



Report

GSLs PhD survey 2021/2022

Commissioned by: PhD Council of the Graduate School of Life Sciences (Utrecht University)
Contact persons: Leiah Brigitha, Malina Iwanski and Sarah Mehrem
Email: phd-council-ugsls@googlegroups.com

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Postbus 681
3500 AR Utrecht
phone: 030 263 10 80
e-mail: info@duo-onderwijsonderzoek.nl
website: www.duo-onderwijsonderzoek.nl



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Separate appendix: See appendix A for supplemental figures and tables.

1 INTRODUCTION

The GSLs PhD Survey is conducted annually and organized by the PhD Council of the Graduate School of Life Sciences (GSLs) at Utrecht University. In this survey, the PhD candidates from the GSLs (Faculty of Science, Faculty of Medicine and Faculty of Veterinary Medicine) are given the opportunity to share their work experience and provide feedback.

This report contains the results of the GSLs PhD Survey 2021/2022. This year, the GSLs PhD Council partnered with DUO Onderwijsonderzoek & Advies to conduct the survey and collect and analyze the responses.

2 THE SURVEY'S OBJECTIVES

The PhD Council of the GSLs would like to achieve the following objectives with the GSLs PhD Survey:

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1. To gain insight into how PhD candidates experience their **supervision**: are they satisfied with the frequency and quality of supervision?
 2. To gain insight into PhD candidates' perspective on **teaching activities**: how are the PhD candidates experiencing their teaching activities?
 3. To gain insight into the **PhD work environment and planning**: how are the PhD candidates experiencing the work environment and the time schedule of their PhD (and the help they receive with this)?
 4. To gain insight into **equality, diversity, and inclusion**: do PhD candidates experience their workplace as diverse and inclusive?
 5. To gain insight into **mental health and wellbeing**: do the PhD candidates feel happy and content with their work and at work and do they know where to find support if needed?
 6. To gain insight into **workplace safety**: do the PhD candidates feel that the workplace is safe, and do they feel comfortable addressing any issues regarding inappropriate behaviour if these occur?
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Additionally, individual PhD programmes have added their specific questions that cover a variety of subjects.

3 METHODOLOGY

Participants and method

The survey was conducted online and spread among all PhD candidates of the Graduate School of Life Sciences.

Survey development

The survey was developed in collaboration with the PhD Council and consisted of seven sections: 1) supervision, 2) teaching, 3) PhD work environment and planning, 4) equality, diversity, and inclusion, 5) mental health, 6) workplace safety, and 7) PhD Programme-specific questions. The final survey consisted of 114 GSLs-wide questions across the seven sections. The PhD candidates were permitted to skip any question they did not wish to answer.

Data collection

After receiving a general link to the survey from, DUO, the GSLs and GSLs PhD Council representatives made sure the PhD candidates from their respective programmes or institutes were invited to participate in the survey. The PhD Council sent multiple reminders in order to make sure every PhD candidate had the chance to complete the survey. The survey was open from to the 4th of April until the 23rd of May 2022.

Response

384 PhD candidates completed at least 90% of the survey and formed the final sample of this study. PhD candidates who completed less than 90% of the survey were not included in the analyses. The response per institute is as follows:

Table 1. In which institute do you work?		
	<i>Percentage</i>	<i>n</i>
Faculty of Science (UU)	16%	63
Faculty of Veterinary Medicine (UU)	13%	49
Hubrecht Institute	10%	38
Princess Máxima Center (PMC)	13%	50
University Medical Centre Utrecht (UMCU)	42%	163
Another institute	5%	21
Total	100%	384

The response per programme is as follows:

Table 2. Which PhD programme are you part of?		
	<i>Percentage</i>	<i>n</i>
Biomembranes	3%	11
Cancer, Stem Cells and Developmental Biology	18%	71
Cardiovascular Research	4%	16
Clinical and Experimental Neuroscience	8%	29
Clinical and Translational Oncology	9%	33
Computational Life Sciences	3%	13
Drug Innovation	3%	13
Environmental Biology	6%	24
Epidemiology	7%	26
Infection and Immunity	9%	34
Life Sciences Education Research	4%	16
Medical Imaging	3%	11
Molecular Life Sciences	2%	9
Regenerative Medicine	9%	35
Toxicology & Environmental Health	5%	18
I am not part of a programme	7%	25
Total	100%	384

Statistics

The results of the survey are presented in graphs and tables in Sections 6.1 to 6.6. Some graphs are accompanied by tables showing the results split by certain characteristics (results are not reported for groups smaller than $n = 5$). We also studied significant differences (with 95% confidence intervals) between PhD candidates of different institutes and different programmes. These statistically significant differences are calculated using the Standard Error (SE) and t -Test Statistic (t). If this statistic is greater than 1.96, the difference is considered statistically significant different.

We calculated an average for the scaled questions, with a higher average indicating greater satisfaction/a more positive opinion on the matter.

4 SUMMARY AND RECOMMENDATIONS

Background characteristics

9% of PhDs became a parent during their PhD, 97% of the parents had the right to paternity/maternity leave, however, one third did not or could not use it. **We recommend** institutes to ensure that parental leave is possible for all PhDs.

Supervision

69% of PhD candidates are (very) content with the supervision of most of their supervisor(s) (in Dutch: *promotoren*), while 7% are not (at all) content with it. PhD candidates rate the aspect 'scientific contribution' highest (mean rating of 7.8 on a scale 1-10) for their supervisors and 'help with planning' gets the lowest mean rating of 6.6. 80% of the PhD candidates are (very) content with the supervisions of their co-supervisor(s) (in Dutch: *co-promotoren*), while 8% are not (at all) content with it. Just like with their supervisors, the PhD candidates rate the aspect 'scientific contribution' highest (mean rating of 8.1) for their co-supervisor(s) and 'help with planning' gets the lowest mean rating of 7.1.

68% of the PhD candidates rate the communication between the members of their supervisory team very or somewhat good.

We recommend that students and supervisors make a clear outline of mutual expectations at the start of a PhD and the following years (during the yearly [PhD progress meeting](#)). This should also include points where students currently show the most dissatisfaction, i.e. assistance with planning, being able to give feedback to supervisors and that they are open to feedback, and discussing the meeting frequency between supervisors and students. The meeting frequency and communication within the supervisory team should be part of the yearly evaluation of PhD supervisors.

Teaching activities

69% of candidates have performed teaching or supervision activities. The amount of candidates who have teaching activities included in their contract is comparable to last year (This year 20%, previously: 23.2%). A striking 30% of candidates report that teaching is not part of their contract, but that they do perform teaching tasks. 9% of candidates reported to have a higher teaching workload than agreed on, which is comparable to previous years. 58% of the PhD candidates involved in teaching indicate that the amount of teaching does not hinder the progression of their PhD, whereas 16% does feel the progress of their PhD is hindered. Only 53% felt adequately prepared for teaching and 21% did not feel prepared. Notably, 44.3% indicated in the last survey that they would like to receive training on teaching. Furthermore, we find that 22% of PhD candidates do not seem to have an agreement on teaching workload with their supervisors.

As 24% reported to not know whether they were obligated to teach according to their contract, **we recommend that** PhD and supervisor both get familiar with what is contractual required from the PhD student. In addition, supervisors and PhD candidates should discuss the teaching tasks and teaching load as currently one fifth had no agreements with their supervisor(s) on teaching load. Supervisors should inform their PhD candidates that they are required to follow training when they have teaching tasks ([compulsory for all UU PhD candidates](#)).

PhD work environment and planning

Only 76% of PhD candidates (totally) agree with the statement 'I feel free to take a holiday'. About half considers that it is normal to finish your thesis outside of your contract time (46%). This is very worrisome

as it is illegal to finish a PhD thesis unemployment allowance from the 'Uwv' as recently also highlighted by the deans of the GSLs (Deans memo June 2022). Besides, it will likely lead to increased mental health problems and stress during an intense PhD track. **We recommend that** the faculties/institutes and GSLs actively stimulates more attention to healthy work-life balance. PhDs cannot be forced to work more hours than stated in their contract. We ask supervisors to protect PhDs and be open to receive feedback. We ask PhDs with a non-acceptable workload to discuss this with their supervisors or a confidential advisor if they don't feel comfortable. In addition, **we recommend that** the GSLs makes a specific form for the completion plan for PhD students that will enter their final year. This form should include a timeline and expected thesis chapters. Supervisor and PhD should also discuss how many hours a week will be spend on writing the thesis and how many hours will be spend on finalizing data collection and analysis. For example it should include when the lab work has to be completed in order to focus on writing the thesis and complete it before the end of the contract. Additionally, **we recommend that** the yearly evaluation of supervisors includes the evaluation of the number of PhDs finishing their PhD on time and handing in their thesis by the end of their contract. When a PhD is not expected to finish in time the yearly evaluation of supervisors should include an evaluation including a plan for extension or plans to prevent this for future PhDs. We also recommend that the registration in MyPhD and PhD programmes can play a key role in this.

Furthermore, on mean, most PhD candidates indicate that supervisors mostly take the quality of research (93%) and progress (87%) into account, whereas personal (69%) and educational development (52%) are less assessed during PhD evaluations. Peers are almost always evaluated as the most helpful resource for different aspects of the PhD track.

We recommend that expectations from supervisors and PhD students need to be more regularly discussed. Both PhD and supervisors should make sure that the Annual PhD progress meeting takes place (using the [GSLs form](#)) that also includes talking about personal and educational development. The new GSLs [PhD guide](#) and [supervisor guide](#) states that "At the heart of the PhD journey of course, lies the growth of a PhD candidate into an independent researcher, who possesses knowledge, skills and behaviours tailored for a position as a knowledge worker." To achieve this, all PhD students should get the opportunity to follow education and discuss this with their supervisors. We expect that the implementation of the new PhD guide will ensure personal and educational development of PhDs and will also be increasingly valued by supervisors. So the following years these percentages will improve. Personal and educational development for the PhD students is extremely important, and improving this development is key for their journey. Therefore, if these do not improve, other measures have to be taken for the benefit of the PhD students

Equality, Diversity, and Inclusion

Overall, 85% of the PhDs feel welcome and included. 76% of PhDs agree that their institute provides an environment for free and open expression of ideas, opinions and beliefs, and 71% that it provides equal opportunities to all people, regardless of ethnicity, religion, gender, sexual orientation, and disability. These results are comparable with our 2020 survey results. While these numbers look encouraging, it is still worrisome that a relevant proportion does not agree with these statements and up to 9% does not feel that all employees get equal opportunities. Furthermore, support for non-Dutch employees is still lacking. Also, 6% of the PhD candidates have been a victim of discrimination at their institute and 15% have personally witnessed discrimination at their institute. We find these percentages unacceptable and feel this needs to be adequately addressed.

We recommend that a D&I module is added to the “responsible conduct of research” course that is already mandatory for all PhDs. This should (mainly) address what diversity in research means, how is it “achieved” and why it is important and how this affects outcome and implementation of such research. All institutes and PhD programmes should evaluate where discrimination may occur and how discrimination can be prevented. An active approach is needed to address this topic. We urge all programme coordinators and respective members of the institute to open up a dialogue about this topic with their PhDs. Also, include your non-Dutch PhDs in the conversation and learn from them how to improve support for non-Dutch colleagues.

Mental health and personal wellbeing

Only 64% of the PhD candidates agree with the statement ‘My workload is acceptable’. 23% of the PhD candidates have encountered a PhD-related or mental health related problem for which they wanted to seek help via the [options offered by the university](#). 89% of the PhD candidates consider peers as helpful when a problem is encountered. Promotors are only considered to be helpful by 61%, and 15% even consider promotors as unhelpful. 12% of the PhD candidates feel uncomfortable using the offered services if they have a problem.

Only 28% of the PhD candidates feel that the topic of mental health is addressed well enough by the GSLs, 37% think the topic is partially addressed well enough and 16% do not think mental health is addressed well enough.

To assess the prevalence of burnout and feelings of emotional exhaustion, mental distance, and feelings of competence in PhD candidates, the Utrecht Burnout Scale – General (UBOS-A) was used, like in the previous PhD Survey. It covers three domains: (emotional) exhaustion, mental distance and competence. 50% of the PhD candidates experience high or very high levels of mental distance and 62% experience high or very high levels of emotional exhaustion (based on the Utrecht Burnout Scale). Feelings of competence are experienced in moderate, low, or very low levels by 80% of the PhD candidates.

65% perceive moderate stress levels and 8% perceive high stress levels. Only 26% of the PhD candidates perceive low stress levels (based on the Perceived Stress Scale). These results are comparable to the results of the two previous surveys (2019, 2020).

