wbg WOMEN'S BUDGET GROUP

COVID-19 REPORT

INEQUALITIES IN ACADEMIA – IMPACT ON EARLY CAREER RESEARCHERS

The UK Women's Budget Group (WBG) is an independent network of leading academic researchers, policy experts and campaigners.

Our vision is of a caring economy that promotes gender equality. For over 30 years we have examined economic policy and asked 'who benefits?'. We produce robust analysis and aim to influence the people making policy. We also work to build the knowledge and confidence of others to talk about feminist economics by offering training and creating accessible resources.

The Women's Budget Group is independent and not-for-profit. We are grateful to our funders and members who have supported our work over many years. We are run by a Management Committee and have over 1900 members. If you want to become a member, you'll find more information and a sign-up form via our website.

With thanks to our 20 interview participants and 205 survey respondents, without whom this report wouldn't have been possible. Many of the interview participants and survey respondents, as well as the report author are part of our Early-Career Network (ECN). The ECN is a place for feminist researchers in academia, policymaking and the third sector to connect with their peers and with established experts. Our ECN wishes to help foster the next generation of feminist economists and researchers, equipping them with the tools to influence public policy and contribute to a more gender-equal economy.

For more information about our Early Career Network, or to join, please go to: **https://wbg.org.uk/early-career-network/**

INEQUALITIES IN ACADEMIA – IMPACT ON EARLY CAREER RESEARCHERS

November 2020

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EXECUTIVE SUMMARY

Key findings and prior inequalities

Gender Inequality in academia before COVID-19

Prior gender inequalities in academia

- There are lower rates of women in professorships[1] and a higher concentration of women on fixed-term contracts,[2] especially in certain subject streams such as Politics.[3]

- Women professors and teachers are judged more harshly in student feedback, with words such as 'brilliant', 'intelligent' or 'smart' more often attributed to men while words such as 'mean', 'unfair', 'strict' and 'annoying' more attributed to women.[4]

- Women have been found to take on more 'academic housework' – roles that are not conducive to career progression such as admin, marking and being on committees.[5]

- There is a shortage of permanent positions that are part-time, flexible or job-shared which makes combining a family with a job in academia difficult.

- There is a persistent gender pay gap of 15.1% in academia, which is higher than in the labour market overall.[6]

Results from this report: How has COVID-19 interacted with gender inequalities?

COVID-19 has increased women's paid workload

- Women reported feeling the need to take up extra work, such as unpaid COVID-19 research, during the pandemic to remain competitive. Reduced job opportunities available in the sector in future years have led to an increasingly competitive environment for Early-Career Researchers (ECRs).

- Women report missing out on promotions in the current climate of hiring and wage freezes. This has led to them being underpaid and undervalued for the work they do.

- Women find the sector increasingly difficult to work in and as a result, many feel that they can no longer continue in academia post-COVID-19. This is primarily due to an unmanageable workload and deteriorating work-life balance.

1   Male professors continue to outnumber females by three to one, or 15,700 to 5,700 in 2018-19. (HESA, 2020)
2   UCU (2020) Precarious work in Higher Education. Insecure contracts and how they have changed over time. (https://bit.ly/3n5TJlZ)
3   Wright et al (2020) 'Equalities in freefall? Ontological insecurity and the long-term impact of COVID-19 in the academy'. Feminist Frontiers, 2
4   Schmidt (2015) Gendered Language in Teacher Reviews. (https://bit.ly/36mQuRe)
5   Macfarlane, B., & Burg, D. (2019) 'Women professors and the academic housework trap'. Journal of Higher Education Policy and Management, 41(3), 262-274
6   Times Higher Education (2019) Gender Pay: Universities report slow progress. (https://bit.ly/3kXdoCM)

- There is an increase in expectations from employers. This is related to the shift in online teaching which has fallen disproportionately on women's shoulders,[7] as well as unpaid work related to supporting students emotionally and extra marking.

COVID-19 has increased women's unpaid (caring or household) workload

- Women are struggling to produce research due to an increase in unpaid work responsibilities in the home.

- Women report a lack of understanding by male colleagues about the challenges of juggling paid and unpaid working responsibilities.

- Post-Graduate Researchers (PGRs) have had to take on more of the caring responsibilities in the home due to the perception that their work is 'not real work' or is more flexible than their partner's job.

- Women are experiencing feelings of guilt due to having to make the impossible choice between looking after their children/relatives or working on their academic job.

- Women are working through the night to keep up with the demands of their paid job while also being full-time carers for children or elderly relatives.

- Much of the emotional labour related to COVID-19 has fallen on women's shoulders.

Uncertainty and Precarity in Academia before COVID-19

Prior challenges related to precarity

- Many PhD students are given zero-hours contracts if they work as teaching assistants. They have little certainty for the future and cannot financially plan.

- Lecturers and seminar teachers on casualised contracts are paid by the hour with only two hours of preparation time, when often this takes much longer.

- Part-time workers in academia are more likely to be on fixed-term contracts.[8]

- Women with caring responsibilities find it harder to move around the country often for new academic positions.

- Many unfunded PGRs rely upon teaching hours for their main source of income. They are put on the lowest pay band regardless of prior teaching experience.

- PhD students are paid 'stipend' funding which is not considered a real wage, so they do not have access to a pension, mortgage, tax-free childcare or labour rights.[9]

Results from this report: How has COVID-19 interacted with precarity in academia?

COVID-19 has decreased paid workload and increased uncertainty for ECRs

- The pandemic has exacerbated inequalities faced by those already in the most precarious working positions.

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7   Women are more likely to be in teaching positions than their male colleagues.
8   Higher Education Statistics Agency (2020) Higher Education Staff Statistics: UK, 2018/19. (https://bit.ly/3jRqzUX)
9   Pandemic PGRs and UCU (2020): 'Survey Summary report: GTAs are workers too'.

- There is a higher concentration of women on fixed-term contracts,[10] meaning they have been the hardest hit by job-losses when contracts are not renewed.

- Because PGRs do not have a permanent contract they are not entitled to redundancy pay when they lose their jobs, regardless of the amount of time they have spent working for their university.

- Women with caring responsibilities during lockdown cannot perform their paid roles well and therefore will be less competitive than their peers when it comes to competing for available jobs and promotions in the future.

- There is a lack of communication regarding future employment, with many ECRs not knowing until the first week of term whether and under what conditions they would be teaching. Many still do not know if this employment will continue past December.

- PGRs from some universities report being sent 'like cannon fodder'[11] back into university to teach face-to-face, unlike those on more permanent contracts who have the choice to teach from home.

Mental and physical health issues for ECRs before COVID-19

Prior challenges related to mental health in academia

- Post-graduate researchers before the pandemic reported rates of depression and anxiety that are six times higher than those in the general public. One report found that more than 40% had anxiety scores in the moderate to severe range, with nearly 40% showing signs of moderate to severe depression.[12]

- Young women are more at risk of poor mental health than the general population. Women between the ages of 16 and 24 are almost three times as likely (26%) to experience a common mental health issue as males of the same age (9%)[13]

Results from this report: How has COVID-19 interacted with mental health in academia?

COVID-19 has negatively impacted the mental health of women ECRs

The most commonly cited reasons that came up in our 200-participant ECR survey were:

- Uncertainty of future career was one of the most often cited reason for stress in the survey, with many despondent about a future in academia.

- The impact of previous mental health issues: Common answers highlighted the difficulties faced by those who had a history of OCD, anxiety, depression and eating disorders, all of which have been exacerbated and have combined to create a debilitating effect on researchers.

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10   UCU (2020) Precarious work in Higher Education. Insecure contracts and how they have changed over time. (https://bit.ly/3n5TJlZ).

11   Quote from interview with ECR3

12   Evans, T. M., Bira, L., Gastelum, J. B., Weiss, L. T., & Vanderford, N. L. (2018) 'Evidence for a mental health crisis in graduate education'. Nature biotechnology, 36(3), 282.

13   Mental Health Statistics England: (https://bit.ly/3jnhoLK)

- **Relationship breakdown:** Survey respondents were candid about the impact of COVID-19 on their relationships, with many citing breakdowns in relationships due to the pressure of the pandemic. This is likely to have an impact on concentration levels and affect the emotional resilience required to conduct research.

In the qualitative interviews, respondents highlighted the following drivers of poor mental health:

- Isolation and loss of office environment;
- Lack of time for self-care and blurring of boundaries between work and personal life;
- Anxiety about future employment and finances;
- Feelings of guilt;
- Stress of High workload and growing tired of balancing act;
- Lack of understanding from male colleagues.

Recommendations

In order to ensure Early-Career Researchers are supported during the pandemic and beyond and the immediate impact of this crisis does not unravel work done towards gender equality in previous decades, we need:

1) **A proper contract for PGRs**. Having a contract would regulate workload, reduce financial pressures and decrease uncertainty and for post-graduate researchers. It would also enable labour rights such as redundancy pay, pension contributions, union representation and government-funded childcare support.

2) **Reduce the demands of a high workload**. We recommend that PGRs are given a 35-hour working week, with a new approach to workload management and adoption of the Health and Safety Executive's Stress Management Standards, or equivalent.

3) **Extend the length of short fixed-term contacts**. This will reduce uncertainty related to future employment for early-career researchers.

4) **Gender / carer awareness training for supervisors**. This may help those without caring responsibilities to become aware of the difficulties faced by working parents.

5) **Availability of counselling and wellbeing support to PGRs**. A properly funded mental health service should be provided together by the government and university sector.

6) **Childcare support for those with caring responsibilities**. Making childcare support available to PGRs and increasing capacity of nurseries by investing in care.

7) **Encourage a support network to tackle isolation amongst PGRs**.

8) **Improved communication and respect for PGRs**.

9) **Actively support researchers to work from home**. Supervisors and management should check that researchers have the equipment, resources and software that they need to work from home.

10) **Hardship funds**. We recommend that government money towards hardship funds is extended, to reduce inequalities and to avoid the solidification of class divides.

1. INTRODUCTION

This is a UK Women's Budget Group report on the gendered impacts of the COVID-19 pandemic on Early-Career Researchers (ECRs) and Post-Graduate Researchers (PGRs) in the UK. It highlights the unique challenges that women at the beginning of their careers in academia are facing as the COVID-19 pandemic impacts upon their professional and personal lives – many of whom are in precarious jobs with fixed-term or zero-hours contracts.

In this report, the term 'ECR' is used to refer to those who are currently undertaking their post-graduate studies or are otherwise in their first five years post-completion. The exact roles of the people that we spoke with often consisted of juggling more than one job, from PhD researchers, research assistants and graduate teaching assistants, to visiting lecturers or associate lecturers. Some were on fixed-term and zero-hours contracts, some relied on their government stipend, while others were on permanent contracts. Some women depended on the income of their partner while some relied on income from a second job outside academia. For ease of writing, all of these varied combinations of jobs will be referred to as falling under the umbrella of 'Early-Career Researchers' because they are all at the beginning of their journeys in academia, a career s tage in which work and pay are precarious.

This report was based on a survey with 205 self-selecting respondents and 20 in-depth qualitative interviews.

Why this study?

