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UKRI Covid-19 Student Consultation

Final report

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Table of Contents

1 Introduction

1.1 Background

Universities in the UK have been significantly affected by the Covid-19 pandemic and associated lockdown measures since March 2020. In recognition of the challenges faced by doctoral students during the pandemic, in April 2020, UK Research and Innovation (UKRI) announced that additional funding was being made available to fund extensions of up to six months for UKRI-funded final year doctoral students. These were available to students whose work had been disrupted by Covid-19 and accompanying restrictions. The funded extension policy specifically aims to mitigate disruption for students due to submit their thesis between March 2020 and March 2021. Requests for funded extensions for doctoral students submitting after March 2021 would be assessed on a case-by-case basis and funded in the first instance through grant underspend.

NatCen Social Research (NatCen) was commissioned by UKRI to conduct a qualitative study to understand doctoral students' awareness and experiences of the funded extension policy. The aims of the study were to understand:

- how Covid-19 has affected students' doctoral research and wellbeing
- mitigating strategies and support offered by doctoral students' institutions
- how the funded extension policy was communicated to doctoral students from UKRI, their institution and through other channels
- how the funded extension policy is being implemented in doctoral students' institutions

We provide a brief overview of the study methods (Section 1.2) and details of recruitment methods and achieved sample below (Section 1.3). We then present findings from the study in Chapter 2 according to four key areas: the effects of Covid-19 on students' doctoral research (2.1), the effects of Covid-19 on students' mental and physical wellbeing (2.2), students' experiences of institutional support (2.3) and students' experiences and views of UKRI's funded extension policy (2.4). In Chapter 3, we draw together key findings and recommendations from the study.

1.2 Methods

We conducted nine online focus groups with UKRI-funded doctoral students between July and August 2020. Focus groups were conducted online using Zoom video conferencing software. Each focus group was moderated by two researchers: a lead facilitator guiding the discussion, and a co-facilitator taking notes and providing technical support where needed. All focus groups were audio recorded and transcribed verbatim; students' informed consent for participation and the use of their anonymised data was sought before recording started. Ethical approval for the study was granted by NatCen's Research Ethics Committee.

While focus groups were the primary mode of data collection, individual interviews were offered to students who were unable to participate in an online group discussion (e.g. due to support needs), and students who preferred to discuss their experiences individually rather than in a group context. We conducted four interviews; these were conducted one-to-one via Zoom or by telephone and were also audio recorded and transcribed verbatim.

Data from focus groups and interviews were managed and analysed using an inductive and deductive approach to thematic coding and analysis. This involved identifying key themes of interest and drawing out any unanticipated themes that emerged from the data. We also conducted sub-group analysis according to key sampling characteristics (see Section 1.3 for more details).

1.3 Recruitment and sample

In order to include a range of students in the study, NatCen and UKRI agreed a purposive sampling frame based on the following primary sampling characteristics:

- Year of study (first year/mid-phase or final year)
- Discipline (Science, Technology, Engineering and Mathematics (STEM) or non-STEM)[1]
- Research mode (laboratory-based, involving fieldwork/data collection or desk-based)

We also aimed to capture a spread of students according to secondary sampling characteristics:

- Institution type (Russell Group and non-Russell Group)
- Gender
- Ethnicity
- Disability
- Age
- Caring responsibilities

UKRI sent invitation and reminder emails to a total of 914 students in July and August 2020. Students were asked to complete a short online screening questionnaire to allow NatCen to schedule focus groups based on students' availability and to include a range of students based on primary and secondary sampling criteria[2]. Seventy-six students expressed an interest in participating in the study[3], representing an 8 per cent response rate. Table 1 presents a breakdown of participant eligibility among these 76 students.

Table 1: Student eligibility for study

Eligibility	Number of students
Eligible – invited to participate in a focus group	54
Eligible – invited to participate in an interview	4
Eligible – not invited to participate[4]	8
Ineligible – screened out[5]	10
Total	**76**

Of the 58 students invited to participate in the study, 42 students attended focus groups and 4 students were interviewed, leading to an achieved sample of 46 students. This is just under the planned sample size for the study (48 to 64 students, based on 8 focus groups with 6 to 8 students each).

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[1] The sample contacted by UKRI consisted of a 75:25 STEM / non-STEM split, to broadly reflect the split of UKRI funding via STEM research councils (74%) and non-STEM research councils (21%). Calculated using 'Studentships – proportion and awardees', available from https://www.ukri.org/about-us/equality-diversity-and-inclusion/diversity-data/.

[2] 864 students were initially contacted by UKRI in mid-July 2020. Due to a low response rate from final year students, UKRI contacted a further 50 final year students (i.e. students due to submit between March 2020 and March 2021) in August 2020. Due to time constraints, these students were not asked to complete a screening questionnaire, but contacted NatCen directly to express an interest in the study. Two final year students contacted NatCen during this additional recruitment phase, representing a four per cent response rate.

[3] 73 students completed the screening questionnaire; three students contacted NatCen directly (without completing the screening questionnaire) during the additional recruitment phase.

[4] Not invited to participate as they were unavailable for scheduled focus groups during the fieldwork period.

[5] Not aware of the funded extension policy prior to the study, and notified they were not eligible to participate.

presents a breakdown of the achieved sample by year of study and discipline. The largest group represented in the study are STEM first year/mid-phase students (39 per cent), followed by non-STEM first year/mid-phase students (33 per cent). As this indicates, the majority of students who participated in the study were in their first year or mid-phase of their doctoral research (72 per cent), with final year students accounting for 28 per cent of the achieved sample. While we did not initially anticipate lower participation rates from final year students, this may reflect:

- **Availability**: students were defined as being in their final year if they were originally due to submit their thesis between March 2020 and March 2021. Assuming those due to submit in March 2020 had received six-month funded extensions, many final year students would have been at a crucial stage of their work at the time of the study (i.e. one to two months prior to their submission date).

- **Motivation**: as final year students were automatically eligible for funded extensions (and therefore may have had less complex experiences than students at earlier stages), they may have been less interested in participating in the study.

Table 2: Achieved sample by year of study and discipline

	First year / mid-phase	Final year	Total
STEM [6]	18	8	26
Non-STEM [7]	15	5	20
Total	33	13	**46**

Table 3 presents the achieved secondary sampling characteristics compared with available data on all UKRI students from 2016-17 to 2018-19.[8] The study sample includes a higher proportion of students from the following groups: students at non-Russell group universities, female students, Black, Asian and minority ethnic (BAME) students, students with disabilities and students aged 40 and over. Table 4 presents a more detailed breakdown of the achieved sample by secondary sampling characteristics.

Table 3: Comparison of study sample with UKRI student population, 2016-17 to 2019-20

Sampling characteristics	Study sample (%)	UKRI student population (%)		
		2016-17	2017-18	2019-20
Attending a non-Russell Group university	44	21	22	22
Female	54	41	42	42
BAME [9] [10]	33	7	9	9
Disability	15	5	6	7
Aged under 30	50	82	83	83
Aged over 41	20	4	4	4
Caring responsibilities	17	n/d	n/d	n/d

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[6] Funded by Biotechnology and Biological Sciences Research Council (BBSRC), Engineering and Physical Sciences Research Council (EPSRC), Medical Research Council (MRC), Natural Environment Research Council (NERC), or Science and Technology Facilities Council (STFC).
[7] Funded by Arts and Humanities Research Council (AHRC) or Economic and Social Research Council (ESRC).
[8] 'Studentships – proportion and awardees', available from https://www.ukri.org/about-us/equality-diversity-and-inclusion/diversity-data/. Additional data on research organisations (used for Russell Group analysis) provided by UKRI.
[9] Including those who entered self-described ethnic categories.
[10] Between 22 and 25 per cent of students in the overall UKRI population did not disclose their ethnicity. A slightly higher proportion in the overall UKRI student population identify as White (60 – 62 per cent) compared to the study sample (56 per cent).