In line with the recently published [KNAW advisory report](#) (in Dutch), **we recommend that** universities and institutes take more active initiative regarding mental health and social security. The current system in place requires action from the PhD in case of problems or inappropriate behavior. We recommend a more active approach by implementing yearly 30-60 minute meetings with an independent confidentiality advisor with the following goals:

- early recognition of signals regarding inappropriate behavior in the GSLs or institutes
- early de-escalation of problems
- ensuring a safe and confidential place to communicate problems, discrimination or other forms of inappropriate behavior and offer help/advise if needed
- destigmatizing mental health issues

Furthermore, **we recommend** PhDs to talk to their supervisors if there are any mental health related issues. If this is not possible, you should go to your supervisory committee. We recommend supervisors to create a safe place for this conversation on a regular basis, at least once a year during the annual progress report.

Additionally, **we recommend that** 2FTE additional PhD psychologists be appointed to be able to timely and effectively counsel and/or treat PhDs seeking help, but also to increase the number and visibility of preventive programmes/courses.

Furthermore, **we recommend that** institutes create a safe place for constructive feedback for supervisors during yearly evaluation reports.

Finally, **we recommend that** the GSLs more actively and openly addresses mental health. We recommend that mental health be addressed by the GSLs in newsletters and events in order to try to destigmatize mental health problems. Additionally, we recommend the GSLs to highlight and offer mental health related courses and ensure there are enough places available and scale up if needed.

A safe workplace

While 81% of the PhD candidates experience their work environment as being safe, still 19% do not experience it as safe. 8% of the PhD candidates have experienced inappropriate behaviour by their supervisor(s) in the past 12 months and 15% experienced inappropriate behaviour by other colleagues. 30% of these PhD's tried to discuss or report the inappropriate behaviour they experienced, of which 63% tried to discuss it with their supervisor. Of the PhD candidates who tried to discuss or report the inappropriate behaviour, most were not satisfied with how it was followed up: 34% were (very) dissatisfied with the follow-up and 48% were neutral. Candidates that decided not to report inappropriate behaviour didn't do that because they thought it would not improve the situation and were worried about consequences for their own work environment and future job prospects.

It is very concerning that 1 in 5 PhD candidates report not feeling safe in their work environment. Compared to the safe workplace section in the PhD survey report of last year, not much has changed per institute, except for the Hubrecht Institute. Here, in the previous report a bit above 50% of candidates reported a safe working experience, while now 61% report to feel safe. This might be a result of the initiative to appoint a confidential advisor that talks to every PhD candidate (half an hour talks) on a yearly basis in order to solve existing problems and prevent escalation. However, this fraction is still significantly smaller than reported for other institutes.

We recommend that 1) All institutes install a 'taskforce' that measures the feeling of social safety, takes action to improve this, and monitors if the actions have an effect. The initiative of Hubrecht shows that there is improvement, although slow, and we advise other institutes to do the same.

2) All institutes have to keep attention on the different possibilities to report inappropriate behaviour. The majority of candidates does not feel compelled to report such instances, for several reasons. It must become safer for candidates to report.

3) Dissatisfaction on how reported situations were handled is high. While reporting inappropriate behaviour is the first step, it is important that it is followed up by actions. Otherwise the current unsafe working environments will **not** change.

5 BACKGROUND CHARACTERISTICS

The demographics of the respondents are shown in the appendix A (Table S1 to S13). 70% of respondents identified as female and 29% as male. 67% is Dutch. Most of the PhDs that needed to relocate for their PhD, relocated within the NL (16%) or from within the EU (including Czech Republic, Iceland, UK) (14%). Most (43%) PhDs obtained their Master's degree at the UU.

The majority of respondents started their PhD between 2019 - 2021. 73% of the PhDs had their initial PhD contract (i.e., excluding extensions and assuming that PhDs got a GO after the first year) of 48 months or more and about half (49%) of the PhDs got an extension. 21% of the PhDs has a medical doctor or doctor of veterinary medicine degree. 9% of PhDs became a parent during their PhD, 97% of the parents had the right to paternity/maternity leave, however, one third did not or could not use it. All PhDs should be able to use their parental leave.

6 RESULTS

6.1 Supervision

The first section of the survey focussed on the supervision that the PhD candidates receive. The following introduction was used for the section of the survey concerning supervision:

Here we will ask some questions about the supervision you receive from your supervisory team: your supervisors (in Dutch: promotoren) and your co-supervisors (in Dutch: co-promotoren).

Table 3 and 4 show the distribution of the number of supervisor(s) and co-supervisor(s). About half of the PhD candidates (51%) have one official supervisor, the other half more than one.

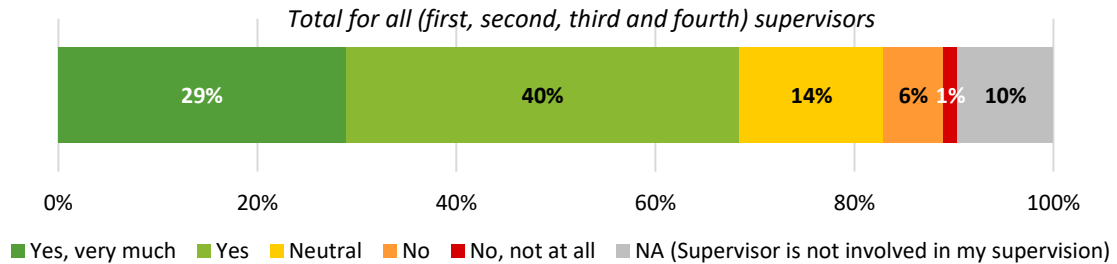
Table 3. How many official supervisors do you have?		
	<i>Percentage</i>	<i>n</i>
1	51%	196
2	40%	153
3	6%	24
4	2%	8
> 4	1%	3
Total	100%	384

And about half of the PhD candidates (48%) also have one official co-supervisor.

Table 4. How many official co-supervisors (in Dutch: co-promotoren) do you have?		
	<i>Percentage</i>	<i>n</i>
0	16%	62
1	48%	186
2	34%	129
3	2%	7
4	0%	0
> 4	0%	0
Total	100%	384

We asked if the PhD candidates are content with the supervision of each official supervisor. The answers were fairly similar for first/second/third/fourth supervisors, so we combined the scores of all official supervisors (Figure 1). 69% of PhD candidates are content or very content with the supervision of most of their supervisor(s). In 10% of PhDs the supervisor is not involved in the supervision (=NA).

Figure 1. Are you content with the supervision of your supervisor (in Dutch: promotor)?

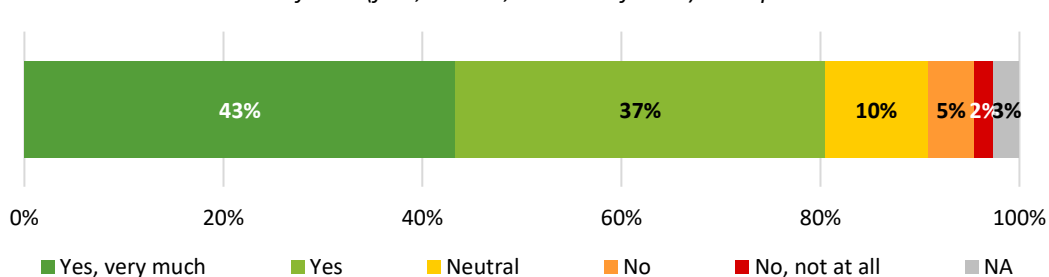


Candidates from the Hubrecht Institute more often reported that they had supervisors that were not involved in their supervision (=NA) and overall they seemed less content with their supervisors (Table S14).

Candidates who were the most content with their supervision are from the PhD programmes Cardiovascular Research (89%), Drug Innovation (80%), Life Sciences Education Research (95%), and Medical Imaging (81%), with the indicated percentage of candidates answering 'Yes, very much' and 'Yes'. Candidates from Cancer, Stem Cells & Developmental Biology (16%), Infection and Immunity (12%), Molecular Life Sciences (13%), and Regenerative Medicine (13%) were the least content with their supervision, with the indicated percentage of candidates answering 'No, not at all' and 'No'. See table S15 for the exact overview per programme.

Subsequently, we asked if the PhD candidates are content with the supervision of each official co-supervisor (Figure 2). The answers were fairly similar for first/second/third/fourth co-supervisors, so we combined the scores of all official co-supervisors. 80% of the PhD candidates are content or very content with the supervisions of their co-supervisor(s). In 3% of PhDs the supervisor is not involved in the supervision (NA).

Figure 2. Are you content with the supervision of your co-supervisor?



See table S16 and S17 for the programme specific and institute specific responses.

The graph below (Figure 3) shows the rating of the quality of the supervision of all supervisors (promotors) on a scale from 1 (very bad) to 10 (very good) for a range of aspects. We also show the mean rating of all of these aspects (Table 5). PhD candidates rate the aspect 'scientific contribution' highest (mean = 7.8). 'help with planning' gets the lowest rating (mean = 6.6).

Figure 3. Please rate the quality of the supervision of your supervisor for the following aspects on a scale from 1 (very bad) to 10 (very good)
Total for all (first, second, third and fourth) supervisors

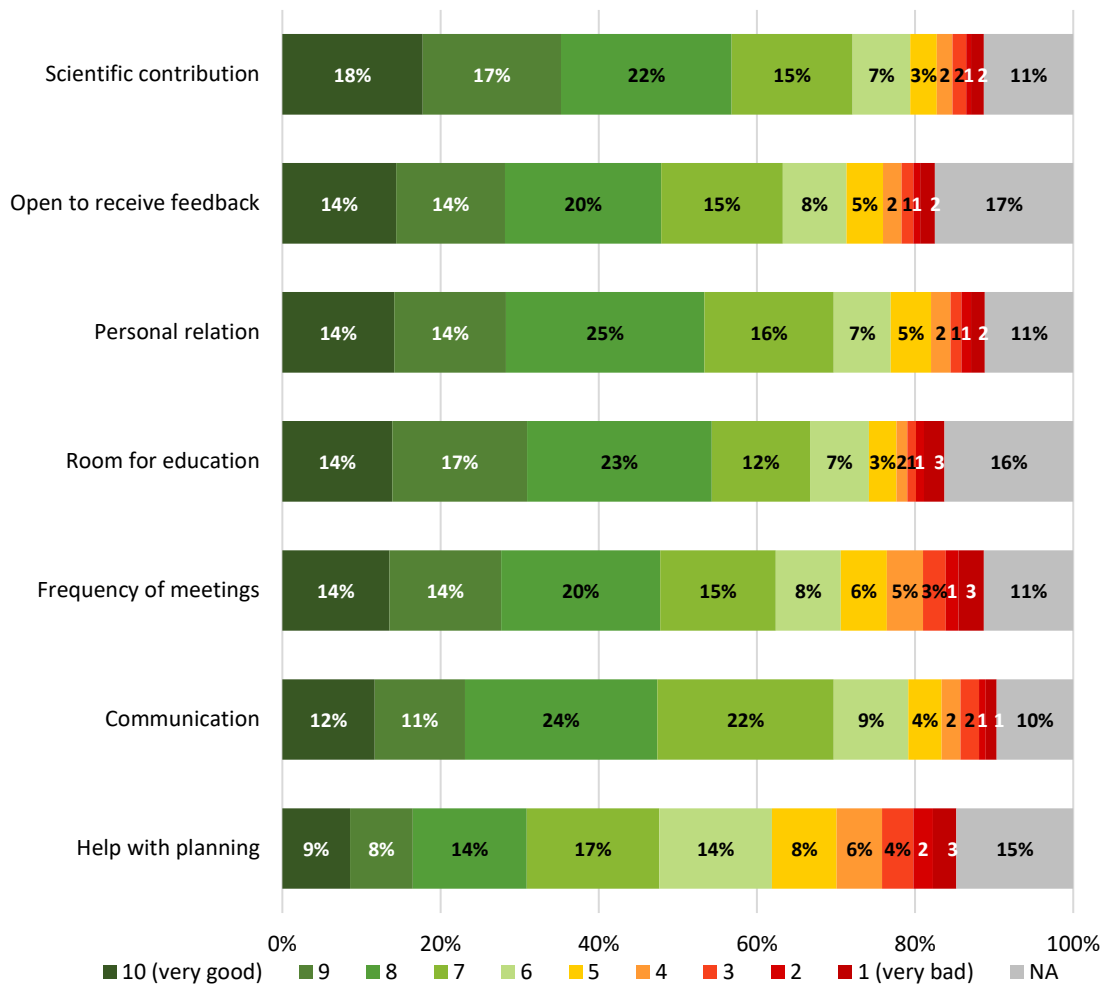


Table 5. Please rate the quality of the supervision of your supervisor for the following aspects on a scale from 1 (very bad) to 10 (very good)
Average for all supervisors split by the overall content with the supervision

	Mean	Standard Deviation
Scientific contribution	7.8	1.9
Open to receive feedback	7.5	2.0
Personal relation	7.6	2.0
Room for education	7.7	2.0
Frequency of meetings	7.2	2.3
Communication	7.4	1.9
Help with planning	6.6	2.3

The graph below (Figure 4) shows again the rating of the quality of the supervision of all co-supervisors (co-promotor) on a scale from 1 (very bad) to 10 (very good) for a range of aspects. Table 6 shows the average rating of all the aspects. Just like with their supervisors, the PhD candidates rate the aspect 'scientific contribution' highest for their co-supervisor(s), with an average of 8.1. 'Help with planning' gets the lowest rating, an average of 7.1.

