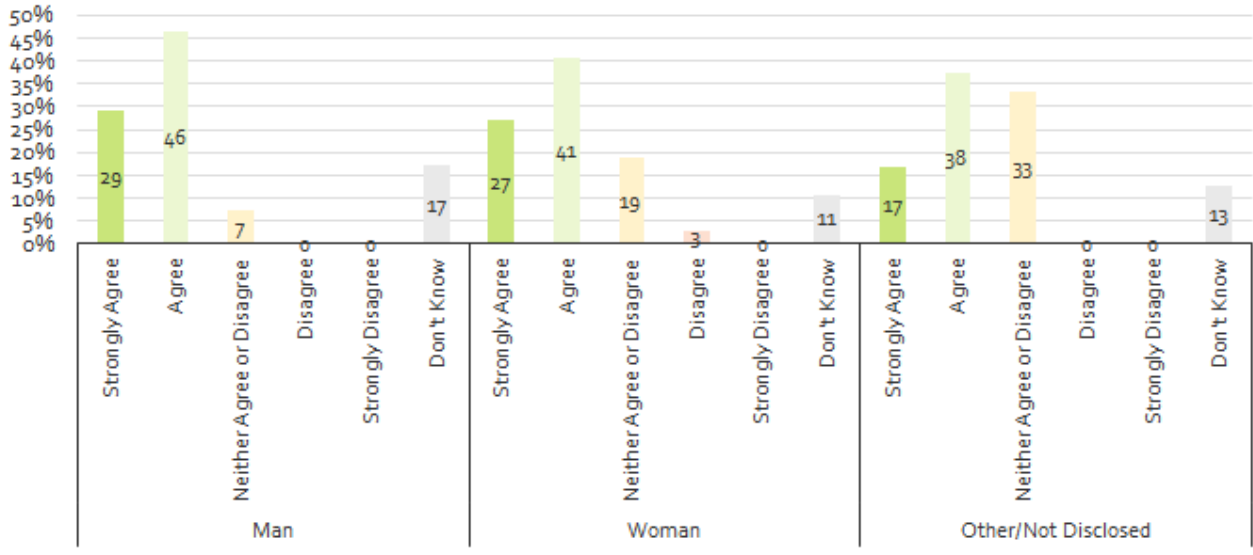

Q8 - The timing of departmental lectures, labs, meetings, seminars, and other events takes into consideration those with caring responsibilities (percentages)

Q10 - I have experienced discrimination, bullying and/or harassment in the past 12 months (accumulated over 108 responses)

Q10 - I have experienced discrimination, bullying and/or harassment in the past 12 months

Q10 - I have experienced discrimination, bullying and/or harassment in the past 12 months (percentages)

Q12 - I have witnessed discrimination, bullying and/or harassment in the past 12 months (accumulated over 106 responses)

44

Q12 - I have witnessed discrimination, bullying and/or harassment in the past 12 months

Q12 - I have witnessed discrimination, bullying and/or harassment in the past 12 months (percentages)

45

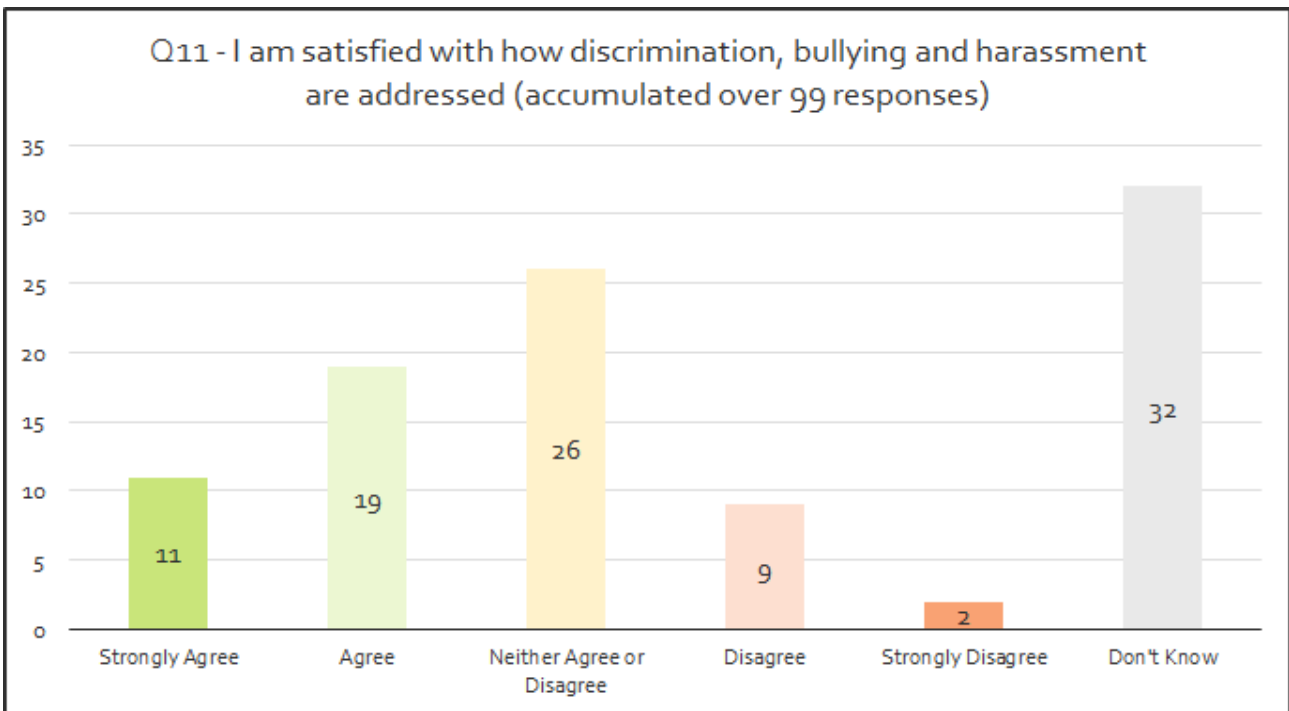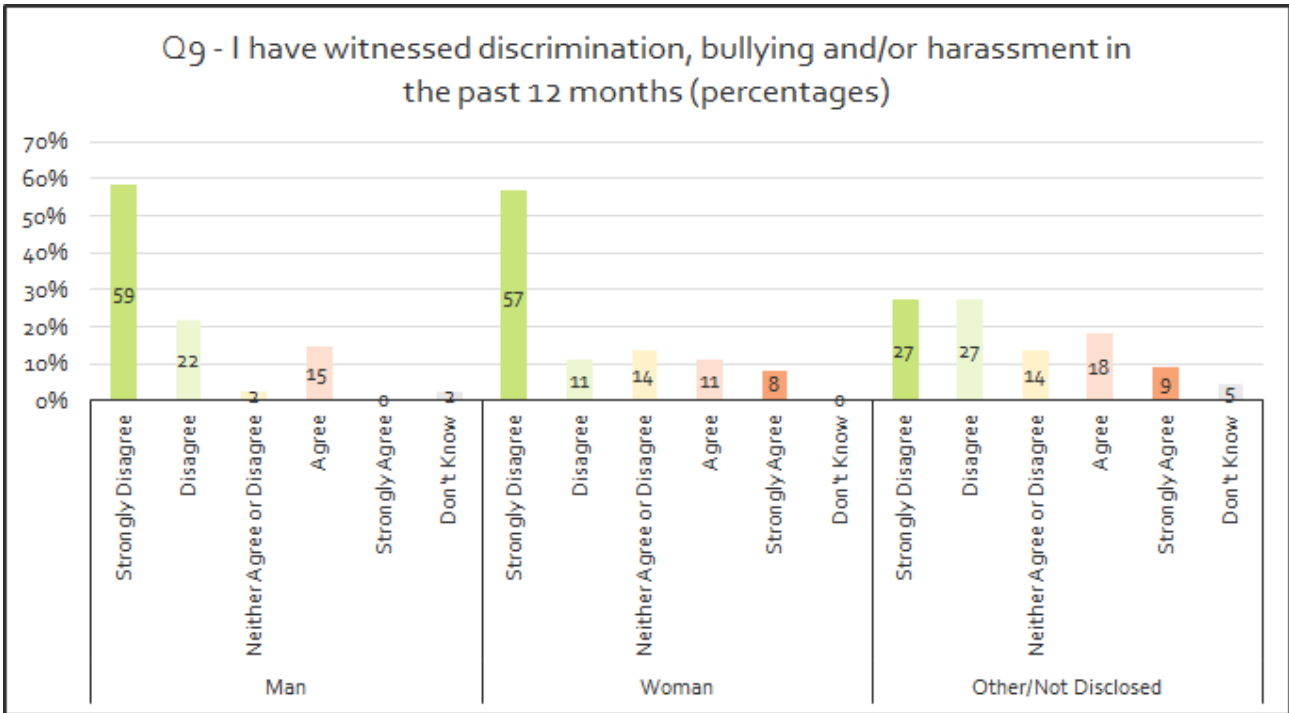Q14 - I am satisfied with how discrimination, bullying and harassment are addressed (accumulated over 108 responses)

Q14 - I am satisfied with how discrimination, bullying and harassment are addressed

Q14 - I am satisfied with how discrimination, bullying and harassment are addressed (percentages)

Man
- Strongly Agree: 18
- Agree: 20
- Neither Agree or Disagree: 7
- Disagree: 0
- Strongly Disagree: 0
- Don't Know: 55

Woman
- Strongly Agree: 6
- Agree: 10
- Neither Agree or Disagree: 19
- Disagree: 13
- Strongly Disagree: 13
- Don't Know: 39

Other/Not Disclosed
- Strongly Agree: 5
- Agree: 14
- Neither Agree or Disagree: 18
- Disagree: 14
- Strongly Disagree: 5
- Don't Know: 45

Q16 - I am aware how and to whom bullying and harassment cases should be reported. (accumulated over 108 responses)

- Strongly Agree: 9
- Agree: 32
- Neither Agree or Disagree: 14
- Disagree: 35
- Strongly Disagree: 12
- Don't Know: 6

Q16 - I am aware how and to whom bullying and harassment cases should be reported.

Q16 - I am aware how and to whom bullying and harassment cases should be reported. (percentages)

Q18 - The department and/or University career services support my career development (accumulated over 107 responses)

	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
	24	43	19	8	6	7

Q18 - The department and/or University career services support my career development

	Man						Woman						Other/Not Disclosed					
	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
	14	25	8	1	3	4	5	13	5	4	3	1	5	5	6	3		2

49

Q18 - The department and/or University career services support my career development (percentages)

Man, Woman, Other/Not Disclosed groups:

Man: Strongly Agree 25, Agree 45, Neither Agree or Disagree 15, Disagree 2, Strongly Disagree 5, Don't Know 7

Woman: Strongly Agree 16, Agree 42, Neither Agree or Disagree 16, Disagree 13, Strongly Disagree 10, Don't Know 3

Other/Not Disclosed: Strongly Agree 24, Agree 24, Neither Agree or Disagree 29, Disagree 14, Strongly Disagree 0, Don't Know 10

Q20 - My current workload is manageable (accumulated over 100 responses)

Strongly Agree 9, Agree 43, Neither Agree or Disagree 21, Disagree 19, Strongly Disagree 6, Don't Know 2

Q20 - My current workload is manageable

Q20 - My current workload is manageable (percentages)

Q22 - My mental health and/or wellbeing are supported in my department (accumulated over 100 responses)

Q22 - My mental health and/or wellbeing are supported in my department

Q22 - My mental health and/or wellbeing are supported in my department (percentages)

Man: Strongly Agree 13, Agree 18, Neither Agree or Disagree 22, Disagree 31, Strongly Disagree 5, Don't Know 11

Woman: Strongly Agree 0, Agree 13, Neither Agree or Disagree 29, Disagree 32, Strongly Disagree 16, Don't Know 10

Other/Not Disclosed: Strongly Agree 7, Agree 21, Neither Agree or Disagree 7, Disagree 43, Strongly Disagree 21, Don't Know 0

Q24 - I feel welcome at the department's social events (accumulated over 100 responses)

Strongly Agree 31, Agree 43, Neither Agree or Disagree 13, Disagree 7, Strongly Disagree 2, Don't Know 4

53

Q24 - I feel welcome at the department's social events

Q24 - I feel welcome at the department's social events (percentages)

54

1.4 Staff Survey Results

Q1: My contributions are valued at work (accumulated over 105 responses)

Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
43	44	8	5	5	

Q1: My contributions are valued at work

	Man						Woman						Other/Not Disclosed				
Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know	Strongly Agree	Agree	Neither Agree or Disagree	Disagree	Strongly Disagree	Don't Know
17	20	2		2		19	14	3		1		7	10	3	5	2	

Q1: My contributions are valued at work (percentages)

Q3 - Departmental leadership actively supports gender equality (accumulated over 101 responses)

Q3 - Departmental leadership actively supports gender equality

Q3 - Departmental leadership actively supports gender equality (percentages)

57

Q5 - The timing of departmental meetings, seminars, and other events takes into consideration those with caring responsibilities (accumulated over 102 responses)

Q5 - The timing of departmental meetings, seminars, and other events takes into consideration those with caring responsibilities

58
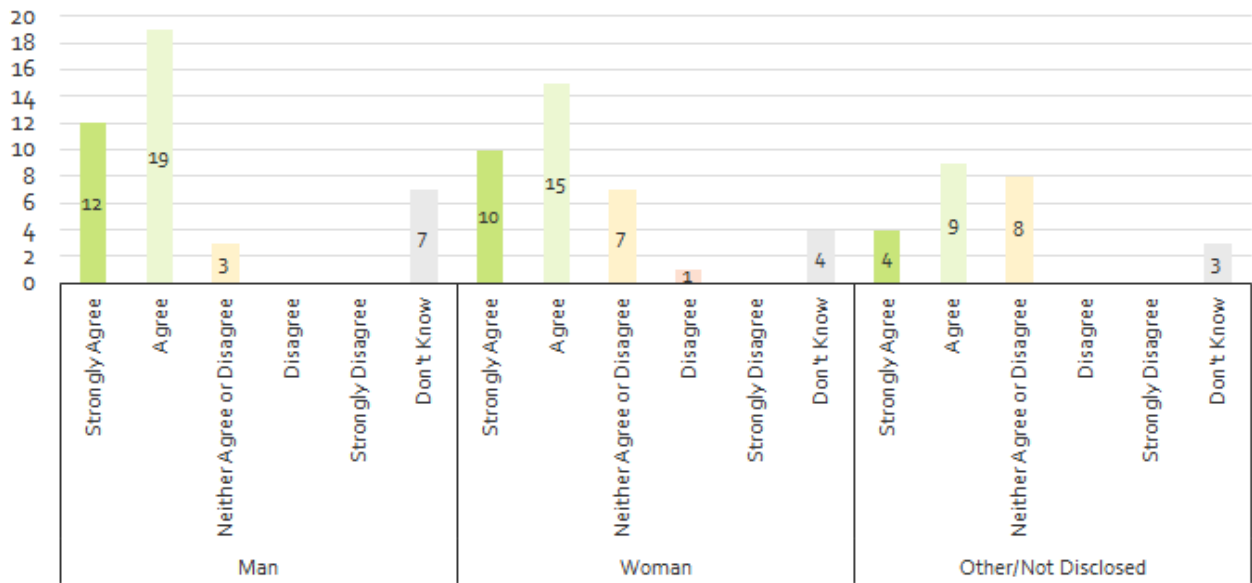
Q5 - The timing of departmental meetings, seminars, and other events takes into consideration those with caring responsibilities (percentages)

Q7 - I have experienced discrimination, bullying and/or harassment in the past 12 months (accumulated over 100 responses)

Q7 - I have experienced discrimination, bullying and/or harassment in the past 12 months

Q7 - I have experienced discrimination, bullying and/or harassment in the past 12 months (percentages)