Table 4: Achieved sample by secondary sampling characteristics[11]

	n	%
Institution type		
Russell Group	26	56.5
Non-Russell Group	20	43.5
Gender		
Female	25	54.3
Male	20	43.5
Prefer to self-describe[12]	1	2.2
Ethnicity		
Asian or Asian British	3	6.5
Black, African, Caribbean or Black British	5	10.9
Mixed or multiple ethnic groups	2	4.3
White	26	56.5
Prefer to self-describe[13]	6	13.0
No response	4	8.7
Disability		
Yes	7	15.2
No	34	73.9
No response	5	10.9
Age		
25 or under	8	17.4
26 – 30	15	32.6
31 – 35	8	17.4
36 – 40	1	2.2
41 or over	9	19.6
No response	5	10.9
Caring responsibilities		
Yes	8	17.4
No	37	80.4
Refused	1	2.2

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[11] 'No response' numbers in each category include students who chose not to respond to these questions, and students who did not complete the screening questionnaire during recruitment.
[12] Female.
[13] Arab (1), Middle Eastern (1) Turkish (1), White Irish (2), White Other (1).

2 Findings

2.1 Effects of Covid-19 on research

Participating students discussed the short and long-term impacts of Covid-19 on their research. These varied based on the subject, mode and phase of students' doctoral work.

2.1.1 Short-term effects

Disruption to research-related activities
STEM students explained that their laboratories had been closed since the beginning of lockdown in March 2020. Students working in both 'wet' laboratories (e.g. chemistry and biology) and 'dry' laboratories (e.g. physics, engineering and computing) were affected, as they were unable to make progress with their practical work, data collection and analysis outside these environments.

> *I felt like my PhD was at a halt purely because, like I said, I am lab-based so I need instruments like microscopes and I need various other equipment that obviously I can't have at home.*
>
> *(Third year STEM student)*

Both STEM and non-STEM students conducting face-to-face fieldwork described severe disruption to data collection. During lockdown, face-to-face fieldwork was prohibited due to social isolation policies and travel restrictions both within and outside the UK. Depending on the nature of their research, students were able to begin or continue fieldwork by adapting to online or telephone data collection methods. However, in certain instances, online methods were deemed inappropriate where research topics were sensitive, with vulnerable participant groups or where the research methodology could not easily be adapted (e.g. overseas ethnographic research). As one student conducting research with a vulnerable group reflected:

> *I was right in the middle of field research, and so it ground to a halt. Obviously considering the ethical care I needed to extend to the case studies and the people that I would encounter, it wasn't appropriate for me to switch to an online forum, because the people that I would need to be in contact with, they weren't in the position to.*
>
> *(Second year non-STEM student)*

Across subjects, doctoral students whose work was desk-based reported disruptions to their work. These students described difficulties accessing materials such as books, datasets or software due to the closure of libraries and university buildings during lockdown. By contrast, students who were able to access materials reported minimal disruption to their doctoral work (for example, because their universities provided alternative means of accessing these resources – see Section 2.3.1). Beyond data collection, participating students also described disruption to planned internships, placements and conferences due to lockdown restrictions. These were either moved online, postponed or cancelled.

Temporary changes to research activities
When research activities were disrupted, students reported making temporary changes to the nature of their research activities. Students who were unable to complete laboratory-based or face-to-face

research activities during lockdown used their time to complete desk-based elements of their doctoral work (e.g. reading, writing, analysis). For instance, STEM students who were unable to access their laboratory described using their time to analyse data and/or write up findings. Final year students felt this was a productive use of their time as they were able to focus on their write-up without the distraction of data collection. By contrast, first year and mid-phase students spoke about the difficulties of writing thesis chapters based on partial results. As lockdown progressed, first year and mid-phase students felt their progress with desk-based work had stalled, as they had completed their literature reviews and/or did not have any new data to analyse and write-up.

As a result of disruptions to planned research, students described having more time for training and development activities. For instance, students spent time learning new skills (e.g. coding) and completing online training. Students also used the time to organise or attend events, such as webinars or conferences. Although students felt this was a productive use of their time, they recognised it would not directly contribute to their thesis.

> *I've kind of done things that aren't directly related to my actual thesis. Things like organising a few webinars and building up networks, rather than focusing directly on my research, which has been useful and are good skills, but yes, doesn't help in the longer term, finishing [my thesis] on time.*
>
> *(Second year non-STEM student)*

By contrast, students whose doctoral work was entirely desk-based (e.g. creative writing) or those who were in the final stages of writing up their thesis, reported no disruption to their doctoral work. These students were able to continue with their work as planned during lockdown.

Working hours and productivity

Across subjects and year groups, there was an increase in home working due to lockdown policies which prevented students from working in laboratories, libraries or other work spaces. Participants reflected on changes to their productivity while working from home, and broadly fell into three groups: decreased productivity, increased productivity or unchanged levels of productivity.

Students who described decreased productivity attributed this to a reduction in their working hours. This was particularly apparent among students with commitments beyond their doctoral work. For example, students with caring responsibilities for family members with disabilities explained they had needed to take on a greater role because paid care workers had been unable to work during lockdown. Students with children also spoke about the difficulties of balancing childcare and home schooling with their doctoral work. Similarly, students with jobs reported difficulties maintaining a balance between their paid work and doctoral work. By contrast, students without these additional commitments reported that their working hours had remained the same or increased.

Regardless of the number of hours they were spending on their research, students in this group agreed that homeworking had caused a drop in the amount of work they were doing.

> *So in that period [at the start of lockdown] I was maybe working at ten per cent capacity. I was doing the hours but unproductively, and then I started maybe to get up to kind of 25 per cent productivity.*
>
> *(Third year non-STEM student)*

Students attributed a decrease in productivity to a loss of motivation to continue with their doctoral research. Due to the difficulties of conducting their work, students described questioning whether it was worth continuing with their research during lockdown.

> *There have been times in the last three or four months I really have thought, what am I doing this for? People keep telling me, 'This is really important work, keep on, keep on. It's going to make such a difference'. Maybe I'm the only one who can't see it, but I really am getting to the stage now where I feel extremely just lost and despairing.*

> *(First year non-STEM student)*

Difficulties in homeworking environments were also described as contributing to a decrease in productivity among this group of students. For instance, the lack of suitable home-working equipment, such as chairs, desks and monitors had a negative impact on students' productivity. Students found that noise and other people in the household disrupted their concentration. Working from home also meant students were more likely to be distracted by housework or other household tasks.

> *I think procrastination is a huge issue, as well. Some days, I'll just find myself doing everything other than PhD work. Things I wouldn't normally do on a day-to-day basis, like I'll think I'll go out in the garden and cut the grass or move furniture around… Things that ultimately get in the way of my work.*

> *(First year STEM student)*

Students reflected that anxieties about their personal lives also influenced their ability to concentrate on their doctoral work.