Figure 4. Please rate the quality of the supervision of your co-supervisor for the following aspects on a scale from 1 (very bad) to 10 (very good)

Total for all (first, second, third and fourth) co-supervisors

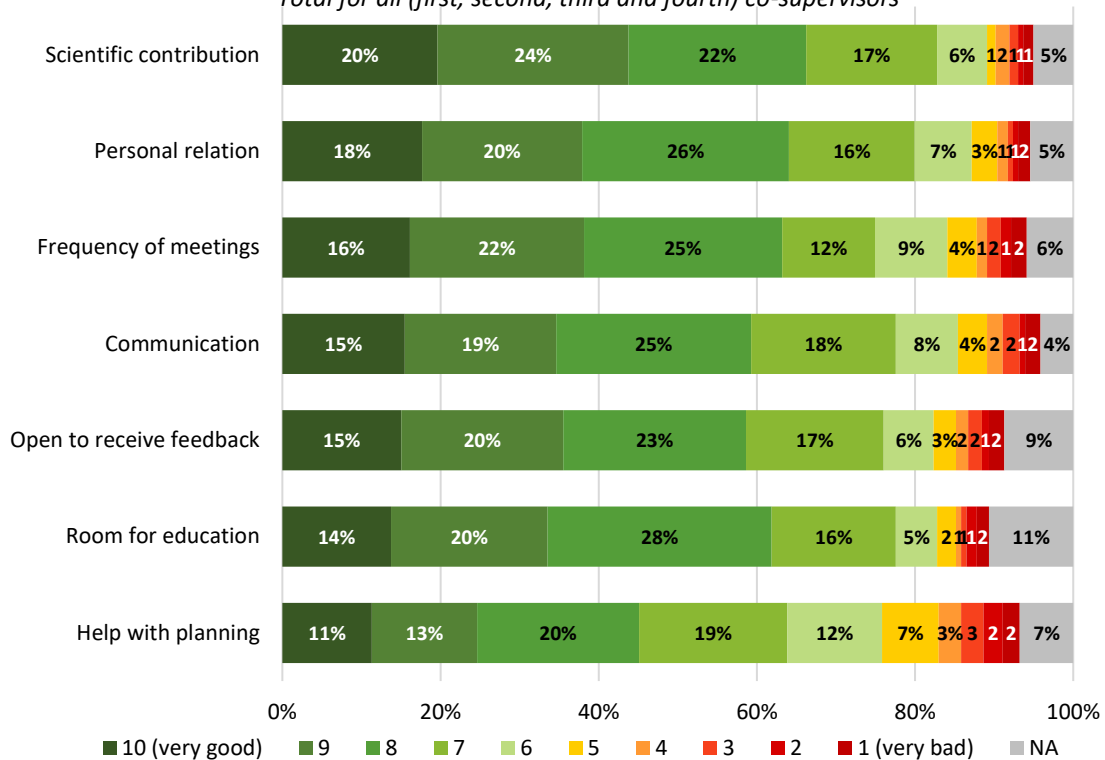


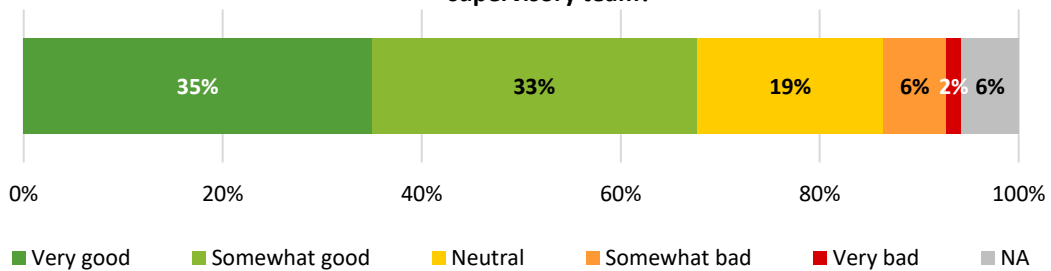
Table 6. Please rate the quality of the supervision of your co-supervisor for the following aspects on a scale from 1 (very bad) to 10 (very good)

Average for all co-supervisors split by the overall content with the supervision

	Mean	Standard Deviation
Scientific contribution	8.1	1.8
Personal relation	7.9	1.8
Frequency of meetings	7.8	2.0
Communication	7.7	1.9
Open to receive feedback	7.8	1.9
Room for education	7.9	1.8
Help with planning	7.1	2.1

Two third of PhD candidates rate the communication between the members of their supervisory team very good (35%) or somewhat good (33%) (Figure 5). 8% rate the communication somewhat or very bad. The communication between members of the supervisory team does not seem to depend on the number of members of the supervisory team (See Table S18).

Figure 5. How do you rate the communication between the members of your supervisory team?



6.2 Teaching

This section of the survey concerns the teaching activities of the PhD candidates. First, we asked if the candidates have taught any courses or supervised any students during their PhD project. 69% of candidates have done teaching or supervising, of which the majority (60%) have supervised bachelor/master students, 25% have taught a bachelor/master course and 15% have had a role as a teaching assistant.

There is a significant difference between institutes in how many PhD candidates have had a teaching role. 13% of candidates from the Faculty of Science (UU) reported to **not** have taught anything, while 53% of candidates from the Hubrecht institute have **not** done so (Table S19).

Next, we assessed how many candidates have teaching (including supervising) as a function within their working contract (Table 7). 20% of candidates report teaching to be included in their contract, of which 15% have already performed teaching duties. 56% do not have it in their contract, and 24% report that they do not know. Of candidates that do **not** report it as part of their contract, 30% still teach. Of candidates who have taught according to their contract, 5% report to have taught more hours than stated in their contract and 2% report to teach less hours. We find no significant differences in answers when split by gender (see Table S20).

Table 7. Is teaching (including supervising) part of your contract?

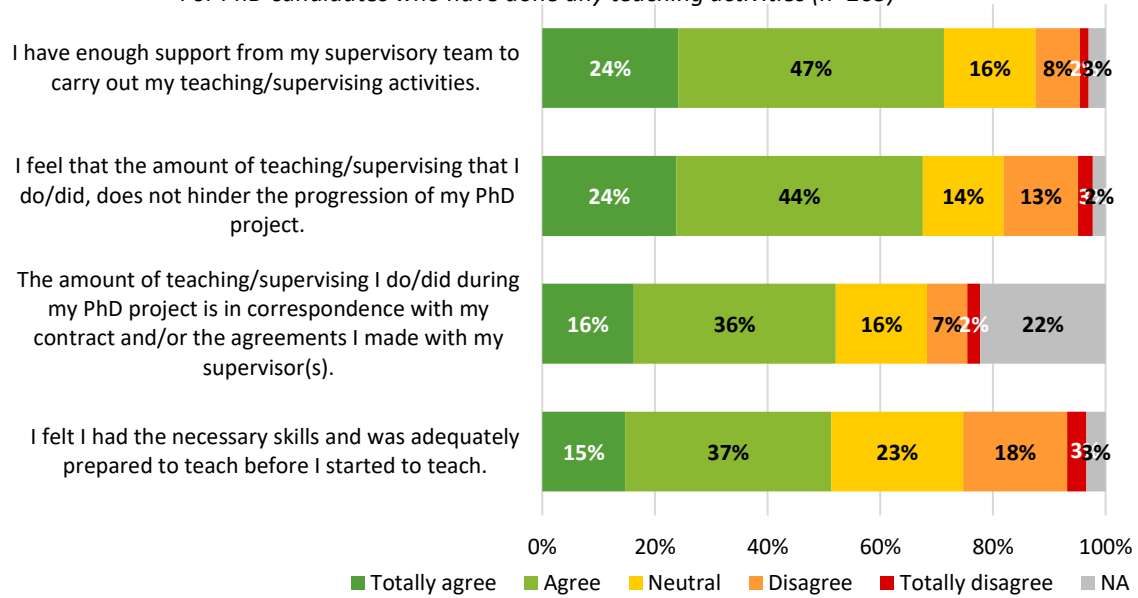
	All
No, but I do teach	30% (113)
No, and I don't teach	26% (100)
Yes, I teach the number of hours as stated in my contract	8% (31)
Yes, but I have not taught yet	5% (21)
Yes, but I teach more hours than stated in my contract	5% (18)
Yes, but I teach less hours than stated in my contract	2% (6)
I don't know	24% (94)
Total	100% (382)

For PhD candidates that were involved in teaching, we asked whether different teaching activities were optional or compulsory (Figure S1). Two third of the different types of teaching activities are reported to be optional (61%-69%).

The PhD candidates who have done teaching and/or supervising were asked to evaluate a number of statements regarding their teaching activities (Figure 6). 71% of candidates reported to have enough support by their supervisory team to carry out teaching activities. 16% of PhDs report that they find teaching hinders their PhD progression. 58% report that they feel the amount of teaching does not hinder the progression of their PhD. 52% find their teaching hours to be in correspondence with the agreements they have made with their supervisor. 53% felt adequately prepared for teaching, whereas 21% does not feel prepared to teach. Summarising these results, a large proportion of PhD candidates disagree with these positively framed statements about their teaching tasks.

Figure 6. Please indicate for the following statements whether you agree or disagree.

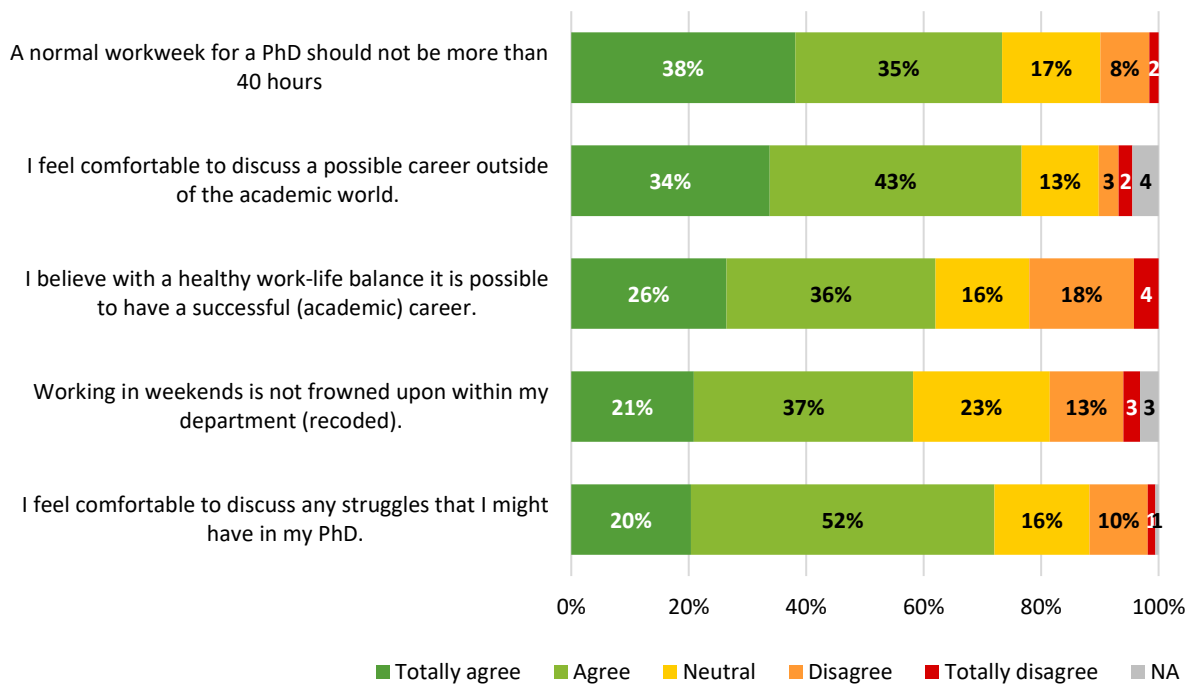
For PhD candidates who have done any teaching activities (n=265)



6.3 PhD work environment and planning

The next section of the survey concerned PhD work environment and planning and included several statements. The majority of PhDs thinks that a normal workweek should not exceed 40 hours. 77% of the PhD candidates feel comfortable to discuss a possible career outside of the academic world (Figure 7) and only 22% does not believe that a healthy work-life balance is possible to have a successful (academic) career.'