60
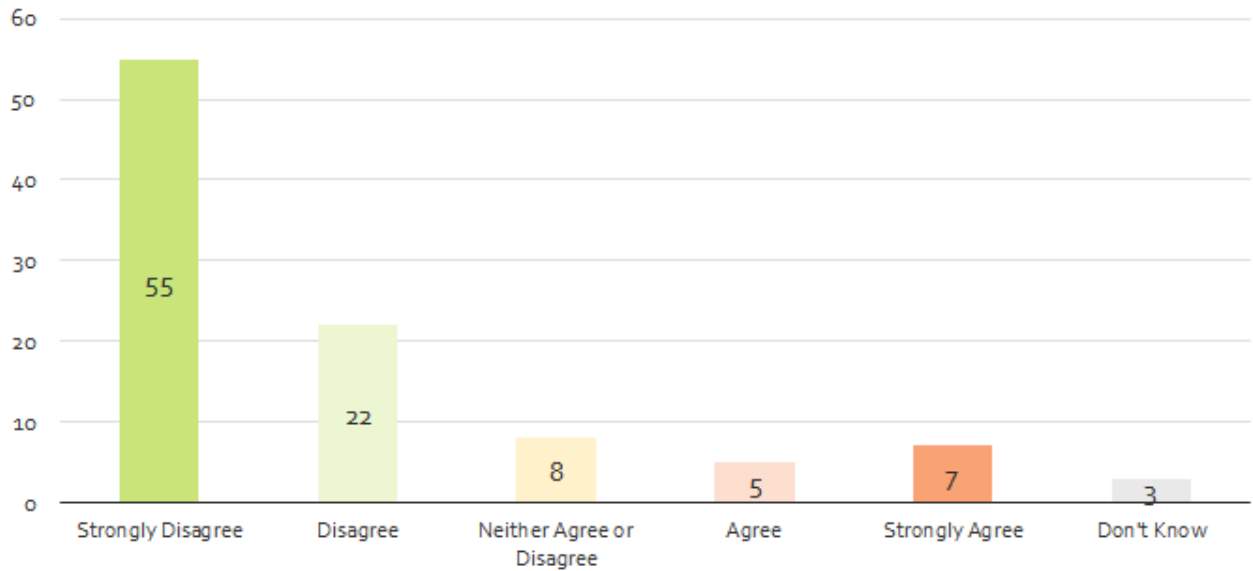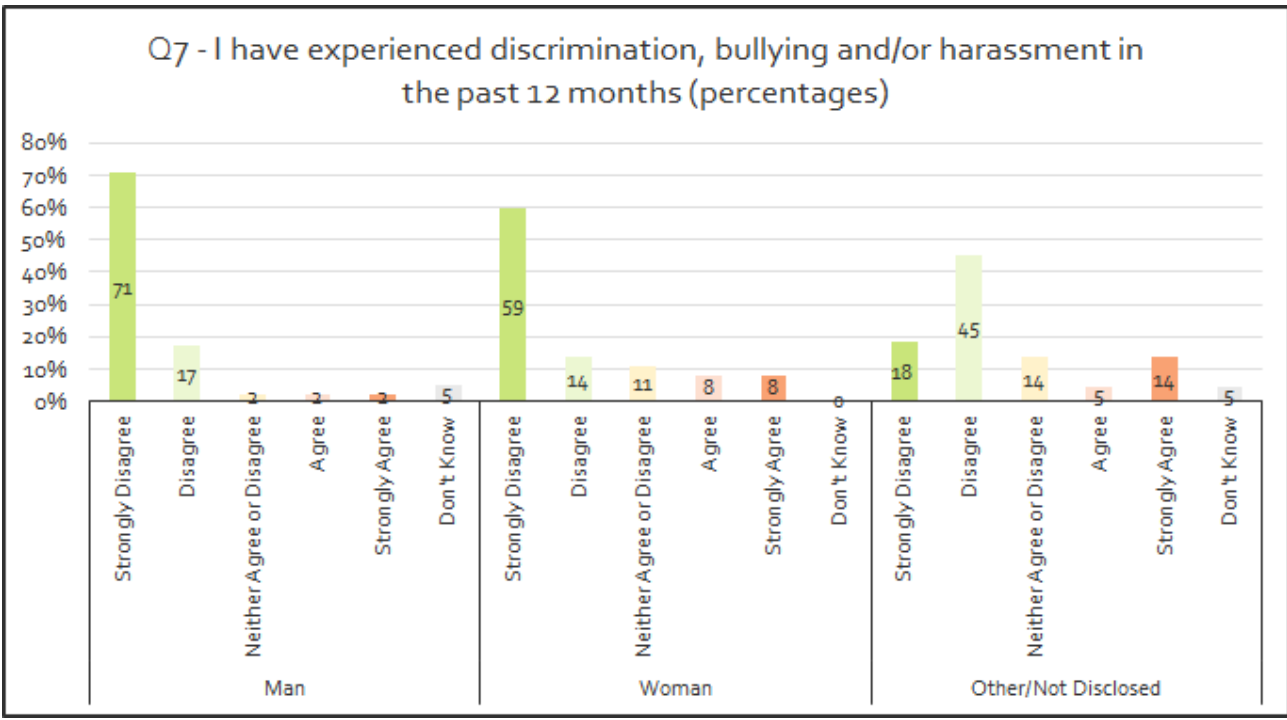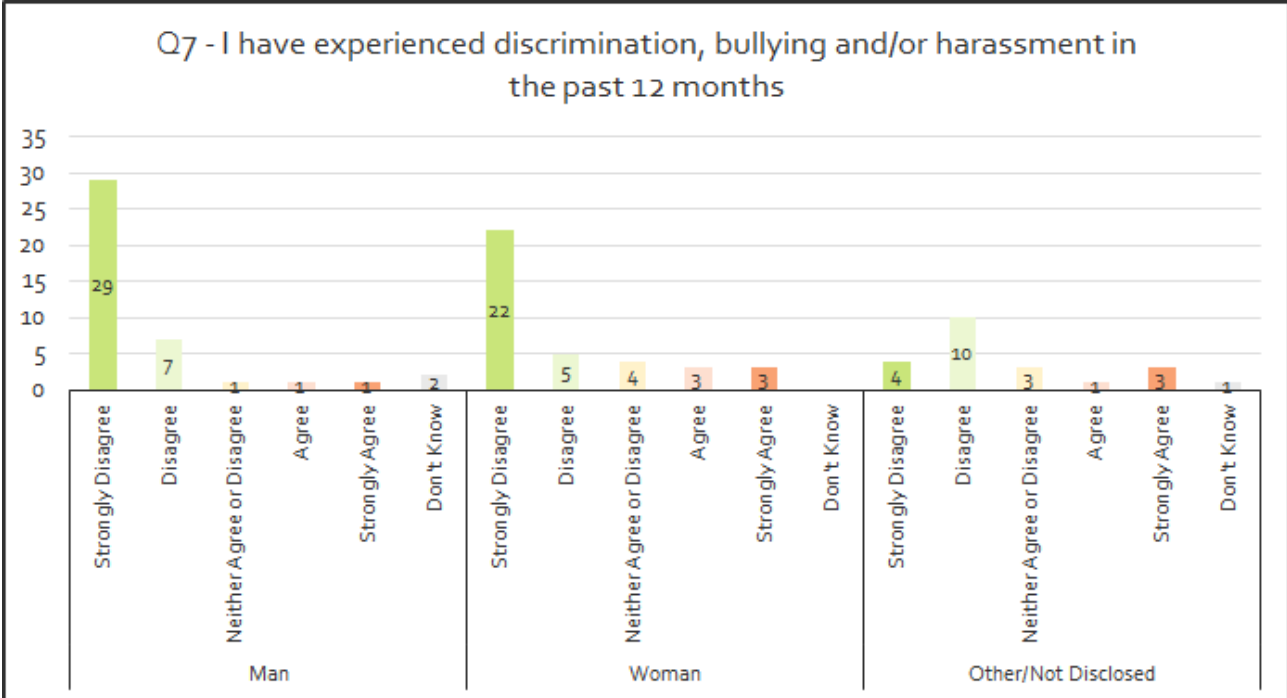
Q9 - I have witnessed discrimination, bullying and/or harassment in the past 12 months (accumulated over 100 responses)

Q9 - I have witnessed discrimination, bullying and/or harassment in the past 12 months

61

Q9 - I have witnessed discrimination, bullying and/or harassment in the past 12 months (percentages)

Q11 - I am satisfied with how discrimination, bullying and harassment are addressed (accumulated over 99 responses)

Q11 - I am satisfied with how discrimination, bullying and harassment are addressed

Q11 - I am satisfied with how discrimination, bullying and harassment are addressed (percentages)

Q13 - I am aware how and to whom bullying and harassment cases should be reported (accumulated over 119 responses)

Q13 - I am aware how and to whom bullying and harassment cases should be reported

64

Q13 - I am aware how and to whom bullying and harassment cases should be reported (percentages)

Man:
- Strongly Agree: 15
- Agree: 50
- Neither Agree or Disagree: 10
- Disagree: 10
- Strongly Disagree: 0
- Don't Know: 15

Woman:
- Strongly Agree: 20
- Agree: 41
- Neither Agree or Disagree: 9
- Disagree: 11
- Strongly Disagree: 0
- Don't Know: 20

Other/Not Disclosed:
- Strongly Agree: 12
- Agree: 40
- Neither Agree or Disagree: 28
- Disagree: 8
- Strongly Disagree: 0
- Don't Know: 12

Q15 - My line manager supports my career development (accumulated over 98 responses)

- Strongly Agree: 49
- Agree: 29
- Neither Agree or Disagree: 10
- Disagree: 5
- Strongly Disagree: 3
- Don't Know: 2

Q15 - My line manager supports my career development

Q15 - My line manager supports my career development (percentages)

Q17 - Other people in my department support my career development (accumulated over 98 responses)

