

Effects of covid-19 on doctoral education: a survey



Doktorandnämnden
The doctoral board of Uppsala University



This is a report on the survey of doctoral candidates at Uppsala University that was carried out by the Doctoral Board (*Doktorandnämnden*, DN) in October–December 2020. The survey addressed quantitative and qualitative effects of the covid-19 pandemic on doctoral education.

Findings from the survey were presented to DN at its meeting on 4 February 2021, and to the University's Management Council (*Ledningsrådet*) on 22 February 2021.

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About the survey

The survey was conducted online, using LimeSurvey. Links to the survey were repeatedly emailed to all registered doctoral candidates at Uppsala University between October and December 2020.

At the end of the survey, each respondent had the option to download a summary of their responses as a PDF file. It was suggested that this summary be shared with the supervisor or department, to be enclosed with the individual study plan (ISP). DN has no way of knowing how many doctoral candidates actually used the summary in this manner, because ISP revision is handled locally within each department.

The survey received 511 responses, out of approximately 2000 registered doctoral candidates. The response rate by disciplinary domain was 30% at HumSam, 19% at MedFarm and 24% at TekNat. Response rates by faculty ranged from 7% (Law) to 40% (Pharmacy). We expect that doctoral candidates more severely affected would have been more likely to participate in the survey.

The survey did not expressly test for any over- or underrepresented groups, such as by nationality or funding source. It is the experience of DN that the overwhelming majority of survey responses come from doctoral candidates based on University campus. In particular, candidates based at hospital or in industry seldom engage with DN, and tend to be severely underrepresented in survey responses¹.

Context

As of December 2020, doctoral candidates had largely transitioned to remote work. Many activities planned for 2020 had had to be cancelled, some on short notice, as the pandemic spread across the world.

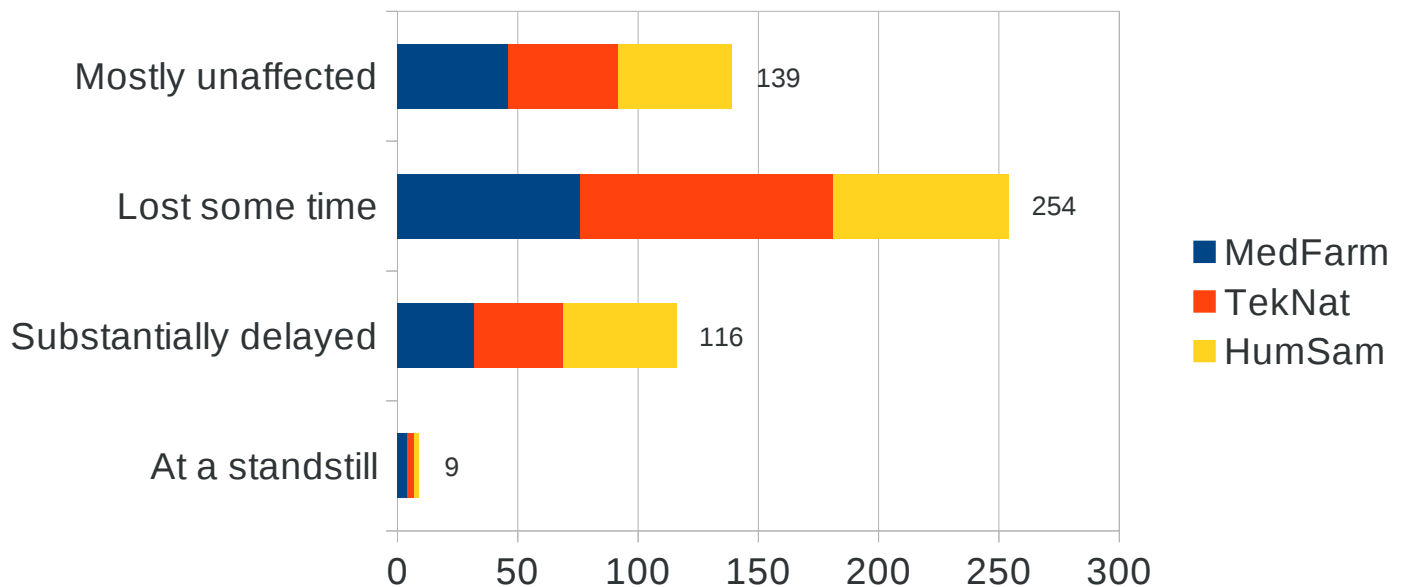
There was (and still is) much confusion and anxiety around the question of whether prolongation will be granted to compensate for time and work lost.