Figure 7. Please indicate for the following statements whether you agree or disagree.

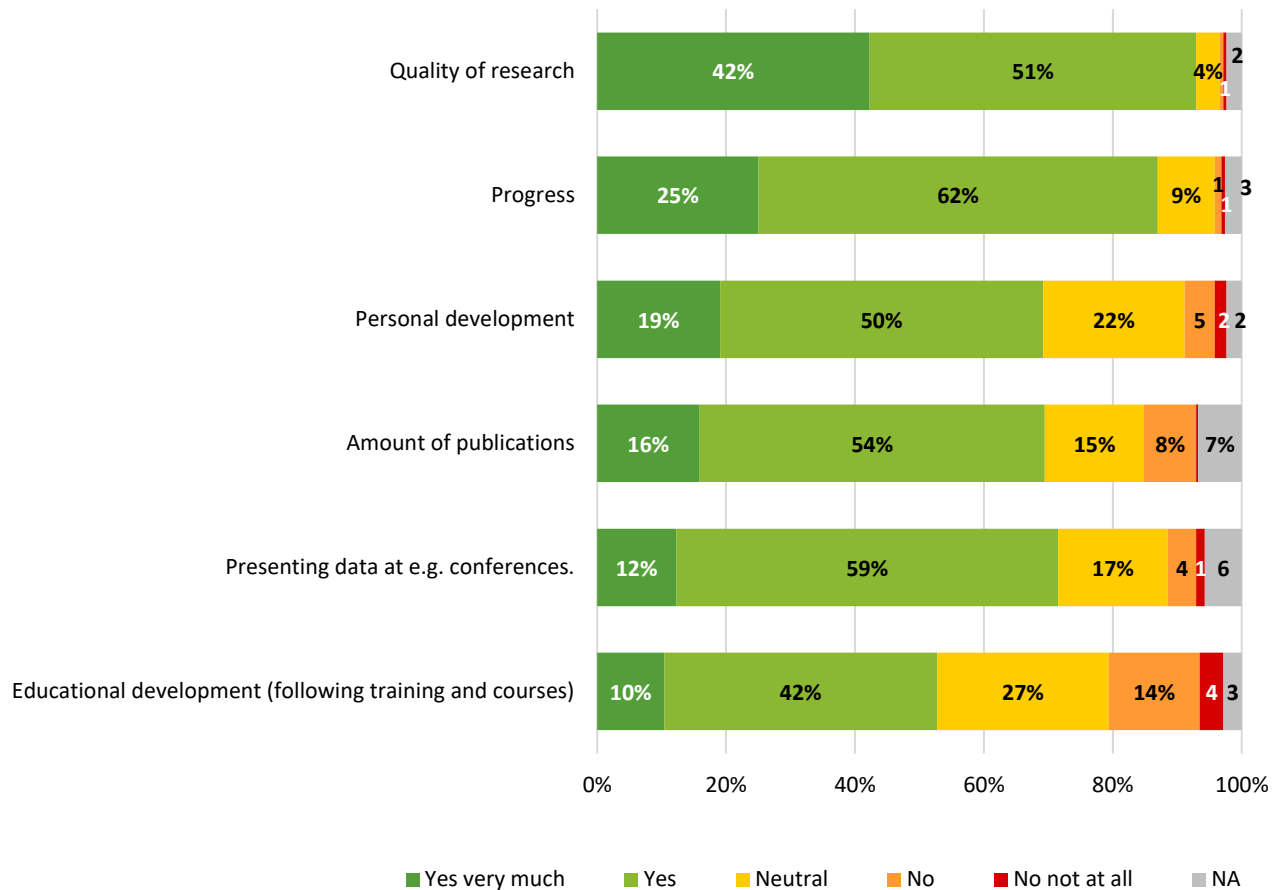


NB: the original statement 'Working in weekends is frowned upon within my department' was recoded to make a comparison with the other (positively formulated) statements easier.

58% of respondents agreed with the statement 'feel that working in weekends is accepted within their department', while 16% disagreed and 23% were neutral. We found that more respondents from the Hubrecht agreed with this statement (63%), and the respondents from the Princes Máxima Center agreed the least (56%) (Table S21). It is worrisome that 11% of PhDs do not feel comfortable to discuss struggles they have during their PhD. A more open culture is needed.

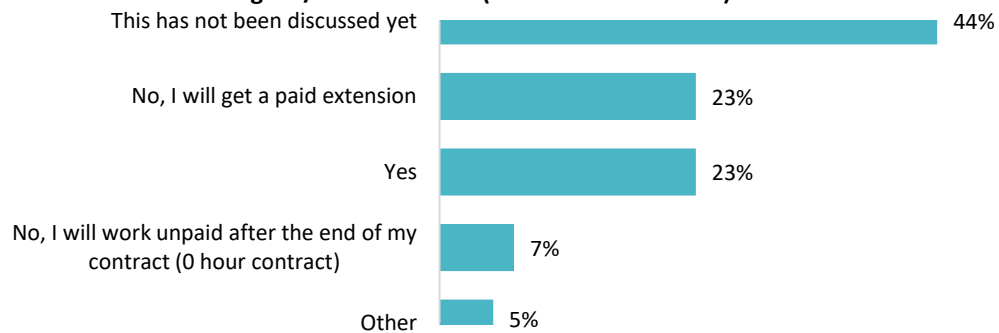
PhD candidates were also asked to indicate what their supervisor(s) take into account when assessing the PhD. Respondents indicated that most supervisors do take into account the quality of research (93%) and progress (87%) when assessing the PhD (Figure 8). See table S22 in appendix A for this response split by starting year of PhD. Educational development is taken the least into account by supervisors (52%).

Figure 8. When assessing your PhD, do(es) your supervisor(s) take into account



Regarding completion of the PhD project, most respondents (44%) have not yet discussed if they will finish their PhD before the end of the initial contract (Figure 9). Almost a quarter (23%) will get a paid extension. Most of these respondents started their PhD in 2019 or earlier. Only 23% of the PhDs think they will finish in time, which does not seem to be correlated to their starting year (Table S23).

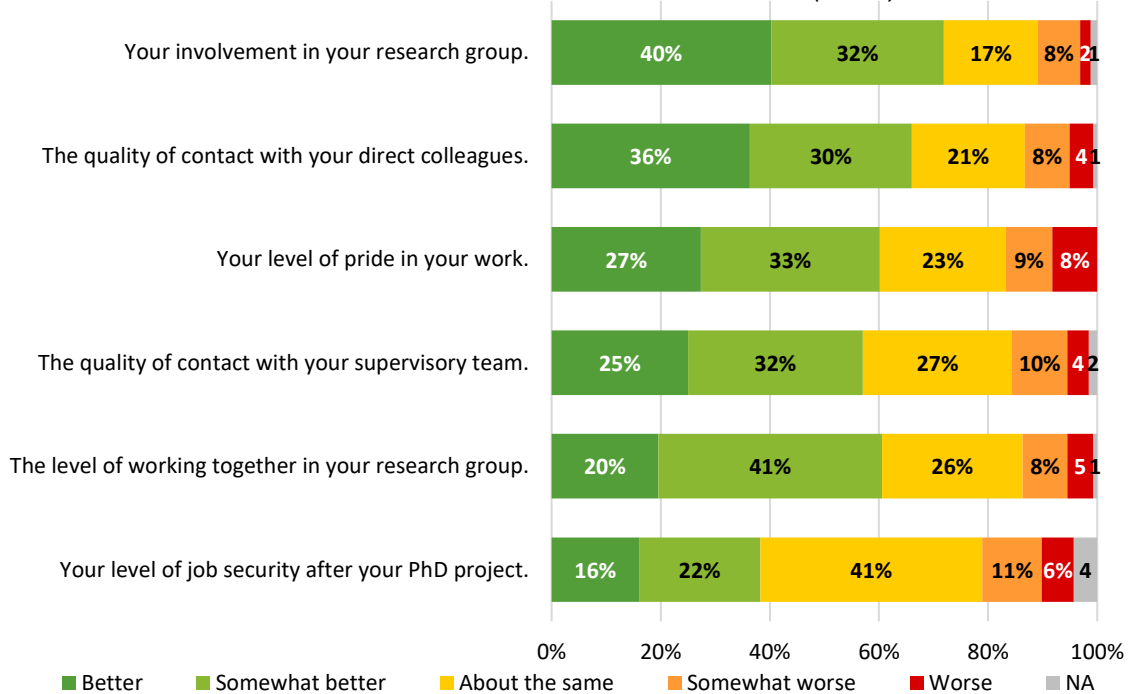
Figure 9. Do you think you will finish your PhD before the end of your original/initial contract (finish = submit thesis)?



We asked the PhD candidates who started in 2020 or earlier ($n=256$) to state how some aspects of their work experience have changed from the start of their PhD up to present-day. The involvement in the research group has most often improved (72% state this is now (somewhat) better). The level of pride in their work and the level of job security have most often gotten worse (17% state this is now (somewhat) worse) (Figure 10). This data has also been stratified per year in the appendix, see Table S24.

Figure 10. Please state how each of the following aspects of your work experience has changed from the start of your PhD up to present-day.

For PhD candidates who started in 2020 or earlier (n=256)



About half of the PhD candidates who started in 2021 or earlier (n=353) felt like they had enough support during the start of their PhD (Figure 11 and Table S25). 30% feel like they did not have enough support. Subsequently we asked how useful certain sources were during the start of their PhD. Peers are considered to be (very) useful, whereas the UU website is considered least useful (Figure 12). The sources 'my PhD programme website' and 'My institute' are split by PhD programme and institute, respectively (Table S26 to S29). The information given by the UMCU was found less useful compared to the other institutes.

Figure 11. Did you feel that you had enough support during the start of your PhD?

For PhD candidates who started in 2021 or earlier (n=353)

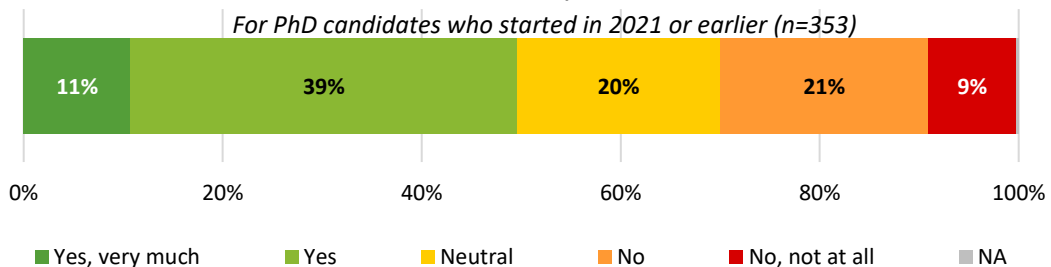
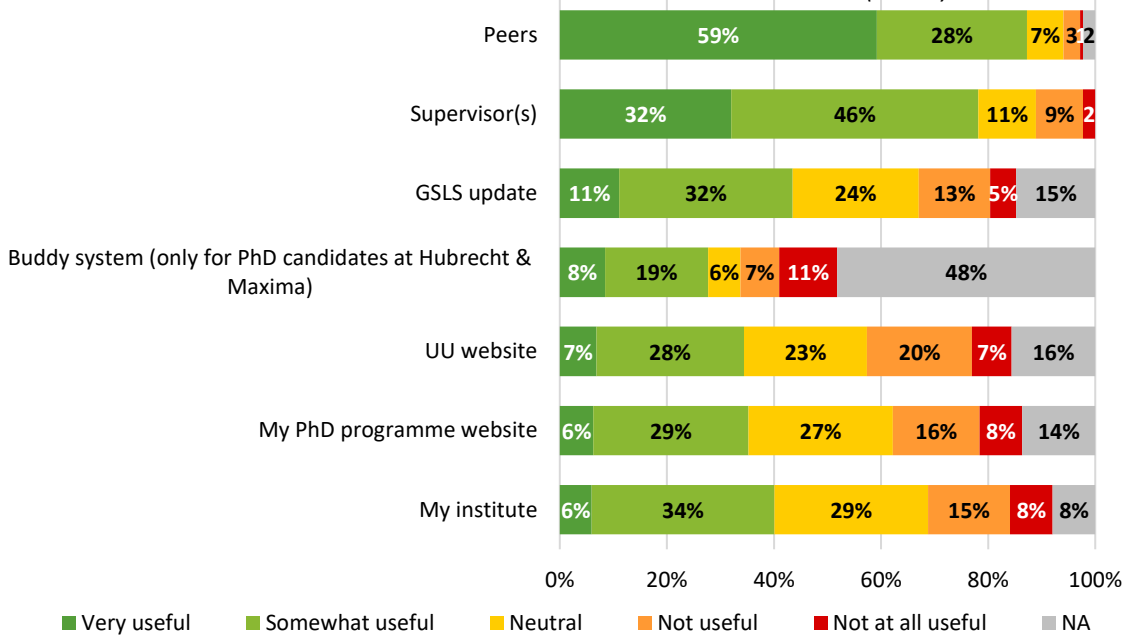


Figure 12. How useful were the following sources during the start of your PhD if you made use of them?