Q17 - Other people in my department support my career development
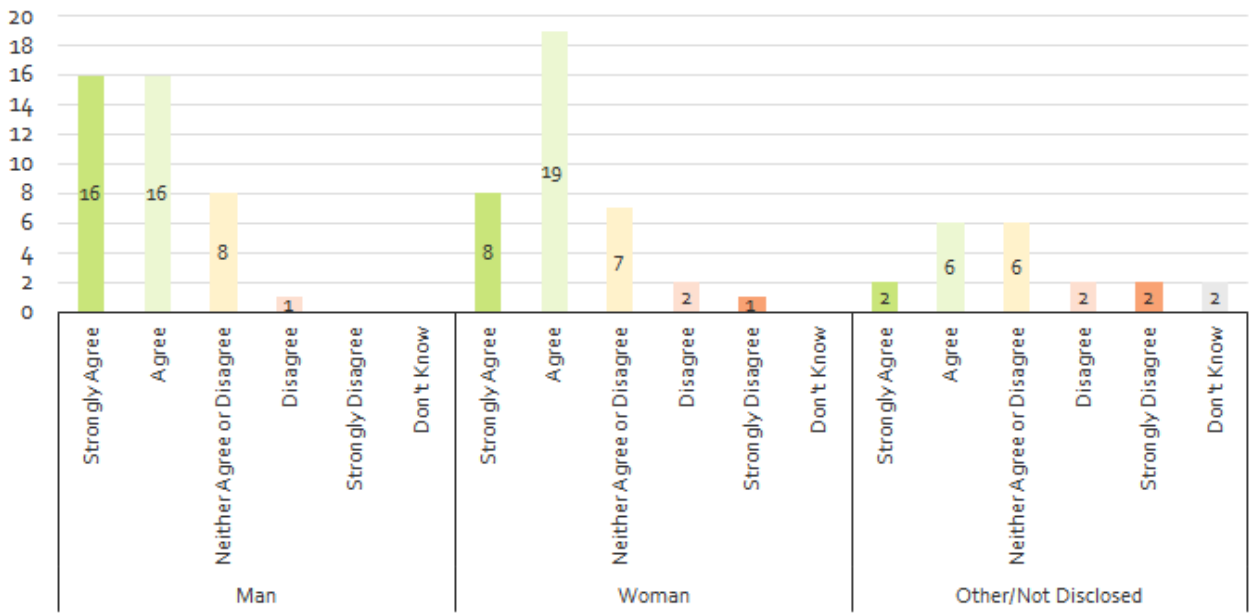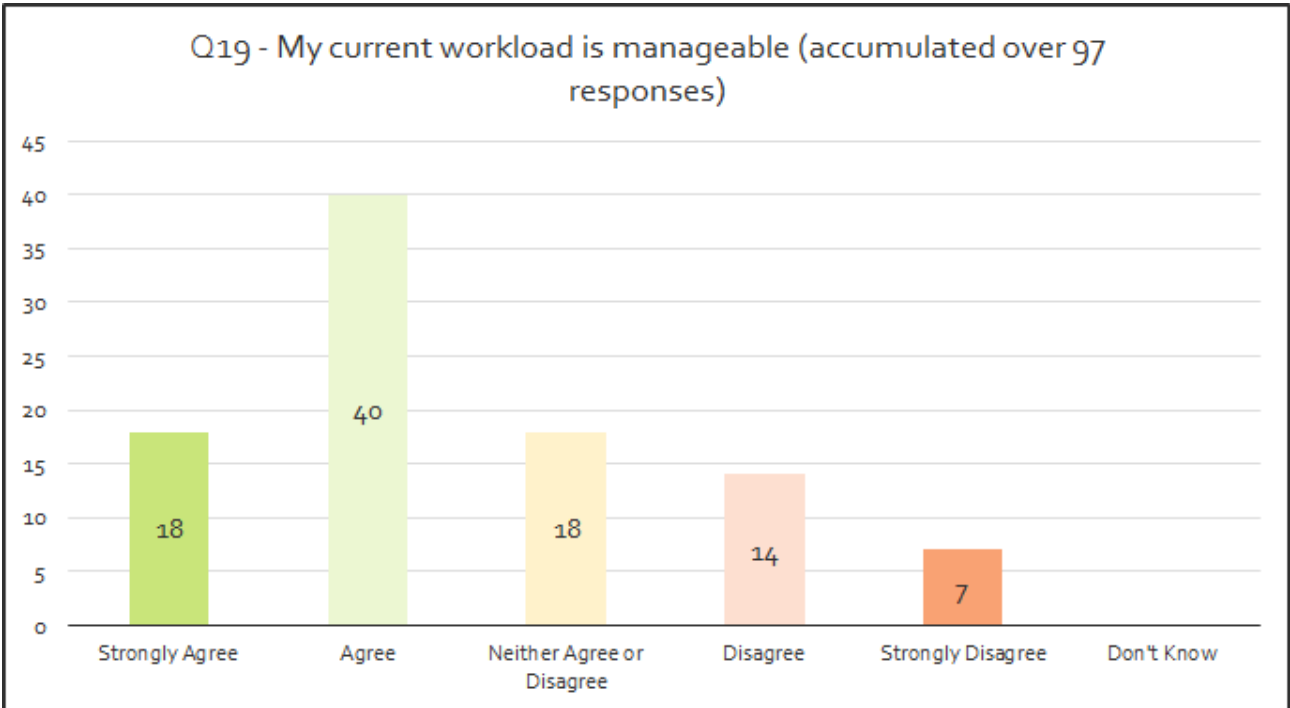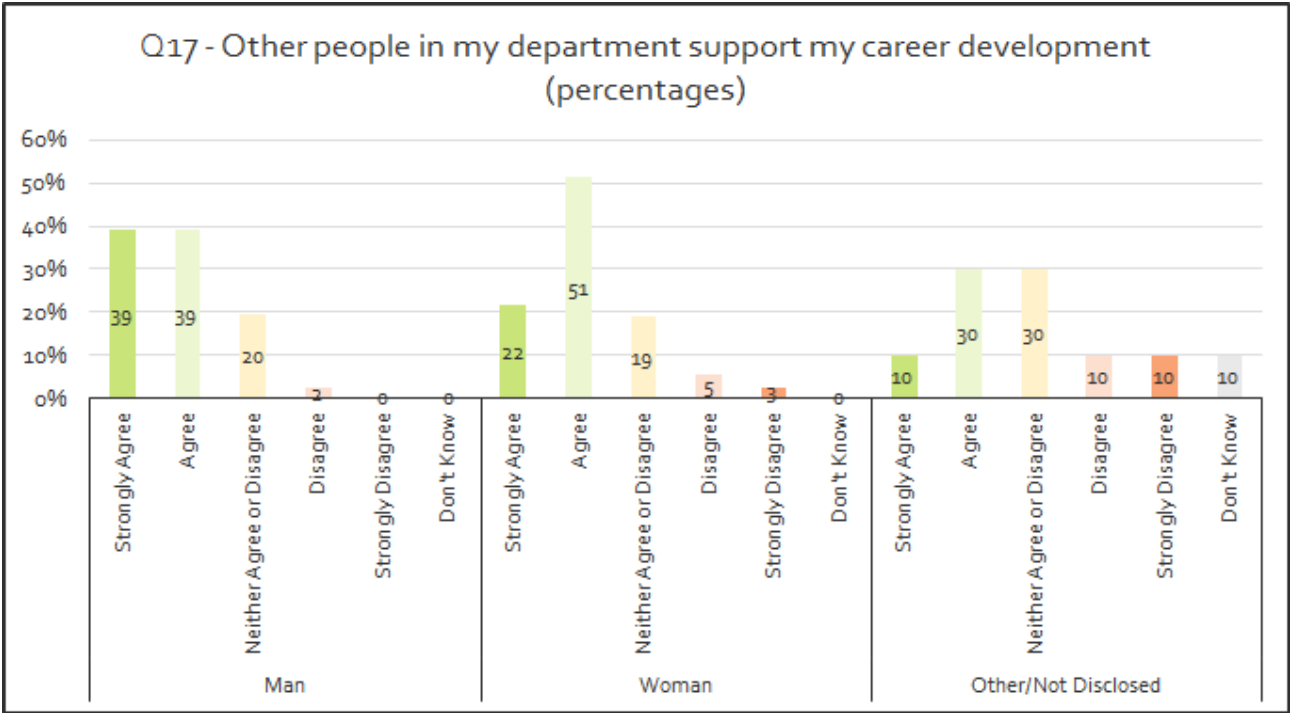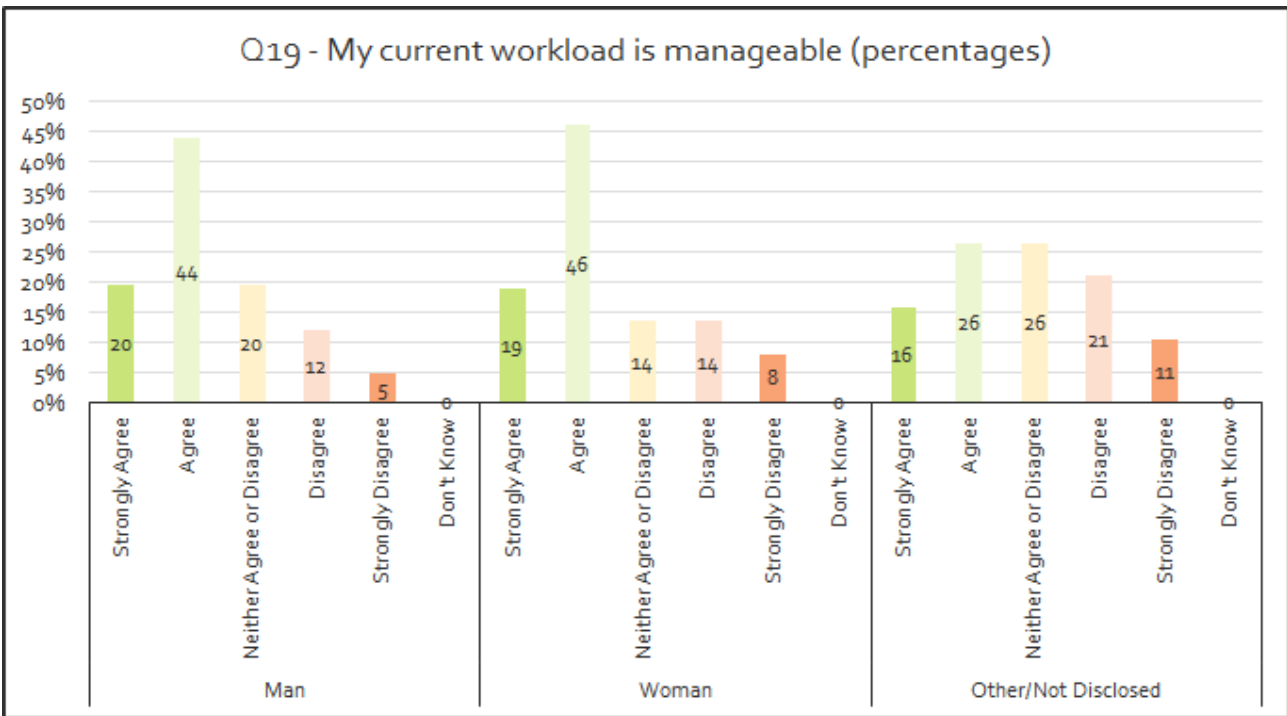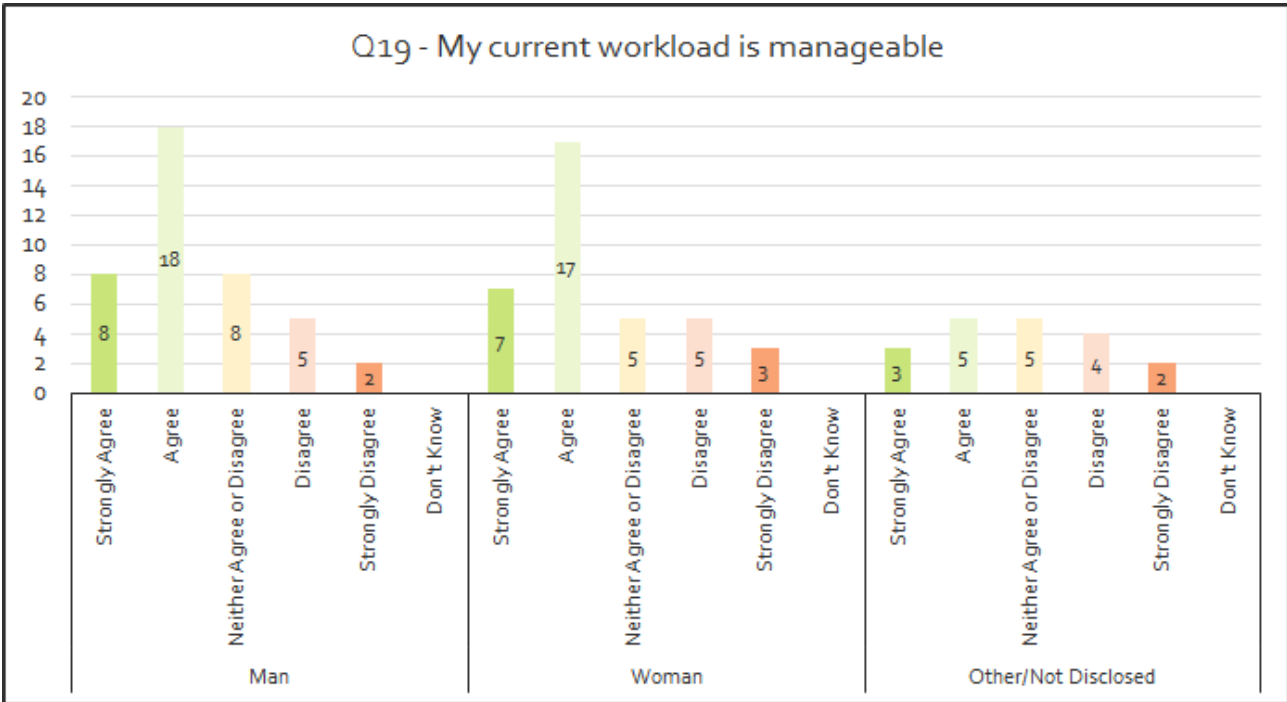
67

Q17 - Other people in my department support my career development (percentages)

Q19 - My current workload is manageable (accumulated over 97 responses)

Q19 - My current workload is manageable

Q19 - My current workload is manageable (percentages)

Q21 - My mental health and/or wellbeing are supported in my department (accumulated over 97 responses)

Q21 - My mental health and/or wellbeing are supported in my department
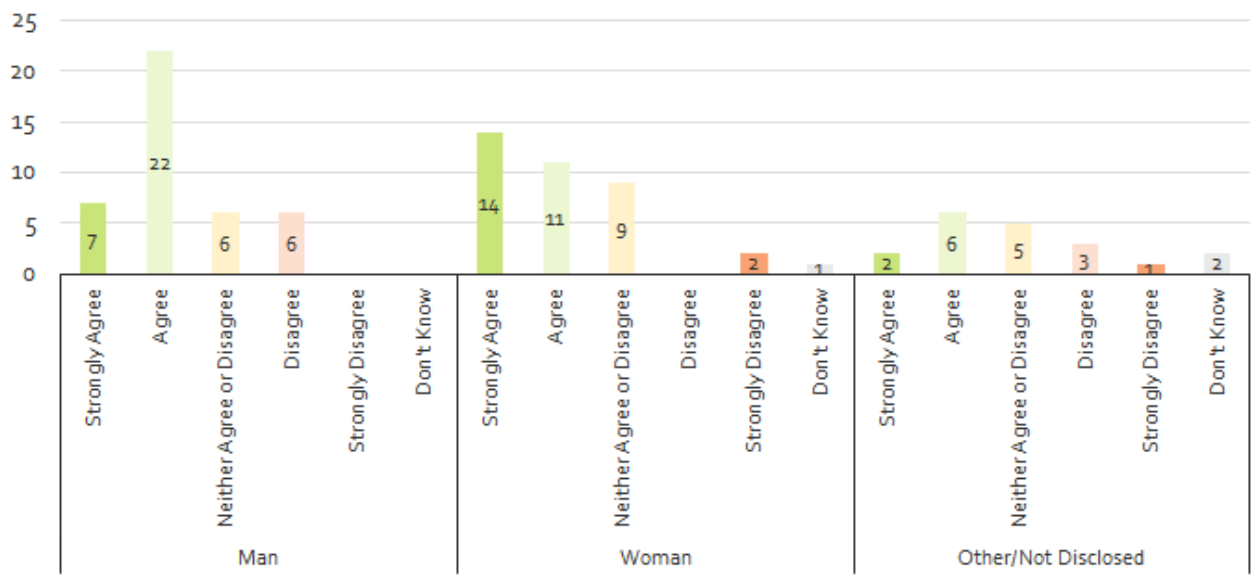
70

Q21 - My mental health and/or wellbeing are supported in my department (percentages)

Man
- Strongly Agree: 17
- Agree: 54
- Neither Agree or Disagree: 15
- Disagree: 15
- Strongly Disagree: 0
- Don't Know: 0

Woman
- Strongly Agree: 38
- Agree: 30
- Neither Agree or Disagree: 24
- Disagree: 0
- Strongly Disagree: 5
- Don't Know: 3

Other/Not Disclosed
- Strongly Agree: 11
- Agree: 32
- Neither Agree or Disagree: 26
- Disagree: 16
- Strongly Disagree: 5
- Don't Know: 11

Q23 - I feel welcome at the department's social events (accumulated over 97 responses)

- Strongly Agree: 46
- Agree: 35
- Neither Agree or Disagree: 10
- Disagree: 5
- Strongly Disagree: 1
- Don't Know:

71
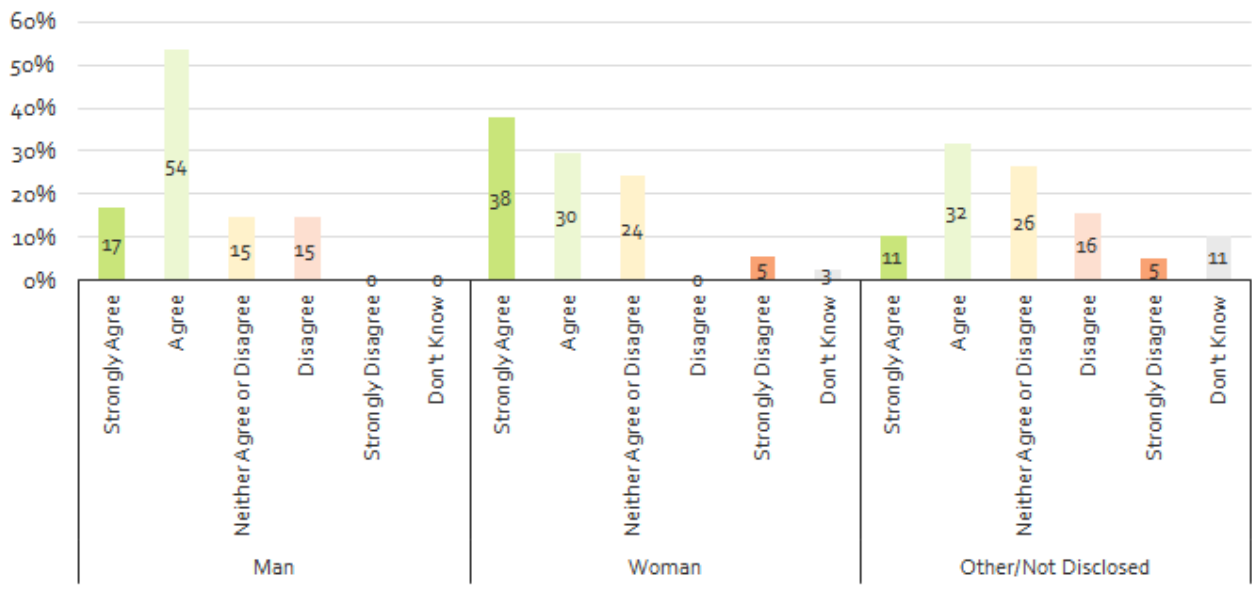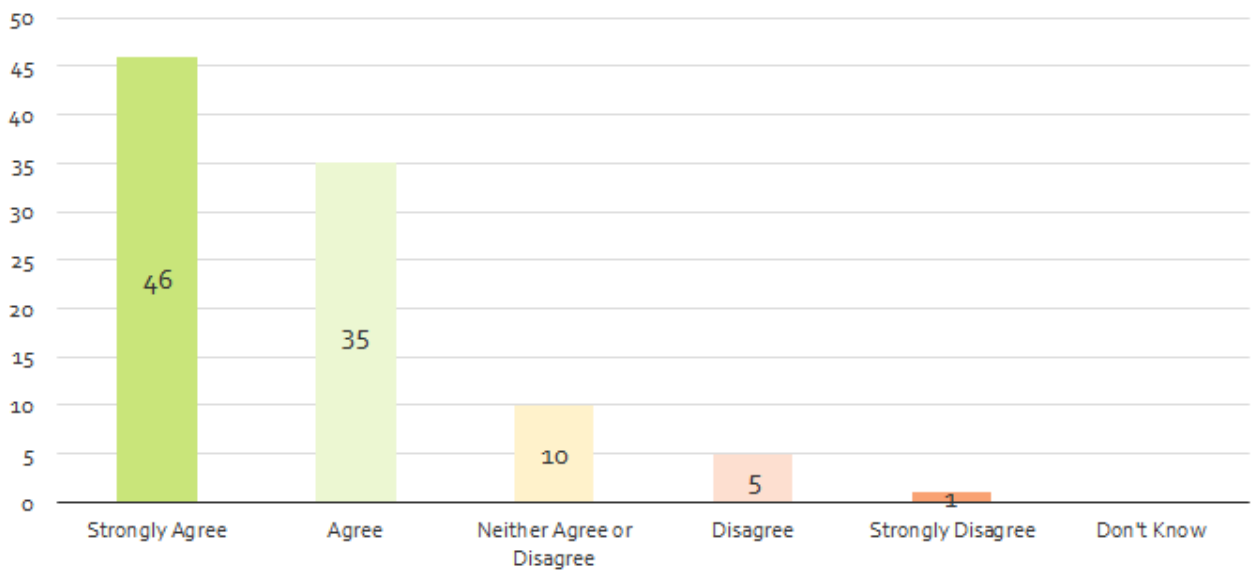
Q23 - I feel welcome at the department's social events