The Vice-Chancellor had issued a decision that the effects of covid-19, as well as any need for support or prolongation, should be documented in the ISP, individually for each candidate².

1 See for example DN's earlier *Uppsala University Doctoral Education Survey 2019*, <https://dn.uppsalastudentkar.se/content/documents/upsala-university-doctoral-education-survey-2019-2020-09-17>

2 Decision of 9 June 2020, UFV 2020/656, <https://mp.uu.se/documents/432512/480483950/2020-06-09-11.pdf>

Which of the following best describes the current state of your doctoral studies?

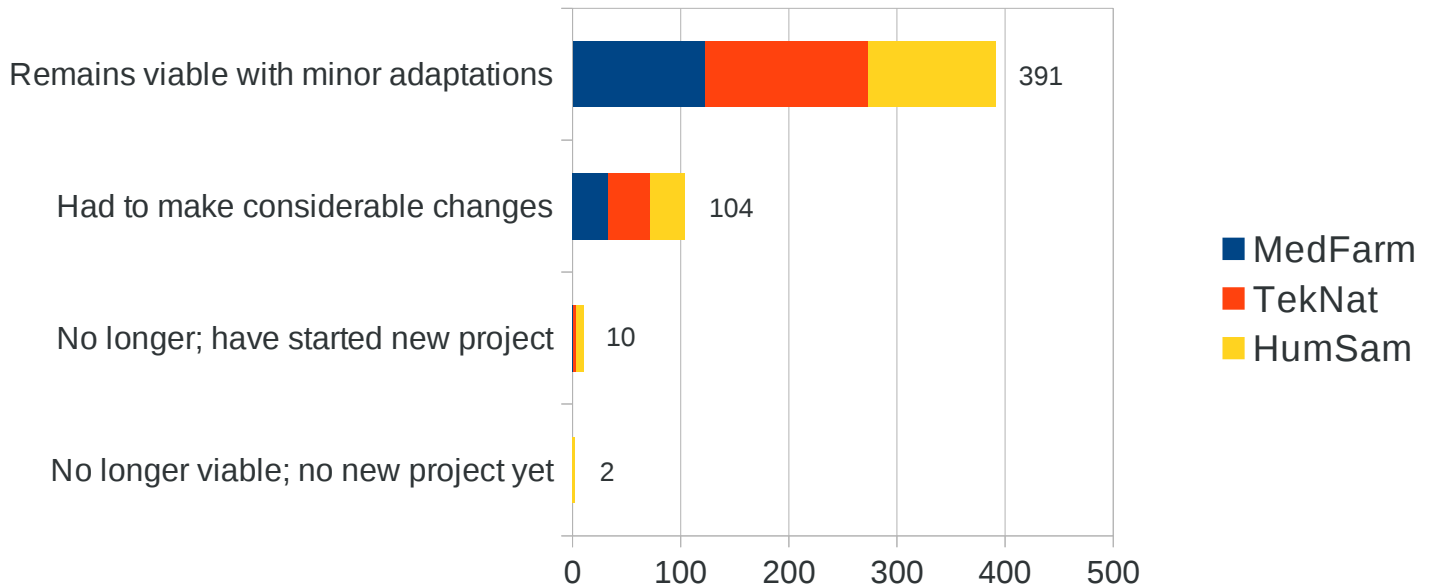


Response options in full:

- I was mostly unaffected by covid-19.
- I lost some time due to covid-19, but I expect to complete my studies in time.
- My work has been substantially delayed by covid-19, and it will be difficult to complete my studies in time.
- My work is currently at a standstill (not advancing at all).

Notice how, throughout the survey, responses are surprisingly even between disciplinary domains.

Which of the following best describes the viability of your doctoral project under covid-19?