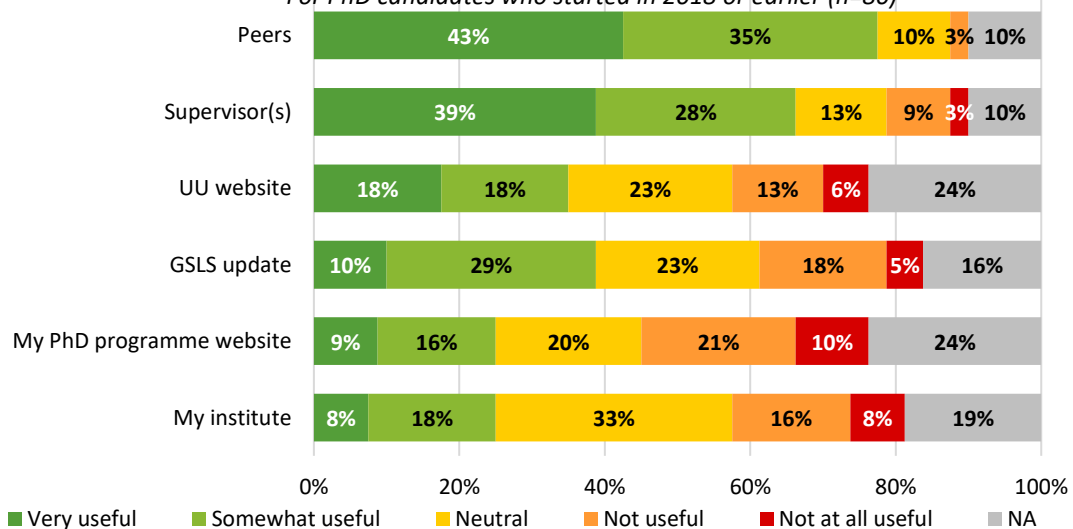
For PhD candidates who started in 2021 or earlier (n=352)



We also asked the PhD candidates who started in 2018 or earlier (n=80) how useful the sources below were during the end of their PhD (Figure 13). Again, peers are most often considered (very) useful. The PhD programme website is considered least useful.

Figure 13. How useful were the following sources during the end of your PhD?

For PhD candidates who started in 2018 or earlier (n=80)



When asking PhDs if they think that their PhD adds value and is of relevance to a new job outside of academia, 82% answers yes (very much) (Figure 14). When asking PhDs to respond to work environment-

related statements (Figure 15), most PhD candidates (76%) (totally) agree with the statement 'I feel free to take a holiday'. Thus one in four PhDs does not feel free to take a holiday. This seems to be related to the contentness of supervision (Table S30), as PhD candidates who are not contents feel more constraint. Additionally, PhD candidates most often feel that it is not normal to finish your thesis outside of your contract time.

Figure 14. If you do not stay in academia, do you think your PhD adds value and is relevant to your new job?

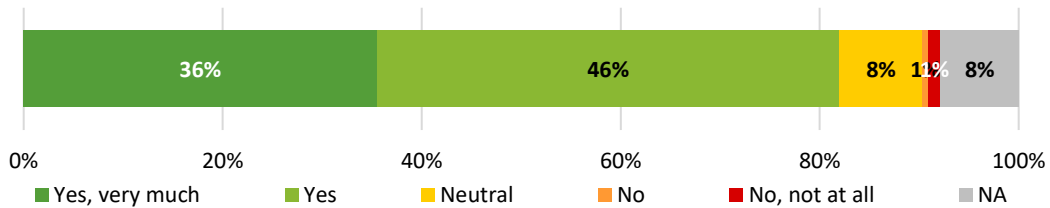
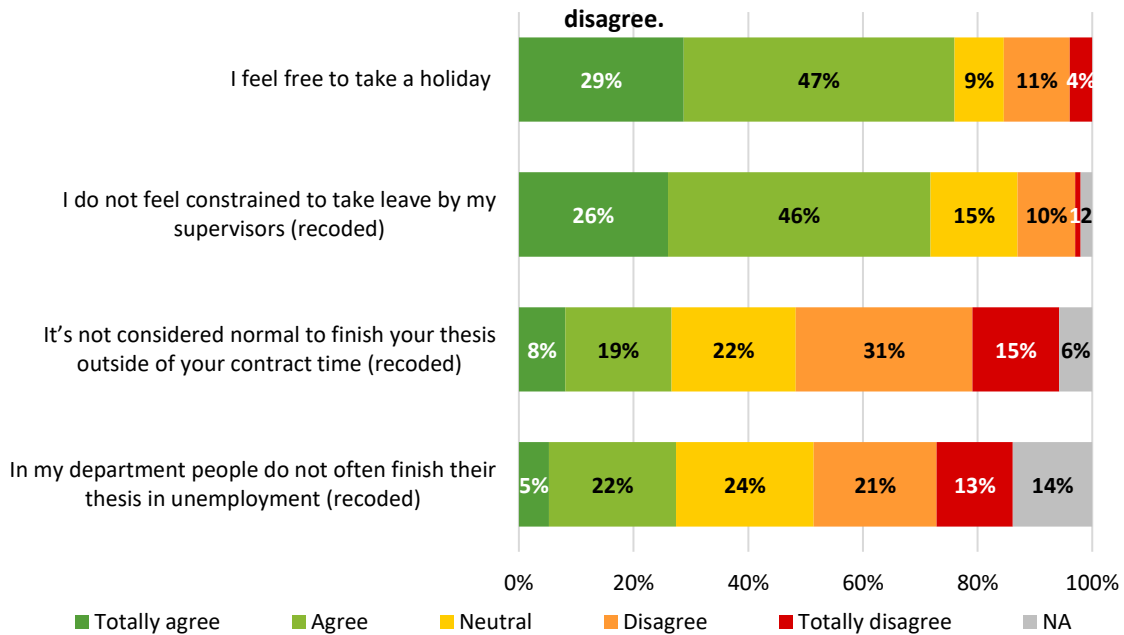


Figure 15. Please indicate for the following statements whether you agree or disagree.

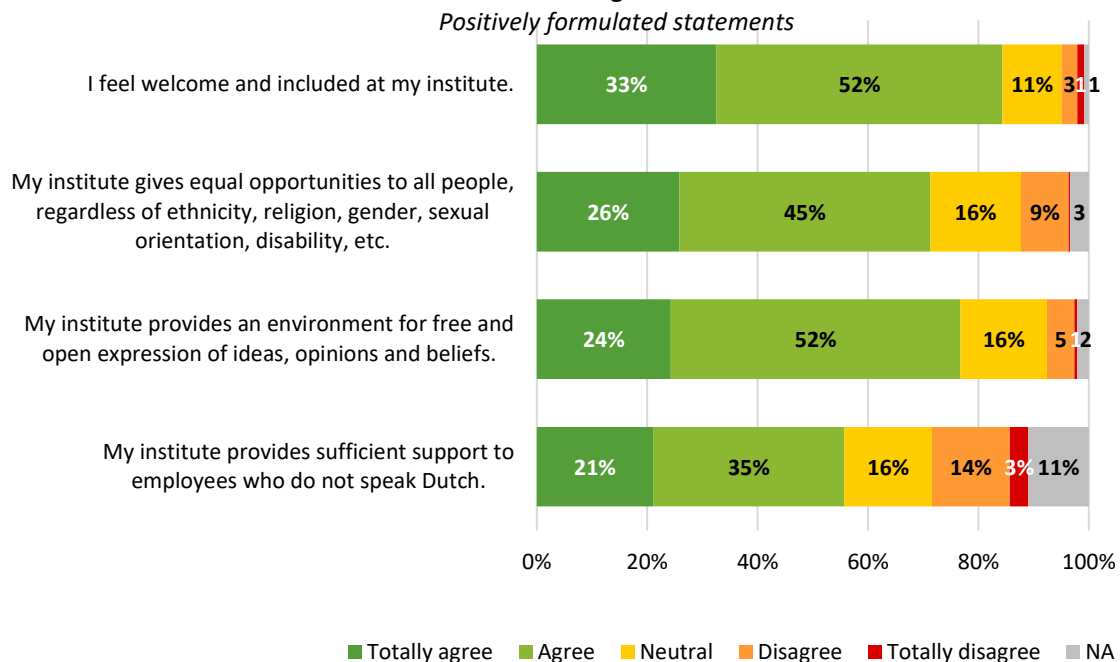


NB: the original statements 'It's considered normal to finish your thesis outside of your contract time', 'In my department people often finish their thesis in unemployment' and 'I feel constrained to take leave by my supervisors' were recoded to make a comparison with the other (positively formulated) statements easier.

6.4 Equality, Diversity, and Inclusion

Six statements regarding diversity and inclusion were presented. The first four statements and responses are shown in Figure 16 and this response is stratified per institute in the appendix (Tables S31-S34). Overall, 85% of the PhD candidates are feeling welcome and included (agree and totally agree). 76% of PhD candidates (totally) agree that their institute provides an environment for free and open expression of ideas, opinions and beliefs, and 71% that it provides equal opportunities to all people, regardless of ethnicity, religion, gender, sexual orientation, and disability. While these results are comparable with our 2020 survey results, more effort should be made to improve inclusivity. Compared to the other institutes, fewer PhD candidates of the Hubrecht Institute and Princess Máxima Center (totally) agree that their institute provides an environment for free and open expressions and provide equal opportunities to all people. Contrarily, PhDs from the Hubrecht Institute and Princess Máxima Center do feel welcome and included by their institute. Only 56% of PhDs believe that their institutes provide sufficient support to international employees who do not speak Dutch. Asking only non-Dutch PhDs gives comparable results (Table S35). This result is comparable with the overall response of the 2020 survey. Similar to [the 2020 Survey](#), the lack of support is again the highest in the institutes where care (mainly Dutch speaking employees) and research are combined, such as the Princess Máxima Center and UMCU.

Figure 16. Please indicate for the following statements whether you agree or disagree.

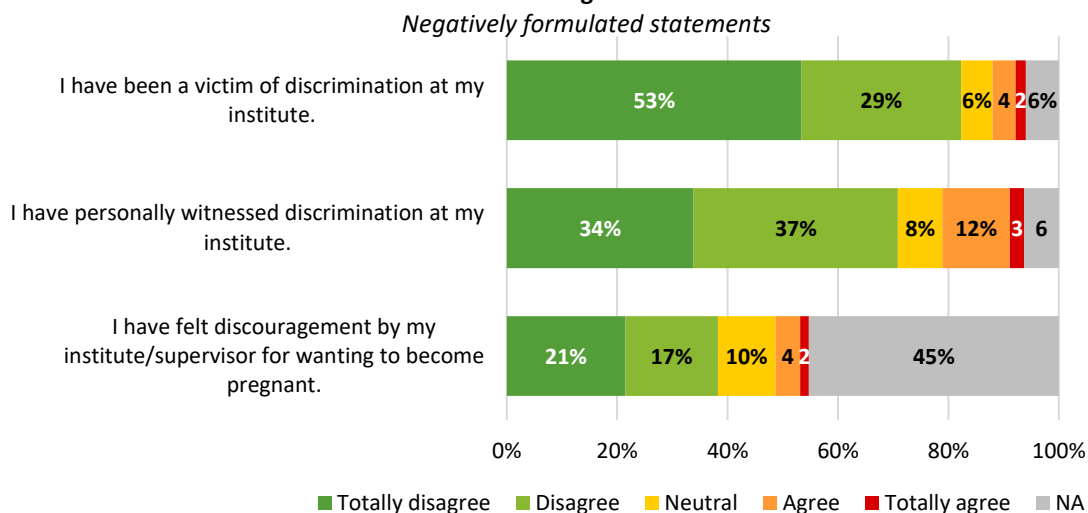


6% of the PhD candidates have been a victim of discrimination at their institute and 15% have personally witnessed discrimination at their institute (Figure 17). Table 8 shows the response per institute. Discrimination is the most visible at the Hubrecht Institute and the Princess Máxima Center.