As the COVID-19 pandemic first hit and lockdowns began around the world, there emerged a constant stream of reports, articles and briefings, highlighting the impact of Covid-19 on gender equality. Think-pieces were written from the perspective of parents finding it increasingly difficult to conduct research work from home.[14] As authors of these pieces across the globe have highlighted, this pandemic is exacerbating existing inequalities. Women are taking on more of the additional unpaid household work than their male partners, work spurred by school closures and widespread working from home.[15] Without childcare available, households are at risk of going *"back to the 1950s"*.[16] Running parallel to these informal opinion pieces were studies noting the decrease in the numbers of research papers published by women.[17]

This study seeks to better understand the reasons behind this concerning reduction in research produced by women in the wake of COVID-19. It also seeks to build on recent research into the impacts of the pandemic upon the mental health of Early Career Researchers, as well as their ability to conduct work and their future prospects. Such research, as of yet, has not been

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14   Frederickson, M (2020): Women are getting less research done than men during this coronavirus pandemic. (https://bit.ly/2Tx0pMN)

15   Del Boca et al. (2020): 'Women's Work, Housework and Childcare, before and during COVID-19'. (https://bit.ly/35koR9i)

16   Cronin (2020): 'Lockdown sent working mothers like me back to the 1950s – here's what must happen now'. (https://bit.ly/31C72S9)

17   Viglione (2020): Are women publishing less during the pandemic? Here's what the data say. (https://go.nature.com/2FTIMo5)

conducted from a gendered, intersectional perspective to draw out the specific ways in which women ECRs are experiencing the pandemic – especially women at the intersection of multiple axes of disadvantage related to race, disability, age, caring responsibilities, class and others.

Gender inequality is already a cause for concern in academia, and the COVID-19 pandemic is set to exacerbate existing inequalities. This study seeks to illuminate the specific challenges that women at the early stages of their careers in academia are facing – challenges which may have implications for equality in the sector for years to come. It first reflects on the impact of COVID-19 upon the paid and unpaid working lives of ECRs, before moving onto the implications for mental and physical health.

There are complex ways in which the responses of institutions will interact with structural inequalities, both in the discipline and the home. As Wright et al. write:

'We already know that a range of factors, including race and gender, intersect in Higher Education settings to produce different outcomes for individuals who do not embody the default stereotypes that identify academics/professors as cis white men. Past responses to crises often have had an adverse impact on minoritized groups and are gendered in terms of their causes, impact and responses.' [18]

We can thus expect to see an accentuation of the challenges that already exist in academia on the grounds of gender, race and disability. Research has also been conducted by the Women's Budget Group into the impact of COVID-19 on women in Coventry;[19] the impacts on BAME women;[20] disabled women[21] and women with caring responsibilities[22]. We may expect to see a reflection of these wider impacts of COVID-19 on women in academia as well.

The report starts with a description of the gender inequalities prior to COVID-19, before moving on to the key findings of the report on the impact of COVID-19 on ECRs careers and their mental health. The report closes with a set of recommendations for universities and government to tackle pre-existing inequalities in academia and mitigate the impact of the current crisis that is threatening to unravel progress on gender equality in academia.

18   Wright et al (2020) pp.2 'Equalities in freefall? Ontological insecurity and the long-term impact of COVID-19 in the academy' *Feminist Frontiers.*

19   WBG (Jul 2020) Covid-19 Report: The Impact on Women in Coventry (https://bit.ly/2HEV2sA)

20   WBG (Jun 2020) BAME Woman and Covid-19 (https://bit.ly/3gZtDy6)

21   WBG (Jun 2020) Disabled Women and Covid-19 (https://bit.ly/2GbOzo2)

22   WBG (May 2020) Crises Collide: Women and Covid-19 (https://bit.ly/3mOresr)

2. EXISTING INEQUALITY PROBLEMS IN ACADEMIA

a) Precariousness of contracts for Early-Career Researchers

Precariousness in academia is characterised by fixed-term, zero-hours or minimum-hours contracts, which predominantly impacts those in the beginning stages of their academic careers. Referred to here as 'Early Career Researchers' (ECRs), staff who consider themselves to be within the beginning stages or first five years of their career have little stability or certainty about future academic employment. ECRs often must juggle multiple part-time, zero-hours or fixed-term contracts at the university or supplement their income with extra work from alternative sources.

While the number of entrants into postgraduate study is roughly equal between the sexes, the ratio of women to men decreases from thereon after. The most recent figures from HESA demonstrate that while 57% of higher education students and 49% of postgraduate (research) students were female in 2018/19, this drops to 38% for senior academic contracts and only 27% for professors.[23]

The changes that the UK higher education sector has undergone over the past decade have led to what is known as a 'revolving door'[24] phenomenon, whereby junior faculty are rotated through entry level positions without gaining permanent employment. As Park wrote back in 1996 this has created 'an intellectual proletariat' who must 'move from one low-paying, dead-end teaching post to another.' As she highlights: 'This proletariat is disproportionately female'.[25] This revolving door is a phenomenon that occurs in the early career stages or first five years post-PhD graduation, when candidates are more likely to be starting a family.

As a result of existing gender inequalities in academia, those on permanent contracts are disproportionately men, whereas those on the most precarious contracts as Early Career Researchers are predominantly women.[26] A small but growing body of literature has emerged in response to COVID-19, which highlights the gendered impacts of university responses to a sudden loss in income.[27] The first to lose their jobs are those on fixed-term and zero-hours contracts, which has led to certain universities coming under fire for the disproportionate number of BAME and women candidates who are losing their jobs.[28] In addition to existing precarity, staff

23   HESA. (2020) 'Higher Education Student Statistics 2018/2019'. (https://bit.ly/3n4JILC)

24   Park, S. M. (1996). Research, teaching, and service: Why shouldn't women's work count? The Journal of Higher Education, 67(1), 46-84.

25   Ibid. p.46

26   UCU (2020) Precarious work in Higher Education. Insecure contracts and how they have changed over time. (https://bit.ly/3n5TJIZ)

27   See for instance: Wright et. al (2020): Equalities in Freefall? Ontological insecurity and the long-term impact of COVID-19 in the academy. (https://bit.ly/3jEy0il)

28   Times Higher Education (9 Jul 2020) "Bonfire of casual contracts 'a huge setback' for racial equality". (https://bit.ly/34dmk0j)

who have an unequal distribution of caring responsibilities within the home must now balance paid work, teaching and research obligations with childcare, housework and home-schooling.

b) Gender expectations at home and at work

Gender expectations at home:

Prior to the crisis, mothers typically performed a larger share of childcare and housework than fathers did.[29] This means that, if households continue to divide up domestic responsibilities as they did before, mothers will take on a larger share of the new responsibilities at home and will see a bigger absolute increase in the time they spend on childcare and housework. Existing research into the impact of the pandemic upon parents in the UK has shown that mothers are spending less time on paid work than fathers, but more time on household responsibilities. Following the pandemic, women have borne the brunt of the distribution of unpaid household labour.[30]

According to an IFS report, the time that mothers spend on paid work is also more likely to be interrupted with household responsibilities. Mothers are doing childcare and housework during two more hours each, but are doing paid work during two fewer hours of the day than fathers.[31] Not only this but mothers combine paid work with other activities (almost always childcare) in 47% of their work hours, compared with 30% of fathers' work hours. The report also finds that the average mother today is doing only 35% of the uninterrupted working hours that the average father does, in comparison to nearly 60% of the number of uninterrupted work hours that the average father did in 2014/2015.

Other than caring for children, women also often face responsibility for housework and caring for elderly or unwell relatives as well as 'emotional labour', defined as putting energy into dealing with the feelings of others, putting them at ease without self-regard, or meeting social expectations.[32] As McMunn et al. found (2019), women did the bulk of the domestic duties in 93 per cent of UK couples analysed. While women do approximately 16 hours of household chores every week, men do closer to six.[33]

Gender expectations at work:

There are persistent inequalities in academia relating to rates of women on permanent contracts, especially at the highest level of professorship and management, as well as persisting wage gaps. On average universities pay men 15% more than women, with some institutions exposed as having a gap of up to 37%.[34] Existing research into the reasons behind this disparity highlight the difficulties of combining an academic job with caring responsibilities, but also a lack of mentorship and advice from women in higher positions. There is also a prevalence of the 'ideal

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29   Ibid.

30   IFS (2020): How are mothers and fathers balancing work and family under lockdown? (https://bit.ly/2HFpFxn)

31   Ibid.

32   'What is Emotional Labour? The Spruce. (https://bit.ly/3dZdisk)

33   McMunn et. al (2019) 'Gender Divisions of Paid and Unpaid Work in Contemporary UK Couples'. Work Employment and Society. 34(2).

34   MacFarlane (2018) 'Women professors, pay, promotion, and academic housekeeping'. (https://bit.ly/3jpdVgA)

academic' as one that embodies typically male characteristics[35] including *'extensive working hours and workload, total dedication, competitiveness, and few expressions of emotions'.*[36] An existing body of literature repeatedly points towards a masculine working culture in academia,[37] and women who do not fit the mould of this ideal type are 'othered'.[38]

The expectations of women in the workplace also differ. Women teachers are judged more harshly in student feedback, with words such as 'brilliant', 'intelligent' or 'smart' more often attributed to men while words such as 'mean', 'unfair', 'strict' and 'annoying' more attributed to women.[39] This demonstrates that the expectations for women in the workplace are higher than those of men and that they must go above and beyond their male peers to gain the same level of respect.

Women have also been found to take on more 'academic housework' – defined as roles that are not conducive to career progression.[40] These administrative, service and citizenship tasks are essential to academia and include serving on committees, mentoring colleagues, advising students, reviewing for journals or grant-awarding bodies, contributing expertise to civic and charitable bodies. Whilst such activities make an essential contribution to the life of the university and wider society, they are not recognised as such. As with much of the work traditionally assigned as 'women's work', so too has 'academic housework' become devalued. Academics usually get promoted or rewarded as a result of their research success – publications in top journals or prestigious grants count for more than administrative tasks. Research shows that women get promoted to senior lecturer or associate professor later than men as a result of taking on more of this undervalued work than men.[41]

c) Race inequalities

According to the Higher Education Statistical Agency (HESA), BAME people account for only 13.9% of all academic staff, despite representing 34% of undergraduates.[42] The Equality Challenge Unit findings flagged ethnic-minority groups as having the least favourable outcomes across contract types (comparing fixed-term with permanent), salary levels as well as promotion/progression. [43] As others have already highlighted, the situation is worse when looking across high-status universities, where these groups are further marginalised.[44]

Additionally, the severity of this marginalisation becomes more apparent when looking at black (Caribbean, African and Black-other) academics who account for a mere 1.7% of all academic staff.[45] Furthermore, those that are employed face pay disparities: BAME staff at Russell Group

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35   Bleijenbergh et. al (2012) 'Othering women: fluid images of the ideal academic'. (https://bit.ly/3kEyGWl)

36   Heijstra et al (2017) 'Testing the concept of academic housework in a European setting: Part of academic career-making or gendered barrier to the top?'. European Educational Research Journal. 16(2-3). 200-214

37   See for example: Baker (2014); Brooks (1997); Sagaria (2007).

38   Bleijenbergh et. al (2012) 'Othering women: fluid images of the ideal academic'. (https://bit.ly/3kEyGWl)

39   Schmidt (2015) Gendered Language in Teacher Reviews. (https://bit.ly/36mQuRe)

40   Macfarlane, B., & Burg, D. (2019) 'Women professors and the academic housework trap'. Journal of Higher Education Policy and Management. 41(3). 262-274

41   MacFarlane (2018) 'Women professors, pay, promotion, and academic housekeeping'. (https://bit.ly/3jpdVgA)

42   Higher Education Statistical Agency (2020).

43   ECU (2018) Equality in higher education: statistical report 2018. (https://bit.ly/2HEqYxc)

44   See Boliver 2016; Rollock 2007; Rollock et al. 2014.

45   HESA (2016) quoted in Stockfelt, S. (2018) 'We the minority-of-minorities: A narrative inquiry of black female academics in the United Kingdom'. British Journal of Sociology of Education. 39(7). 1012-1029.

universities face an average pay gap of 26% compared to their white colleagues.[46] UCU research has shown that 90% of BAME staff in colleges and universities reported facing barriers to promotion, while 72% of university staff said they had experienced bullying and harassment. [47]

d) Disability inequalities

The Equality and Human Rights Commission (EHRC) 2017 report found that the pay gap between disabled and non-disabled employees nationwide is 13.6%. Disabled people are also significantly more likely to lose a job or be in low-waged work than non-disabled people. They're also routinely given fewer responsibilities at work and turned down for promotion or refused a job in the first place.[48] The proportion of staff in universities declaring health conditions or impairments rose to 5.7% in 2018/19.[49] However, 16% of working-age adults have a known disability and 14% of students in 2018/19 were known to have a disability.[50] This has increased in recent years largely due to an increase in students reporting mental health conditions. Taking this into consideration, there is an under-representation of disabled people, invisible illnesses, chronic conditions and neurodiversity amongst academic staff. Being a disabled woman in an environment such as academia, that already has stark gender pay and employment gaps, adds a second layer of disadvantage.