Q23 - I feel welcome at the department's social events (percentages)

72
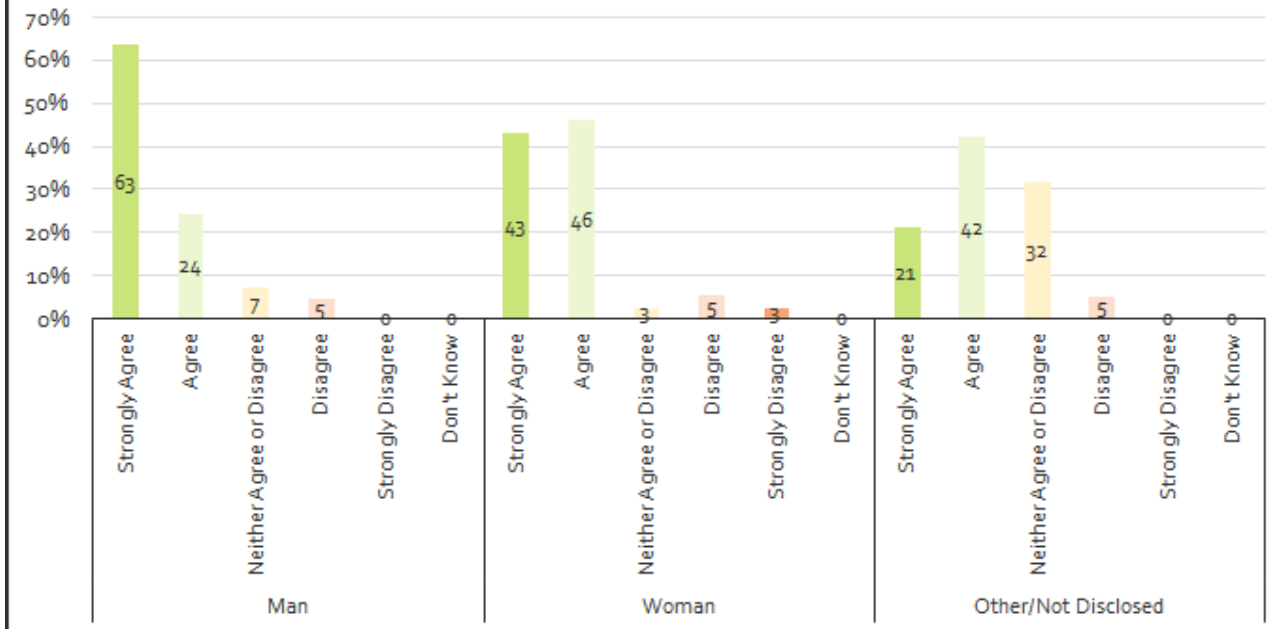
Appendix 2: Data tables

2:1   Students at foundation, UG, PGT and PGR level

UG, PGT and PGR Admissions

UG, PGT and PGR Admissions

Percentage of Female Admissions from 2019/20 to 2023/24
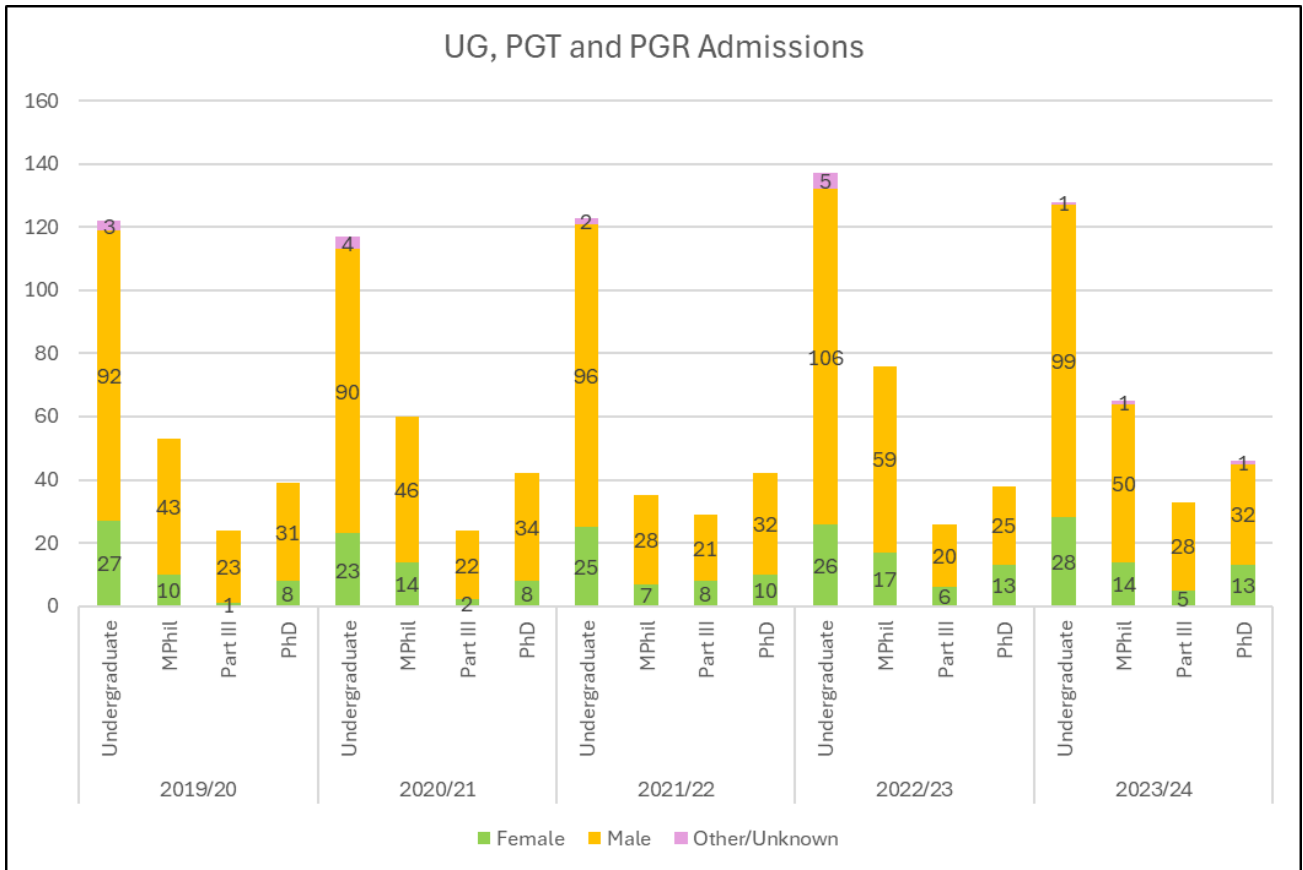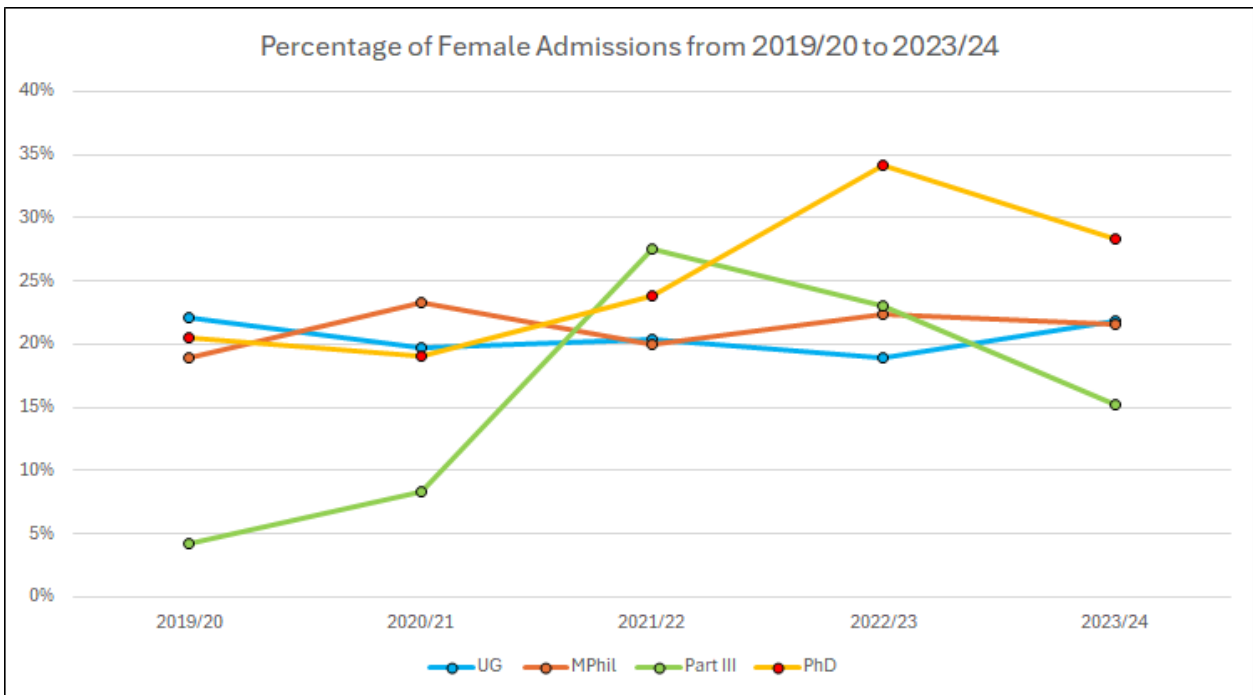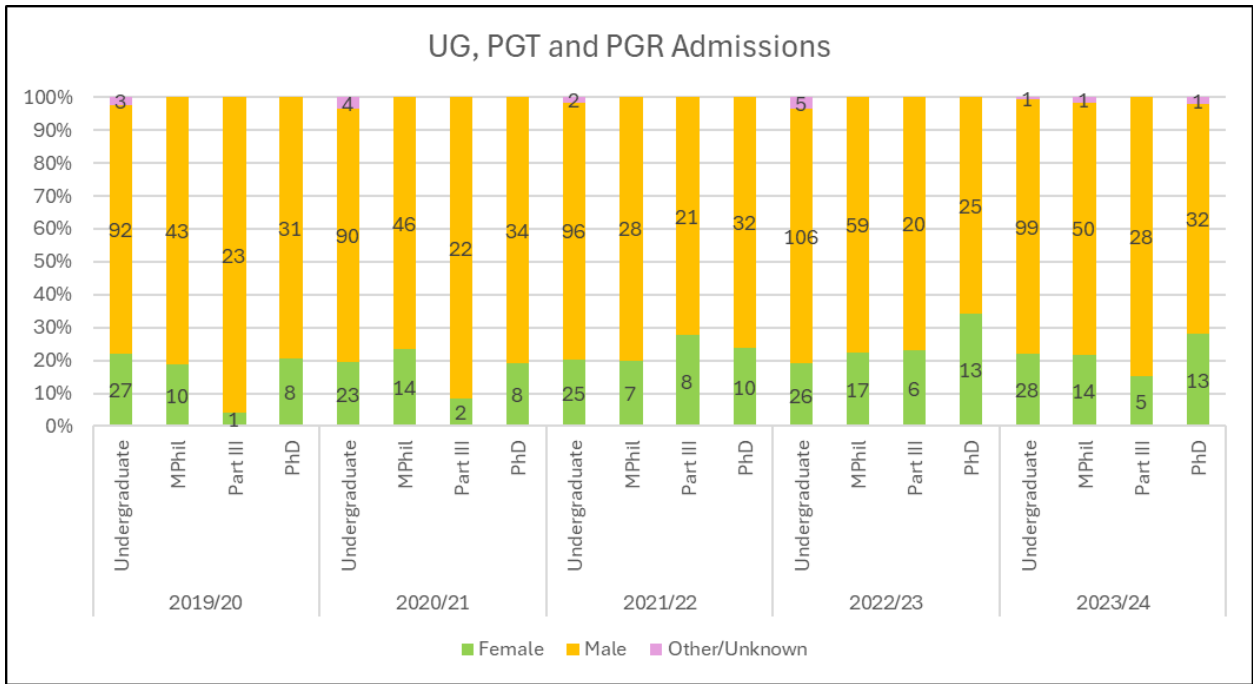
2:2   Degree attainment and/or completion rates for students at foundation, UG, PGT and PGR level

Undergraduate Part IA

UG Part IA Percentage of Class I
(Data for 2019/20 has not been presented due to alternative examination arrangements during Covid)

UG Part IA Average Percentage of Marks
(aggregated over last 5 years)

Undergraduate Part IB

UG Part IB Percentage of Class I

Female: 2017-18: 30.8%, 2018-19: 5.9%, 2020-21: 7.4%, 2021-22: 16.0%, 2022-23: 14.3%

Male: 2017-18: 34.1%, 2018-19: 37.6%, 2020-21: 40.2%, 2021-22: 36.8%, 2022-23: 36.2%

UG Part IB Average Percentage of Marks (aggregated over last 5 years)

Female: 60.6%
Male: 65.5%

Undergraduate Part II

UG Part II Percentage of Class I

Year	Female	Male
2017-18	23.5%	43.6%
2018-19	46.2%	38.6%
2019-20	23.5%	57.3%
2020-21	32.0%	42.9%
2021-22	30.8%	45.3%
2022-23	34.6%	40.9%

UG Part II Average Percentage of Marks
(aggregated over last 5 years)

Female: 68.2%
Male: 69.9%

UG Percentages of First
(aggregate over last 5 years)

MPhil Results
Gender "other" removed due to small numbers

MPhil Results
Gender "other" removed due to small numbers

MPhil Percentages of Distinction by Gender

MPhil Percentages of Distinction by Gender (aggregated between 2019 and 2023)

Part III Results
Gender "other" removed due to small numbers

Part III Results
Gender "other" removed due to small numbers

81

Part III Percentages of Distinction by Gender

Part III Percentages of Distinction by Gender (aggregated between 2019 and 2023)