Table 8. Responses of PhD candidates per institute if they have personally witnessed discrimination or have been the victim of discrimination at their institute.

	I have been the victim of Discrimination (Totally) Agree (%)	I have personally witnessed discrimination (Totally) Agree (%)
Hubrecht Institute	18	37
Faculty of Science (UU)	3	21
Facultie of Veterinary Medicine (UU)	2	14
Princess Máxima Center	12	18
University Medical Centre Utrecht UMCU)	3	7
Average	6	15

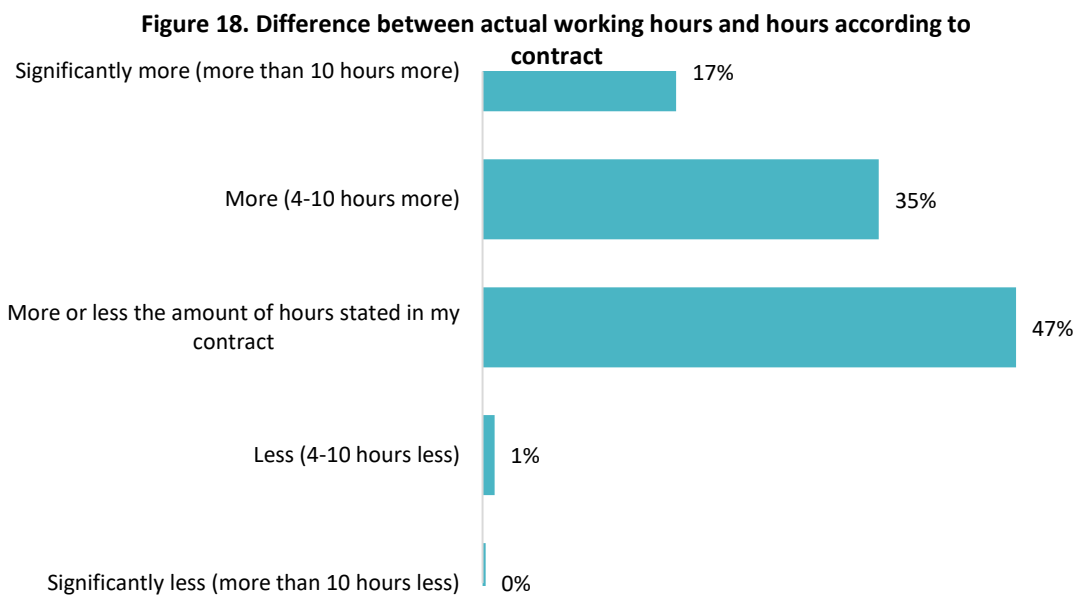
Figure 17. Please indicate for the following statements whether you agree or disagree.



We believe that research can thrive best when there is an open culture, free and open expression, and equal opportunities for everyone. The fact that still a relevant proportion of PhDs feels that this is not possible, is in our opinion a serious research limitation and should be addressed by the GSLs and the institutes.

6.5 Mental Health and Wellbeing

To estimate the work-life balance of the PhD candidates we compare the number of hours they work per week to the number of hours stated in the contract. While only 10% thinks it is normal to have a longer than 40 hour workweek (Figure 7), more than half (52%) of the PhD candidates reported working more than four hours per week above what their contract states including 17% working more than ten hours per week above the hours stated in their contract (Fig. 18).



When we looked at individual institutes and PhD programmes, it stood out that 76% of candidates from the Hubrecht Institute work 4-10 hours or >10 hours more than stated in their contract. In addition, more candidates from Cancer, Stems Cells & Developmental Biology (76%), Molecular Life Sciences (78%), and Regenerative Medicine (71%) work 4-10 hours or >10 hours more than stated in their contract compared to those of other programmes.

64% of PhD candidates find their workload is acceptable, while 17% finds their workload unacceptable (Figure 19). PhD candidates who work more hours than stated in their contract, tend to find their workload less (Table 9).

Figure 19. To what extent do you agree with the following statement: My workload is acceptable.

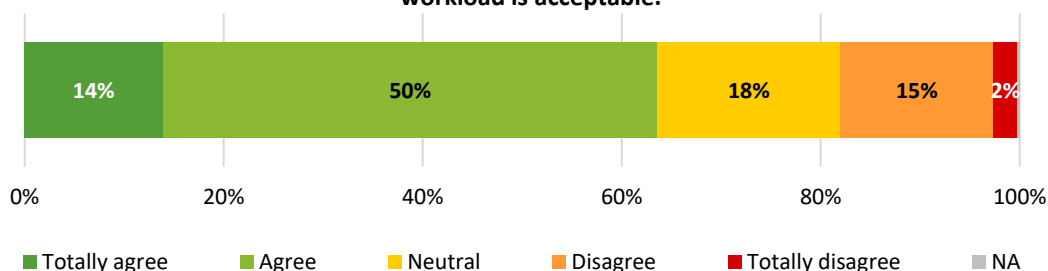


Table 9. To what extent do you agree with the following statement: My workload is acceptable.

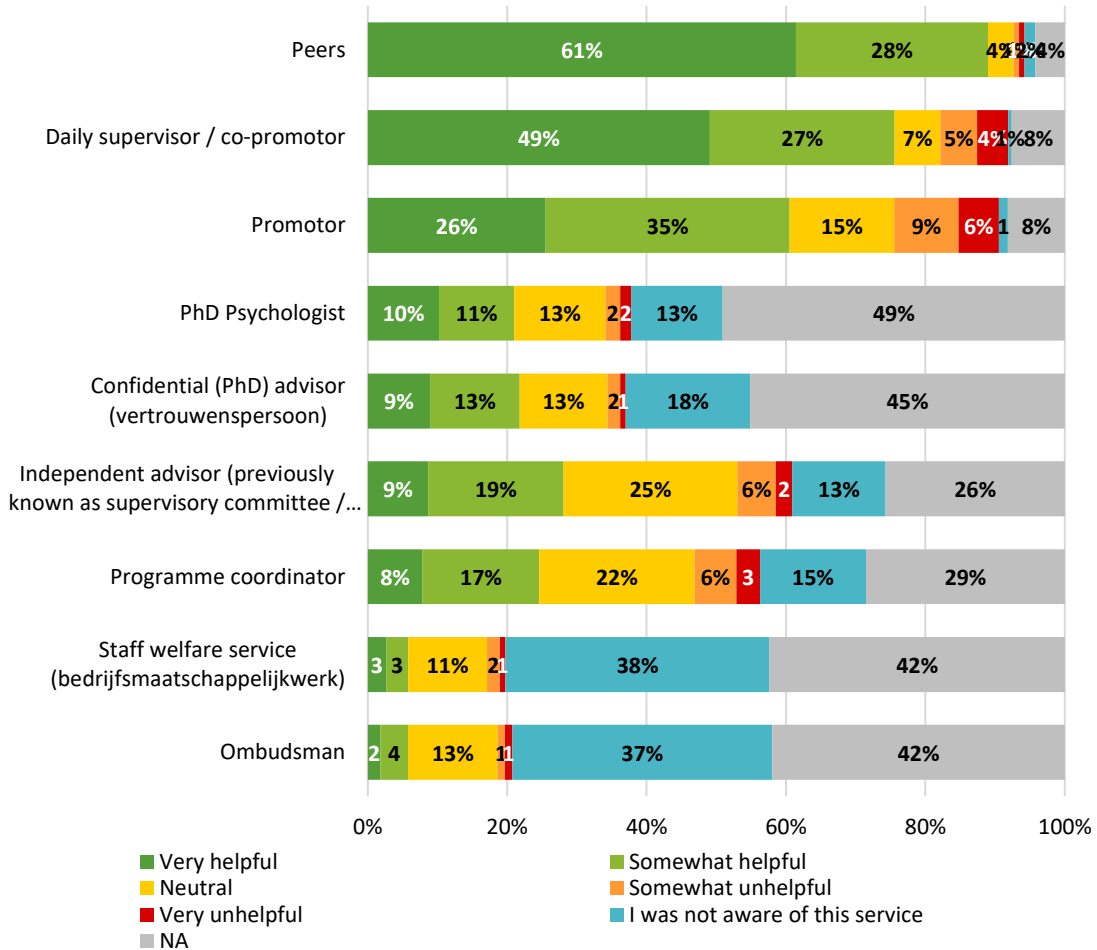
Split by difference between actual working hours and hours according to contract

	Significantly less (more than 10 hours less)	Less (4-10 hours less)	More or less the number of hours stated in my contract	More (4-10 hours more)	Significantly more (more than 10 hours more)	All
Totally agree	x	x	19% (34)	9% (12)	8% (5)	14% (53)
Agree	x	x	61% (109)	47% (63)	23% (15)	50% (189)
Neutral	x	x	14% (25)	23% (30)	23% (15)	18% (70)
Disagree	x	x	6% (11)	20% (27)	32% (21)	15% (59)
Totally disagree	x	x	0% (0)	1% (1)	12% (8)	2% (9)
NA	x	x	0% (0)	0% (0)	2% (1)	0% (1)
Total	x	x	100% (179)	100% (133)	100% (65)	100% (381)

23% of PhD candidates have encountered a PhD-related/mental health related problem for which they wanted to seek help via the options offered by the university.

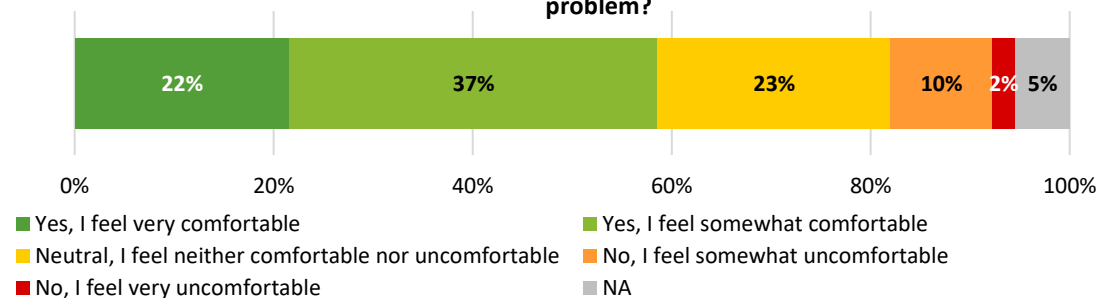
Peers are considered to be the most helpful when a problem is encountered. Promotors are less often considered to be helpful (Figure 20). 55% of the PhDs rate the psychologist as helpful, 34% remain neutral. Only 10.5% don't find the PhD psychologist helpful. Reasons for this may be the long waitlist for the first intake, the necessity to perform group sessions to decrease the waiting list and the fact that a certain match is needed/effective between the PhD and psychologist (UU has only one PhD psychologist).

Figure 20. There are multiple services in place to help you if you encounter a problem. How would you rate the services below in terms of helpfulness?



59% of PhD candidates feel comfortable using the offered services if they have a problem. 12% feel uncomfortable (Figure 21).

Figure 21. Do you feel comfortable in using the offered services if you have a problem?



The PhD candidates who feel uncomfortable using the offered services were asked to specify the reasons for not feeling comfortable. The most common answers are:

- Scared that my supervisor will be informed about my problems.
- I do not know where to start or how to reach these services.
- I think using the services will make the problem bigger.
- I am ashamed to admit I need professional help.

The topic mental health is increasingly incorporated in institutional plans and guidelines. However, do PhD candidates think the topic is addressed well enough? The survey shows that 28% of the PhD candidates feel that the topic of mental health is addressed well enough by the GSLs, 37% think the topic is partially addressed well enough and 16% do not think mental health is addressed well enough (Figure 22). The PhD candidates were given the opportunity to elaborate on their answer on this question.

The most common answers from PhD candidates who think mental health is addressed well enough are:

- There is (currently) enough attention for mental health.
- Available services (like the PhD psychologist) are brought under attention.