> *When we were in complete lockdown, although I tried to work pretty well every day, I found that I just couldn't concentrate. I'm in the shaping-up stage really, in the first year, so I was reading, and I couldn't concentrate, or I was writing, and I'd get a couple of paragraphs done and it wouldn't work.*

> *(First year non-STEM student)*

Participating students reflected that home working led to them being isolated from their supervisor and other doctoral students which also influenced their productivity. Although students were able to communicate virtually, they felt this type of communication was less spontaneous and therefore, it was harder to get help or discuss ideas and theories with their supervisor and other doctoral students which caused them to 'lose momentum'.

> *I found that you lose momentum a little bit when you are restricted in what you can do, but also, you're not around your colleagues, who can help you or bounce ideas off you. I think that that, the detrimental effect of those are definitely having a long-term effect.*

> *(Second year STEM student)*

A second group of students reported increased productivity during lockdown. For example, these students reported working longer hours due to a pressure to catch up with work and meet deadlines.

During April and May I had to submit an end of year report. So what that meant was analysing the data I had to date, updating my literature review and doing loads of reading and during April and May I completely burnt myself out. I was doing 12 hours, 14 hours on and off just trying to get through the work and then I got to the point where I was like, I can't keep doing this because I'm feeling unwell.

(Second year STEM student)

A third group of students reported that homeworking did not affect their levels of productivity. This view was held by students who were used to working in isolation prior to lockdown, or who had a quiet and comfortable space to complete their doctoral work. Students in this group also mentioned they had been able to meet colleagues or their supervisor when socially distanced meetings were allowed during lockdown.

2.1.2   Long-term effects

Changes to project scope
Experiences of the impact of Covid-19 on students' project scope fell into two distinct groups. One group of students mentioned they would not be changing the scope of their project. These students either did not need to change the scope of their research as they had faced minimal disruption (e.g. students who had already completed their laboratory work) or were unable to change the scope of their research (e.g. students who were planning to conduct overseas fieldwork).

A second group of students discussed plans to change their project scope. First and mid-phase students within this group described reducing the scale of their planned work to counteract the impact of disruption. Examples for STEM students included reducing the number of planned experiments and for non-STEM students reducing the number of interviews.

Alongside reducing project scope, students also described making changes to their research protocol. Due to issues with conducting face-to-face fieldwork, students described plans to either change the mode (e.g. shifting to online or telephone data collection methods) or the methods (e.g. shifting to ethnographic methods) of their research. Similarly, due to issues conducting laboratory work, participants described plans to reduce the practical elements of their work by conducting more theoretical work or completing more secondary analysis.

My supervisor, obviously he's mentioned things like extensions or delays, but because I'm at such an early stage, we're talking more so about the idea of rescoping my project, at least to maybe a little more theoretical one, because obviously, the laboratory access is restricted. At the moment, I'm working quite heavily on design, simulations, which I can do all day, so yes. Refocusing is definitely being talked about in my case, more than extending the whole workload.

(First year STEM student)

Students who were planning to reduce or change the scope of their doctoral work expressed concerns that significant changes to their project may mean their doctoral work does not meet specific requirements set out by their funder or industrial sponsor.

Changes to project timeline

First and mid-phase students who were changing or reducing the scope of their doctoral work felt that they would still meet their original submission dates. Final year students who were close to finishing their thesis write-up shared this expectation. By contrast, across year groups, students who were unable to change or reduce the scope of their research reported that they would be unable to meet their original research and submission timelines.

Research experience and career development

Students raised concerns that they would not be able to progress in their academic careers as they were not gaining the necessary research and/or teaching experience during their doctoral work. This view was held by students who were not able to complete planned research or work activities because their data collection mode had changed (e.g. from face-to-face to online), their work as a laboratory demonstrator had been cancelled or their industrial placements or internships had been postponed or cancelled. Students also indicated that delays to their research would impact the likelihood of future publications, which in turn would negatively impact their post-doctoral applications and future job prospects.

2.2 Effects of Covid-19 on mental and physical wellbeing

2.2.1   Effects on mental wellbeing

Social isolation

When full lockdown measures were in place in March to May 2020, students described being unable to visit family and friends. Students also explained they were unable to meet their colleagues or supervisors face-to-face due to the closure of their universities and lockdown policies.

Despite the easing of lockdown restrictions from June 2020 onwards, different groups of students described difficulties in resuming face-to-face contact due to their personal circumstances. These included:

- Students who were shielding or living in a household with someone who was shielding
- Students with Covid-19 symptoms who were required to self-isolate
- International students or UK students with family living abroad who were unable to travel home to visit family members
- Students who were required to complete laboratory-based maintenance work, and so were unable to leave their university town to visit family members.

> *I think [for] people that are shielding, it's a different experience. Not seeing people, I haven't seen my grandson for more than four months, my daughter's pregnant, she became pregnant while we've been in lockdown, I haven't seen her since she's been pregnant. I don't know when we'll be able to see them safely again. We can't go to shops, we can't go to supermarkets, we can't do anything.*
>
> *(Final year non-STEM student)*

Doctoral students described the significant psychological and social impact of lockdown and isolation on their lives. In particular, students described the lack of face-to-face contact as *'lonely'* and *'isolating'*. Those with pre-existing mental health difficulties, such as anxiety or depression, or those living alone, found the isolation particularly difficult.

> *There is that awful sense of isolation and the awful sense that, not even being able to get on the bus and go up to town, up to [my university], sit and have a coffee with my supervisors, and just sort of take myself out of this for a bit. I think that's what it is, it's the overwhelming sense of isolation.*
>
> *(First year non-STEM student)*

Students reflected that it was difficult to complete their thesis work in isolation from their supervisor and other doctoral students. This particularly affected students working on sensitive thesis topics (e.g. sexual violence, trauma), who relied on higher levels of regular face-to-face support prior to lockdown.

Social isolation also proved particularly challenging for participants who had experienced bereavement following the death of family and friends from Covid-19. These students described a negative impact on their mental wellbeing and having difficulties coping.

Mental health difficulties

Students described the exacerbation of pre-existing long-term mental health problems or the onset of mental health problems such as depression due to lockdown and isolation. Students felt that disruption to their day-to-day routines and difficulties accessing healthcare services contributed to the worsening of their mental health. Students also described an increase in anxieties related to their current circumstances and the future.

Students expressed anxiety about Covid-19 infection for themselves. For instance, students described concerns from using public transport. This view was particularly common among participants with pre-existing health conditions or a clinical vulnerability.

> *I was worried, am I going to die? The guy I shared an office with said, 'You're in your 50s. You're not like us, you might die.' For the very first time I thought, gosh, I am at higher risk than other people.*
>
> *(Second year STEM student)*

In addition to concerns about themselves, students experienced anxieties about Covid-19 infection relating to friends and family. In these instances, participants were concerned about family members' vulnerability to infection, for example due to pre-existing health conditions, being elderly or working in a hospital.

> *I think because you're shielding, there are more additional pressures where you have to keep a vulnerable family member safe, and you're second guessing everything. If we go out for a walk, what are the risks? We haven't gone out, we've just been doing laps of the back garden.*
>
> *(First year non-STEM student)*

In addition to concerns about the health implications, there were concerns about stigmatisation related to Covid-19 symptoms.

> *I'm afraid if I go out with a mask and the coughing in front of others, they will avoid me and then they will think I spread the virus! I don't know, I was afraid. I'm originally from Asia, I'm not Chinese, but I was afraid about what people are thinking about in [a] Western country, being Asian.*
>
> *(Third year STEM student)*

Students explained that pressures to complete doctoral work during lockdown contributed to their anxieties. Students were particularly concerned about their immediate progress and the quality of the doctoral work they produced.