As previous research conducted this year by the Women's Budget Group together with the Fawcett Society has found, disabled people in the UK have been impacted by the pandemic in myriad ways, some of which intersect with gender. For instance, 56% of disabled women say social isolation has been difficult to cope with, compared with 42% of non-disabled women, while 53% of disabled women reported high levels of anxiety and 63% of disabled women said they were struggling to cope with the different demands on their time.[51]

These inequalities should be kept in mind when considering the impacts that women in academia face over the course of this report; as they are likely to be exacerbated if people lie at the intersection of multiple axes of disadvantage, such as race, disability and gender.

e) Poor mental health

Post-graduate researchers before the pandemic reported rates of depression and anxiety that are six times higher than those in the general public. One report, based on the responses of 2,279 students in 26 nations, found that more than 40% had anxiety scores in the moderate to severe range, with nearly 40% showing signs of moderate to severe depression.[52]

In addition to this, young women are more at risk of poor mental health than the general population. Women between the ages of 16 and 24 are almost three times as likely (26%) to experience a common mental health issue as males of the same age (9%).[53] The combination of

46   BBC (7 Dec 2018) 'Ethnic minority academics earn less than white colleagues'. (https://bbc.in/3jlQPau)

47   UCU (2016) 'The experiences of Black and Minority Ethnic staff in further and higher education.' (https://bit.ly/33lpHTM)

48   Ryan, Francis (2018) We know about the gender pay gap. But what about the disability pay gap? The Guardian Online: (https://bit.ly/3jv7dVC)

49   HESA (2020) Higher Education Student Data – open data release. (https://bit.ly/35Qa5HB)

50   GOV (2014) Disability facts and figures. (https://bit.ly/2TxhOVw)

51   Fawcett Society and WBG (Jun 2020): Disabled women and COVID-19. (https://bit.ly/3oDVo30)

52   Evans et al. (2018) 'Evidence for a mental health crisis in graduate education'. Nature Biotechnology. 36. 282–284

53   Mental Health Statistics England: (https://bit.ly/3jnhoLK)

these three risk factors: being female, being a post-graduate student and being young, will have a negative cumulative effect upon the mental wellbeing of women ECRs. This means that women in higher education were already amongst the highest-risk category for poor mental health. In addition to this, women who lie at the intersection of multiple categories of disadvantage are likely to be placed under further pressure – whether that be BAME women, women with caring responsibilities, or disabled women.

There are established pre-existing health inequalities in the UK. Health inequalities are unfair and avoidable differences in health across the population, and between different groups within society. Inequalities have been documented between population groups across at least four dimensions in the UK.[54] These are as follows: socio-economic status and deprivation; protected characteristics (such as age, sex, race, sexual orientation and disability); vulnerable groups of society (such as migrants; Gypsy, Roma and Traveller communities, rough sleepers, homeless people and sex workers/prostitutes) and geography (whether patients are urban or rural). It is important to note that these dimensions also overlap, with people often falling into various combinations of the categories. This is highlighted because there are likely to be unevenly distributed physical and mental health impacts of COVID-19 upon early-career researchers. Furthermore, as Wright et al have written, the anxiety surrounding the higher percentage of deaths for BAME people during the pandemic is likely to have an emotional toll, leading to a reduction in the ontological security required to produce quality research.[55] Any ECRs who lie at the intersection of multiple health inequality dimensions will be at a higher risk of being adversely impacted by COVID-19. This may lead to those who are already underrepresented in academia having to leave due to mental or physical health complications.

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54   NHS England. Definitions for Health Inequalities (https://bit.ly/3mBldyV)

55   Wright et al (2020) 'Equalities in freefall? Ontological insecurity and the long-term impact of COVID-19 in the academy' Feminist Frontiers. pp 2

3. COVID-19 challenges for women ECRs

The next chapter highlights the key challenges that COVID-19 has caused for ECRs, that have been identified in our study. Firstly, COVID-19 has exacerbated the problems related to a casualisation of contracts. Secondly, PGRs feel treated neither as 'paying customers' as students nor as permanent staff and thus lack labour rights. Thirdly, there are challenges relating to a high workload and poor working conditions for ECRs, including an increase in paid workload but a reduction in ability to conduct that work. The fourth theme expands on this relationship between paid and unpaid responsibilities further by highlighting the increase in caring responsibilities for women since the onset of COVID-19. The final theme explores the lack of support that ECRs have felt from their universities.

Theme 1: Casualisation

The uncertainty related to casual contracts was something that many interview respondents highlighted[56] as a problem that existed beforehand: *"I've always been quite like a last minute, step in anywhere, rather than knowing in advance if I'm teaching"[57]* – but problems caused by the casual, last-minute nature of work available, were exacerbated by COVID-19.

Before the pandemic hit, the UCU were already in negotiations with universities over the zero-hours or fixed-term contracts. While a certain number of hours could not usually be guaranteed for the coming year, Graduate Teaching Assistants would usually be fairly sure that they would stay on rotation, as the demand for teaching tended to remain relatively constant year on year. However, uncertainty was highlighted as something that was exacerbated and made worse by the pandemic, leading to loss of income for some:

> ❝ *I know a lot of people in my department just lost a load of money. If they weren't guaranteed for a certain number of marking hours or invigilation, because that wasn't in place yet by the time of the lockdown, but they were expecting it as part of their budget – they were hit massively by that."[58]*

For staff with caring responsibilities, the casual nature of their contract led to feelings of stress about how they would provide for their family and for themselves in the future:

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56   ECR5; ECR10; ECR12; ECR19
57   ECR10
58   ECR20

> *I am concerned now because of this situation, the work that I might have anticipated having is not available, and that has an immediate impact on bringing up my kids. It also has an impact when I'm older about not having a pension."*[59]

With the Institute for Fiscal Studies (IFS) predicting that UK universities could cut spending on temporary teaching staff by £200 million, and on other temporary staff by £300 million, these impacts on precarious staff are likely to worsen.[60]

Exacerbation of inequalities relating to casualised staff

As one BAME survey respondent highlighted:

> *Women of colour disproportionately hold precarious contracts and are therefore some of the hardest hit by the pandemic, as universities let go of those on fixed-term contracts first."*

This reflects existing data published by HESA,[61] who have found that only 58% of BAME staff were on permanent contracts in comparison to 69% of white staff in UK higher education. At Goldsmiths, University of London, campaigners have suggested that about 75% of those losing their fixed-term contract jobs are from a BAME background.[62]

Furthermore, in an open letter published online by Times Higher Education,[63] more than 300 academics, students and support staff warned that UK universities' statements of support for the *Black Lives Matter* movement 'can at best be regarded as tokenistic and superficial',[64] considering the loss of employment, persisting pay gaps and additional burdens and responsibilities placed on black, Asian and minority ethnic scholars.

Theme 2: PGRs feel neither students nor staff

Post-graduate researchers (unlike early-career researchers on fixed-term or permanent contracts) report feeling that they fall into a grey area between staff and paying students. This has left them open to exploitation by their university institutions. The *Pandemic PGR* group have supported *'a push to ensure we are recognised as staff members to end the grey area around our employment that allows us to go unrepresented, underpaid, and exploited.'*[65]

Before the pandemic, PGRs were unionising against this casualisation with the 'four fights'[66] that they sought to emphasise alongside the strikes over pensions. However, it is difficult to unionise when PGRs feel neither represented entirely by the students' union nor the staff union. While PGRs technically as students are eligible to representation through the NUS, many feel that their

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59   ECR12

60   IFS (Jul 2020) Will universities need a bailout to survive the COVID-19 crisis? (https://bit.ly/3kSjzsq)

61   Higher Education Statistical Analysis 2018/2019

62   McKee, A (2020): Bonfire of casual contracts 'a huge setback' for racial equality. Times Higher Education. (https://bit.ly/34dmk0j)

63   THE (2020): 'We are at a crucial moment to address racial justice in higher education'. (https://bit.ly/36uIVYK)

64   Ibid. 15

65   Pandemic PGRs and UCU (2020): 'Survey Summary report: GTAs are workers too'

66   The four fights refer to Pay, Workload, Equality and Casualisation in the Higher Education sector.

demands as staff are not fully represented through that avenue. As highlighted in the *Pandemic PGR* and UCU Survey summary document, Graduate Teaching Assistants (GTAs) also did not feel a mutual level of support from more senior members of staff, as was shown by the former to the latter in the strikes against pension cuts.[67]

A lack of respect for PGRs as staff was highlighted on multiple occasions as something which caused problems for respondents. One key problem was last-minute teaching, with many PGRs still not knowing in August what their teaching hours would be in the Autumn semester, or whether they would have any work at all:

> *They asked us, did we still want to do PTA [Post-graduate Teaching Assistant] work? And I replied, saying yes, and that's all I've heard. I've never heard anything since. And I think that's weird. Like, even to just say to us, 'Sorry, we haven't got the budget for it.' There's no commitment from them to us."[68]*

The impact on teaching is likely to be unequal along gender and race lines because women and BAME staff are more concentrated in precarious teaching positions in universities.[69] The timing of when teaching is available is also important – ECRs whose funding is due to run out will rely more upon teaching hours for their income. One woman highlighted that the extension of six months to PhD programs, while welcome, creates new problems related to her income stream once the PhD finishes. Finishing a PhD in March instead of having a submission date in September will be detrimental to her ability to earn money due to the lack of teaching available after the Spring term ends. Her situation reflects that of many PGRs who have timed their PhD submission date in line with aspirations for a post-doctoral or teaching job when term starts in the Autumn. As she highlights:

> *I don't think they have any understanding of the situation that we're in. I'm now in a situation where my funding will run out in March, and there will be no teaching after March. So I don't quite know how I'm supposed to survive until the potential of teaching in September. Generally, there's no commitment to us – I don't feel the university is committed to us as PhD students."[70]*

For some PGRs, the lack of treatment as staff is compounded by the fact that they also do not feel that they are being treated with the respect afforded to undergraduate students who are considered 'paying customers'.[71]

The divide between funded and unfunded PGRs

PGRs were sent home and expected to continue working, even though this in many cases was impossible. The solution, which is to provide funded extensions to PGRs, does not solve the

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67   Ibid pp.5

68   ECR12

69   Gabster, B. P., van Daalen, K., Dhatt, R., & Barry, M. (2020). Challenges for the female academic during the COVID-19 pandemic. The Lancet, 395(10242), 1968-1970.

70   ECR12

71   ECR1 and ECR2

problem for unfunded PGRs, who may have to pay extra fees to extend their PhD and some of whom will have lost their income. Many PGRs highlighted that they felt that they were falling through the cracks – neither formally recognised as a member of staff, nor afforded the same respect as a paying student. This has led to financial uncertainty for many.