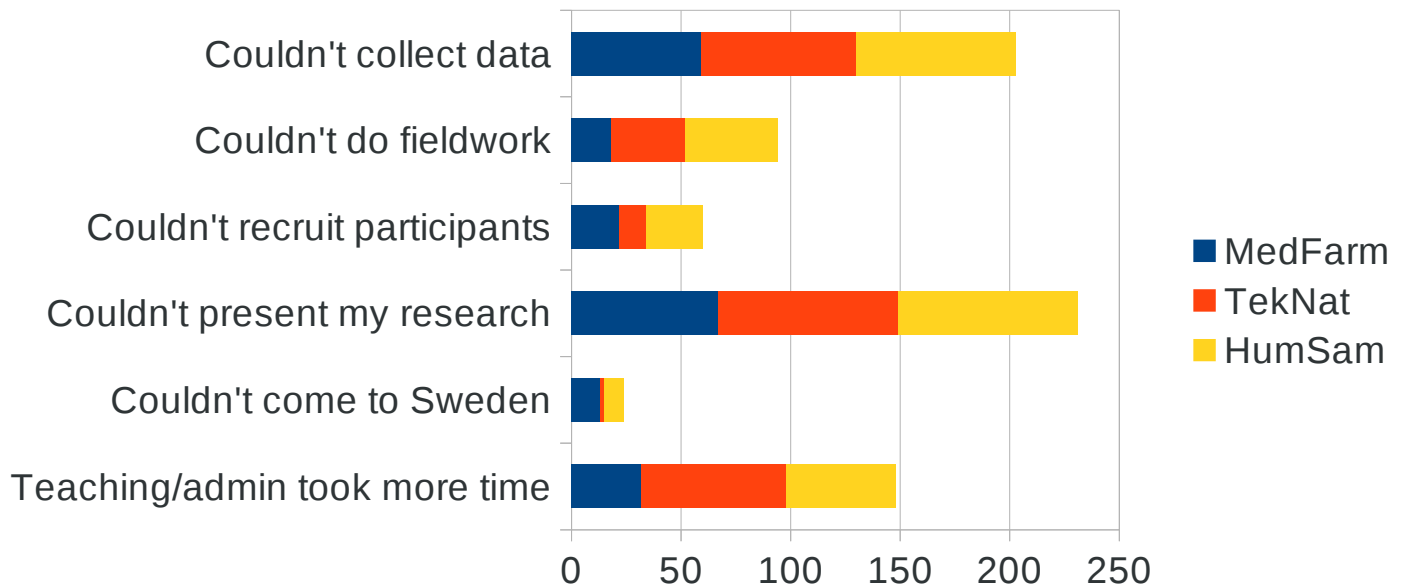


Response options in full:

- My intended project remains viable, with only minor adaptations due to covid-19.
- I have had to make considerable changes to my project to keep it viable.
- My intended project is no longer viable due to covid-19, and I have now started a new (or substantially modified) project.
- My intended project is no longer viable due to covid-19, and I do not yet have a new project.

In the experience of DN, there is huge variation in supervisors' willingness and creativity when it comes to making adaptations in a candidate's research project on short notice. See the free-text comments at the end of the survey.

Which of the following happened for you due to covid-19:



Response options in full:

- I was prevented from collecting data.
- I was prevented from conducting fieldwork.
- I was prevented from recruiting research participants.
- I was prevented from presenting my research (e.g. at a conference).
- I could not come to Sweden.
- My teaching or administrative duties took up considerably more time.

We expect these are largely the same issues also experienced by other staff categories. Note the considerable number of responses on teaching and administration taking up more time.

Below are some selected free-text responses.

About supervision:

My supervisor became unavailable due to increased teaching time.

My supervision was limited because my supervisor (a medical doctor) had to work clinically.

About materials and equipment:

Vital parts to research equipment, manufactured by workshop, were substantially delayed.

The short supply of laboratory materials from our suppliers due to covid-19 slowed down my experiment.

About work environment and remote working:

I was not able to work due to having my three kids at home more often.

I do not have adequate work space at home and have scattered hours to work due to this factor. I am at the final stage and need a lot of time to carry out analytical work, which is extremely challenging.