> *There was a point where I was writing up a chapter and I just felt so terrible about myself because I was just so deep in that chapter, and all I could see was its deficiencies.*
>
> *(Final year STEM student)*

Reporting progress to supervisors caused additional worries for students whose supervisors were not supportive or flexible (see Section 2.3.2 for more details). Alongside concerns about the immediate progress of their doctoral work, students also expressed concerns about the long-term impacts of

Covid-19, including delays to their research causing it to become outdated or other students taking their research ideas.

> *The only anxiety I've had, which is a rather strange one, is I've been worried about somebody else stealing my research. I work in the public domain, as a professional I share my ideas fairly readily, and it's not too difficult now for somebody else to pick up on those things and get there before [me].*
>
> *(Final year non-STEM student)*

An exception to the dominant view that doctoral work caused stress during lockdown was that doctoral work had a positive impact on mental wellbeing by providing structure and a distraction from day-to-day worries.

> *As far as the PhD goes, it's actually useful because there's a focus to your day, if you know what I mean. Everything else might be unpredictable and uncertain, but you know the piece of work that you'll be doing and that you're continuing to work on, so it gives you a bit of structure. That's very helpful.*
>
> *(First year non-STEM student)*

Beyond the work pressures and disruptions students were experiencing (see Section 2.1), they also discussed anxieties around further potential disruption to their doctoral work that may be caused by a second wave of Covid-19 and future lockdown measures.

> *I'm a planner, I like to plan things, and this uncertainty just makes me anxious every single day.*
>
> *(Final year STEM student)*

Students also reported long-term concerns around job prospects, related to an inability to develop research skills and/or to build a publication record, as discussed in Section 2.1.2. They also mentioned worries about the instability of the academic job market.

> *Just thinking about job prospects post-PhD, when this is all happening, and not knowing what state the world's going to be in when we finish. That is also definitely stressful.*
>
> *(Final year STEM student)*

Students who were uncertain about whether they would receive a funded extension (see Section 2.4.3 for more details) expressed concerns about their ability to continue paying for living costs while in the final phases of their doctoral work.

> *If you're having to pay for accommodation, just basic living, it's hard for you to turn around to your landlord and say whether you're going to be there or not in three months' time.*
>
> *(Final year non-STEM)*

Increased levels of anxiety led to an overall decline in students' mental wellbeing. Students described feeling 'stressed' and 'unmotivated'. Heightened anxieties also caused difficulties concentrating on doctoral work and productivity levels, as discussed in Section 2.1.1.

I would say pretty much every day I've been waking up and feeling anxious and have a tight knot in my stomach as if something bad is going to happen and that's impacted my productivity. It's difficult to work if you're feeling anxious and then you start feeling unmotivated… You start feeling is there any point of any of this and it's very easy to slip into a routine where you're not doing as much or you're just having really dark thoughts all the time. Yes, it has been quite an awful few months actually.

(Second year STEM student)

Lack of time away from doctoral work

Students reflected that they had not had time away from their doctoral work during lockdown, which they felt had negatively impacted their mental wellbeing. Because they were homeworking, students described being 'unable to escape' their doctoral work due to a lack of separation between their work and home lives. This view was particularly strong among students who did not have a separate space to work.

The only place I could really set it up [desk and computer] is right next to my bed in my room, so I spent all of my day in here, with very little escape from it.

(Final year STEM student)

As lockdown restrictions prohibited social activities and hobbies, students explained that this further led to the feeling that they had 'no time away from the PhD'.

When you do a PhD they tell you, 'Make sure you have hobbies, make sure you have other things that are in your life that aren't - so your life isn't just focussed on the PhD, and friends.' Of course, this happened and it just took all of that away so no friends, no hobbies, no time away from the PhD; that is all you have.

(Final year STEM student)

Students also explained they had not taken time off from their doctoral work during lockdown, which further contributed to tiredness and a lack of motivation. Reasons for not taking planned breaks were related to anxieties about research progress, or because students felt they had already had a 'holiday' due to being at home for an extended period.

I feel as if I shouldn't be taking [time off] because I've been kind of not doing as much during lockdown and I feel as if I should be using that time to catch up and I don't feel like I really deserve that time. So I'm feeling a bit annoyed at myself and unmotivated.

(Second year STEM student)

Since we're at home, it feels like we're on holiday, in a way, but we're not, and then it's almost like, 'Oh, why am I so tired?' and then, 'Oh, I've not had a day off in a long time!'

(Second year STEM student)

2.2.2 Effects on physical wellbeing

Covid-19 related ill health
Participating students who had suffered from Covid-19 described initial and ongoing effects on their physical health. Symptoms included fatigue, breathing difficulties and a persistent cough. Students described experiencing these symptoms for varying lengths of time, from two weeks to three months.

> *It was difficult to communicate because my dry, continuous, non-stopping, dry cough, which makes me wake up even midnight, I was so serious at the time…I could not really concentrate on studying.*

> *(Third year STEM student)*

Access to healthcare services
Due to disruption to healthcare settings during lockdown, students with pre-existing long-term physical illnesses or disabilities were unable to seek their usual treatment. For instance, a student who suffered from migraines was unable to get medical treatment during this time period.

> *When I get stressed, I suffer a lot from migraines, and I can get them in clusters, and they can be so awful that I can't leave the bed and I start losing my eyesight. So that started picking up and then I felt I couldn't really go and get help from the doctor to monitor it.*

> *(Second year STEM student)*

Physical health issues working from home
Students indicated that working from home with the wrong equipment (e.g. unsuitable desks and chairs) had led to physical health issues such as back and neck problems.

> *What I found out later is I'd herniated a disc in my neck due to the chair. Getting funny sensations shooting down my left arm was not what I wanted in the morning, so yes! It was literally all down to the chair. A hard, wooden dining chair, not ideal.*

> *(First year STEM student)*

Lack of physical exercise
Students reflected that lockdown policies, including the restriction of outdoor exercise, team sports and the closure of gyms resulted in a reduction in physical exercise. As a result, students reported lower fitness levels and gaining weight. However, students who had access to outside space were able to continue exercising throughout lockdown.

2.3 Experiences of institutional support

Students described three main sources of institutional support during lockdown: universities and/or departments, supervisors and Doctoral Training Partnerships (DTPs)/Centres for Doctoral Training (CDTs). Students also discussed their universities' return to work policies and other support received as lockdown restrictions eased.

2.3.1 Support offered by universities and departments

Communication

Doctorial students described several ways in which they felt their universities and/or departments had communicated with them effectively. Receiving regular, informative emails, such as a fortnightly bulletin from universities or regular updates from heads of school was viewed positively. Students also appreciated the use of new communication systems, such as collaboration platforms like Microsoft Teams, as a method of staying connected and facilitating meetings that usually took place face-to-face.

A lack of communication, those with an inappropriate or blunt tone or providing inconsistent or limited information presented difficulties for doctoral students. This was particularly true for students working across multiple sites, who received conflicting advice or too much information which led to confusion.

Mental health and support

When participating students reported positive experiences with mental health and wellbeing support from universities, this was either because the usual support continued during lockdown or because additional support was on offer.