2:3   Academic staff by grade and contract function

Research only

Teaching and Research
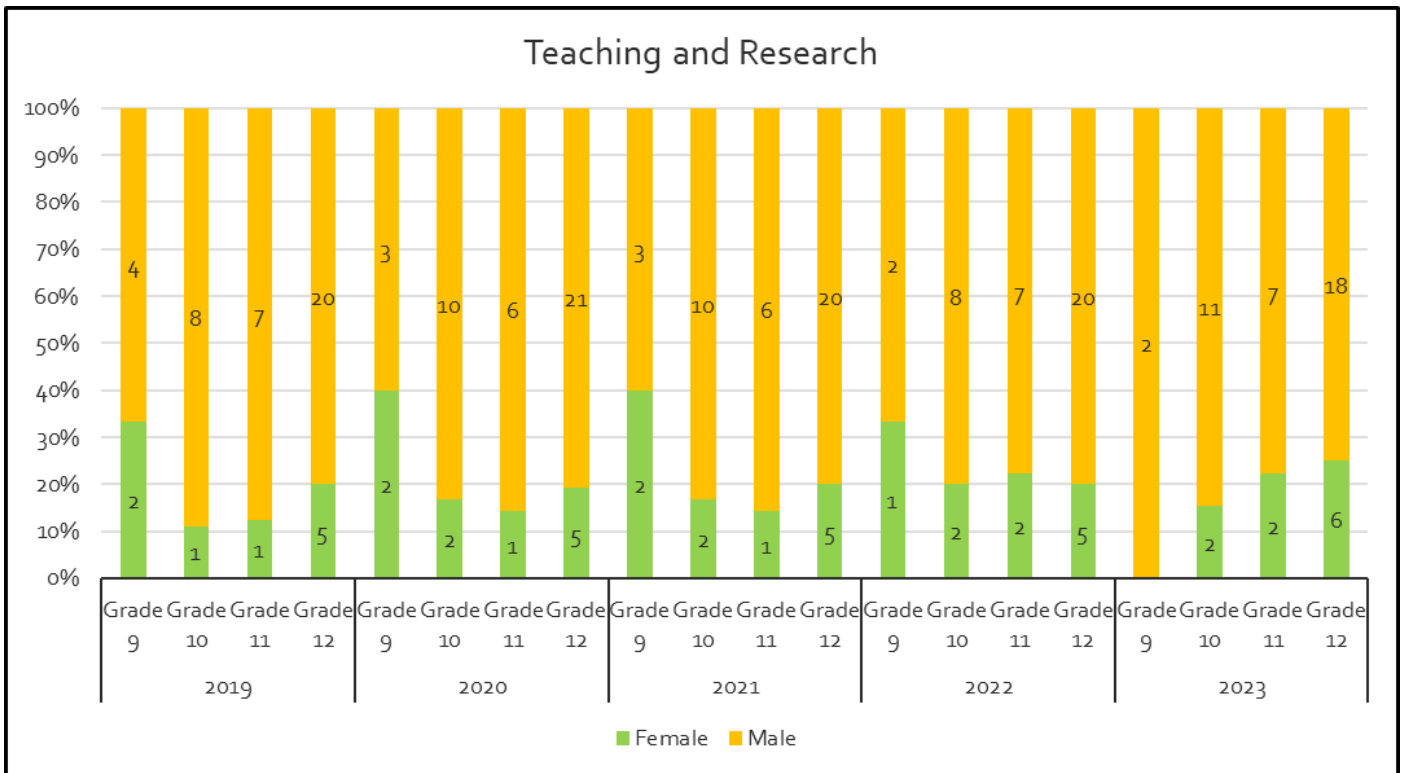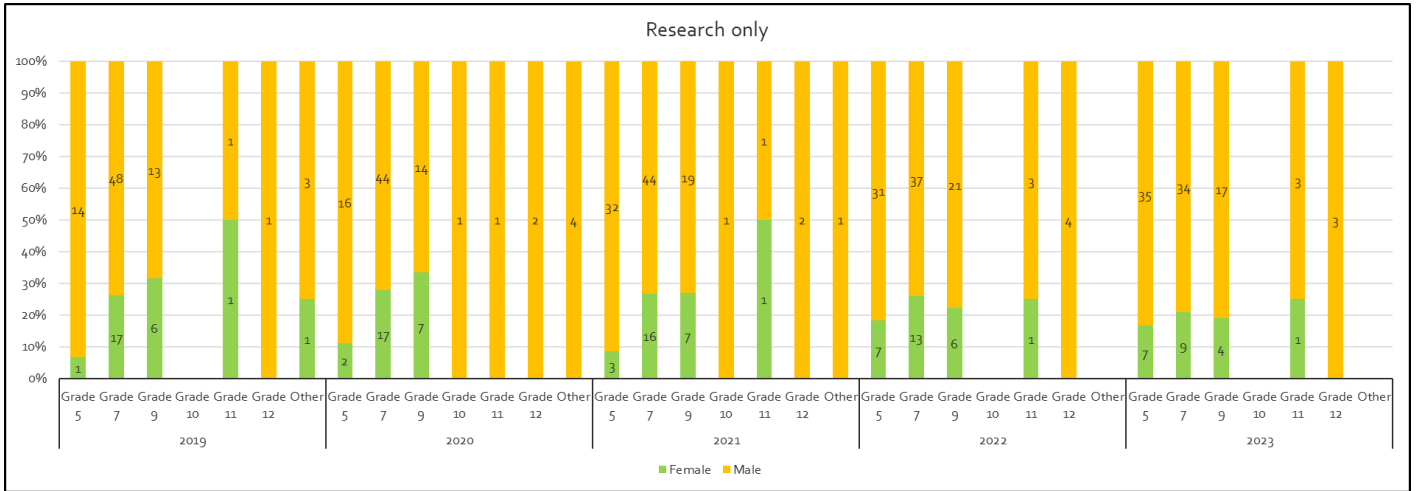
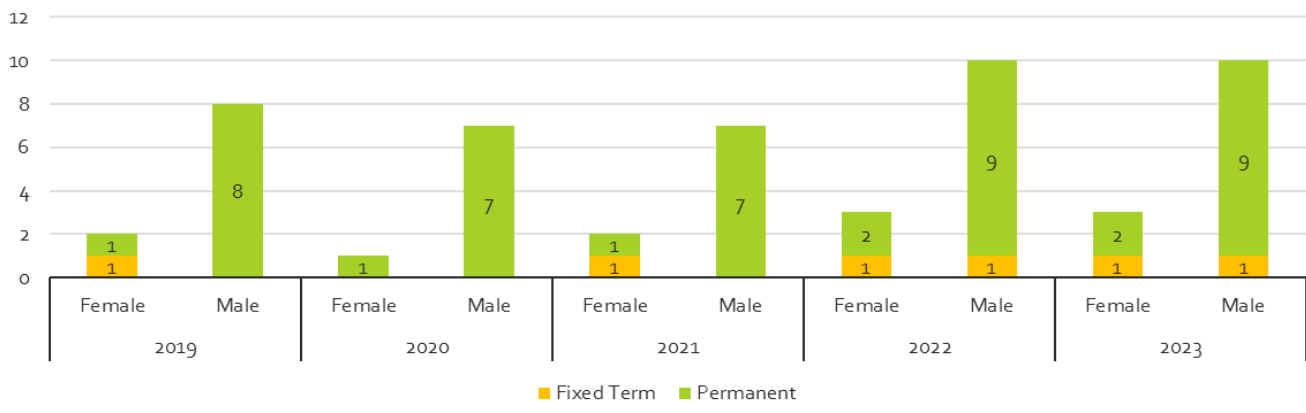## 2:4 Academic staff by grade and contract type (including Research Staff)

Grade 05 Permanent/Fixed Term Contract

Grade 05 Permanent/Fixed Term Contract
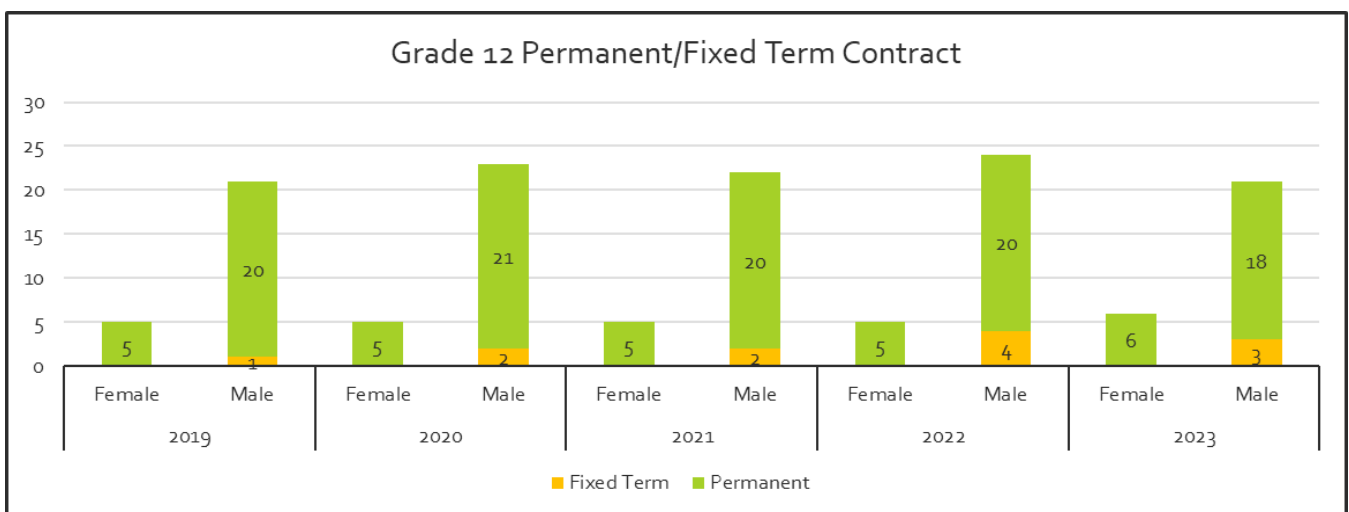

Grade 07 Permanent/Fixed Term Contract

Grade 07 Permanent/Fixed Term Contract

Grade 09 Permanent/Fixed Term Contract

Grade 09 Permanent/Fixed Term Contract
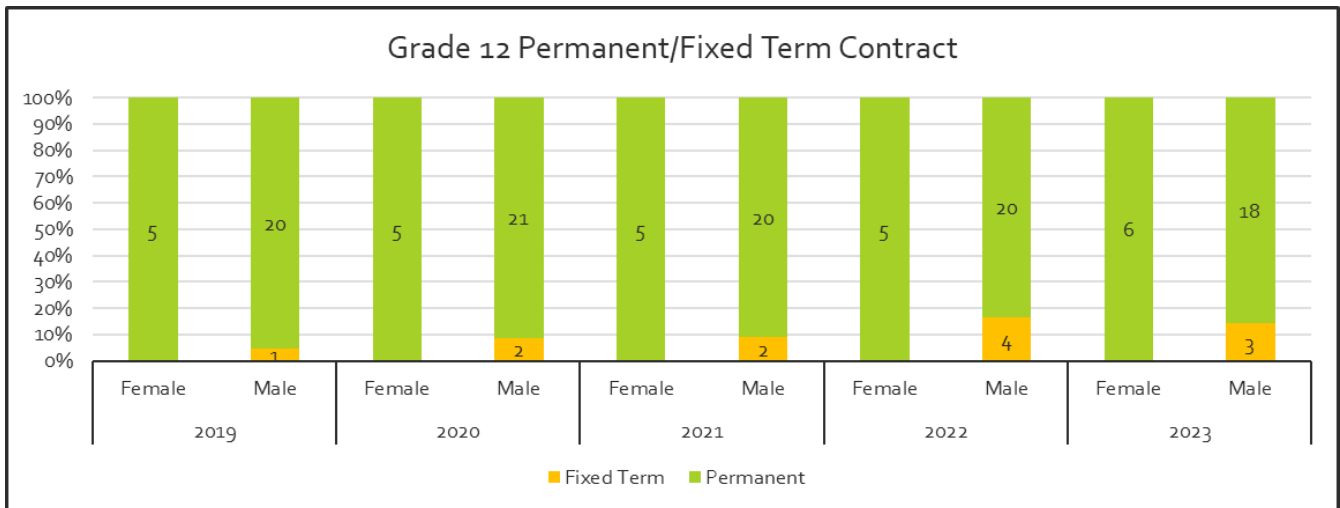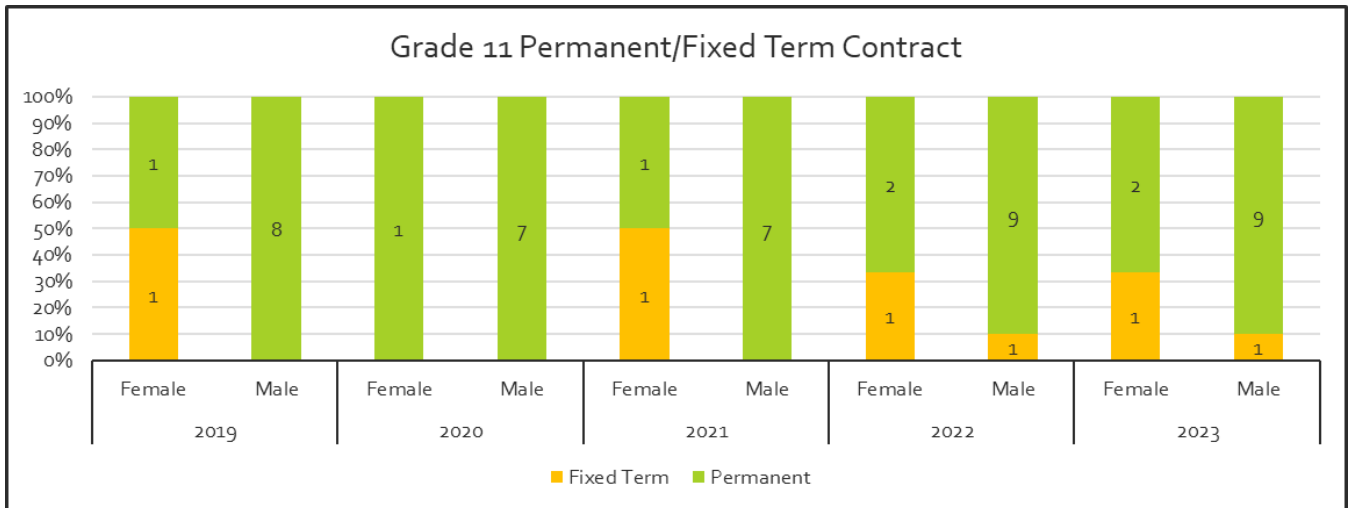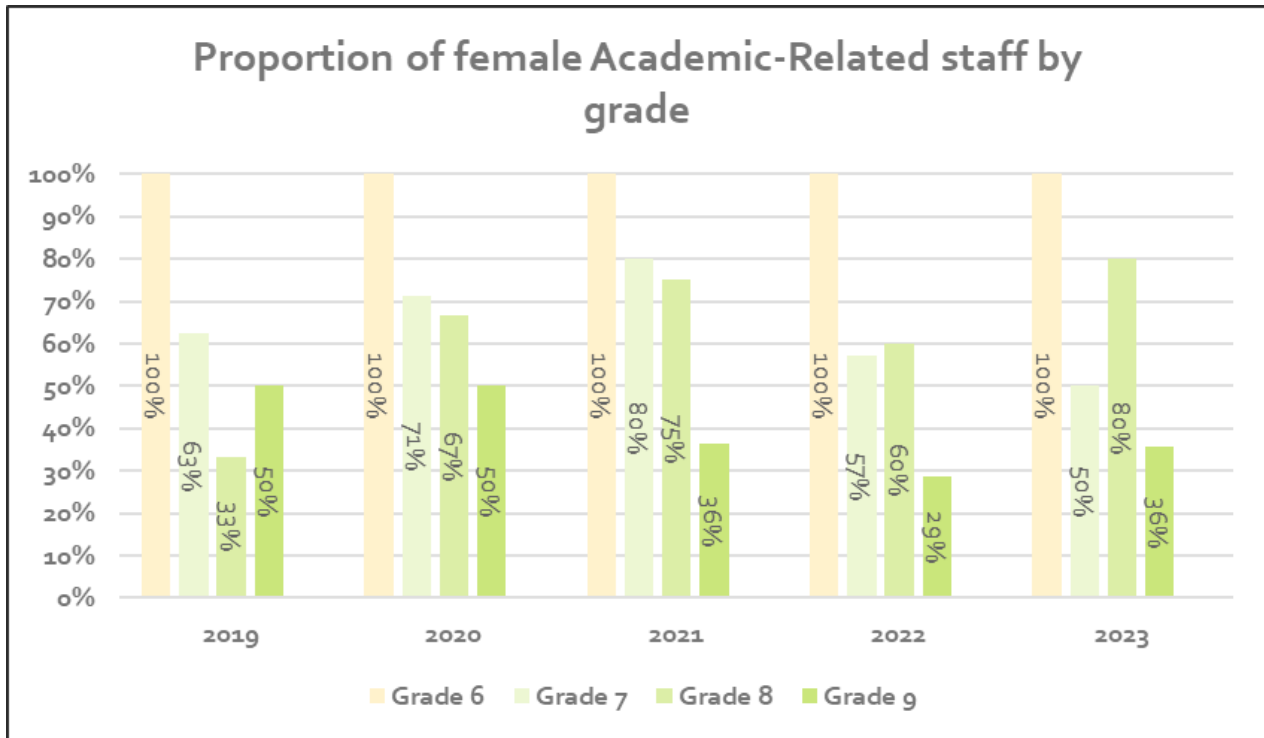
Grade 10 Permanent/Fixed Term Contract