Could not use some software due to licensing issues when working from home.

Communication with colleagues is also substantially affected.

I had poor internet connection in my apartment which had a negative impact on my possibility to conduct statistical analyses and to participate in meetings.

Remote working and other restrictions resulted in loss of: structure, routines and the ability to concentrate; separation of work and rest; access to office supplies and ergonomic working position; a professional and social environment for exchanging ideas and receiving feedback and advice; a sense of academic belonging; professional motivation and meaning.

About previous work that was rendered useless:

Transient transfection experiments on HeLa cells were thrown away in March 2020. I had to start over during summer 2020 and now I had to throw it away again.

I work with living organisms and at the beginning of the pandemic it wasn't clear whether the University would go into lockdown. Back in March, I had to stop what I was doing and try to collect as many samples as I could under the worse case scenario ... These samples (several hundred) are now redundant and useless. In hindsight, this turned out to be a huge waste of time, but at the time there was no way to tell whether the samples would have been needed or not.

I spent a lot of time on an application for a place as a visiting research student abroad. Because of travel restrictions, I was forced to withdraw my application and cancel the visit.

About personal circumstances:

Mental health decline.

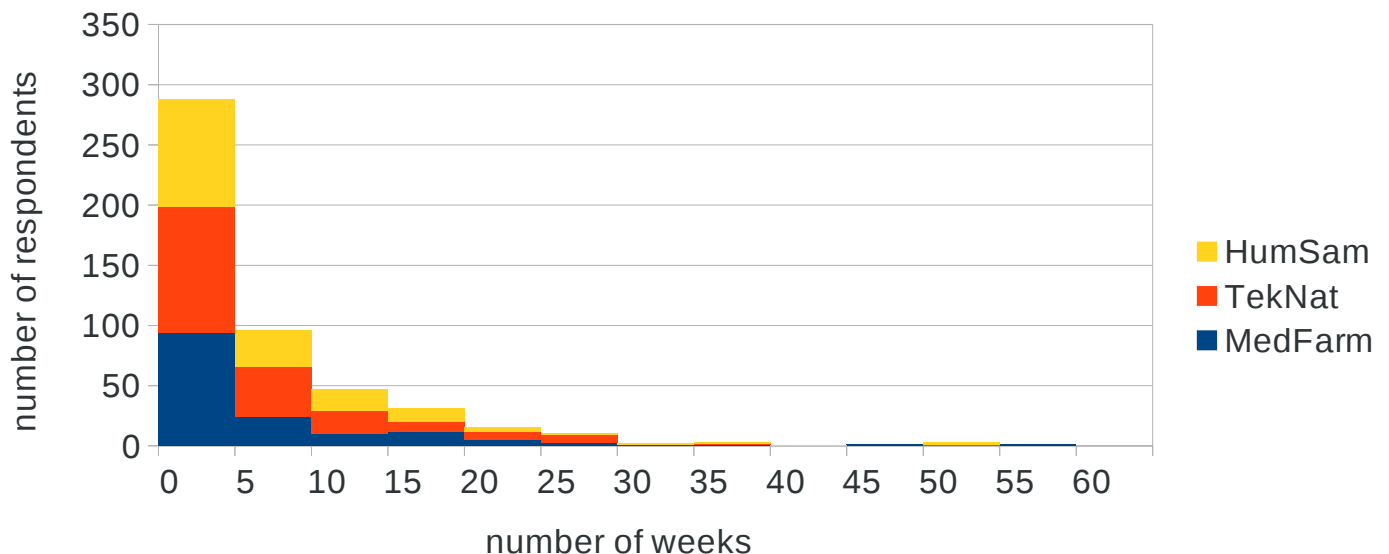
I couldn't travel to my native country and was all alone in this difficult time.

[Numerous other comments to similar effect.]

About positive side-effects:

My PhD was accelerated as I could take courses online now.

Imagine the world goes back to normal today (i.e., as it was before covid-19). Please estimate: how many weeks of extra time would you need to complete your doctoral studies, to compensate for the effects of covid-19 so far?



Of 511 responses, 36 (7%) were 20 weeks or more.