Continued support included mental health services, counselling and disability support services (such as one-to-one study skills support paid for through Disabled Students Allowance). When institutions offered additional support, this was in the form of signposting to support services (such as emails about existing wellbeing services), sending information about ways to enhance wellbeing via email and additional guidance and support offered through group workshops.

> *It also just made you realise that there are a lot of people in the same situation, and everybody's managing differently. With the lockdown, it was just nice to connect a little bit and hear other people doing the same things.*
>
> *(First year non-STEM student)*

In one example of positive institutional support, a student explained that their department had sent out a poll to assess doctoral students' needs. The department used the results of this poll to identify students who needed additional help or support and then contacted them directly.

Students reported negative experiences with mental health and wellbeing support when universities closed mental health support services or those services were less accessible because of increased demand.

Resources and equipment

Participating doctoral students found it helpful when their universities offered additional financial resources in the form of emergency funding made available during lockdown (beyond usual hardship funds).

The need for equipment and resources to facilitate working from home was particularly pertinent for participating students. When universities and departments facilitated home working effectively, they

allowed doctoral students to borrow office equipment to use in their homes and/or ensured software was accessible off-campus. Students felt that measures such as additional provision for library access, such as click and collect services and additional online support, showed a positive response from their institution.

> *The part of my university that actually changed things the best has been the library service. They've really upped their level of getting actual books for you if you can't get them. They've introduced a click and collect service. They've also been much more active online, in being able to talk to somebody and have somebody do some kind of library research for you, so that as far as possible, they're being pretty good at replacing the fact that you can't actually go into the library.*
>
> *(First year non-STEM student)*

When universities did not offer additional provision of equipment and resources, doctoral students felt that they had been let down, or 'abandoned', by their institutions. It was suggested that additional financial support or a reallocation of research funds to purchase equipment would have been valuable, particularly for students with additional health needs. There was a sense of frustration for students who had asked if they could use available research funds to purchase office equipment but had their request declined.

Other ad hoc support

Students described a range of ways in which their universities provided ad hoc support. These included: an automatic unfunded extension policy available to all doctoral students and adapting the terms of employment for graduate teaching assistants and laboratory demonstrators.

When universities offered unfunded extensions, these varied from one to six months in length and were a blanket policy to extend all doctoral students' registration period (and consequently final submission deadline). Although this extension was unfunded, there were also no additional registration fees required. Students whose universities implemented a blanket extension policy viewed it as a positive measure.

Students employed as graduate teaching assistants or laboratory demonstrators noted the importance of additional financial support. In these instances, their universities tried to account for the disruption due to Covid-19 by adapting terms of employment. For teaching assistants, these universities offered additional pay for the extra time needed to move teaching online. In some cases, universities paid laboratory demonstrators for sessions that were unable to take place due to the Covid-19 lockdown restrictions. Students found this support helpful as they were reliant on the income to supplement their UKRI doctoral funding.

Lack of support

When participating students felt their universities had not provided sufficient support, they described several reasons for this. They felt that doctoral students were not a priority for their universities in normal circumstances, and this was emphasised in the way their institution handled the effects of Covid-19 and lockdown. Examples of this included providing support to academic staff and undergraduate students ahead of doctoral students.

When desk-based students reported a lack of support, they felt that this was because provision and field- and laboratory-based students had been prioritised. Students with caring responsibilities and those with health problems also reported feeling unsupported, particularly when trying to decide whether to pause their doctoral work during lockdown, or whether additional support was available to help them continue their research.

2.3.2   Support offered by supervisors

Participating students who reported positive experiences of support from their supervisors appeared to have good pre-existing relationships with them. For example, a student who described a lack of support from their supervisor expressed a wish of having chosen their supervisor more carefully at the beginning of their doctoral studentship.

Empathy and understanding
A crucial element of the support from supervisors was expressing empathy and demonstrating understanding. When participating students spoke positively about their supervisor's response to Covid-19, they stated that supervisors had been flexible with deadlines and expectations, realistic about productivity and understanding about personal circumstances.

> *For me the key has been that my supervisors are being really, really supportive, and they've allowed me to just be really flexible in terms of when I'm working and what I'm working on.*

> *(First year non-STEM student)*

> *My primary supervisor is amazing and he's also realistic and understands that it's not the same working from home,*

> *(Second year STEM student)*

When students did not have a good pre-existing relationship with their supervisors, communication could be difficult. In these instances, students reported feeling unable to talk to their supervisors. It was felt that supervisors were not as understanding as they could have been about difficulties faced by students and there was little flexibility in terms of expected productivity and deadlines.

Pastoral support
Participating students described a range of ways in which their supervisors went 'above and beyond' to provide pastoral care. Examples included: delivering a care package to a participating student when they were unwell with Covid-19, delivering a spare office chair to a student's home and reallocating funds from a separate grant to provide their student with financial support.

Other pastoral care included frequent 'check-ins' with the research group, more frequent communication and availability for meetings, promoting healthy home working practices such as taking breaks and leaving the house and support with pre-existing mental health conditions.

> *[My supervisor] really is trying to make sure that people aren't just sitting at home, facing a computer screen for hours and hours and hours and hours, and not getting any exercise or having that space to actually turn off.*

> *(Final year STEM student)*

Students faced challenges when supervisors were dealing with their own Covid-19-related difficulties. For example, when supervisors had increased work responsibilities due to Covid-19 or new childcare arrangements, this left less time for supervision which, in turn, left students with little support.

> *Both of my supervisors have several young children that they've been home schooling the whole time, so they've not really had time to speak to us.*

> *She's doing the best she can. She's just very overloaded. I get the impression that there's a lot going on.*

(First year non-STEM student)

Project management and contingency planning

For students whose research activities were disrupted by lockdown, support from supervisors in terms of project management and contingency planning was critical. To manage the disruption, students reported needing to develop a new project management approach, a new research timeline and/or apply for additional funding. Supervisors provided support with these activities by giving clear guidance on how to plan work, setting short-term goals and locating alternative data sources for analysis.

2.3.3   Support offered by DTPs/CDTs

A core part of the standard offer to doctoral students from DTPs/CDTs is the training and networking opportunities they provide. Participating students responded positively when training was still provided during the Covid-19 lockdown by using online platforms as an alternative to in-person training. While there were examples of problems with online methods, such as a lack of interactive sessions during an online DTP conference, students appreciated the opportunities provided by DTPs/CDTs to continue their learning and development.

When DTPs/CDTs offered additional financial support, this was well-received by students. For example, an Arts and Humanities Research Council (AHRC) DTP offered students an allowance to buy books and office equipment to replace library resources and office space they normally had access to.

> *If you can't go into uni and print out reams of stuff, or you're sitting on a particularly uncomfortable chair in your bedroom for hours on end, then having something to help that equally I think is very practical. It's practical help which I think sometimes just goes that extra mile to make the situation a little bit more palatable.*

(Final year non-STEM student)

Doctoral students reported finding regular communication from their DTP/CDT helpful. However, students reported a lack of communication from some DTPs/CDTs, particularly during the first three months of lockdown. Students described this communication gap, and a lack of clarity about who communications were coming from, as particularly challenging.

2.3.4   Peer support networks

In addition to formal channels of support, students found new and creative ways of setting up and/or participating in peer support networks during the lockdown, either within their own research groups or with other doctoral students more generally. Collaboration software (e.g. Microsoft Teams) and social media (e.g. WhatsApp) were used to combat isolation, share resources and signpost support.