Ineligibility for government support

The lack of a formal paid contract for PGRs means that they are not eligible for work benefits that are crucial in the wake of COVID-19. In other sections of the economy, workers could be furloughed if they had caring responsibilities and thus were unable to work, as part of the Coronavirus Job Retention Scheme ('furlough scheme').[72]

This means that employed parents in other sectors whose children cannot attend school could be put on furlough rather than taking annual or unpaid leave to look after them. For parents and carers who are PGRs, furlough for caring responsibilities was not an option. For parents who were unable to conduct research during this period, the equivalent of furlough would be a funded extension to PhD contracts by their funding body, which is what PGRs have been campaigning for.[73]

However, some PhD students are funded partly or wholly by their university. For these students, they are left dependent upon institutions that are going through financial uncertainty and facing large cuts to their income. The government did not expect any other employer in the UK to pay for furlough in the first six months following the initial lockdown, however a financial contribution on this level is expected of university institutions for PGRs, due to PGRs not having employee status. PGRs are not considered a paid member of staff, as they are instead on a 'stipend'. This has led university institutions and funding bodies having to pay for the equivalent of 100% furlough for six months, if students require funding extensions. For institutions that cannot afford this, PGRs are left in an impossible situation.

Without the equivalent of furlough via an extension, many women who could not work throughout lockdown due to the closure of schools and nurseries, now fear that they cannot complete their PhD. This holds implications for their future career prospects, their ability to provide for their families and their mental health. This is likely to have a devastating impact upon gender equality in the higher education sector.

PGRs not eligible for Tax-free Childcare

For PhD researchers, tax-free and 30-hour free entitlement childcare is not available, which is a key obstacle for parents, particularly mothers. If PhDs were afforded a wage rather than relying on a mixture of scholarships and self-funding, then working parents would be eligible for the associated working benefits. Parent researchers must either source willing relatives or pay for wraparound childcare for their children if they wish to keep up with colleagues. As one working mother laments:

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72   People Management (2020): "Employees can be furloughed to carry out caring responsibilities". (https://bit.ly/3l4ldXD)

73   See demands from: Pandemic PGRs (2020): GTAs are workers too.

> *"I think one of the challenges is that you don't get childcare funding if you're a full-time PhD student and that's why I've had to keep up my part-time working status. In the ideal world, I would do the PhD full time and just get it done because I don't love my job. I need to keep this manic plate spinning going to get the government funding because they try to get out of paying it to as many people as possible."[74]*

The lack of tax-free childcare[75] available to PhD researchers with children means that they must pay for 100% of their children's care outside of school hours. This is likely to exacerbate existing inequalities, as not all parents can afford childcare on their low wages. Arranging or providing childcare is a responsibility that more often than not falls on mothers,[76] so female academics are more likely to be disadvantaged. It again highlights that the sector is based around the idea of the male academic with no caring responsibilities. As one ECR summarises:

> *"Assuming that either you have the resources to pay for the childcare, or that you don't have children, isn't adequate."[77]*

PGRs not eligible for redundancy pay

As one PGR highlighted, under normal circumstances, waged employees who have worked for the university for two years would not be able to have their job cut without a redundancy package. This is something that PGRs are trying to fight for, as one union rep highlighted:

> *"We want to get a GTA [Graduate Teaching Assistant] contract so that the status of GTAs would be that of an employee, which would also mean we would have access to things like redundancy pay and redundancy notice, which at the moment we don't get. Even in my institution, where we already have staff status, people in management didn't consider us as employees. So they just announced back in June that there would be a 15% cut to all faculties and a stop for GTA employment, but the GTAs were actually the last to know. So in employment law you would have the right to redundancy pay if you have two years of service. We brought that forward to them saying this policy targets specifically GTAs, which is unfair grounds – you can't just sack everyone. And they weren't prepared for it at all. They didn't even consider that we would have those rights."*

In addition, many PGRs were not treated as members of staff and were left out of communications:

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74   ECR9

75   Tax-free childcare is the latest government support for parents in the paid workforce who have childcare responsibilities. It is replacing childcare vouchers.

76   ONS (Oct 2019) Families and labour market; UK 2019 (http://bit.ly/34ekWbU)

77   ECR11

> *I had to get my, co-workers to forward me the emails they were getting, but then I couldn't access them because I didn't have a staff account to log on to it. So it was a complete pain, I had to rely on my co-workers telling me, you know, what I should be doing."*

Theme 3: Workload and working conditions

Long working hours

For some early-career researchers, the lack of hours in the day to conduct research led to them being up all hours of the night.[78] As one woman quoted:

> *I went to sleep at night at 4 am. So it was a really stressful time, I think. It was difficult."[79]*

The reason this woman was working during the night was because of the competitive nature of academia and wanting to take on even more work during lockdown, on top of caring for two children and her existing paid workload. For this woman, it was taking on a systematic review. There is a high amount of pressure that comes with the 'publish or die' mentality to remain competitive in a shrinking jobs market.

Some ECRs highlighted that they felt exploited by the expectation they would fill gaps left by senior members of staff. PGRs are on the lowest pay grade band in academia. Some were sprung with last-minute workload that they had not been trained for and did not feel confident with, like this first-year PhD student:

> *I think it wasn't until the end of May they were telling us that we're going to start marking and we weren't supposed to be marking because we were new, obviously only started in February. They originally said we weren't going to be marking but because of the situation, they just sprung it on us."[80]*

Emotional labour and 'academic housework' falling on women's shoulders

Much 'academic housework' is often expected or disproportionately assigned to women in academia. This is extra work which is not conducive to career progression, which includes being emotionally supportive to students. This burden of unpaid labour has been amplified since COVID-19, as more students need emotional support and there is less capacity from welfare services to meet demand. As one respondent puts it:

> *Emotional labour has fallen heavily on femme people. There has been little to no support in relation to my health conditions, as welfare capacity has stretched thin to reach those most in need."[81]*

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78   ECR7
79   ECR7
80   ECR4
81   Anonymous survey respondent

The switch to online teaching

> 66 *I've never taught remotely before. So that was completely new. I had to learn how to do that... I found it harder than teaching in person. Definitely."[82]*

As a result of the pandemic, universities have switched much of their teaching online. This process was described as chaotic, with little to no support. Teaching online required extra labour from staff who were already overworked, with no additional compensation. Women are more highly concentrated among teaching staff at universities. They are also assigned more introductory courses and counsel more students, including more students needing additional support.[83] Female academics report spending more time on teaching and public-engagement tasks, and less time on research, than their male counterparts, according to one recent survey of UK university staff in science-based subjects.[84] This means that the uptake in work related to the switch to online learning is likely to have had a disproportionate effect on women.

The switch to online teaching was not only new for teachers, but for students too. ECRs therefore had to deal with not only learning a new online platform themselves, but also being there to answer student queries, of which there were many:

> 66 *Teaching wise, it was very hard just to work out the technology alone, but also being inundated with emails by students who also didn't know how the new technology works, and I didn't know how it works."[85]*

The shift to online learning also impacted upon more senior members of female staff. As one ECR highlights, one member of staff could not deal with the switch to online learning and was suffering health implications from COVID-19. This led to an ECR losing her supervisor:

> 66 *My supervisor suddenly retired because she couldn't cope with being online. I was extremely stressed about that. I had to find another one in the middle of all this. And that was tricky because she was really the only person with the right expertise for my project."[86]*

This demonstrates that not just ECRs have been impacted by the switch to online learning, but that those who are more comfortable in their careers can leave their online teaching workload to more junior members of staff. When those on permanent contracts are affected, this also has the ability to create ripple effects that indirectly impact upon ECRs.

One woman had given up her second job to focus on her PhD, her teaching role and on raising her children. However, she then found that due to the increase in extra hours expected of her, this simply used up the two days a week that she had taken up – but with no additional pay:

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82   ECR10
83   Natue Trend Watch (Apr 2017) 'Teaching load could put female scientists at career disadvantage'. (https://go.nature.com/2TKcqhF)
84   Ibid.
85   ECR10
86   ECR12

> *I had to move online; I had to do lecture recordings; I had to do video editing; I had to redesign all the curriculum. So in actual fact, after about Easter, I would say maybe April, May, I then had to use the two days that I don't officially work, to work because I had all these curriculum changes to make."[87]*

This illustrates how women who have elected to have more flexible timetables and have decided to take on less work to fit with their lives, are the ones more likely to have to take on extra unpaid workload when it arises. Those with permanent contracts may be less likely to be taken advantage of in this way.

Taking on extra work to secure employment due to precarious contracts

Respondents reported that they were fearful of losing their precarious fixed-term jobs and therefore some took on permanent contracts so that they could be guaranteed employment in the new year. They also spoke of going for roles that they felt unqualified for, that they would not have felt that they had to apply for was it not for their fear of losing teaching hours due to the impact of COVID-19 on precarious contracts:

> *I went for that job because of Corona. Because I thought, 'Right, I am not guaranteed those associate lecture hours in September. They might not happen. I need to get something permanent because I need some income – I'm doing the PhD part time and I'm self-funded.' I was on a precarious contract. I knew the other roles weren't going to come out into a contract."[88]*

The fact that this ECR had to take on a role in an area she was not familiar with led to a further workload: *"It's not an area that I'm really comfortable in so I'm doing extra work to feel comfortable."[89]*

Additional work involved with unionising

For PGRs that took it upon themselves to unionise and fight for their rights, this took up much of their time and was described as emotionally draining. Equality committees and union reps are by virtue comprised of those that they represent. This however entails extra unpaid work that minorities often must undertake to represent their own interests. As one PGR highlights:

> *I'm just doing a lot of union meetings, a lot of meetings with groups, rewriting motions for improving the PGRs representation within the Union as well and trying to mobilise PGRs. So we're writing minutes and all kinds of things – that's taking a big amount of the time that I would probably usually spend as working hours. The amount of work that's piled up, it's bigger and bigger by the day."[90]*

87   ECR9
88   ECR19
89   ECR19
90   ECR20

Respondents also expressed fear that their union demands and strikes earlier in the year may have lost momentum due to COVID-19. But these issues remain just as important:

> *We're still continuing with the fight around those issues, but it's just really difficult to imagine voting for strike again, in the middle of all this... those issues are incredibly important, you know, especially the issues around casualisation, gender pay gap, like, those are still so chronically important in the sector. And it feels really sad that we've kind of lost that momentum around those issues."*[91]

Theme 4: Caring responsibilities

The survey asked the extent to which respondents were performing the majority of caring and household labour before and after the pandemic. Female respondents to our survey were more likely (78% before the pandemic and 82% afterwards) to be performing the majority of household and caring labour, than male respondents. The survey asked: 'To what extent would you have agreed with the following statement before the COVID-19 pandemic: "Within my household, I was doing the majority of domestic work"', and asked the same for after the COVID-19 pandemic.

While the average answer for male respondents was 'Neutral'; for female respondents this average was 'Agree', with this percentage rising yet further for women with caring responsibilities.[92] For some respondents their roles were seen as more 'flexible' and therefore there was an assumption that they would take on additional unpaid childcare:

> *As a mother working in a moderately paid but flexible job married to a husband working in a male-dominated field with higher pay but zero flexibility, I was expected to look after our children since lockdown"*[93]

All interview participants who had caring responsibilities cited care a key reason that their ability to conduct research fell.[94] As one woman stated:

> *I was probably getting 10 hours a week then compared to my normal 40."*[95]

The lack of hours to conduct research was tied to the lack of wraparound childcare, which previously had made their work possible:

> *My ability to work went down because I previously had childcare set up for five days a week, which they could not do this whole time."*[96]

As a result of the pandemic, some respondents lost their place at their university nursery due to stipulations that children could only attend one form of care:

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91   ECR6

92   It has gone for women from 3.6 to 3.7 for housework and from 3.3 to 3.4 for caring labour. For those women with caring responsibilities, it has gone from: 3.8 to 4 / 5 and for caring labour from 3.9 to 4.1.