The histogram suggests that a clear majority of candidates “lost” at most 1-2 months of work, which appears compatible with the adjustment to new work routines and cancellation of activities. However, many candidates report needing more time than this, in some cases more than a full year. This underlines the importance of assessing prolongation need at the individual level.

It has been proposed by the SULF Doctoral Candidate Association together with the SFS Doctoral Committee that all active doctoral candidates be offered two months of prolongation, plus further prolongation on an individual basis as needed³. Our findings confirm that a two-month blanket prolongation offer would be satisfactory for the large majority (while dispensing with a lot of paperwork). A limited number of more complex situations would still need to be addressed on an individual basis.

As a rough quantification: the cumulative amount of work “lost”, based on these 511 responses, is 3551 weeks (**89 work years**, or 22 complete doctoral projects). In terms of gross doctoral salary, this equates to **35 million kronor**. These numbers should not be extrapolated to 2000 candidates, since those most severely affected are perhaps more likely to respond to the survey.

Based on these rough numbers, prolongation as proposed reasonably fits within the additional funding that the University has received from the Swedish Government.

³ *Förläng doktorandernas utbildning med anledning av corona: äventyra inte forskningen*, <https://universitetslararen.se/2020/11/12/forlang-doktorandernas-utbildning-med-anledning-av-corona/>

Have you received (or do you expect to receive) any prolongation, or any other kind of support, from your department or supervisor to help you manage the effects of covid-19?

This was asked as a free-text question. Many answered simply “yes” or “no”; some elaborated.

Answers can be broadly categorised as:

- 61 “yes”;
- 188 “no”;
- 63 “don’t know”.

Below are some selected free-text responses.

About good supervision:

During the initial months I was stuck in my home country. My supervisor was able to very quickly figure out a new study plan with meaningful work that could be accomplished away from the lab.

My supervisors have both been extremely helpful in coming up with alternative ways to start my project and to minimise the effect of the pandemic on my project.

My supervisor drove home a work chair for me, which I appreciated! We have also had regular zoom-fika to stay in touch.

The date of my defence was moved forward from November to January 2021. My supervisor has been very up to date on the changes and we have had good discussions around adaptations that has needed to be made in order for me to finish.

About bad supervision:

My supervisor does not really do remote meetings. Every time I ask for supervision he tells me to meet him in the office, which I do not feel comfortable with considering the pandemic. So no, I have not received any support or supervision during this time.

About uncertainty:

I have discussed this with my supervisor, that there might be a possible prolongation, but it “has to be fair”. No clear “yes” from their side.

I haven't got any information about support or prolongation. My supervisor recommended that I make notes about the situation, but nothing else. Nobody gives any information about it.

My supervisors are supportive, but no one knows what kind of prolongation could be possible (or who would pay for it).

I have asked for prolongation, but as per usual, keep being sent from pillar to post.

About prolongation granted:

I have received financial support from my supervisors and my department has provided me with a health insurance while stranded abroad.

I was told (regardless of covid, to be honest) that I could take more time if I needed.

We received additional 20% recognition of our teaching to compensate for the extra time spent.

One (1) day to compensate for issues related to teaching. This was not individualised, and was extended to all who taught last semester on a course by course basis. My department has said that this probably is insufficient, but it was also all that was possible due to financial constraints.

My supervisor had extra funding and so we added an additional few months to my total PhD time (I'll be finishing in the spring) to make up for the more difficult circumstances of working from home.

About local budget issues or decisions:

My supervisors are both arguing my case for prolongation and are fully supporting me. However, it might be a problem if there is no budget at the department to pay for prolongation.

My supervisor has mentioned that his funding will come to an end in June 2021, by which time I am expected to finish my thesis.

We've only been advised to include effects of covid-19 in our ISPs, but have also been told that the department does not have any extra funding for prolongation.

My department has set aside funds for extra hours put in by teaching staff, so I expect to be compensated in this way.

Have not received any prolongation. Department does not have the funds. Work is at a standstill.

About practical and psychosocial support:

Our research group has not been good at handling the situation at all. People felt shamed for working from home, or avoided working from home to keep these leaders happy, despite feeling like it was inappropriate to come into the workplace.