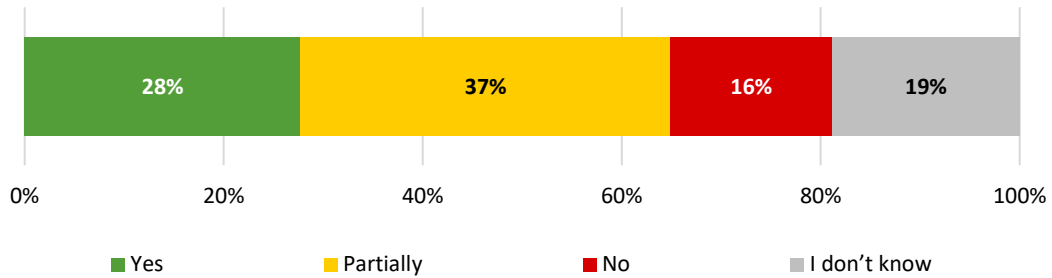
The most common answers from PhD candidates who think mental health is partially addressed well enough are:

- The focus should be on normalizing using professional help.
- I was not aware of all available options.
- The options are there, but it is still taboo to talk about mental health problems.

The most common answers from PhD candidates who think mental health is not addressed well enough are:

- I did not know the GSLs paid attention to mental health.
- There is not enough focus on solving mental health issues.
- During the Covid lockdown, there was not enough attention for mental health problems related to the lockdown.

Figure 22. Do you feel that the topic of mental health is addressed well enough by the GSLs?



The *Utrecht Burnout Scale – General (UBOS-A)* was used to assess the prevalence of burnout and feelings of emotional exhaustion, mental distance, and feelings of competence in PhD candidates. This scale has also been used in the previous PhD Surveys. It covers three domains:

- **(Emotional) Exhaustion (U):** *The feeling of being completely 'empty' or 'empty' because of the work. This domain contains (amongst others) the statements "I feel mentally exhausted by my work." and "I feel tired when I get up in the morning and there is another workday in front of me."*
- **Mental Distance (D):** *A cynical, distant, and not much involved attitude towards the PhD candidate's own work. This domain contains (amongst others) the statements "I doubt the significance of my work" and "I have become less connected to my work since starting my job."*
- **Competence (C):** *To what extent PhD candidates feel capable of doing their job well. This domain contains (amongst others) the statements "I have learned many valuable things during my PhD" and "Regarding my work, I am full of self-confidence."*

These domains are measured using 16 statements that the PhD candidate needed to rate on a 7-point scale ranging from never (which gets a score of 0) to every day (which gets a score of 6). The figures below show that for the current survey, most PhD candidates experience high or very high levels of mental distance and emotional exhaustion (Figure 23). Compared to 2019 and 2020, a higher percentage of PhD candidates feel very high levels of emotional exhaustion and mental distance. Feelings of competence are most often experienced in moderate or low levels. The percentage of PhD candidates that have experienced feelings of competence in moderate levels is lower than in 2019 and 2020.

Figure 23. Distribution of the extent of burnout-symptoms measured with the Utrecht Burnout Scale – General (UBOS-A) per survey year.

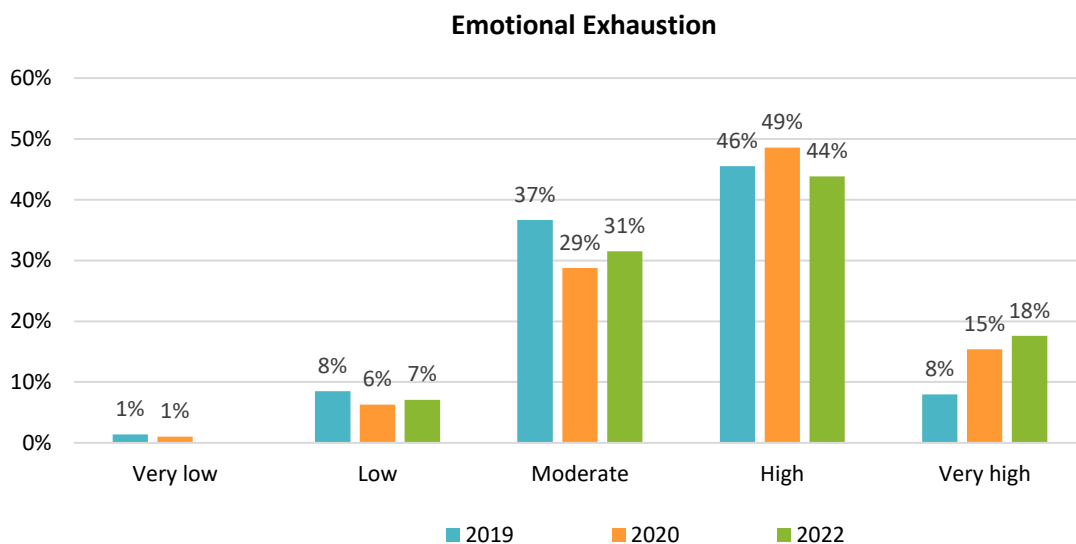
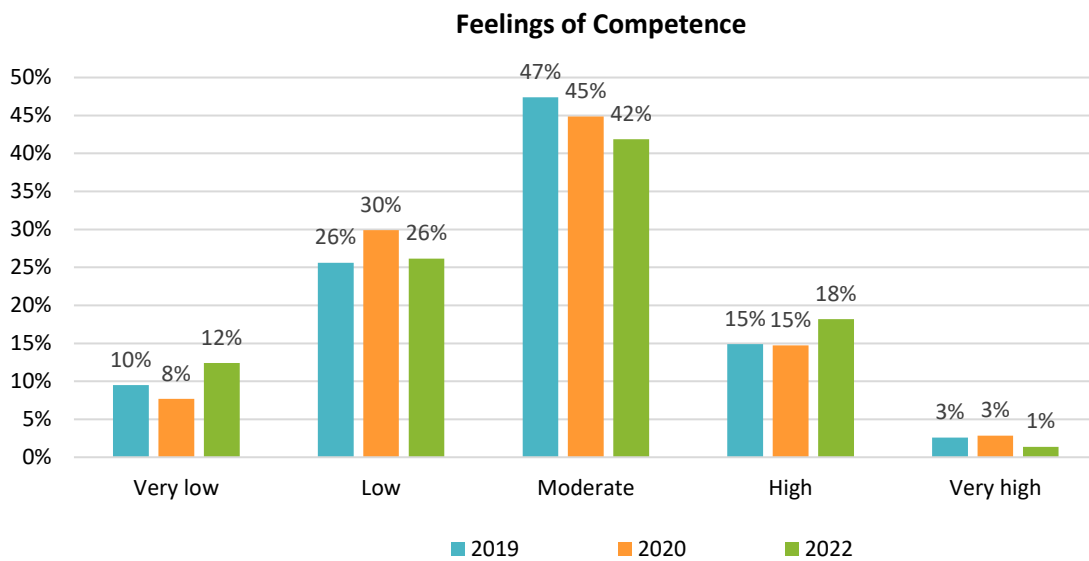
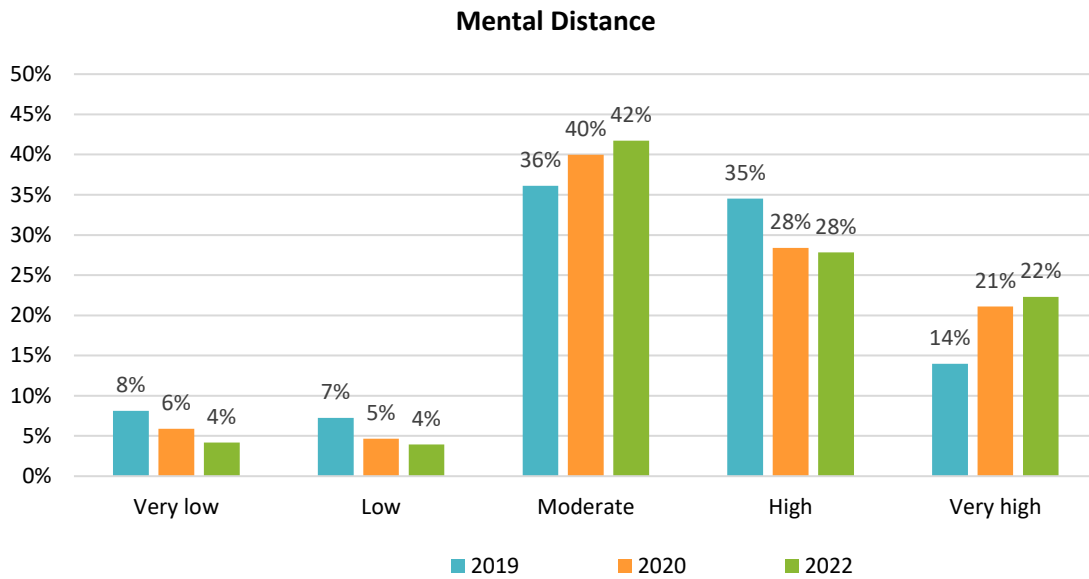
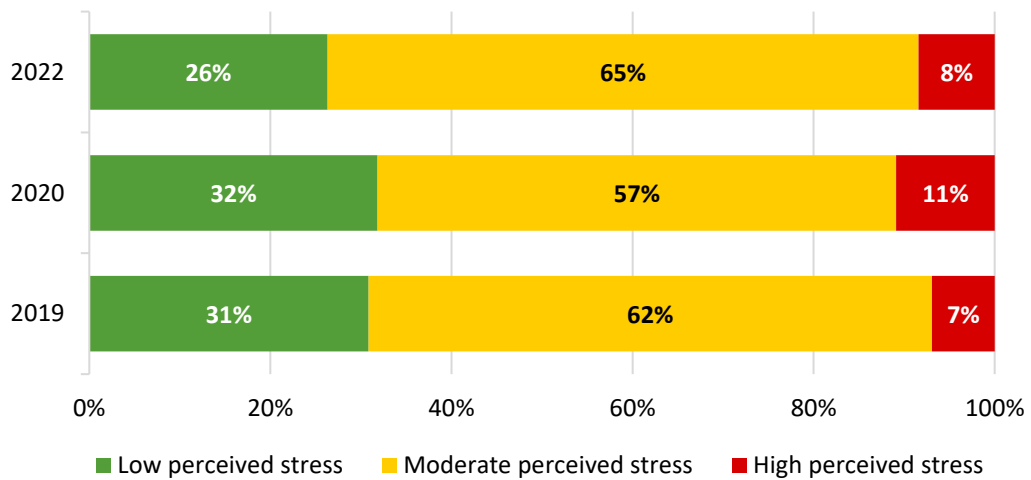


Figure 23 continued.



To assess whether the PhD candidates perceive themselves as being under stress, the Perceived Stress Scale (PSS) has been used. All questions are answered on a 5-point scale ranging from never (score of 0) to very often (score of 4). An average is then calculated to estimate the stress level of the PhD candidates (Figure 24). While about a quarter of the PhD candidates (26%) perceive low stress levels, almost two-thirds (65%) perceive moderate stress levels and 8% perceive high stress levels. The percentage of PhD candidates that perceive low stress is lower than in 2019 and 2020.

Figure 24. Distribution of Perceived Stress Scale (PSS) scores per survey year.



6.6 A safe workplace

The following paragraph was used to introduce the section of the survey about a safe workplace:

The Graduate School of Life Sciences wishes a safe learning and working environment for all PhD candidates.

A safe learning and working environment is described as an environment in which:

- *PhD candidates feel safe, relaxed and willing to take risks*
- *PhD candidates' self-esteem is enhanced*
- *PhD candidates dare - with mutual respect - to ask questions and give and receive feedback.*

Most (81%) PhD candidates experience their working environment as being safe; however, almost one in five (19%) PhD candidates do not experience it as safe (Table 10). 39% of candidates from the Hubrecht Institute and 28% of students from the Princess Maxima Centre **do not** experience their working environment as safe. While for some PhD programmes, such as Cardiovascular Research (94%), Environmental Biology (96%), Life Sciences Education Research (94%), and Medical Imaging (100%), the levels of safety are promising, even then there is still a small proportion of candidates who report their work environment as being unsafe. More concerning are programmes such as Cancer, Stem Cells and Developmental Biology, Molecular Life Sciences, and Regenerative Medicine, in which 28%, 44%, and 29% did not experience their work environment as being safe, respectively. 28% of PhD candidates not part a PhD programme also indicated that they did not experience their working environment as being safe (Table S36).

Table 10. In the past year, did you experience your working environment as being safe as described above?
Split by institute of the PhD candidates.