93   Female Survey Respondent

94   ECR2; ECR3; ECR 7; ECR11; ECR12; ECR13; ECR18; ECR19

95   ECR12

96   ECR2

> *Our childcare comprised of two sets of grandparents, childminder and the university nursery. Because the childminder reopened much, much quicker than the university nursery did, in a smaller setting as well, we went with them. And then when the nursery opened up the university said that she couldn't come back because she was in two settings."*[97]

Others relied on grandparents for childcare, who were no longer an option due to shielding measures. Caregivers are faced with an impossible choice: either to accept support from older family members and loved ones, potentially placing them in danger and breaching official rules; or to give up their childcare place and thus their ability to work in their paid research capacity.

The dependence of young academics upon support networks such as this demonstrates how the ability of ECRs to perform their role as researchers over the summer months ultimately depends upon their family circumstances, household distribution of care, and income. When children are out of school, it falls upon their parents to financially manage this added cost. Academics who don't have family members willing or able to provide care will have to manage wraparound childcare during the summer months – the months when the research that is required to stay relevant in the 'publish or die' mentality of academia is done. This has a disproportionate impact on mother academics. Furthermore, working during daytime hours led to feelings of guilt due to not being able to provide care for her children at home:

> *I think I really felt for the kids really because they will let you know, because I'm at home and they want my attention."*[98]

For mothers who were working from home with small children it was difficult to create boundaries. This is in line with the Institute for Fiscal studies finding that mothers have much less 'uninterrupted working time' than fathers since the onset of the pandemic.[99]

Not only this but even returning children to their previous childminders now presents moral dilemmas, as some childminders are also at a high-risk category. Childminders, along with other frontline people-facing key workers, are at a higher risk of catching coronavirus. There are over 3 million people in jobs at high risk of exposure to COVID-19 in the UK – 77% of them are women. Over a million of these workers are low paid – 98% of them are women.[100] Working mothers, such as those that were spoken to as part of this research project, were faced with a moral dilemma. They desperately need childcare but simultaneously do not wish to place childminders who fall into the high-risk category at further risk. As one woman highlights:

> *Initially, our childminder didn't reopen. And we were completely on board with that because it felt like a disproportionate risk. She's an older woman. And she's a black woman as well. So it kind of felt like she was in a higher risk group relative to everyone else, you know? And we are in London."*[101]

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97   ECR9

98   ECR7

99   IFS (2020): 'How are mothers and fathers balancing work and family under lockdown?': (https://bit.ly/2HFpFxn)

100   WBG (2020) Low paid women at highest risk of exposure to Covid 19: (https://bit.ly/2Ga5fw8)

101   ECR11

Impacts upon single parents

For those that were raising children alone, the strain was even harder. As one woman shared:

> 66 *I'm a single parent with two kids and three dogs. And so everything fell on my shoulders."*[102]

Impacts of home-schooling

As research by the Institute for Fiscal Studies has shown, since the pandemic, mothers have taken on a greater share on unpaid housework and caring responsibilities than fathers.[103] Having to home-school children was another burden that made working from home during school hours impossible. Whereas usually term-time allowed parents respite from some childcare demands, home-schooling under lockdown meant that the opposite was true.

> 66 *It was all this home-schooling that suddenly had to be done, you know. And so, suddenly, I went from having these large windows within which to do a lot of my work, to finding myself having just tiny amounts of time, and even when I had time, I found it really difficult to concentrate – especially in the first few weeks and months because it was such a different world, different life. I found it really tricky to concentrate. So my workload went from full time to, you know, I would say less than 10% of what I did before."*[104]

Respondents that had to home-school their children spoke of the lack of support from their partners:

> 66 *I took on most of the responsibilities for that as my husband works shifts."*[105]

One respondent spoke of trying to leave aspects of home-schooling to her partner, only to have to step in to intervene when he was not teaching their daughter in a way that she could understand. This separation between roles that women and men are naturally 'good at' may seem benign, but such gender role separation can trigger women to take on more work long-term in the household, to the detriment of their paid jobs. Teaching and raising small children has historically been an activity considered 'women's work' and has thus been devalued and not appropriately compensated. Under lockdown, the role of home-schooler has fallen on women's shoulders, especially those who are ECRs due to their 'teaching experience' (even if of adults, not children).

Caring for elderly parents

Some women who are early-career researchers are 'sandwiched' between responsibilities for both their children and their parents. Elderly parents are particularly at risk from COVID-19 and,

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102   ECR3
103   Andrew, A., Cattan, S., Dias, M. C., Farquharson, C., Kraftman, L., Krutikova, S., ... & Sevilla, A. (2020). Parents, Especially Mothers, Paying Heavy Price for Lockdown. London: Institute for Fiscal Studies.
104   ECR19
105   ECR19

if shielding or ill, may require extra help from their adult children. One woman ECR highlighted that she felt that the expectation of being a 'dutiful daughter' and caring for her mother was a gendered phenomenon that males in her department did not seem to be impacted by:

> *Particularly men don't seem to have quite the same sort of complexities in their life that I feel like I've got at the moment".[106]*

Increase in housework

Aside from home-schooling and care responsibilities, the volume of housework also increased as a result of families spending 24/7 in the home. One single mother describes the hectic nature of her life, and how every single aspect had increased in intensity, ranging from schoolwork, to cooking and cleaning, to washing clothes, to helping the neighbours:

> *So you end up shopping not just for yourself but for various neighbours and then you go and you make sure everyone's fine. And so it really was very, very busy, very busy."[107]*

Theme 5: Lack of support

Lack of understanding by male colleagues: "Well, you can't have your cake and eat it"

One woman shared her story of how she had been working on a project voluntarily for six years, and an opportunity had finally come up to write a book chapter on the topic. However, her supervisor suggested she delegate the work. He also questioned why the woman, as well as another single mother in the department, had not produced more work under lockdown:

> *I said, 'Me and her have both been stuck at home with the kids. We haven't been able to do anything.' And his comment was, 'Well, you can't have your cake and eat it.' And I was so angry, I'm still really angry about that and I just – more angry I didn't have a better response. I just said, 'I think that's unfair.' I said, 'What are we supposed to do, let, just get shafted, and let everyone-' He said, 'Well delegate it.' I said, 'Why? I've worked as a volunteer on this project for about six years. Why when we're now writing a book chapter, should someone else do it?' It just upset me that he can't see that."[108]*

Women also spoke of the frustration of male colleagues in superior positions to themselves, not having empathy for their situation:

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106   ECR13
107   ECR3
108   ECR18

> ❝ *I have two male supervisors. My main supervisor I had some communication with but he had very little sympathy for me. At one point he said, 'Well it was your choice to have a child so?' And I said, 'Yeah, but this is not normal.' And he said, 'Well, what is normal?' And I just thought, well, not a pandemic. Yes I did make a very conscious choice of a child, with a supportive partner, with all the money I saved for childcare but none of that is there for me at the moment, and that's no one's fault, but certainly not my fault.[109]*

Loss of office environment and lack of assistance with setting up working from home (WFH)

Younger, unfunded students with less disposable income or with care responsibilities were much less likely to have a suitable workspace. This is likely to lead to an exacerbation of inequalities, with those who do not have a spare room available facing worse impacts from the transition to WFH. The lack of support for working from home was seen as a reflection that PGRs are not considered proper members of staff, and deprioritised:

> ❝ *I would like them to assume that the work that I do as a PhD researcher is just as valuable."[110]*

This impacted ECRs financially due to the added costs associated with working from home.

The lack of financial help for students to set up a work-from-home office caused a considerable amount of stress. For students already on the equivalent of minimum wage, they cannot afford the extra outgoings:

> ❝ *Equipment like buying a keyboard and a computer stand and stuff like that. There was no kind of financial help... or a desk, I've had to buy a desk. So actually, they are financial costs and the university are just like, 'No, we can't afford to do that.' Well – they would have been paying me to be in an office, like I do have office space, but I'm not there. So that's saving them some money. Probably a keyboard wouldn't cost them very much. But it does cost me, you know. So I think that's been quite hard."[111]*

For some, risk assessments confirmed that their work-from-home set-up was not safe, only for nothing to be done about it:

> ❝ *Three weeks ago, I finally got an email where I was told that I should do a risk assessment for working from home. I had to do this health and safety thing, where I was told my working space is basically not safe. But that was like three weeks ago, and there's nothing. I told them my working space i's not safe and I'm working from the sofa. I'm working from the kitchen table and so forth. But obviously, there's no resources for us to change any of that."[112]*

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109   ECR18
110   ECR20
111   ECR5
112   ECR20

ECRs with less money are less likely to have a spare room to use as an office space. The experiences of one woman in a house-share:

> *I don't have a working space in my flat. I'm living in a shared house. So that makes it difficult, like at the moment I'm working in the kitchen. But that needs to be timed so people can get to go to the lunches and stuff – if too many people online are having meetings, the internet breaks down. Sometimes I have to work in my bedroom, which has not been good for me at all. I really need that separation of work and life.*"[113]

For women with families, having a WFH office was not possible:

> *I'm in the living room and the kids at home, I can't tell them to leave, because it's our living room. So that's been difficult with the workspace*".[114]

Again, these impacts are compounded by class and income:

> *We live in a three-bed semi, so all the rooms are occupied. I usually work in the conservatory. And with other people at home it's the highest traffic area because it's right there in the kitchen and everybody's always in the fridge. So that's been quite distracting.*"[115]

The prioritisation of STEM subjects over Social Sciences and Arts

Returning to the office was something that also appeared to be occurring unequally. As one respondent highlighted:

> *Many researchers are being encouraged to do online interviews/ ethnography, but I feel that less attention and care is given to people whose work is completely dependent on face-to-face, prolonged and intimate engagement with people. There is almost a feeling that this kind of research is less important compared to research conducted in labs or through other quantitative methods, and less consideration is given by universities and funding bodies to researchers who are doing this type of work and the stress they might be going through.*"[116]

This problem was also highlighted in interviews[117] and feeds into broader discussions surrounding the prioritisation of STEM subjects over Arts, Humanities and Social Science subjects by the UK government.[118] This 'STEM agenda' is gendered, with women making up the majority of 'non-science' post-graduate research degrees[119] and men making up the majority of 'science' post-

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113   ECR20
114   ECR7
115   ECR9
116   Anonymous survey respondent
117   ECR5
118   See for instance prioritisation of UK government of STEM in education: (https://bit.ly/2TAxVS9)
119   22,495 women to 18,455 men. See Higher Education Statistical Analysis (2020): (https://bit.ly/33hIboa)

graduate research degrees[120]. The favouring of lab-based research over other kinds of face-to-face research is something that will have gendered repercussions due to the above separation in subjects pursued by men and women.

Adapting the work-from home environment for disabled ECRs

Disabled ECRs reported a lack of support for working from home. While students funded by the UKRI were eligible for certain adjustments when working from their offices on campus, these are no longer available due to an inability to conduct home visits. This had led disabled students without the necessary equipment to work from home:

> ❝ *I'm unlucky in so far as the equipment that I need, I don't get. I am disabled. I need those adjustments. But the ESRC home assessments were stopped because you can't have the in-home assessments. I didn't get bits of equipment for three months. So by that time, I had to go out and buy the equipment because otherwise I would not be able to work. But the institution itself was pretty useless. We heard very little.*"[121]

Lack of support for PGRs who are non-UK residents

PGRs who are non-UK citizens depend upon their student or staff status to remain in the UK, but uncertainty regarding future employment and a lack of extensions for some, have led some PGRs to be forced to leave the country. International students also have a limit on the number of hours they can work and no recourse to public funds, so if their funding runs out, they have no option but to rely on the generosity of others or to leave the country. As one of our respondents highlighted:

> ❝ *If you're not a UK citizen, some agencies require you to have a UK-based grantor or you have to pay six months in advance of the rent. Then it's really important that you have this employment status or student status. So if that's interrupted, that creates more cost and insecurity. I know one person, that because the institution was too slow to extend her student status, she was asked to leave the country by the end of the month for 12 months to be able to come back and apply again. Even though her programme is ongoing.*"[122]

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120   32,545 women to 39,075 men. See Higher Education Statistical Analysis (2020): (https://bit.ly/33hIboa)

121   ECR5

122   ECR20

4. COVID-19 impacts for women ECRs

This chapter highlights the key impacts of COVID-19 on women early-career researchers. These vary from impacts upon mental health and physical health to impacts upon productivity.