When I have asked for help and spoke about the severe stress and delays caused by working from home and the pandemic in general I was told to consider sick leave. I found this to be inadequate; I felt a structural issue was being put as an individual problem. ... I requested to get my monitor and other office appliances that would allow me to create a better office space at home, but received no reply.

I think that everyone is struggling to find support, including my supervisor, my department and the University as a whole. Being at the bottom of the academic ladder, I think that PhD candidates have the least resources, experience and capacity to respond to covid-19.

The master student that I was supposed to supervise during the spring was also hired during the summer to help me collect data in time. [DN cannot help but wonder about the form of employment for that master student. Skuggdoktorand?]

Any other comments

Selected free-text responses.

Comments expressing that the situation is acceptable for now, but not viable in the longer run:

I was able to shift parts of my projects (no mouse studies or very laborative experiments). So there hasn't been a major impact on my research yet, but in long term my research would be delayed.

If this continues into 2021, clearer guidelines regarding how to manage laboratory work would greatly improve the situation. Some students are still in the lab working, others are not welcome, all depending on the group leader. We have also lost staff that have been transferred to aid in running covid-tests, which is of course a great and necessary redistribution of resources, but makes lab work extremely slow.

Access to measurements and the lab has been the main concern. I can work at home to a large extent but there are certain tasks I can not do from home. If the situation is permanent I am in a very bad position. It will be very difficult to complete my studies without doing more measurements.

Comments about quality of doctoral education:

Although it will be possible for me and my PhD colleagues to produce work and articles during this period of time, the quality of this work has been largely affected by the covid-19 situation. This is partly due to the lack of academic companionship (on a daily basis) and easily accessible advice from the department community. Also there is essentially no academic cross-pollination any more: I have no idea what my direct colleagues are working on and vice-versa. It has been an isolated experience that will affect the quality of our work in ways that are not easily quantifiable, but definitely noticeable.

The data collection for the follow-up study had been preplanned in my ISP ever since my first year; it is unfortunate how the current situation has disturbed an otherwise well thought out plan. The follow-up data itself plays an essential role in my dissertation since at least two chapters are directly linked to the data, results and overall discussion. I am concerned about the quality of my dissertation should it be negatively affected by the lost time if no suitable action is taken.

I have tried to follow the recommendations from Folkhälsomyndigheten. Working online has huge effects on my education since networking and socialising with other scientists is not possible. I will not be able to find future collaborators and learn from others to the same extent as before covid-19.

It is probable that my PhD-project will be of lower quality since I have not been able to meet other researchers in my field.

Examples of particular circumstances of candidates' projects:

My work was not advancing at all for long periods during spring and summer 2020. This was mostly due to travel restrictions and reduced service or shutdown of collaborating labs. Eventually, we managed to work with other labs but the data are still not available and changing the lab was very costly.

I conduct my research in healthcare emergency units. Due to covid-19, these healthcare facilities have been overwhelmed, therefore I was unable to collect data.

A research trip during which important material was to be collected (mainly secondary sources, only available in the target country) and during which I was to meet important researchers in the field was postponed. Two conferences where my abstracts had been accepted and which could have benefited my work were postponed. Even though there is possibility that the research trip might be completed spring/summer next year, there is no guarantee since the target country still requires 14 days of quarantine on arrival, which makes a 30 day trip largely wasted. There has been a noticeable increase in workload in administrating the courses I am teaching, and there is a risk that there will be a very significant increase, depending on how the course I am currently teaching develops.

I was expecting data from the Very Large Telescope in Chile, but due to covid-19 the observatory was shut down for several months and has only started minimal operations in September. Now I am not expected to get any observations until spring 2021. I was also scheduled to visit the telescope, but that has been cancelled indefinitely.

I have lost a few sessions of fieldwork (i.e. the target groups have cancelled their events) ranging from a few hours to complete days which, together with field notes, transcriptions and other treatments perhaps would tantamount to something in between 6 to 8 weeks. These data will need to be gathered later on, and hopefully I'll make it in time, but there are uncertainties pertaining to the pandemic. And this is as of yet, further delays might follow!