Grade 10 Permanent/Fixed Term Contract

Grade 11 Permanent/Fixed Term Contract

Grade 11 Permanent/Fixed Term Contract

	2019		2020		2021		2022		2023	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Permanent	1	8	1	7	1	7	2	9	2	9
Fixed Term	1				1		1	1	1	1

Fixed Term Permanent

Grade 12 Permanent/Fixed Term Contract

	2019		2020		2021		2022		2023	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Permanent	5	20	5	21	5	20	5	20	6	18
Fixed Term		1		2		2		4		3

Fixed Term Permanent

Grade 12 Permanent/Fixed Term Contract

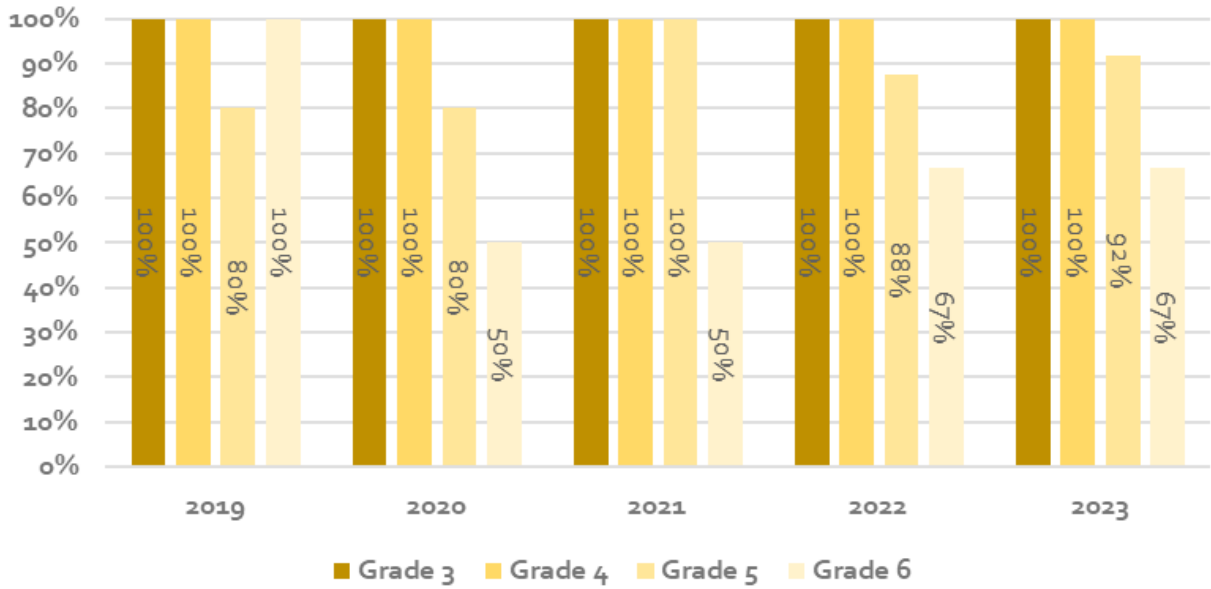|	2019		2020		2021		2022		2023	
	Female	Male	Female	Male	Female	Male	Female	Male	Female	Male
Permanent	5	20	5	21	5	20	5	20	6	18
Fixed Term		1		2		2		4		3

Fixed Term Permanent

87

2:5 Professional, technical and operational (PTO) staff by grade and job family

Proportion of female Academic-Related staff by grade

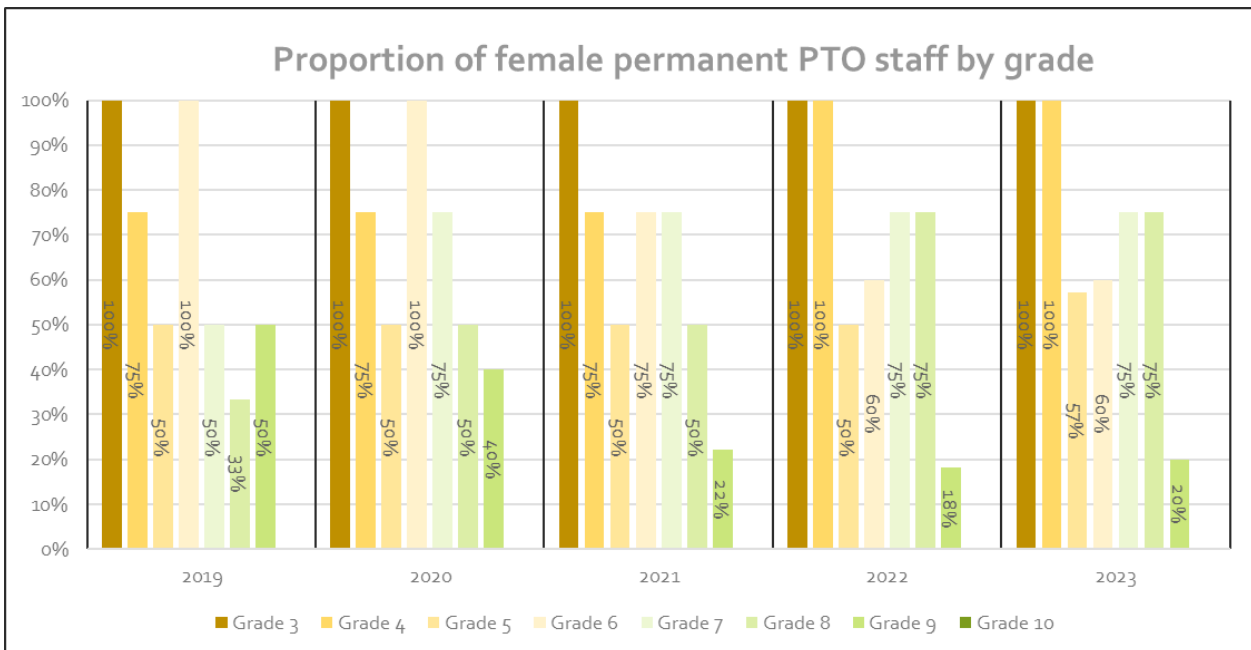|	2019	2020	2021	2022	2023
Grade 6	100%	100%	100%	100%	100%
Grade 7	63%	71%	80%	57%	50%
Grade 8	33%	67%	75%	60%	80%
Grade 9	50%	50%	36%	29%	36%

Proportion of female Assistant CS staff by grade

Proportion of female Assistant T staff by grade

2:6　PTO staff by grade and contract type

Proportion of female fixed-term PTO staff by grade
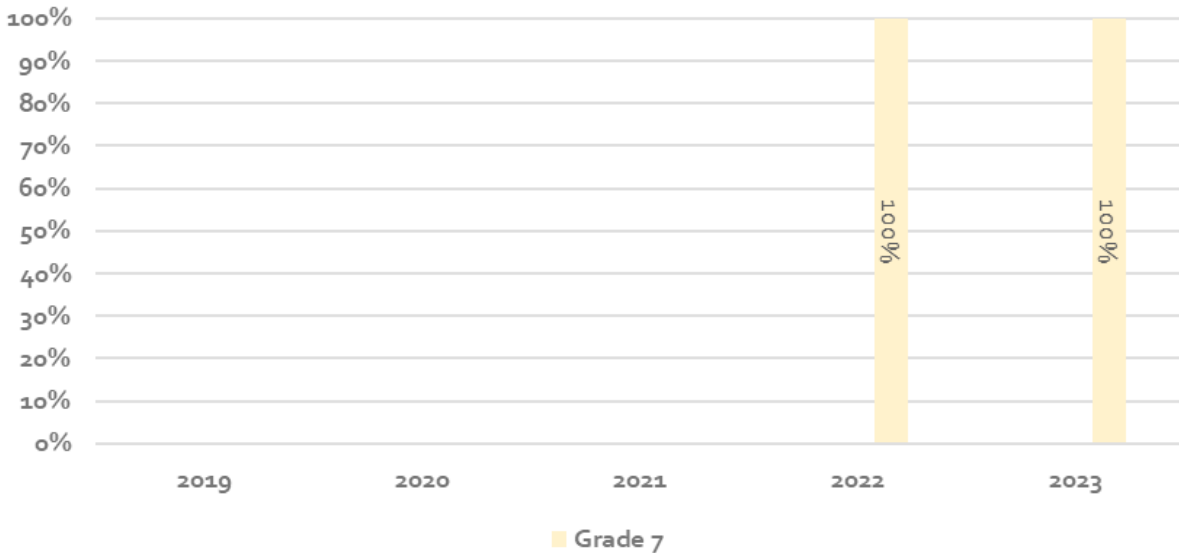
Proportion of female permanent PTO staff by grade
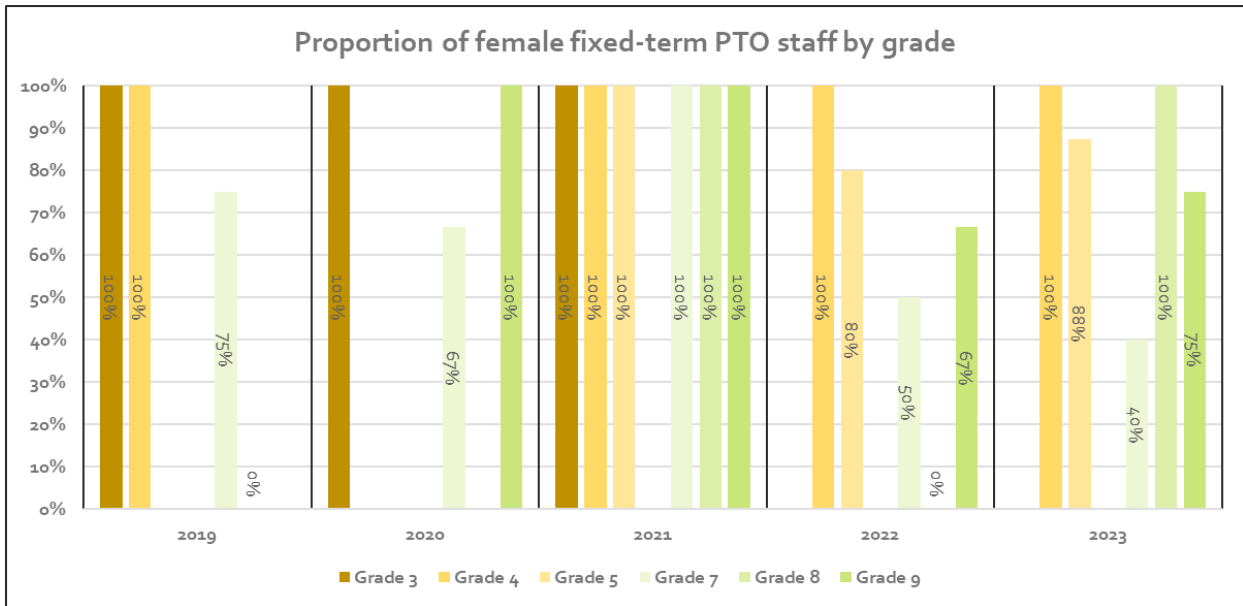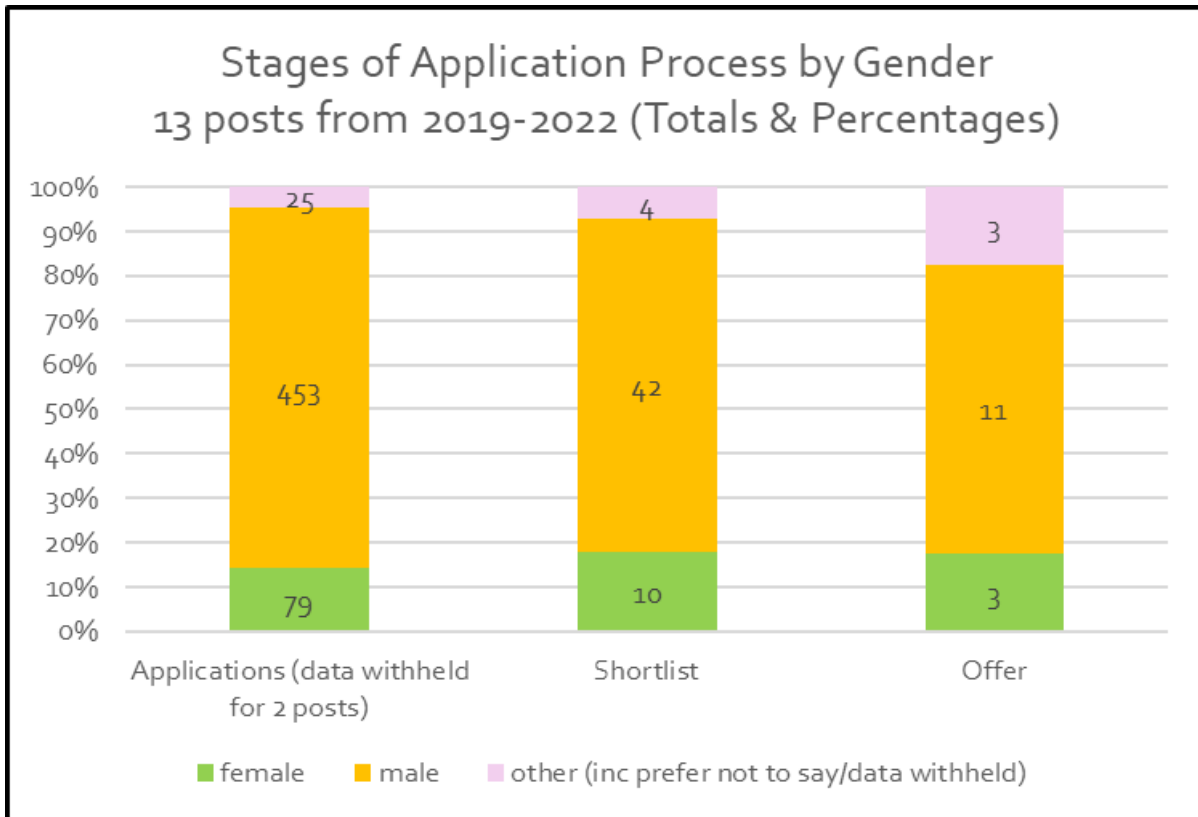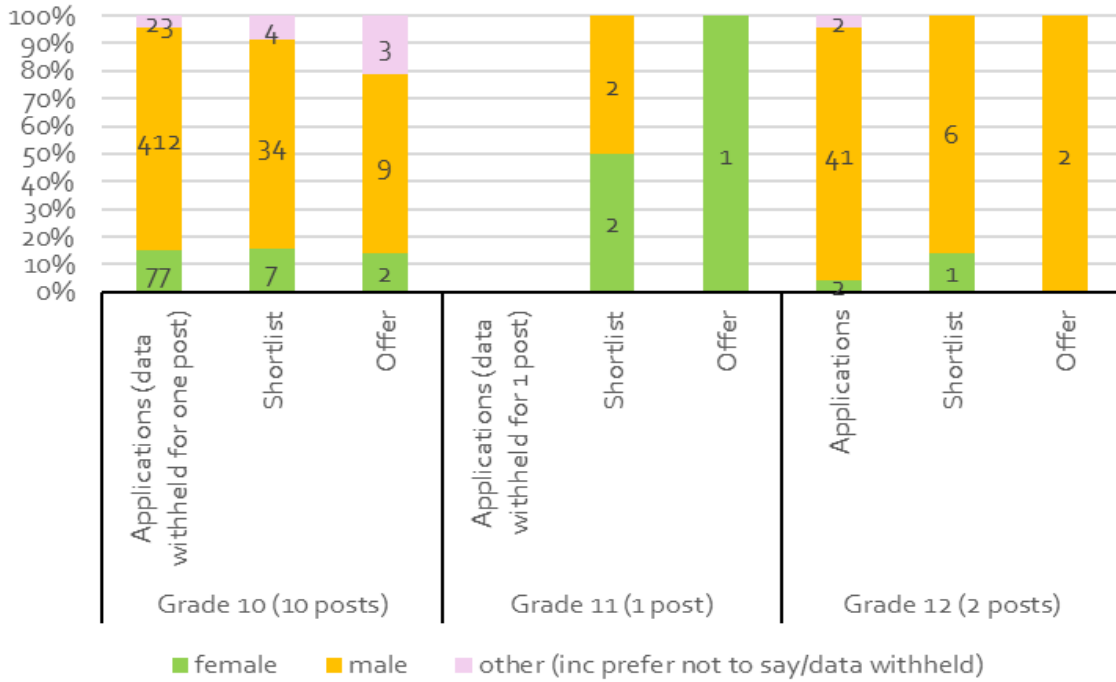
2:7   Applications, shortlist and appointments made in recruitment to academic posts by grade

