

**Written evidence submitted by VisNET and Evidence Base,  
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**Who are we?**

[visNET](#) is an EPSRC Inclusion Matters funded research project led by the University of Glasgow in collaboration with the Universities of Strathclyde and Edinburgh. Our aim is to develop and evaluate remote collaboration and networking strategies to combat barriers for women who are postdoctoral, early career academics working in STEM areas. We implement virtual tools and strategies to mitigate reported and perceived barriers to these women's career progression and retention in engineering and technology-related arenas. We are thus remodelling the implicit 'rules' of networking and collaboration within STEM academia, with the aim of reducing the gendered practices that have systematically maintained the underrepresentation of women in these disciplines, and which presently appear to be worsening given the COVID-19 crisis.

We believe a significant barrier for women's career advancement in STEM is the ability to establish their international research profile, as a result of specific gendered challenges that include limitations to their freedom to travel for work due to caring responsibilities and difficulty breaking in to, or exclusion from, existing formal and informal networks (i.e. the "old boys" club). Our research indicates that the strategic use of social networking and virtual collaboration tools could play an important role in improving the retention and progression of women in STEM; however, for positive outcomes to be achieved, best practices for virtual working need to be defined, established and upheld, and we do not feel this is happening during the COVID crisis.

In addition, [Evidence Base](#), also funded by the EPSRC Inclusion Matters call and based at the University of Edinburgh, was tasked with investigating and developing interventions to address the gender bias in large grant funding. Emergent findings from our research further indicate that the challenge of caring responsibilities coupled with the bias in the grant funding decision making processes are key factors impacting upon women's career trajectories.

The research of both Evidence Base and VisNet concern making meaningful changes to the flawed ‘business as usual’ workings of academia. In the Covid-19 environment, and its ongoing emphasis from many Higher Education Institutions that we must continue with ‘business as usual’, we are beginning to observe an amplification of the previous issues. Therefore, we offer our research findings to date, as well as interdisciplinary research expertise in the physical and social sciences to urgently combat the widening inequalities we see emerging from current top-down models of virtual working practices. We are particularly committed to addressing the negative impact of universities’ COVID-19 distances working models, often implemented in a top-down approach, on women’s careers in terms of funding, publications, network development, particularly for those with caring commitments and in precarious working environments.

### **How people have been affected by the illness or the response to it?**

In common with many other workplaces, universities are physically closed to the majority of staff. Researchers in STEM are working from home and can no longer access their lab work and specialist equipment required to analyse data. A large proportion of STEM research is conducted in laboratories or in the field. In effect, full time researchers, such as research fellows, postdoctoral researchers and PhD students have had their careers put on hold. Most of these researchers are employed on short, fixed-term contracts and therefore any interruption is a set back to their future academic career and a potential source of tremendous anxiety (McKie, 2020).

UCU Edinburgh (2020a, 2020b) recently published (on twitter) the initial findings of their Covid-19 impact survey with University of Edinburgh Staff. These findings demonstrate that many female staff are facing disproportional challenges, such as balancing caring responsibilities with expectations to work as normal and, experiencing considerable anxiety and uncertainty, not least with regard to the future for those on fixed-term contracts.

At present UKRI, which is one of the largest funders of STEM research in the UK, has offered ‘no-cost’ extensions to grant funding. However, this means that the deadline for the completion of grant outcome is extended but the spend on the grants, which includes the salaries for these fixed-term staff, will not be increased therefore further failing to support

these precariously employed staff, many of whom are the very cohort our research set out to support, given their already vulnerable employment positions.

Some staff have been furloughed (McKie, 2020), which may work well in some sectors, but in academia career breaks can be seen to have devastating effects on careers where researchers are often judged on productivity (mainly article publications, but also funding applications) for hiring and promotion. For some furloughed staff, there is also an expectation, from institutions and PIs, that they will spend time on CPD and other career advancement activities. This can put those unable to undertake such activities at a further disadvantage. Some academic researchers will have work they can progress at home, such as analysing data and writing for publication in peer-reviewed journals; however, these are tasks that require comfortable working conditions, something many precariously employed staff do not have in their homes (Flaherty, 2020). Features of an unstable income include but are not limited to: cramped/shared accommodation, unreliable or outdated IT hardware and internet connections, inability to afford increased utility bills associated with home working (Britton, 2020). Couple any of these features with the challenge of caring responsibilities that have increased with school closures and you have an unmanageable and wholly unsuitable working environment (Minello, 2020).