This project depends on patient samples. As long as the hospital continues working, I can work as well. There are problems with supply of materials as well. For example, we have trouble getting the right pipette tips, gloves, ethanol etc. If there is a longer delay of material supply, we could get in trouble. However, we try our best to replace our materials with other materials if we can not obtain them in time.

My work relies heavily on international collaborations, meaning that regardless of whether Uppsala University remained open, delays were caused by covid-19 effects on other places.

A central element of my research is to get access to public archives and, importantly, personal collections of archived material. The plan is to also interview people that are well above the age of 65, and are thus in high risk groups. To accommodate this, the research approach needs to be revised, which takes time.

What enabled me to actually continue working with my thesis was that the museums that manage the collections that I am studying granted me access to storage during the spring. Also, the fact that the libraries at Uppsala University, especially Carolina Rediviva, were kept open helped to save my project.

The main problem for me is the lack of lab supplies and the long waiting times for ordering reagents and equipment. This makes it really hard for me to say exactly how long an experiment will take.

My research is mainly affected by schools closing (or going into distance teaching) due to covid-19, and by closed borders in general. My choice of participating schools is now also limited by me not wanting to travel by public transport in or far from Uppsala.

The clinicians take every chance they can to block our research at the clinic. I need to collect data from patients admitted for screening at a clinic at Akademiska sjukhuset. Patients are obviously admitted only if they have no symptoms of covid-19. My collection of data involves a non-invasive procedure that takes no more than 10 minutes. I feel like the clinicians use every prohibition possible due to covid-19 to shut out researchers, even when hygienic regulations are followed. Conflicts between clinicians and researchers are common, and covid-19 has given clinicians another tool in the box to hinder research.

More comments about working from home / health effects / parenting:

The biggest issue with covid-19 is that one is forced to work from home, which is hell, and then has to work weekends to compensate.

My project is mostly theoretical work, so I am barely affected by the current covid-19 situation. But the rate of my progress can be slower compared to normal due to the fact I have to mostly work at home. I am taking courses online and staring at the computer all the time, which is bad for my health. Other than that, my project progresses fine.

My project wasn't directly affected by covid-19, but having to work at home with two babies around is very challenging and slows down the pace of work considerably.

The two main reasons why I feel like I have lost time was due to not being able to work efficiently in the home office as well as more teaching preparation due to hybrid/online teaching which had to be prepared but wasn't compensated accordingly.

I find that being in Sweden as a foreigner, without my immediate support system in the same country has most affected me (more than cancelled fieldwork).

I was not prevented to do my work, however, I think my work pace became slower - especially during spring. This was mainly due to experiencing a lot of anxiety and feeling cut off from colleagues when working from home.

I think covid-19 has had a lot of indirect effects. ... Sometimes, some days, you mentally just cannot work on that manuscript any more and cannot read another article. Those are the days some of us would have liked to go to the lab and do something practical, which in my case does not work.

With the availability of Zoom and proper replanning, we managed to decrease the influence of covid-19 immensely. Working from home and having access to most of the literature via VPN or library service was going very well. There was only a limitation of my work by accessing certain software, which is only possible from the workplace.

The major problem I see with covid-19 personally is a great loss of connection to colleagues, support from supervisors and other researchers and in general, a lack of scientific discussions. All the fun parts of a PhD are lost, but the hard parts remain and the stress increases as you cannot leave your work at work. ... The focus should not be on how PhDs have lost research time and some specific projects, but more importantly on how they have lost a context at university and in research. Scientific meetings with many PhDs and their supervisors should be arranged over Zoom on a regular basis to not leave anyone alone and behind in these hard times.

While I will be able to finish my dissertation on time in spite of covid-19, this is in part because I have worked longer hours and weekends.

If any measure [such as prolongation] is to be taken, it needs to be retroactive, because a lot of affected doctoral candidates' contracts have now ended without a defence and they are continuing to work, with very little support. I believe that these PhD students who were already behind because of other problems are the ones most vulnerable to be affected by the crisis.

Parents with any respiratory symptoms are not allowed to drop off or pick up their children at preschool. Then how do you get your child to preschool? Or how do you work if you are instead parenting? In such a situation neither you nor your child are sick enough to get sick leave or VAB. What do you do?