Where virtual support networks were successful, DTPs/CDTs shared information more widely. In this instance, students felt it would have been more helpful if the DTP/CDT had set up a support network directly.

2.3.5   Return to work policies

Institutional return to work policies
In terms of timescales, university return to work policies fell into two groups. Universities were either planning on reopening from September 2020 or were delaying reopening until January 2021. Alongside this, students described a range of measures to facilitate phased approaches to reopening. These included:

- priority access for specific laboratory spaces such as medical research labs or engineering labs which were reopened over summer 2020

- priority access to laboratory spaces for specific student groups over summer 2020, such as final year doctoral students and master's students

- priority or emergency access to campus facilities for staff and students who cannot work from home or who have physical or mental health needs

- limited access to laboratory space, with reduced opening hours and shorter booking slots

- face-to-face teaching in the 2020-21 academic year which will be voluntary for students and socially distanced

- encouragement to continue working from home in the new academic year

Views and experiences of return to work policies
As with other sources of support, doctoral students felt that a successful return to work policy was underpinned by effective communication. This included clear communication that was disseminated on a regular basis so that students were kept up-to-date about new processes and what to expect when campus reopened.

> *The university has been very proactive in giving updates about where things currently sit during the pandemic, and giving information out about, 'When the buildings start to open up, this is what you can expect,' which is very useful. There has been a good flow of information regarding that.*
>
> *(First year non-STEM student)*

When information was lacking, students found this confusing and frustrating. Students also raised concerns as to whether the new policies were fit for purpose. For example, limiting the length of laboratory slots was problematic for lab-based students whose experiments took several hours just to set up. Reduced laboratory access meant they no longer had enough time to set up and run their planned experiments.

The process of developing return to work policies was unclear for participating students, which led to speculation about whether those developing the policies had relevant experience of the practicalities of conducting research on campus. For example, office spaces had been made 'Covid secure' but were then unsuitable for working in as the computers and office chairs had been completely removed. Students also reported difficulties with using additional personal protective equipment (PPE) required due to Covid-19, as it was incompatible with standard laboratory PPE.

2.4 Experiences and views of UKRI's funded extension policy

2.4.1   Communications about the funded extension policy

Participating students received information about UKRI's funded extension policy in a variety of ways. These included general communications such as social media and the news, as well as more targeted forms of communication. For example, final year students indicated that they had received emails about the funded extensions directly from their DTPs/CDTs, and that their universities had forwarded emails from UKRI as well. First year and mid-phase students described receiving information from the same sources, and also mentioned email communications from research councils, universities and supervisors. The Medical Research Council (MRC) was highlighted as a research council which sent clear information to doctoral students via several emails.

Forms of communication from universities included administrative emails and regular (e.g. weekly or bi-weekly) departmental meetings via Zoom, in which information about extensions were shared. However, some mid-phase students indicated that they had not received any formal communications about the funded extension policy. This meant that they did not hear about the policy until several months after it was first announced.

A dominant view among participating students was that communications had provided an insufficient amount of information about the extension policy. For example, mid-phase students felt there was a lack of clear information about who could access funded extensions:

> *It's been a bit unclear and a lot of the nuance of who's eligible, who should be applying […] has just been hearsay and just people chatting online.*
>
> *(Second year STEM student)*

Where information was provided, students reported receiving mixed messages and conflicting information about access and the application process[14] for different year groups. Final year students described initially receiving information that all doctoral students in their final year would receive a 'blanket' six-month extension, only to learn later on that the extensions of *up to* six months would be awarded and that students were required to submit applications. Final year students also described confusion around whether available extensions were unfunded (i.e. extensions to submission deadlines) or funded, and the length of available extensions.

Mid-phase students also described receiving mixed messages about the funded extension policy. Reported experiences included seeing inconsistent information from UKRI via Twitter, receiving university emails about the funded extension 'for the attention of final year students only' and receiving conflicting information from universities and DTPs/CDTs regarding accessibility for non-final year students.

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[14] While UKRI communications have referred to 'requests' rather than 'applications' for funded extensions (e.g. UKRI Covid-19 Grant Extension Allocation – FAQs), participating students unanimously referred to 'applying for', rather than 'requesting' funded extensions. This suggests that students perceived the funded extension policy as a competitive process, which in turn is likely to reflect the formal and informal communications students received about the policy. In this chapter, we therefore refer to the process of 'applying for' funded extensions so as to reflect participants' own language and interpretation of the policy.

One view, expressed by a final year student, was that mixed messages about the policy resulted from a lack of communication and clarity between key organisations – for example, between UKRI, DTPs/CDTs and university departments:

> *It seems at least in our [experience] that the universities, they had no idea what they were doing themselves. They were given the money or told to apply for the money themselves, and then the PhD students were the ones that were left to sit and wait.*
>
> *(Final year STEM student)*

Across year groups, students expressed a concern about a lack of transparency regarding how extensions were being awarded; in particular, participating students felt that it was important to know the demographic breakdown of successful extension applicants:

> *There's no breakdown as to who got extensions. I don't know who they were, don't know anything in relation to race, class, gender, and I think these things are really important because it's like, well, who did get the funding extension and who didn't and why? We kind of need to know that, that's quite important, this is public money.*
>
> *(Second year non-STEM student)*

2.4.2   Understanding of the funded extension policy

There was some variation in participants' understanding of the funded extension policy. For example, among first year and mid-phase students, one view was that final year students would receive an automatic extension; another view was that only students right at the end of their doctoral studies could access extensions. One group of final year students indicated that they were unaware of wider criteria for accessing funded extensions – they simply knew that they were able to apply final year students. However, a second group of final year students seemed to have a better understanding of the policy: i.e., that funded extensions of up to six months were available for final year students, and that extensions for students in earlier years would be reviewed on a case by case basis. The variation in students' levels of understanding may reflect a lack of clarity in communications regarding the policy, as described above (see Section 2.4.1).

2.4.3   Experiences of applying for funded extensions

Support for extension applications

Students' experiences of applying for funded extensions varied considerably for students depending on the stage of their studies and the level of support received from their institutions. Among those who had applied for extensions, students described a range of experiences in the level of encouragement and support they received with their application. First year students described being discouraged from applying, with '*a variety of people*' (including research councils) telling them '*there [was] no point applying*' as a first-year student. Students whose research was desk-based also reported feeling discouraged from applying:

> *Funded extensions [were] very much targeted [at] students that were field-based, but […] there is quite a large proportion of PhD students that are desk-based, […] we would have lost access to basic things, like access to software.*
>
> *(Final year non-STEM student)*

Across year groups and research modes, support and encouragement from supervisors seemed to be an important factor in students' decisions to apply for extensions. Examples of this support included supervisors providing information about how to apply and initiating discussions about the appropriate length of extension to apply for based on students' circumstances.

Application processes
Students described a range of different application processes for funded extensions across universities and DTPs/CDTs. Among final year students, experiences included completing a '*very simple and very straightforward*' application form for their DTPs/CDTs, being asked to quantify how much Covid-19 would affect their research in their application, receiving an automatic one-month extension for filling in a questionnaire from their DTP/CDT and receiving a full extension without '*having to prove anything*'.