The situation is less precarious for permanent staff, and those without caring responsibilities. However, the universities sudden shift to full online provision of courses, materials and exams has meant that most of staff's time and energy has been re-directed to these tasks, diminishing time left for anything else, and those in less senior academic positions often have higher loads of teaching and marking (and in STEM subjects senior staff are also more likely to be male). Academics on research and teaching tracks, are also mostly promoted on research performance, creating unfair advantage to people who managed to preserve time for their academic work.

### **If there have been specific impacts on people due to them having a protected characteristic?**

In the UK and many other countries, female academics' teaching and pastoral care duties are on average greater than men's (Teelken & Deem, 2013), often overloading early career women in academic with student support and social roles in contrast with leadership roles needed for career progression. Teaching tasks and students' pastoral needs have now

increased exponentially over the last six weeks. The burden of the current situation in universities is therefore likely to be more acute for women than men (Guarino & Borden, 2017). Additionally, women do on average take on more unpaid care and domestic work than men and lockdown has increased the time required to attend to domestic and caring responsibilities such as children requiring care and home schooling, supporting those whose paid social care is not being fulfilled and caring for those affected by the virus but not admitted to hospital (Minello, 2020). Evidence points out to an even greater domestic burden on women than prior to COVID-19, when familiar responsibility was already associated with reduced research output worldwide (Aiston & Jung, 2015).

And it is not just our research cohorts highlighting a worsening of these inequalities in academia. On social media, many female colleagues report struggling to find even a few hours to focus on their work due to the above factors. At the same time, male colleagues without these responsibilities may use this time at home to ‘focus’ on their work, particularly writing (Kitchener, 2020), thereby creating a further disparity in much-needed research outputs between male and female academics in STEM. Publishers are already reporting that submission by male authors has increased and is greater than that by female authors by as much as 50% in some already male-dominated domains, such as astrophysics (Flaherty, 2020; Kitchener, 2020). We fear that this will also be reflected in grant funding applications, as the tasks to produce publications and funding proposals require the same type of time and focus.

All of the above are likely to have a long-term damaging ripple of impact on the little progress there has been in increasing gender representation within STEM subjects, as women academics will struggle more than ever to meet the criteria for promotion to more permanent positions post-COVID-19.

We are urgently concerned that the sudden move to full on-line communication has created a real risk of magnifying gendered practices in academic decision-making, as it is easier to ignore or dismiss opinions in virtual meetings. The need for constant availability, and literal visibility, which seems to have stemmed from remote working, is also likely to penalise women as future leaders and managers in Higher Education. The lack of guidance to ensure equality and inclusion in our new working practices is at risk of setting back women’s position in universities by several decades.

### **What needs to change or be made to work better in 3 weeks' time?**

1. Urgently place equality and inclusion at the heart of the new working practices, informed by years of work by Athena SWAN committees and where available, by emerging research from projects like VisNet and Evidence Base, funded by Inclusion Matters.
2. Ensure that decision making is not to the detriment of equality and diversity.
3. Extend project funding and related fixed term contracts.
4. Suspend or extend grant application deadlines as women are more likely to struggle to find the focused time required for grant writing.

### **What needs to change or be made to work better in in 6 months' time?**

1. Refocus research activities to beneficial but less time-consuming/intense focus requiring actions (Anguelovski et al., 2020).
2. Create opportunities for staff to increase their network: organise online seminars and virtual networking events.
3. Funders and HE/FE Institutions should encourage and reward public engagement activities via social networks (Twitter, LinkedIn, YouTube, Instagram, Tik Tok)
4. Fund and organise hackathons/ collaborative problem-solving activities spanning several days with regular intervals.
5. HE/FE Institutions need to make commitments to suspending, or appropriately augmenting performance review criteria for job retention/renewal and promotions in the light of Covid-19 (Donald, 2020)

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