Impact 1: Mental Health

> *Financially, emotionally, physically, it's been exhausting."*[123]

Conducting a PhD is a difficult task, with indicators of positive mental wellbeing much lower among graduate students than in the general population.[124] From our interviews and survey responses, it is clear that feelings of guilt, isolation and uncertainty are combining with an overwhelming amount of work, an expectation to remain competitive in a shrinking jobs market and an inability to switch off, leading to burnout among many ECRs.

Existing research into the impact of COVID-19 on mental health

> *The current generation might be facing the most severe career and health crisis so far.'*[125]

It is well-established that COVID-19 has had a negative impact on the mental wellbeing of the general population. Uncertainty about the future, isolation and financial difficulties have increased feelings of loneliness, anxiety and stress among both men and women.

However, young women, especially those with caring responsibilities, has been one of the hardest hit groups in the UK population, which has exacerbated existing inequalities in relation to mental health.[126] As previous analysis has shown, a third of women compared with a quarter of men have reported being highly anxious since the onset of COVID-19 (8 or above on a 0-10 scale).[127] 46% of mothers of younger children report anxiety above a 7/10 compared with 36% of men (and 32% of women and 24% of men who are not parents of young children).[128] As data from the Office for National Statistics has also found, adults under the age of forty who are female, unable to afford an unexpected expense or disabled were the most likely to experience depression during the pandemic.[129]

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123 ECR13

124 T. M. Evans et al: 'Evidence for a mental health crisis in graduate education'. Nature Biotech. 36, 282–284; 2018

125 Nature (2020): 'Postdocs in crisis: science cannot risk losing the next generation': Nature Editorial

126 IFS (Jun 2020) The mental health effects of the first two months of lockdown and social distancing during the Covid-19 pandemic in the UK. (https://bit.ly/3cWryzJ)

127 WBG (2020) Half of parents with young children 'struggling to make ends meet'. (https://bit.ly/2Mmrb6V)

128 Ibid.

129   ONS (2020) Coronavirus and depression in adults, Great Britain: June 2020. (https://bit.ly/2HPGyWB)

In addition to this analysis, specific research has been conducted into the impact of the pandemic upon early-career and doctoral researchers. As documented by one worldwide study of more than 7,600 post-doctoral researchers (across 19 disciplines and 93 countries), 23% of respondents said that they have sought help for anxiety or depression caused by their work, and a further 26% would like such help.[130] However, this data has not been stratified according to sex or other protected characteristics.

Narrowing the focus down to the impact on UK post-graduate researchers, 'Pandemic PGRs' found that in their survey conducted with over 700 participants across all years, disciplines, and nations in the UK[131]:

- 81% reported experiencing stress

- 60% are facing mental health difficulties

- 50% reported facing financial concerns

These results also support the early findings of The Student Mental Health Research Network (SMaRteN)'s research into the impacts of COVID-19 on doctoral researchers and research staff. SMaRteN, together with Vitae, conducted a survey of over 6,000 early-career researchers across the UK – finding that 88% of respondent were experiencing at least moderate mental distress. Half of respondents report being very stressed about their work, two thirds very worried about their future plans and 70% worried about their finances. They found that predictors of worse mental wellbeing following the pandemic include being female; having 'student' rather than 'staff' status; and also having a disability.

While there have been quantitative studies into the impact of COVID-19 upon the mental health of PGRs, there is currently a lack of data that is able to analyse the links between COVID-19 and gendered mental health outcomes among early-career researchers, due to the pre-existing inequalities related to gender and mental health. There is also a lack of qualitative studies that identify pathways between cause and effect. Our qualitative interviews, combined with responses to our survey, bring to light the reasons that lie behind the poor mental wellbeing of women in academia.

Report findings: drivers of poor mental health among ECRs

Among the ECRs who responded to our survey, 89% reported feeling an adverse impact of the pandemic upon their mental health, which remained constant across women and men. While COVID-19 is likely to have impacted the mental health of all PGRs, certain structural inequalities may mean that there are different drivers behind men and women's experiences.

To better understand cause and effect, the interviews followed a narrative approach to reflect upon aspects such as work/life balance, aspirations for the future and mental and physical wellbeing before and after the pandemic. The following key reasons for poor mental health were identified:

130   Nature (2020): 'Postdocs in crisis: science cannot risk losing the next generation': Nature Editorial

131   Pandemic PGRs and UCU (2020): 'Survey Summary report: GTAs are workers too'

Loss of the office environment

The loss of office environment was something that was found to exacerbate mental and physical health issues among early-career researchers. This is something which has hit women particularly hard, as they are faced with a disproportionate share of household labour and childcare, as well as facing increases in paid work. These factors lead to the home environment being particularly disruptive and not conducive to work, which led to feelings of guilt and overwhelm.

Lack of separation between work and home life

The lack of separation between work and home life caused distress for many ECRs. Workers in all sectors will be coming to terms with working from home, but the nature of research work, which is inherently personal, has led to many ECRs feeling particularly overwhelmed and unable to create boundaries. It has left some despondent about the sustainability of this workload long-term:

> *What I do really find is everything is melded into one. It's incredibly intense, because research never has a natural end, right? There's always more that can be done. And because there is that personal responsibility for it as well, unlike other work. I'm a little bit nervous about how I do this sustainably for the next period, how to actually take time off that is meaningful and restorative, as opposed to just do all the things with the kids that I need to do. When you do everything at home, there's no boundaries."* [132]

This also has ramifications for the personal relationships of ECRs. Survey respondents were candid about the impact of COVID-19 on their relationships, with many citing breakdowns in relationships due to the pressure of the pandemic. This is also likely to have an impact on concentration levels and affect the emotional resilience required to conduct research.

Growing tired of the balancing act

One participant reflected on how her inability to work from home was tough mentally:

> *I think when you're constantly trying to do little bits but making no progress, I found that really tough mentally – to kind of keep saying to myself, 'You doing all right', because I didn't feel I was. I felt like I was achieving nothing every time that I did get to do something."* [133]

Lack of time for self-care

Some women found that their increased workload and lack of separation between work and home life also led to them losing time previously reserved for self-care, which is essential to the emotional well-being and resilience of ECRs:

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132   ECR11
133   ECR18

> *Before, weekends were me-time. Monday to Friday after six I'd be home, I didn't do work from home, I would just do my own things. But now everything is muddled."*[134]

Feelings of guilt

Feelings of guilt were highlighted as twofold: firstly, interview respondents highlighted feeling guilty that they were not producing enough work:

> *I feel really guilty about it like, 'Oh my god, I should have done more, I should have been more productive.'"*[135]

However, respondents also did acknowledge that if they been in the office with a clear separation between work and home life, access to their research materials and more structured days, they would have been more productive.[136] These feelings of guilt are thus directly linked to the poor working conditions of students and their lack of access to a positive working environment in which they can concentrate. However, it is leading to students feeling that the consequences of poor university practices are their own fault.

Furthermore, respondents who had lost elements of their paid work due to the pandemic felt guilty that they were not spending it in the most productive way. They were so used to always being 'on' and having to remain competitive, that they could not switch off and felt guilty even about the way that they were spending their spare time:

> *It just feels like a really unproductive way of spending time".*

The second key element of guilt was related to home life. Working mothers expressed guilt that they weren't spending enough time with their children; guilt that they weren't helping their partner enough around the house; guilt about sending their child back to nurseries, childminders or grandparents, and guilt that they were not home-schooling their child adequately. All of these feelings of guilt combined will be contributing factors to the high levels of anxiety experienced by ECRs. As the tagline for the international forum for academic mothers, 'Momademia' puts it:

> *Why feel just academic guilt or mom guilt when you can have both?!"*[137]

Isolation

> *A PhD, as everyone keeps saying, is a lonely journey, but with this, with these circumstances, it's even worse."*[138]

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134 ECR15
135 ECR20
136 ECR20
137 www.twitter.com/Momademia
138 ECR14

The loss of a social support network is something that has been hard for everyone and PhD researchers have reported feeling particularly isolated. PhD researchers often have little-to-no contact with colleagues or supervisors and rely upon creating their own support networks in person, via sharing an office or social contact with others in the department. With nobody checking in on them and a lack of communication from their department, some students report feeling *"trapped"* and completely alone. As one interview participant describes:

> *If you are in a company, you will have continuous calls and continuous meetings, but for us, we need to ask for supervision meetings, we need to initiate all the coordination and meetings and communication. The staff are too busy.*[139]

Many interview respondents[140] highlighted that nobody checked in with them to see if they were okay:

> *Nobody from my team phoned to make sure I was okay. I've had no one-to-ones.*[141]

This complete isolation from others has led to reported feelings of loneliness and depression. These feelings are exacerbated for international students, with family abroad:

> *My family are abroad and I have been unable to see them for the best part of a year so far. Beyond this, ECR friends are dispersed around the country and abroad and so I have been unable to see them too.*[142]

This holds implications for equality in the academy, because existing research shows that isolated female students are more likely to drop out of PhD programmes.[143]

Fear of a lack of understanding from male colleagues

One ECR found the shift to working from home difficult due to circumstances in which she was being harassed and stalked, making her living situation unbearable. However, she did not feel comfortable disclosing this with her supervisor:

> *I hadn't raised the issue with my supervisor because it was a subject I don't think he'd be particularly comfortable talking about.*

This demonstrates the need for no-evidence requests for extensions and highlights the inequalities that will arise from the existing 'case-by-case' approach to funding extensions. Individual cases are liable to be impacted by unsupportive supervisory teams or by individuals who are uncomfortable disclosing personal circumstances.

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139 ECR14
140 ECRs 1; 4; 6; 10; 12; 14; 18
141 ECR1
142 Anonymous survey respondent
143 Bostwick and Weinberg (2018) 'Nevertheless She Persisted? Gender Peer Effects in Doctoral STEM Programs'

Losing the practical aspects of the PhD that made it enjoyable

For many PGRs, the practical element of their PhD role was their primary reason for conducting it at all. This was eliminated due to COVID-19:

> **"** *I think part of what attracted me to the PhD is that it was practical, and it was about learning. So it wouldn't just be desk-based, though now it is entirely desk-based."*[144]

This feeling of disillusion with their role has led to lower levels of job satisfaction and for some, it has made it harder to stay motivated.