2:7 a) Permanent academic posts

Stages of Application Process by Gender
13 posts from 2019-2022 (Totals & Percentages)
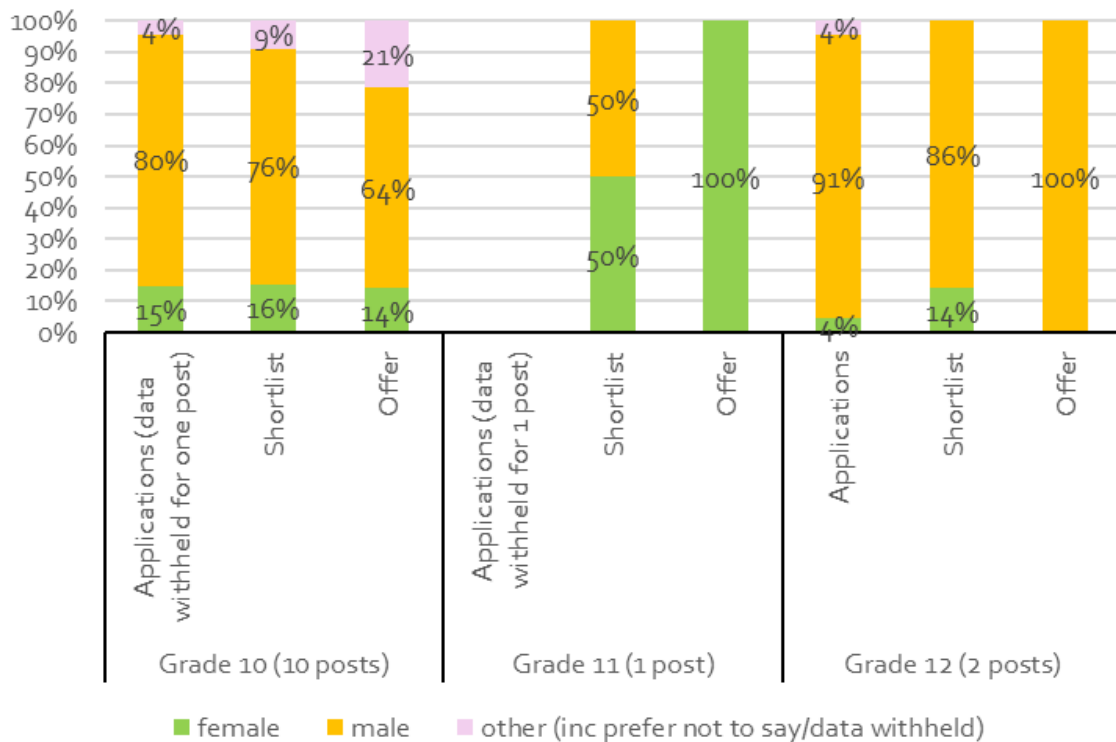

Stages of Application Process by Gender
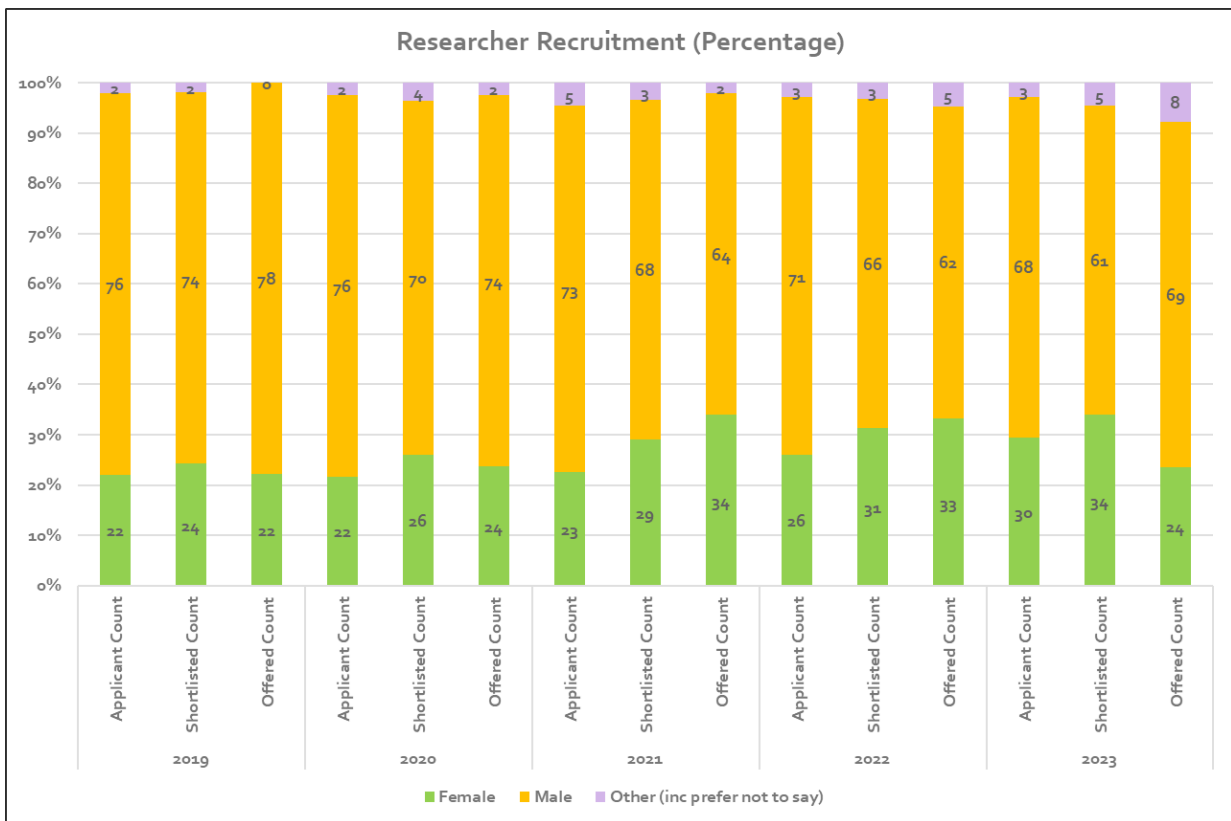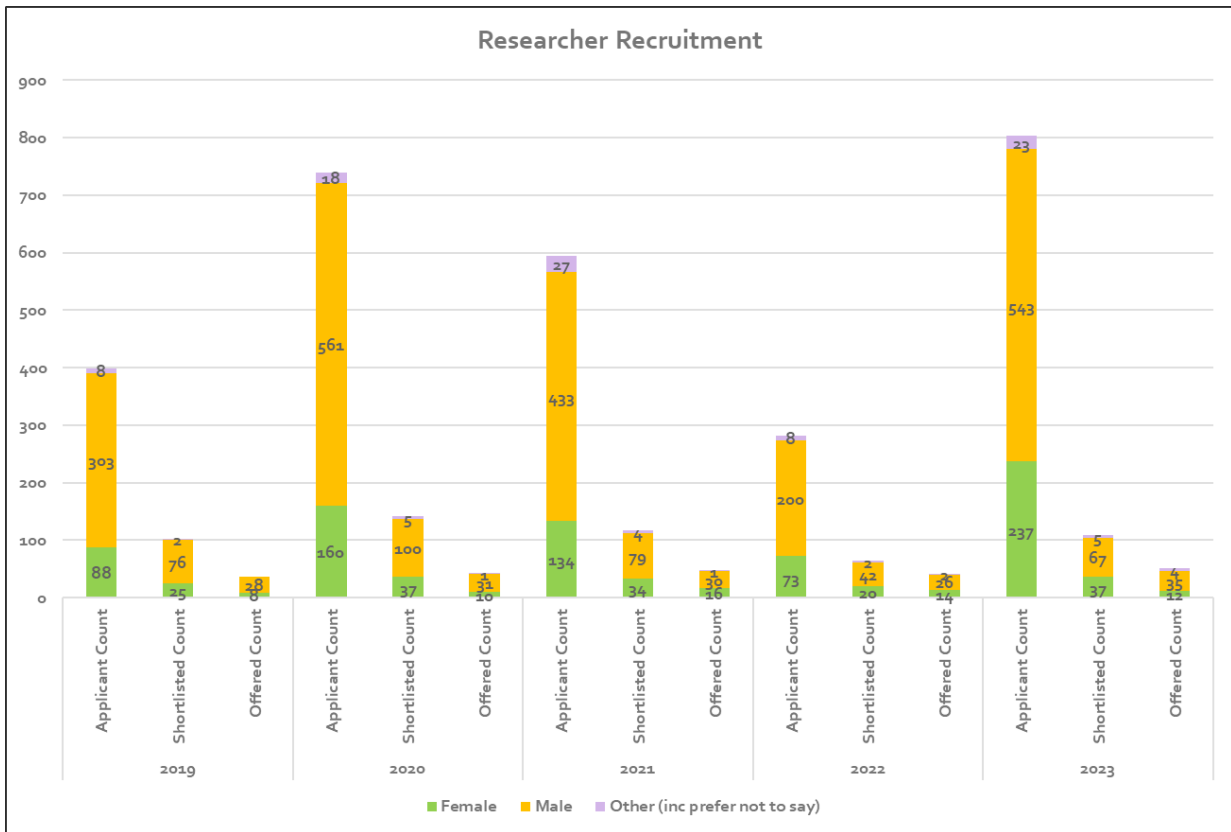13 posts from 2019-2022 (Percentages)
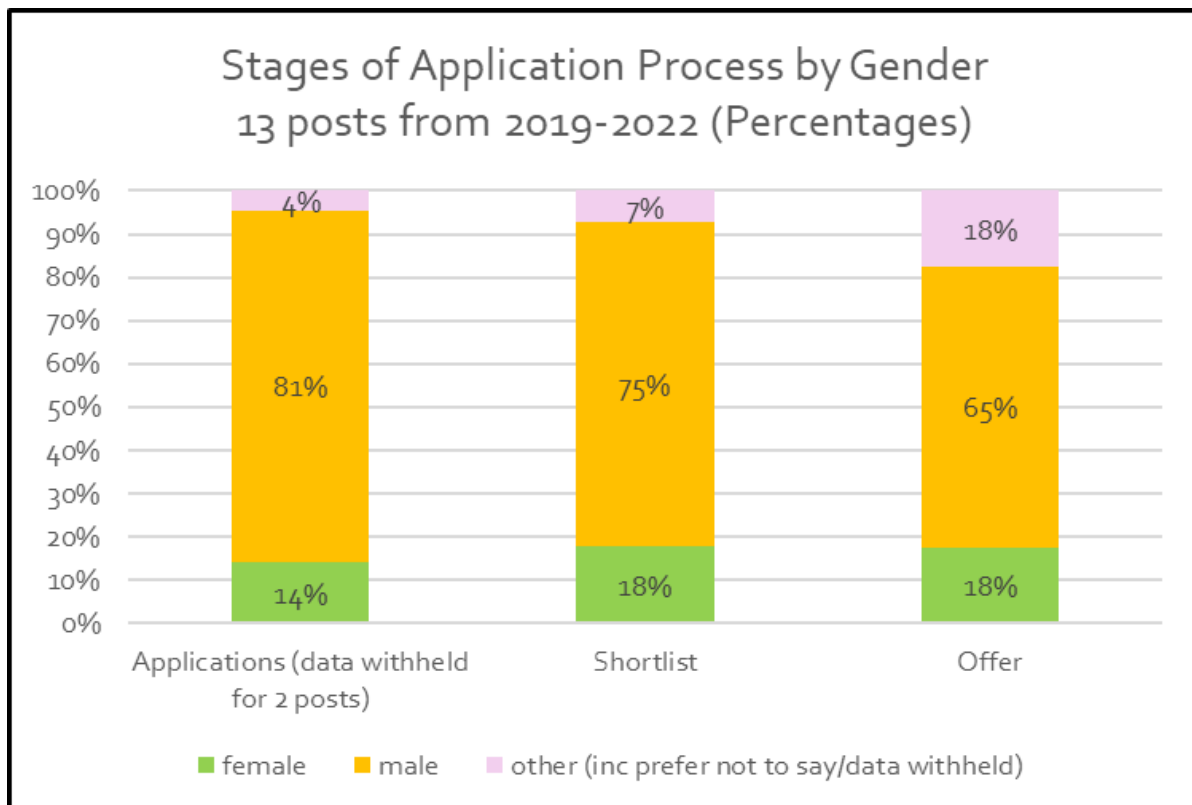
Stages of Application Processes by Grades and Gender (Percentages and Totals)