First year and mid-phase students who had not yet decided whether to apply for a funded extension described being asked to complete a survey about the effects of Covid-19 on their research and their mental and physical wellbeing. Students in these year groups who had decided to apply completed a formal application for a funded extension. However, there was confusion between students as to which of these came from their universities, and which from their DTPs/CDTs. While some mid-phase students submitted their own applications, supervisors did this on their behalf in other cases. Mid-phase students who had been particularly affected by Covid-19 expressed concerns regarding supervisor-submitted forms. In one example, a student was unsure whether their supervisor would accurately reflect details about their symptoms and the associated impact on their doctoral work in the submitted application.

Across year groups, a particular challenge highlighted by students was the need to quantify the effects of Covid-19 on their research, particularly in terms of time lost:

> *Asking students to predict how much this is going to affect their research so early in the pandemic… it's really difficult to do that at that point.*

> *(Final year non-STEM student)*

> *I don't know when I can go back, and I don't know what measures I need to put in place…I've no idea what the landscape is that I'm going back into… I don't know whether I need a 12-week extension or whether I need some time to rethink it all and I need extra time to refocus it.*

> *(First year non-STEM student)*

Students described *the* challenges *of* estimating the impact of Covid-19 on their mental and physical wellbeing, particularly in the context of complex circumstances such as the presence of pre-existing health conditions. Students explained that recalling their experiences may cause increased anxiety, and *so* the requirement to provide *this* evidence was viewed as a barrier to applying for an extension.

Application outcomes
Among students whose applications for funded extensions had been successful, a range of experiences were reported. Final year students whose extensions had been granted within a short space of time expressed gratitude for this:

> *[I'm] just very glad and happy and grateful […] that [I'm] able to finish [my] work and not have to worry about the whole finances of it. We're going through a pandemic and that's not something that happens every day […] so*

it's alleviated that stress as well. Obviously, everybody has their own different personal situations that they're going through. This is just something that has helped to not add to that.

(Final year STEM student)

However, participants across year groups who had experienced longer waiting times before hearing the outcome of their applications – including those that were partially approved or rejected – expressed frustration and disappointment. In one case, a final year student reported a two-month wait before hearing the outcome, which was followed by a dispute in which their awarded extension was reduced from six to three months.

First year and mid-phase students who were still awaiting the outcome of their applications also described several challenges. These included an inability to plan their doctoral work, since timelines were unknown and this caused stress. While students expressed understanding for the scale and difficulties of the overall extension process, it was noted that updates on the decision-making timelines would have been helpful – '*something, a short email just to say, "We haven't forgotten you […] hang in there, and we're getting on with it"*'. First year and mid-phase students described a sense of abandonment as they waited for their extension outcomes:

> *Yes, I just felt really, really abandoned and all first-years are in exactly the same category, and it doesn't matter what you've been doing and what, [whether the pandemic] has affected [your research] a lot, because it just, it hasn't just affected my PhD, it's affected, yes, my whole life. Yes, it's really difficult.*

(First year non-STEM student)

Students who did not apply for extensions
First year and mid-phase students described a range of reasons for deciding not to submit applications for funded extensions. This included uncertainty about whether they could access funded extensions, a lack of information and/or support regarding the application process, and being put off by 'horror stories' about lengthy applications. In cases where it had been possible to change the scope of their doctoral work, mid-phase students had decided not to apply for an extension as they hoped to finish their thesis within their original timeline.

First year, mid-phase and final year students also indicated that they had not applied due to a lack of information about eligibility, or because their universities, research councils or DTPs/CDTs had actively discouraged them. One final year STEM student decided to change the scope of their work instead of applying for an extension, based on the information provided by their university:

> *[The university are] only happy to extend if you have very crucial data analysis, basically, if you need lab work, without which you can absolutely [can] not graduate […] In the end, for me, I did not apply for an extension […] I'll just try to squeeze in the experiment in the time I have and see what happens, but that's something I can hopefully graduate without.*

(Final year STEM student)

2.4.4   Views on the funded extension policy

While positive views on the extension policy were expressed by students whose applications had been successful (see Section 2.4.3), students across year groups and with a range of application outcomes expressed critical views of the policy. Across year groups, students suggested that the policy should not have prioritised final year students, as those at earlier phases of their doctoral studies had the same or a greater need for extensions. For example, as implied by the following student, final year students were more likely to have completed their planned work compared to first year and mid-phase students, and so may have faced less disruption:

> *Do people who are finishing in September really need that much of an extension, considering if you were to do this typical PhD path, your last six months are just writing? If you got to [that point], you should have enough data or whatever [is needed in] your field […] to write. […] There are people like us who are at the start [and] middle of the PhD and having to apply for it, rather than being given it, is a bit harsh, I think.*

> *(Second year STEM student)*

Mid-phase students also felt that the conditions for accessing funded extensions were overly complex, which made it difficult for students to understand whether they were eligible or not. These complexities may explain why certain students who were eligible had assumed they could not apply for extensions, even when they were needed (see Section 2.4.3).

Across year groups, students further expressed the view that the policy should have been unrestricted, as all doctoral students would have been affected in some way by the pandemic – in terms of effects on their research, their personal circumstances or both. An alternative suggestion was that all doctoral students should have been given a six-month extension, which would end early if the full extension period was not required.

First year and mid-phase students – those who were waiting for their application outcome and those who had not yet applied – were also critical of the length of time offered by the funded extension policy. These students expressed the view that while an additional six months may be helpful for some students, the amount of time offered seemed 'arbitrary' given uncertainties around the global pandemic and potential disruptions to doctoral students' work.

> *I think that three or six months is like an arbitrary timescale, because nobody can say at this point in time what that is going to look like. We're going to be coming into the winter, things will change. I think that the extension is brilliant, that UKRI has recognised how this is going to impact [students], but the timescales, I'm not sure whether somebody who maybe is working in a lab […] it could adversely affect them for a longer period than say myself […] who's desk based.*

> *(First year non-STEM student)*

3 Conclusions

In this final chapter, we summarise the key findings from the study (Section 3.1). Doctoral students valued the opportunity to participate in the study, so that they could express their views and describe their experiences. This was particularly the case for students from minority groups; for example, one view was that students with disabilities are often asked to provide input into consultations, but that their perspectives are rarely considered when decisions are made. In this chapter, we present recommendations for action based on students' experiences during the Covid-19 pandemic, and their views and experiences of UKRI's funded extension policy (Section 3.2).

3.1 Summary of key findings

3.1.1 The impact of Covid-19 and lockdown

Doctoral students' research was significantly disrupted due to Covid-19.

Across subjects and research modes, doctoral students' planned research activities were cancelled, re-formulated or delayed (temporarily or indefinitely), with knock-on effects for the broader scope and longer-term timelines for students' doctoral research. For example, laboratory-based students were unable to proceed with practical work, and field-based students were unable to conduct face-to-face or overseas data collection. The closure of facilities such as libraries, archives and museums meant that desk-based and practice-based students were unable to proceed with key elements of their work. Where feasible, students re-formulated their original research activities – for example, moving from face-to-face to virtual modes of data collection – or worked on other elements of their doctoral work during lockdown. For students who were in the final stages of writing up their thesis, who had good home working environments and who had alternative access to resources, the impact of Covid-19 on their research was less significant.

The Covid-19 pandemic and lockdown had an overwhelmingly negative impact on doctoral students' mental and physical wellbeing.