Working overtime and losing due holiday

Many departments and supervisors were highlighted as saying the right things such as reminding ECRs to take time for self-care. However, these reminders are not accompanied with an easing of workload or deadlines. Correspondence about taking time off was perceived as empty words without demonstrable action towards reducing the workload and pressures that ECRs face. As one ECR with children highlights:

> **"** *I'm running three separate research activities doing data collection and I'm having no summer holiday. Of course, my supervisor is like 'Make sure you take two weeks off'. And I'm just, like, 'No, that's not a thing'. He is wonderful, but he doesn't have his own kids."*[145]

High expectations of PGRs to be using the lockdown 'productively'

As if early-career researchers weren't facing enough pressure to balance their high workload, some reported that the communications they received from their universities put further pressure on them to be extra productive under lockdown, to remain competitive. As one ECR shared with us:

> **"** *It was horrific, all students got this email. It said that employers will be looking at what your CV says you did during lockdown. So make sure what you spend your time doing in lockdown is really productive. Try learning a new language or a new skill or do this and do that. One of my friends has got three kids and she had to start caring for her elderly grandmother at the start of lockdown, and I was, like, 'You're telling her that she needs to worry about a CV, and also finishing a PhD?' Suddenly she's teaching three kids and looking after a grandma and it's just sickening. It was so thoughtless."*[146]

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144   ECR17
145   ECR11
146   ECR10

This compounded the stress experienced by women when being the primary caregiver and being expected to continue as normal. For those that did try to continue their usual level of productivity, they soon found that it was unsustainable:

> " *I think immediately you try and carry on as you were, but just with the child. So that became stressful really, really quickly.*"147

Stress related to health of relatives

One ECR highlighted multiple intersecting stressful situations that were occurring simultaneously related to the health of her elderly relatives:

> " *My mum's in a care home locally, and we weren't allowed to visit her after the 23rd of March. And so I've been very anxious about her. She's got dementia, my mother-in-law who's elderly and my dad was shielding in another part of the country. Then my sister's son had a respiratory problem and ended up in hospital and then my daughter broke her arm and so there were a series of really stressful things made more stressful by the fact that there was the lockdown and that I couldn't visit my mum.*"148

This intersection of both physical and mental health impacts of the pandemic upon family members would be a difficult burden for anyone to carry. But this is likely to impact women in particular, who due to gendered expectations often assume the caring role to parents as well as the role of emotional caregiver for family members. The emotional labour involved with caring for relatives was highlighted as creating an extra burden for the women ECRs that we spoke to, which they felt that they took on the lion's share of in their household:

> " *There's been a lot of anxiety about things like just keeping them mentally stable and making sure they're feeling secure and stuff. So there's a lot of kind of emotional work going on. Which the energy for that has to come from me.*"149

Uncertainty of future career

Uncertainty was one of the most often cited reason for stress in the qualitative answers to the survey, with many despondent about a future in academia.

The impact of previous mental health issues

Respondents were frank about the impact of their existing mental health issues in the survey due to its anonymous nature. Common answers highlighted the difficulties faced by those who had a history of OCD (Obsessive-Compulsive Disorder), anxiety, depression and eating disorders, all of which have been exacerbated and have combined to create a debilitating effect on researchers:

147 ECR18
148 Survey respondent
149 ECR12

> *Increased depression and anxiety resulted in days where I did not communicate with anyone or leave bed."*

For students who already have a history of mental health issues such as anxiety and depression, the pandemic has accentuated these existing problems, leading to a greater cumulative impact:

> *I already suffer from depression, but the inability to carry out research and uncertainty that this brings around completing my PhD has lowered my mood significantly."*

Anxiety, stress and uncertainty were some of the most commonly-used words in the answers to our survey. Of anxiety, the responses linked this to 'delivery anxiety' about being unable to accomplish even simple tasks, as well as anxiety related to uncertainty of future prospects. One participant described the lockdown as putting them *"in the pit of despair"*.

Impact 2: Physical health

Respondents highlighted the linkages between both physical and mental health, with poor physical health impacting upon respondents' ability to work and this spurring negative feelings. For some, this was a consequence of a more sedentary lifestyle and isolation:

> *I think mainly the impact of a more sedentary lifestyle has impacted both my mental and physical health. Furthermore, I didn't appreciate how the little daily conversations with other students/co-workers impacted my mental wellbeing and motivation to work."[150]*

For some, it aggravated prior injuries, leading to debilitating levels of pain:

> *Closure of swimming pools has exacerbated back pain to crippling levels. Though this a problem with my physical health it makes me feel depressed because I am in pain all the time."*

For others, this period was characterised by a rollercoaster of emotions, which have impacted the physical through damage to the mouth and sleep deprivation:

"Honestly, it's been all over the place, a proper rollercoaster. Depression, anxiety, happiness, comfort, insecurity, worrying, fears. Find myself clenching my teeth constantly, causing damage to my mouth. Sleeping affected. Concentration out the window, which again leads to depressive episodes and anxiety and pressure."[151]

COVID-19 health complications

For ECRs unfortunate enough to have experienced COVID-19 symptoms, they reported that this further exacerbated feelings of guilt due to their reduced ability to conduct research. However, respondents again reported no respite to the high volume of work required.

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150   Survey respondent
151   Survey respondent

PhD researchers who developed COVID-19 health complications were not afforded the same rights as workers and they are not eligible for such Statutory Sick Pay or leave.

Those that did experience severe health complications from COVID-19 were more likely to have to take time out and were less likely to be able to return to work. One interviewee shared her experience of persisting consequences following COVID-19:

> *I actually ended up blacking out, which means that currently I'm unable or not allowed to drive, which means getting to campus itself is going to be very, very hard. So I actively took the decision that I don't want to be going back on campus now – certainly not to just to teach an hour here or there. Absolutely not. I need flexibility because I'm not well."*[152]

COVID-19 also had lasting implications, not just for the immediate availability of affected ECRs to teach but also for their long-term capacity to complete their research:

> *I was unwell for a good couple of months. So it knocked at least two months out of my research."*[153]

This means that existing health inequalities reflected in the ECR population have the potential to transform into more permanent inequalities in academia due to its impact on ECRs' ability to conduct research and also their experience of teaching.

One respondent highlighted a health inequality that has previously not been addressed: the added impact of menopause upon female ECRs. She shared how the impacts of COVID-19 upon her ability to concentrate have been compounded by the effects of menopause, and ultimately have led to her feeling unable to continue from PhD to early-career stage:

> *Menopause has hit me as well. So there has been this ongoing battle between what I was supposed to be doing and then what I'm actually physically able to, and getting unwell and things like that. So last year, I got sick, I got very sick without control. Obviously menopause has been a big part of that."*[154]

Impact 3: Productivity

Ability to conduct research went down

In answer to our survey, 84% of respondents believed that the COVID-19 pandemic has impacted upon their ability to perform their job(s) as an ECR to the standard expected. There was not a significant difference between the answers of men and women.

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152   ECR11
153   ECR11
154   ECR13

Difficulties concentrating

It was difficult to focus on work in the new working environment. Conducting a PhD is a solitary task, with a lack of short-term targets and accountability. PhD students nonetheless benefit from a peer support network when working with others in an office environment. However, at home, PGRs lacked support and structure, with ramifications for productivity levels. As one woman stated of her inability to conduct research at home:

> *You can't be as productive at home, you can't do the research. You can't push out the publications. Because of household stuff, or new care and responsibilities you don't find the time to write alongside doing your PhD or conduct the research you're doing."*[155]

Another woman stated that the impact of the pandemic on her mental and physical health, on top of care and household responsibilities, had led to her inability to conduct research:

> *It's recognising that health-wise, eating-wise, routine-wise, exercise-wise – all of that was impacting on everything. And processing the impact on the world. To the stage now where I feel like I am behind even before I've started. Yeah, like how did that happen? I've had nearly since March, it's just luxury time to write. And I've managed to do 600 words."*[156]

One woman spoke of how difficult it is to dip in and out of deep thinking, especially for a subject such as statistical analysis:

> *Anyone who studies knows you can't switch it on and off. You know, you sit there for an hour going 'Oh, where was I?'. And at that point, I was doing statistical analysis. For me, it was really hard to dip in it. You know, it was really hard to teach myself to run this model, so I found that really difficult."*[157]

Quality of work went down

The combined impacts of a lack of concentration and increase in paid and unpaid work led to a fall in self-perceived quality of work for our interview participants:

> *I know I handed in one chapter to my supervisors, because we had a deadline and I wanted to stick to it. I've already changed it once. I was so unhappy with the chapter I submitted."*[158]

Some allocated this to the fact that as time went on, the struggles of juggling caring responsibilities with working hours became too much:

> *I do think that over time, I got more and more tired."*[159]

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155   ECR10
156   ECR16
157   ECR3
158   ECR3
159   ECR3

CONCLUSION

Existing data shows that young women have poorer mental health than the general population and that graduate students also have poorer mental health than the general population. Non-gender-stratified data has shown that ECRs both internationally and nationwide are suffering mental health consequences of this pandemic. Our interviews have sought to pull out the exact reasons behind the mental health consequences of the pandemic. Some of these issues may affect all ECRs, such as uncertainty about their future careers. However, some of these effects will be greater for people who lie at the intersection of multiple categories of disadvantage.

In particular, these qualitative responses have highlighted that those with pre-existing mental health issues have been hit hardest, with accounts of flare-ups of OCD, anxiety, depression, eating disorders and PTSD all common. In addition to this, the burdens of juggling caring responsibilities with research work is leading to a generation of researchers who feel guilty, overworked and overwhelmed.

Because of the bottleneck in permanent positions in universities, fierce competition leads to a 'survival of the fittest' – but instead of the most promising academics making it past the early-career stage, those that 'survive' are likely to be those that are resilient.

Findings show that those who are less impacted by the pandemic are those that are male; who do not have primary caring responsibilities; who are not disabled; who do not suffer from any prior mental health issues; and who are in fields with secure job prospects such as the Medical Sciences.[160] This is likely to entrench inequalities along class, gender, race and disability lines.

As the head of post-graduate education at the University of Exeter has written of what is expected of early-career researchers during the era of the pandemic: *"PGRs will need to be flexible, adaptable, resourceful, patient and independent."*[161]

But the level of flexibility and adaptability that PGRs are able to undergo depends on their home circumstances and competing responsibilities. Feelings of failure are common among PGRs when they do not live up to their own perceived standard of excellence. However, when the 'ideal type' researcher upon whom they base their own expectations is unattainable, this leads to widespread, and unconstructive self-criticism.

The ideal-type researcher that ECRs seem to have in their mind is in line with research that demonstrates that the 'ideal type' researcher is a male construction.[162] This 'ideal' researcher has no children, no caring responsibilities for elderly relatives, is geographically mobile and able to produce a higher volume of work than usual, while working from home during a global

160   SMaRteN study (2020) Impact of COVID-19 on doctoral researchers: (https://bit.ly/2Sdc6aw)

161   McRae, A: '2020 made us too: the pandemic postgraduates.' WonkHE. (https://bit.ly/2ScUQT2)

162   Inge L. Bleijenbergh, Marloes L. van Engen, Claartje J. Vinkenburg, (2013),"Othering women: fluid images of the ideal academic", Equality, Diversity and Inclusion: An International Journal, Vol. 32 Iss: 1 pp. 22 – 35

pandemic. When ECRs are not able to fulfil these high standards they expect of themselves, this leads to feelings of worthlessness.

However, it is in the interests of universities to not lose a generation of bright academics. Poor levels of mental wellbeing are directly linked to leaving the sector: as a recent global survey conducted by Nature found, 51% of respondents have considered leaving active research because of work-related mental-health concerns.[163] As they too conclude, it spells trouble for discovery, knowledge and invention if so many people are deciding that they have no future in academia.

163   Evans, T. M., Bira, L., Gastelum, J. B., Weiss, L. T., & Vanderford, N. L. (2018). Evidence for a mental health crisis in graduate education. Nature biotechnology, 36(3), 282.

RECOMMENDATIONS

COVID-19 has collided with a sector in crisis. Increased casualisation and precarity in academia has hit early-career researchers without permanent contracts the hardest. As this report has highlighted, COVID-19 has negatively impacted the work-life balance, mental health and future job prospects of PGRs and particularly women, exacerbating pre-existing challenges relating to paid and unpaid workload, uncertainty and structural inequalities.

Women were already at a higher risk of dropping out of academia, with one report released prior to the pandemic finding that only 12% of third-year female PhD students wishing to remain in academia.[164] Women across all professions are at a higher risk of burnout since the pandemic, with McKinsey's annual study of women in the workforce finding that one out of every four women is considering dropping out altogether or cutting back.[165] from the struggle to combine their paid and unpaid responsibilities, at work and at home. The completion rates of PhDs are lower among women of colour. If universities and the UK government are serious about tackling inequalities related to gender, race and disability in academia, mental health of their PGRs needs to become a priority. Given that the causes for stress related to being an ECR following COVID-19 primarily fall into the categories of finances, workload, uncertainty and feelings of failure or inadequacy, this report recommends that these be tackled in the following ways:

1) **A proper contract for PGRs.** Having a contract and labour rights would reduce financial pressures and uncertainty and regulate workload for post-graduate researchers. Having a proper contract would mean that mothers are eligible for childcare support, that they can pay into a pension and that they are properly represented by their union. It also means that if PGRs lose their jobs they would be entitled to redundancy pay if they have been in their position for a qualifying number of years.