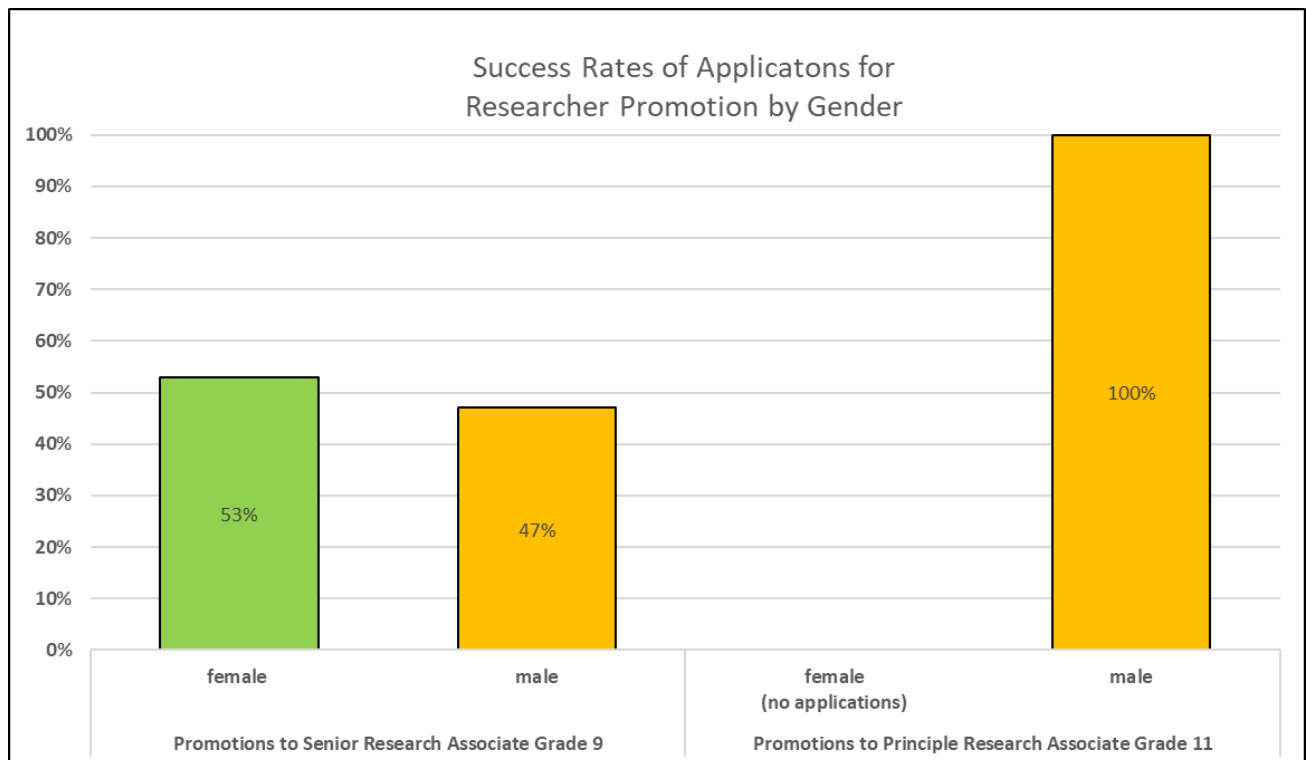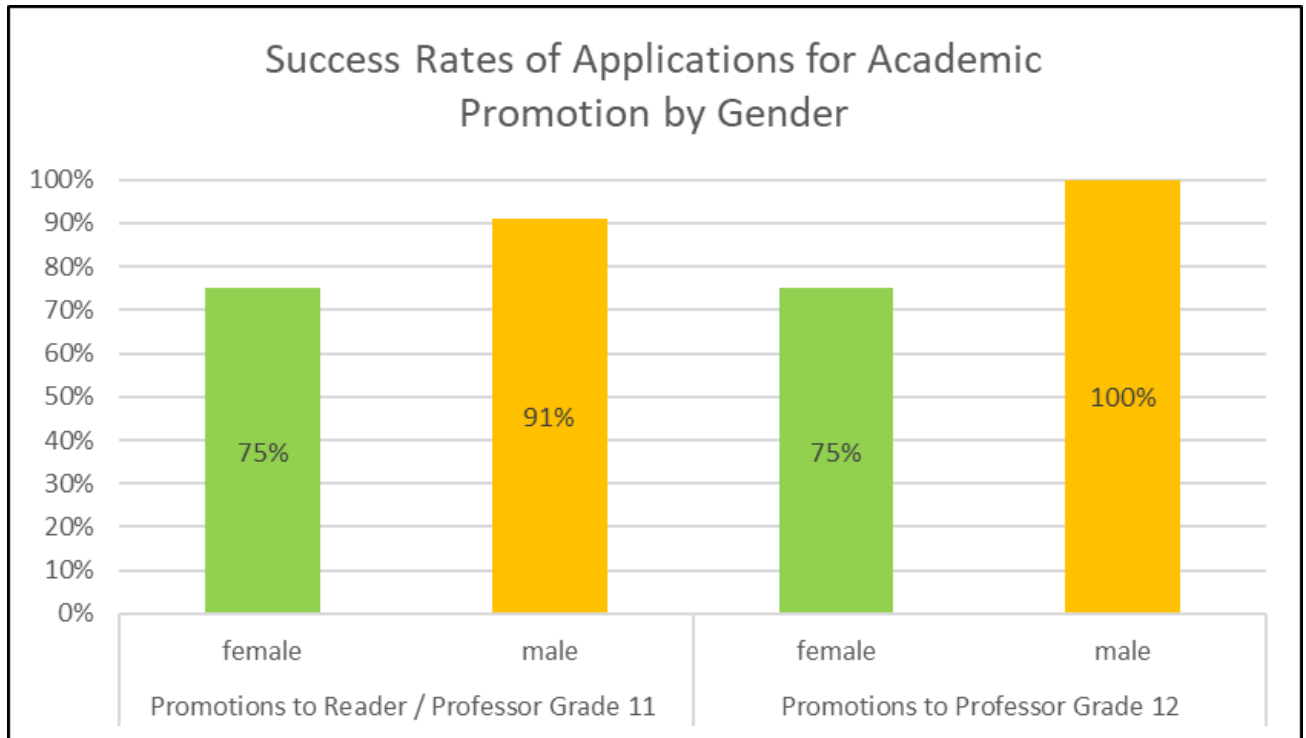Stages of Application Processes by Grades and Gender (Percentages)

2:7 b) Fixed term and open-ended researcher posts

Researcher Recruitment

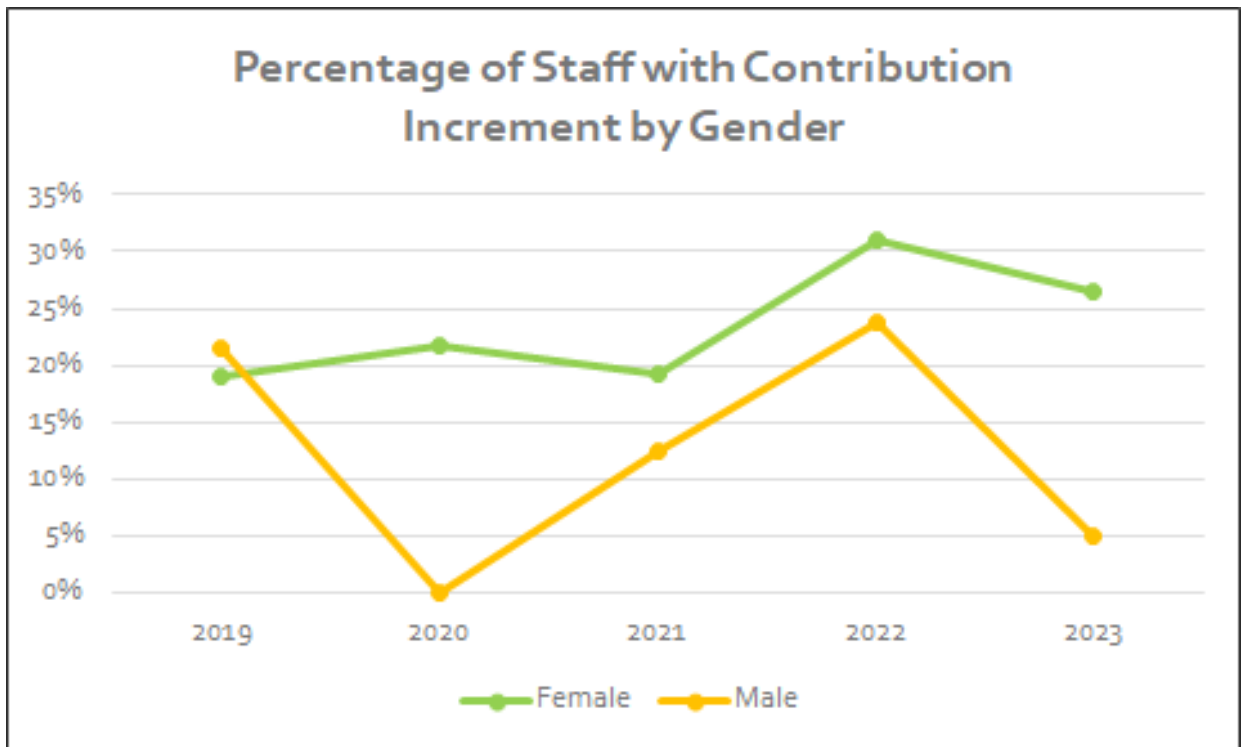

Researcher Recruitment (Percentage)

2:8 Applications, shortlist and appointments made in recruitment to PTO posts by grade

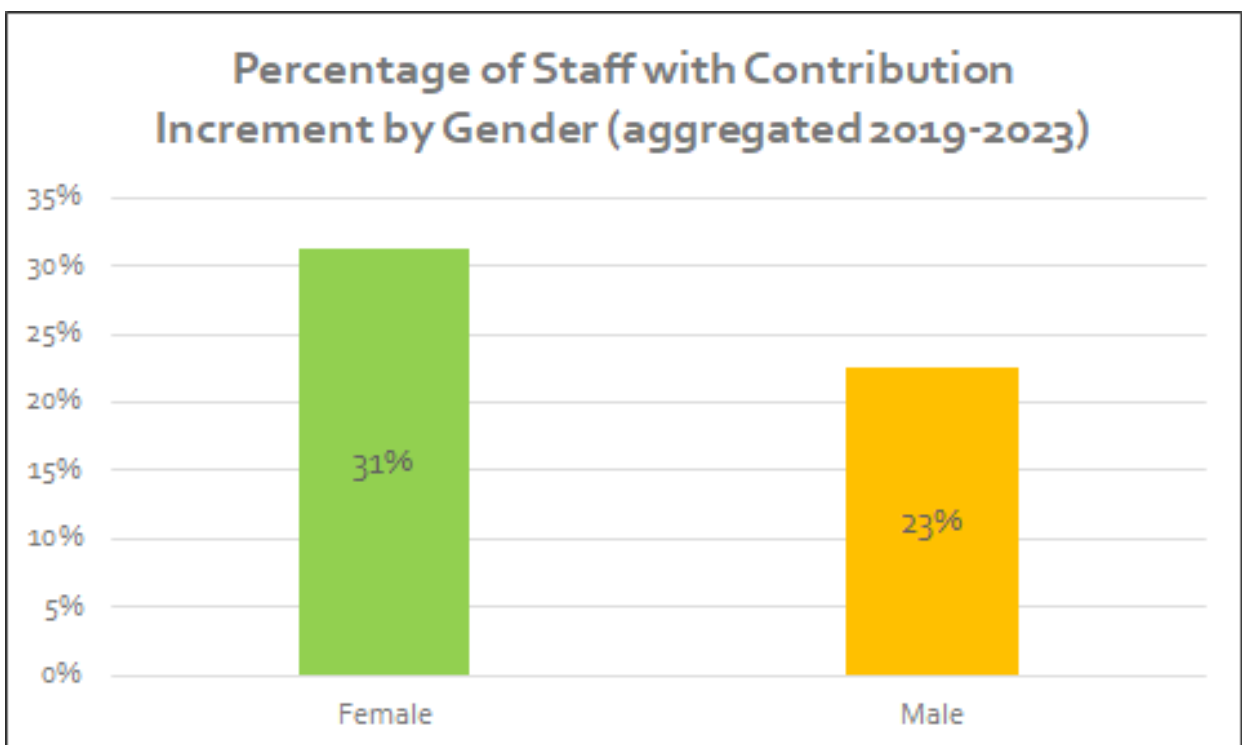The University's HR Division does not currently hold this data.

2:9 Applications and success rates for academic promotion by grade

Success Rates of Applications for Academic Promotion by Gender

Success Rates of Applicatons for Researcher Promotion by Gender

Percentage of Staff with Contribution Increment by Gender
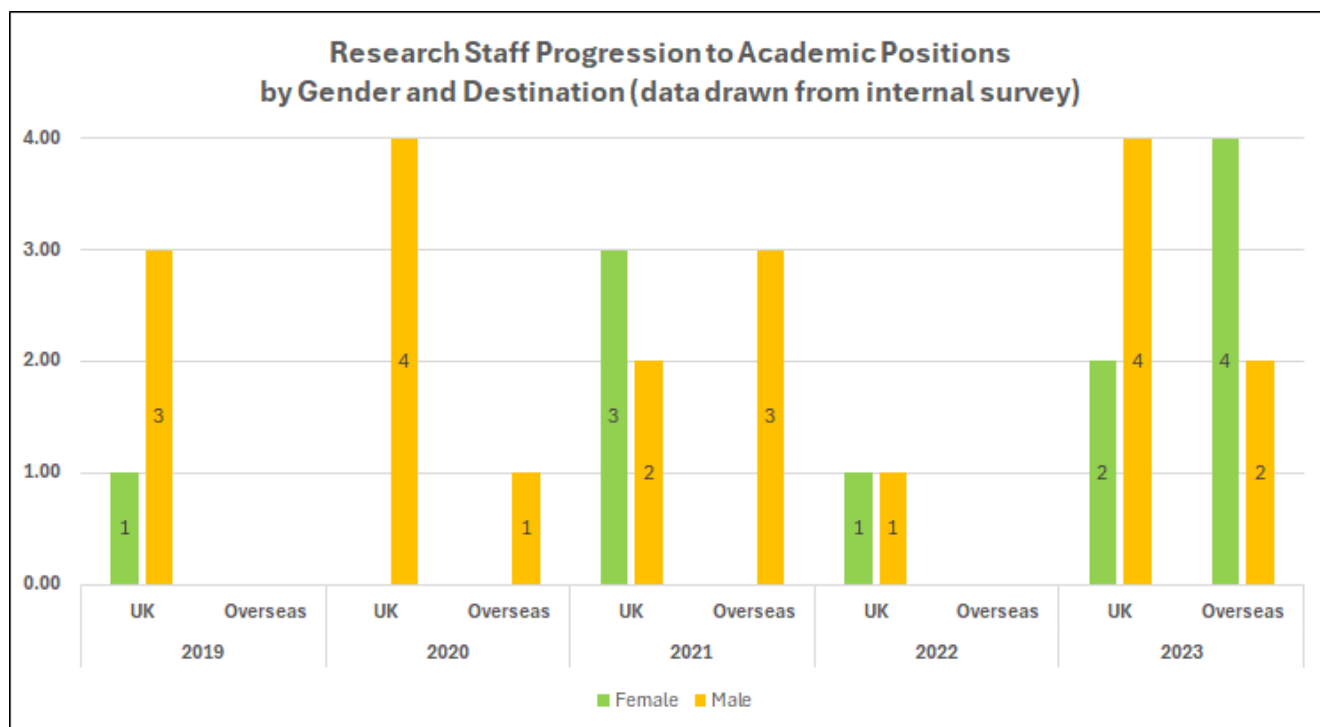
2:10 Applications and success rates for PTO progression by grade (where there are formal routes for progression)

There are no formal routes for progression. The data we hold is presented below.

Percentage of Staff with Contribution Increment by Gender (aggregated 2019-2023)

2:11 Research Staff Progression to Academic Positions

Research Staff Progression to Academic Positions by Gender and Destination (data drawn from internal survey)

2:12 Committee Membership by Gender

Committee	Men	Women	Other	Ratio
Academic Career Pathways Faculty Committee	5	3	0	38%
Awards Committee	4	0	0	0%
Buildings and Environments Committee	6	4	0	40%
Degree Committee	6	4	0	40%
Equality, Diversity and Inclusion Committee	5	6	0	55%
Ethics Committee	5	1	0	17%
Faculty Board	13	8	0	38%
Health and Safety Committee	3	6	0	67%
HR Strategy Committee	2	3	0	60%
IT Strategy Committee	8	2	0	20%
Outreach Committee	5	6	0	55%
Postgraduate Education Committee	3	5	0	63%
Research Staff Forum	7	4	0	36%
Research Strategy Committee	8	2	0	20%
Tripos Management Committee	8	4	0	33%

Appendix 3: Glossary

AS — Athena Swan

CS — Computer Science

DHoD — Deputy Head of Department

DoS — Directors of Studies

DS — Secretary of the Department

E&D — Equality and Diversity

EDC — Equality and Diversity Committee (2018 application)

ED&I — Equality, Diversity and Inclusion

ED&IC — Equality, Diversity and Inclusion Committee

FA — Faculty Administrator

FB — Faculty Board

HoD — Head of Department

HR — Human Resources

PSF — Postgraduate Students Forum

PSS — Professional Services Staff

PTO — Professional, Technical and Operational

RA — Research Associate

RSE — Research Software Engineer

RSM — Research Strategy Manager

RST — Research Strategy Team

SAT — Self-Assessment Team

SRA — Senior Research Associate

SRSE — Senior Research Software Engineers

TMC — Tripos Management Committee

UB — Unconscious Bias