Negative effects on mental wellbeing included challenges due to pre-existing mental health conditions such as depression, anxieties related to Covid-19 (including those who lived with people who were shielding, or were shielding themselves), and dealing with loneliness due to social isolation. Students who contracted Covid-19 themselves suffered from lasting adverse physical health effects, while some student reported Covid-19 related bereavements. Other negative effects included physical problems due to poor working from home conditions, and a lack of physical exercise. Students from specific groups described particular challenges that had affected them during the pandemic. For example, students with caring responsibilities spoke about the difficulties of balancing childcare and home schooling with their doctoral work, including struggling to focus on their research because of competing priorities. Meanwhile, due to lockdown restrictions, students with disabilities and pre-existing physical health conditions were unable to access their usual medical treatment.

3.1.2 Experiences of institutional support

Supervisors were a key source of support for students during lockdown.

Students reported positive experiences of support from supervisors who showed empathy and understanding, who were flexible with deadlines and expectations and who offered guidance on project management and contingency planning. Students with pre-existing mental health conditions

and disabilities particularly valued pastoral care from their supervisors, including more frequent 'check-ins' and availability for meetings. However, support from supervisors was not always available – for example, when supervisors were dealing with their own Covid-19-related difficulties, and/or where pre-existing relationships between supervisors and students were poor. In these cases, students reported feeling unsupported and isolated.

DTPs/CDTs, universities and departments provided important forms of support for students during lockdown – but not all institutions provided the same level of support.

Positive experiences of institutional support included alternative access to university resources and equipment; additional financial support to buy working from home equipment; new and continued mental health and wellbeing support services; and regular, virtual meetings within departments. However, these forms of institutional support were not offered consistently across DTPs/CDTs and universities, or for all student groups. For example, desk-based students felt that field- and laboratory-based students were being prioritised in terms of access to resources. Students with caring responsibilities and students with health problems also felt unsupported, particularly when trying to find out whether additional support would be available to continue their doctoral research, or whether they would need to pause their doctoral research during lockdown.

Students had mixed views and experiences of institutional return to work policies.

Where provided, students appreciated clear information and regular updates from their universities about return to work policies. However, return to work policies were not always suitable for students' needs. Laboratory-based students reported that some 'Covid-secure' processes (such as one-way systems and shift-based access) meant it was difficult for them to complete their work. Students across year groups and subjects felt that phased return to work policies largely focused on undergraduate students and/or university staff, without clear explanations of why doctoral students were not being prioritised.

3.1.3 Communications about UKRI's funded extension policy

Students often received mixed messages and unclear information about the funded extension policy.

Students reported that communications around the funded extension policy from official channels was sporadic, unclear – and in some cases, completely absent. Across subjects and year groups, students felt that poor coordination between UKRI, research councils, DTPs/CDTs and universities resulted in mixed messages and inconsistent information, particularly regarding eligibility criteria for non-final year students. Students also expressed frustration that they were unable to contact individuals at research councils or DTPs/CDTs directly for information or clarifications. A lack of transparency regarding decision-making processes, including demographic information on which students had received funded extensions, was perceived as a key gap in communications.

Where provided, students appreciated regular, clear communications about the funded extension policy.

Clear, regular email communications about UKRI's funded extension policy, including eligibility criteria for students in different year groups, were appreciated by students. Students reported other forms of positive communication, such as virtual departmental meetings, in which students could ask questions and seek clarifications about the extension policy. Students also valued support from supervisors to discuss eligibility and to prepare their applications for funded extensions.

3.1.4 Views and experiences of UKRI's funded extension policy

In light of conflicting information, there was confusion about which groups could access funded extensions, and how to do this.

Final year students were aware that, if they were due to finish before March 2021, they were able to apply for a funded extension. By contrast, first year and mid-phase students were uncertain about who could apply for a funded extension. While these students were aware final year students could access funded extensions, there was inconsistent information about the availability of funded extensions for non-final year students. This uncertainty may be a consequence of the inconsistent communications regarding the policy outlined above. Additionally, students reported different processes for accessing funded extensions across and within institutions, which may have further contributed to students' confusion. For example, students described university- and/or DTP/CDT-specific approaches such as a blanket extension for all final year students or allocating extensions to final year students on a case-by-case basis.

Students experienced a variety of application processes. Burdensome applications and lengthy decision-making processes were challenging for students, while simple application processes and timely decision making were valued.

Students across year groups described having to complete multiple and/or lengthy questionnaires and application forms in order to request a funded extension. Students were often asked to report 'time lost' on their doctoral research during the pandemic to justify an application for a funded extension, which could be a challenge. For example, it was difficult for students with disabilities to quantify impacts on health and wellbeing, particularly for those with chronic illnesses and those unable to get a doctor's note. It was noted that reflecting on and quantifying the effects of the pandemic on health and wellbeing could be traumatising for students. Students who experienced lengthy waiting times before hearing the outcome of their application described stress due to the uncertainties this created, including financial insecurities and an inability to re-plan their doctoral work.

Students whose applications for funded extensions had been successful expressed gratitude for the policy, as it meant that they were able to continue and complete their doctoral research with the knowledge that they would be financially secure during their final months of study. Students appreciated being awarded extensions without needing to fill in an application form, or only being asked to complete a short questionnaire. Short timeframes for communicating decisions about funded extensions were also valued by students.

Students were critical of the prioritisation of final year students and the length of time offered by the extension policy.

Across year groups, students felt that the funded extension policy should not have prioritised final year students. One view was that those at earlier phases of their doctoral studies had a greater need for funded extensions, and so should have been prioritised instead. Another view was that all doctoral students would have been affected in some way by the pandemic, and so it was not appropriate for the policy to prioritise according to year group. First year and mid-phase students were also critical of the length of time offered by the funded extension policy. While it was felt that an additional six months may be helpful for some students, the amount of time seemed 'arbitrary' given uncertainties about the pandemic and potential disruptions to students' work.

3.2 Recommendations

In this section, we present recommendations for action based on students' experiences during the Covid-19 pandemic, and their views and experiences of UKRI's funded extension policy.

Recommendation 1: improve the quality and quantity of support offered.

- Consider providing a base level of financial support to all UKRI-funded doctoral students regardless of year group.

- In addition to this base level of support, provide targeted support for students in specific groups (e.g. students with disabilities, students with caring responsibilities) based on their needs.

- Provide a clarity on the financial support available for first-year and mid-phase students, to reflect that some within these groups may experience more adverse effects than final year students.

- Update the funded extension policy to indicate what kind of support will be available for doctoral students in the event of future lockdown restrictions due to Covid-19.

- Encourage universities and departments to monitor levels of supervisor support being provided.

Recommendation 2: provide clear, frequent communications about policies and processes.

- Provide frequent communications about sources of support, including the funded extension policy, with clear information about eligibility and how to access different forms of support.

- Coordinate and/or streamline communications from multiple sources – for example, from UKRI, research councils and DTPs/CDTs – to ensure students receive consistent information.

- Maintain regular communications so that students remain informed, even when no new information is available.

Recommendation 3: simplify and standardise the application process for funded extensions.

- Consider developing a single, standardised application process for funded extension applications across universities and DTPs/CDTs.

- Ensure that the application process is not burdensome for students, and consider reducing the requirement for quantifying the personal and research effects of the pandemic on students (or making this optional).

Recommendation 4: improve transparency around decision-making.

- Consider mandating a consistent approach for distributing funding across DTPs/CDTs and universities.

- Provide students with clear information on expected timelines for communicating decisions about funded extensions, including when these timelines change or are delayed.

- Provide students with clear information on how funded extension applications are assessed, and how decisions to grant extensions will be made.

- Publish information about which students have been granted extensions by key demographic characteristics, including ethnicity.