2) **Reduce the demands of a high workload.** A contract for PGRs would also help with this, by assigning a set number of hours for tasks each week, acknowledging overtime and ending the unpaid exploitation of labour. In line with the 'Four Fights' demands of the UCU, we recommend that PGRs are given a 35-hour working week, with a new approach to workload management, and adoption of the Health and Safety Executive's Stress Management Standards, or equivalent.

3) **Extend the length of short fixed-term contacts.** This will reduce uncertainty related to future employment for early-career researchers. We recommend that fixed-term positions of two years or less be replaced by longer-term contracts, in which post-doctoral students have time to breathe, grow and develop in their roles. This will also help students who cannot move around the country due to caring responsibilities.

164 Newsome, J. L. (2008). The chemistry PhD: The impact on women's retention. A report for the UK Resource Centre for Women in SET and the Royal Society of Chemistry, 1-38.

165 McKinsey (2020) 'Women in the Workplace 2020'. (https://bit.ly/35Haa0m)

4) **Gender / carer awareness training for supervisors.** Feelings of inadequacy and failure would be alleviated through improved communications, more understanding responses from male supervisors and empathetic management for those with caring responsibilities and home difficulties. Such training may help those without caring responsibilities to become aware of the difficulties faced by working parents.

5) **Availability of counselling and wellbeing support to PGRs.** A high mental health burden will have an equally high cost for the sector. There is a burgeoning mental health crisis that must be tackled together by the government and university sector, through a properly funded mental health service.

6) **Childcare support for those with caring responsibilities.** Wraparound care is not available for PGRs. Making childcare support available to PGRs and increasing capacity of nurseries by investing in care, would enable parents and especially mothers to progress in their academic career.

7) **Hardship funds.** We recommend that government money towards hardship funds is extended to reduce inequalities and to avoid the solidification of class divides.

8) **Encourage a support network to tackle isolation amongst PGRs.** Offer the opportunity for groups of PhD students facing similar challenges, such as parents, to meet online, talk or share childcare so that they do not feel that they are alone.

9) **Improved communication and respect for PGRs** so that they feel like they are being treated like staff. PGRs who are teaching should be included on staff mailing lists so that they are informed about teaching plans, access to PPE and campus study spaces.

10) **Actively support researchers to work from home.** Supervisors and management should check that researchers have the equipment, resources and software that they need to work from home. Researchers need support accessing resources, including journals, books, software and equipment. Advice and guidelines around effective remote working would be appreciated. Institutions should be providing training opportunities online, to prevent gaps in essential skills development.

Appendix 1. Intersection of inequalities: Key Challenges for different groups of women

For disabled and neurodivergent women, working from home holds further challenges. These include:

- An inability to concentrate due to disruption of routine and lack of structure.

- A lack of funding from the university towards working from home has left some disabled students in chronic pain and unable to work.

- Home-visits, required for assessing the needs of disabled students, have stopped. This has led to universities not offering any support or alternative to disabled students.

- Tokenistic health and safety self-assessments are done for PGRs to assess their home-working environment but no follow-up is given when working environments are deemed unsafe.

- Some disabled students are dependent upon flexible working contracts and occasional teaching is all they can manage. This means that their teaching contracts are the first to be cut and that they have no security.

- Some neurodivergent students require an office environment to work effectively but this is not taken into consideration when assessing who can come back into the office. Instead, research that cannot be done from home and STEM subjects are prioritised.

For BAME women:

- BAME women make up a higher percentage of casualised staff and teaching staff and therefore are more likely to be negatively impacted by cuts to staff.

- BAME women are more likely to take on extra unpaid work during the pandemic to remain competitive. They must work extra hard to be considered equal to the 'ideal' (white male) academic.[166]

- Emotional toll of the pandemic: as Wright et. al have written,[167] the anxiety surrounding the higher percentage of deaths for BAME people during the pandemic is likely to have an emotional toll, leading to a reduction in the ontological security required to produce quality research.

For non-UK citizens:

- PGRs who are not British citizens were further impacted by the distance between themselves and loved ones abroad.

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166   Bleijenbergh et. al (2012): 'Othering women: fluid images of the ideal academic'. (https://bit.ly/3kEyGWl)

167   Wright et al (2020) 'Equalities in freefall? Ontological insecurity and the long-term impact of COVID-19 in the academy'. *Feminist Frontiers*. Gender, Work and Organization. pp 2. (https://bit.ly/2Gll1V4)

- International students have a limit on the number of hours they can work and no recourse to public funds, so if their funding runs out, they have no option to rely on the generosity of others and/or have to leave the country.

- PGRs who are non-UK citizens depend upon their student or staff status to remain in the UK, but uncertainty regarding future employment and lack of extensions have led some PGRs to have to leave the country.

- As Ricardo Visinho, student advice Rep at LSE, writes: "This year alone I have seen students trapped in isolation for months because they could not afford a flight back home, racking up rent arrears, surviving on a single meal a day, or less. Students that are literally dependent on hardship funds, food banks and charitable donations to see it through from one day to the next."[168]

For women of minority religions:

- One woman spoke of how her experience of lockdown was compounded by the duration of Ramadan this year. It exacerbated feelings of isolation as well as tiredness related to the high, unrelenting workload during a period of fasting.

For women with caring responsibilities:

- There was a reduction in the ability of these women to conduct research under lockdown. This is likely to have lasting implications for women's career prospects in future due to 'publish or die' nature of academia.

- Women work throughout the night, due to caring responsibilities during the day.

- There is a lack of time for self-care leading to poor mental health.

- Six-month extensions due to no childcare arrangements currently may lead to women finishing in March rather than September, when no teaching hours are available. This has impacts for women's long-term financial plans.

- Some women face a lack of understanding from male peers, who view having children as the mother's choice and therefore not something that they should receive any concessions for.

For younger women:

- ECRs with less space in a shared house struggling to find room to work.

- Younger women report not being taken seriously, facing harsher criticism from students when teaching and being taken for granted.

- Women without caring responsibilities during lockdown have had to take up the extra (unpaid) workload left from those with caring responsibilities such as extra marking.

- PGRs sent 'like cannon fodder' into face-to-face teaching.

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168   Visinho (2020): International Students need our help. (https://bit.ly/3jk6U0F)

For older women:

- Older PGRs feel that academia is not geared towards people like them.

- Older PGRs who are settled cannot up and leave to different institutions around the country for new fixed-term positions.

- Older PGRs highlighted that they need to start saving towards their pension and they need the security that comes with work outside of academia.

- Some ECRs are more likely to need to take leave to look after elderly relatives.

- Older ECRs are more likely to be in a high-risk category (or have relatives who are) and thus need to shield. This places a higher onus on them for online teaching.

A final note on inequalities:

As one PGR rep highlighted, the pandemic has: *"created inequalities and really heart-breaking stories, horrifying stories for a lot of people – especially PGRs that are disabled or chronically ill or neurodivergent; especially for PGRs work on a visa and couldn't get funding – the amount of stress that created in the community, I think is immense."*[169]

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169   ECR20

Appendix 2: Methodology

This research consisted of a review of existing data and literature, followed by a survey which received 205 responses from across 52 Higher Education (HE) institutions across the UK.

This was supplemented by 20 in-depth qualitative interviews, conducted with PhD and Early-Career Researchers from across 15 Higher Education institutions across the UK.

A review of existing literature, along with data from two key recent and large-scale surveys highlighted the key challenges that already exist in the HE sector. This report seeks to provide in-depth findings to amplify the lived experiences of women in academia. This is to understand how COVID-19 may have exacerbated existing gender inequalities and other pre-exiting challenges in the HE sector.

The survey conducted for this study collected data on the distribution of paid and unpaid work within the household for ECRs before and after COVID-19 as well as questions relating the impact of COVID-19 upon research, mental health and inequalities.

It underwent beta-testing with PGRs and ECRs from the University of Exeter and other members of staff at the Women's Budget Group before being distributed via the Doctoral Training Partnership (DTP) and the WBG Early-Career Network mailing lists across the UK.

It should be clarified that the participants of this study were self-selecting, meaning that they chose to take part in the survey. Respondents who have strong opinions or who have had particularly negative experiences may have been more likely to participate in such a survey than those who felt neutral about the impact of COVID-19 or who had little to comment. Therefore, the results must be read in light of the fact that they might be slightly skewed towards more challenging experiences.

The survey was open to all, so that we could seek to understand any gendered differences. However, this cannot be said to be completely representative of the student body, as due to the nature of this study, there were more female respondents than any others.

A breakdown of the demographic of the participants of the survey and of the interviews can be found in the appendices at the end of this study, should anyone be interested in learning more about the validity or generalisability of the findings.

The interviews took a narrative approach, beginning by reflecting upon what life was like before COVID-19, before moving onto when the pandemic first hit, reflecting upon how their working life changed, including their ability to balance paid and unpaid work; their ability to conduct research or to complete their PhD on time. It reflected on the impact on their physical and mental wellbeing, as well as what could have been done differently by the university sector and by the government. The interview ended by looking to the future. It highlighted the feelings of participants about their career prospects, their optimism or pessimism for the future and their recommendations for the university sector and for the government moving forwards.

Interview Demographics

Of the 20 women interviewed, there was a mix of 15 different institutions from across England and Scotland. They have been coded for ease throughout the report referring only to 'ECR' and the number assigned to them.

ECR1: A woman in the North of England conducting her Doctorate in Education (EdD), who is also working as a teacher.

ECR2: A Scottish woman conducting her PhD research in Anthropology

ECR3: A woman in the South West of England who is conducting her PhD in Law but also lecturing and working as a research assistant, with two children.

ECR4: Woman conducting her PhD and GTA contract for 4 years and research assistant position too. In NHS Social science.

ECR5: Woman in the South West of England. PhD in politics, disabled and with a history of depression.

ECR6: Woman who is a Lecturer in Social Science in South West of England.

ECR7: This Scottish woman has a part-time fixed-term contract research role in the School of Health in Social Science. She is an international student and has two children.

ECR8: Scottish Research Associate, North of England.

PGR9: PhD + PBL + tutoring. With children in the North of England. Medical School.

ECR10: PhD + lots of teaching. North of England. Criminology.

ECR11: PhD + teaching + children + COVID-19 experience. South East England. Lots of voluntary roles too.

ECR12: PhD + PTA + children. South West of England. Research assistant work too.

ECR13: International student based in Scotland. Caring responsibilities for elderly relatives + 2 adult children. Mental health + menopause.

ECR14: Second year international student conducting a PhD with extra voluntary work. Also had Ramadan during lockdown.

ECR15: Vision Sciences. GTA (clinical) and PhD.

ECR16: Sociology. PhD + GTA + external engagement work. NE England.

ECR17: Collaborative doctoral partnership in London Area. PhD in Education.

ECR18: PhD student with teaching as part of contract + caring responsibilities. One day a week for son and one day a week working. Part-time. In environmental sciences.

ECR19: Permanent contract lecturing position + part-time PhD. North of England + 2 children

ECR20: PhD researcher + research assistant + union work. International (EU) student. Military protection. North of England.

Survey finding demographics:

Due to the nature of the mailing lists that were utilised, this survey collected data on more respondents from the fields of the Economic and Social Sciences, Arts and Humanities. However, this is by no means the only demographic, with many respondents also from STEM subjects.

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