	Faculty of Science (UU)	Faculty of Veterinary Medicine (UU)	Hubrecht Institute	Princess Maxima Centre (PMC)	University Medical Centre Utrecht (UMCU)	Another institute	All
No	19% (12)	19% (9)	39% (15)	28% (14)	12% (20)	15% (3)	19% (73)
Yes	81% (51)	81% (39)	61% (23)	72% (36)	88% (141)	85% (17)	81% (307)
Total	100% (63)	100% (48)	100% (38)	100% (50)	100% (161)	100% (20)	100% (381)

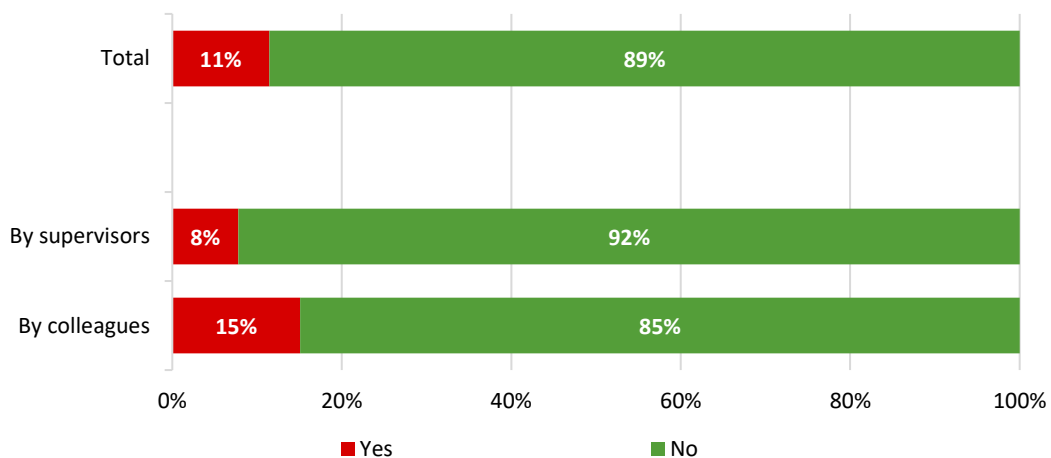
The following description of inappropriate behaviour was shown in the survey to PhD candidates:

Inappropriate behaviour constitutes inappropriate manners (for example gossiping, ridiculing, intentionally excluding someone), discrimination (based on gender, race, religion, sexuality, national origin, mental or physical disability, illness), bullying, violence and aggression, and sexual harassment. Additionally, inappropriate behaviour can include other behaviour that you yourself find inappropriate.

8% of PhD candidates experienced inappropriate behaviour by their supervisor(s) in the past 12 months (Figure 25). Candidates from the Princess Maxima Centre (18%) and the Hubrecht Institute (11%) have experienced inappropriate behaviour by their supervisors most often compared to other institutes within the last 12 months. Per PhD programme, the highest levels of inappropriate behaviour by supervisors were reported in Cancer, Stem Cells and Developmental Biology (14%), Clinical and Translational Oncology (12%), and Regenerative Medicine (14%) (Table S36, Table S37).

In addition, 15% experienced inappropriate behaviour by other colleagues. This percentage was highest for students in the Faculty of Science (22%) and the Princess Maxima Centre (20%). Per programme, this percentage was highest in Molecular Life Sciences (44%), Biomembranes (27%), Regenerative Medicine (23%), Drug Innovation (23%), and Cancer, Stem Cells and Developmental Biology (21%) (Table S39, Table S40).

Figure 25. Did you experience any kind of inappropriate behaviour in the past 12 months at Utrecht University?

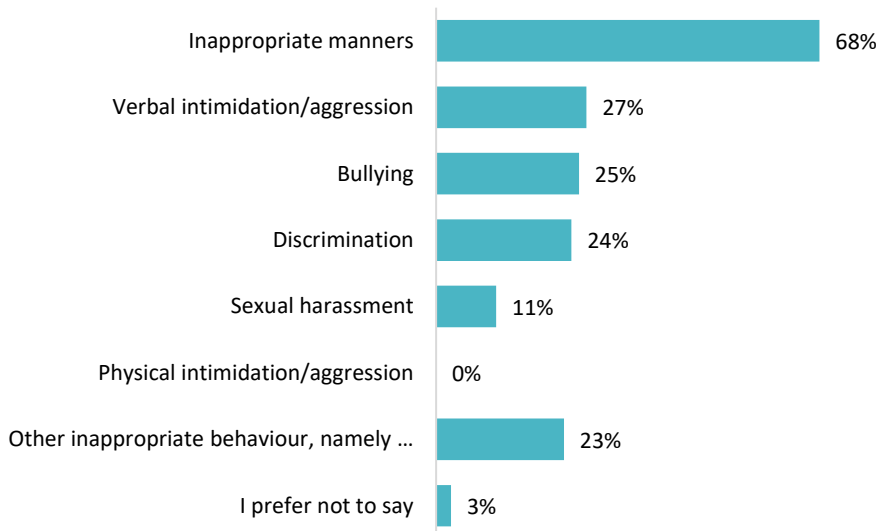


More than two-thirds (68%) of the PhD candidates who have experienced inappropriate behaviour, have experienced inappropriate manners (Figure 26). 27% have experienced verbal intimidation/aggression, 25% have experienced bullying, and 24% have experienced discrimination. The open answers that followed the category 'other types of inappropriate behaviour', mostly contained gossiping and racist or other types of inappropriate comments. Candidates from Princess Maxima Centre (PMC) significantly more often indicate they have experienced bullying (54%) and verbal intimidation/aggression (54%). Candidates from Cancer, Stem Cells and Developmental Biology significantly more often indicate they have experienced sexual harassment (26%).

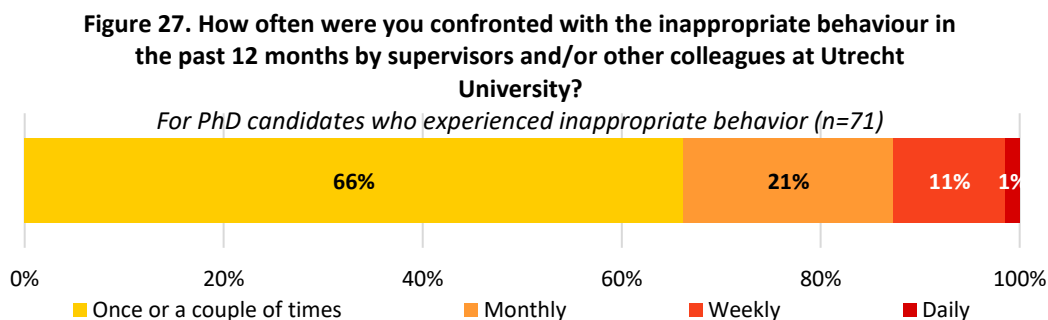
Figure 26. Which kind(s) of inappropriate behaviour did you experience in the past 12 months by supervisors and/or other colleagues at Utrecht University?

Multiple answers possible

For PhD candidates who experienced inappropriate behavior (n=75)



12% of the inappropriate behaviour was experienced weekly or daily, 21% was experienced monthly, and 66% was experienced once or a couple of times (Figure 27).



After the question above, the following text was shown to the PhD candidates:

Utrecht University can help you (1) to discuss a case of inappropriate behaviour and (2) to assist you if you want to make an official complaint. To create a safe environment for discussing and reporting inappropriate behaviour, multiple people are appointed with different social distance to your working environment:

1. Faculty/Institute Confidential (PhD) advisor
2. (PhD) Psychologist
3. Human resources
4. UU/UMCU/Maxima/Hubrecht Confidential counsellor for inappropriate behaviour
5. You can also talk to your supervisor, independent advisor, or head of the department.

You can review the types of support that are available to you when you encounter a problem on the following website: <https://www.uu.nl/en/education/graduate-school-of-life-sciences/phd/support-during-your-phd>

Almost a third of the PhD candidates (30%) tried to discuss or report the inappropriate behaviour they experienced (Table 11). We found no significant differences based on the starting year or gender of the candidates (Table 11, Table 12).

Table 11. Have you ever tried to discuss or report inappropriate behaviour by supervisors and/or other colleagues at Utrecht University?

*For PhD candidates who experienced inappropriate behaviour
Split by starting year of the PhD candidates.*

Starting year:	2016	2017	2018	2019	2020	2021	2022	All
Yes	x	0% (0)	42% (5)	30% (8)	38% (5)	20% (2)	x	30% (21)
No	x	100% (5)	58% (7)	70% (19)	62% (8)	80% (8)	x	70% (49)
Total	x	100% (5)	100% (12)	100% (27)	100% (13)	100% (10)	x	100% (70)

Table 12. Have you ever tried to discuss or report inappropriate behaviour by supervisors and/or other colleagues at Utrecht University?

For PhD candidates who experienced inappropriate behaviour

Split by gender of the PhD candidates.

	Male	Female	Non-Binary	All
Yes	33% (4)	30% (17)	x	30% (21)
No	67% (8)	70% (40)	x	70% (49)
Total	100% (12)	100% (57)	x	100% (70)

We asked the PhD candidates who did not discuss or report the inappropriate behaviour they experienced, what the reasons were for not doing this. More than half of the PhD candidates (57%) indicate that they did not think it would improve the situation, 41% were uncertain about the consequences and 37% did not think it was necessary (Fig. 28). We found no significant differences by year of gender (Table 13, Table 14). Candidates from Cancer, Stem Cells and Developmental Biology significantly more often indicated they did not report the inappropriate behaviour because they didn't think it would improve the situation (90%).

Figure 28. What were the reasons for not discussing or reporting inappropriate behaviour? Multiple answers possible

For PhD candidates who experienced inappropriate behaviour and did not try to discuss or report this (n=49)

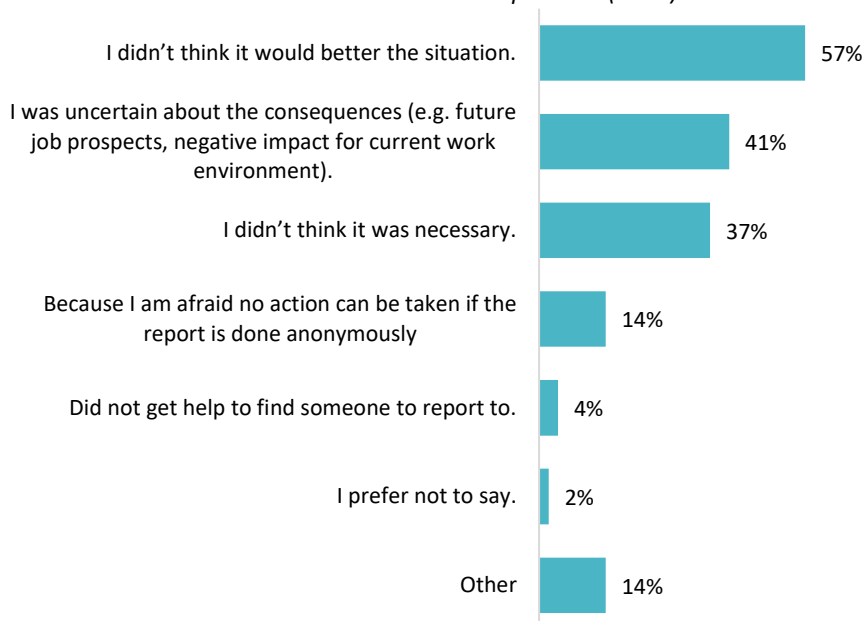


Table 13. What were the reasons for not discussing or reporting inappropriate behaviour? Multiple answers possible
For PhD candidates who experienced inappropriate behaviour and did not try to discuss or report this.
Split by starting year of the PhD candidates.

Starting year:	2016	2017	2018	2019	2020	2021	2022	All
I didn't think it would better the situation.	X	80% (4)	57% (4)	79% (15)	25% (2)	25% (2)	x	57% (28)
I was uncertain about the consequences (e.g. future job prospects, negative impact for current work environment).	X	40% (2)	43% (3)	42% (8)	38% (3)	50% (4)	x	41% (20)
I didn't think it was necessary.	X	0% (0)	29% (2)	37% (7)	38% (3)	63% (5)	x	37% (18)
Because I am afraid no action can be taken if the report is done anonymously	x	0% (0)	29% (2)	11% (2)	13% (1)	25% (2)	x	14% (7)
Did not get help to find someone to report to.	X	0% (0)	0% (0)	5% (1)	0% (0)	13% (1)	x	4% (2)
I prefer not to say.	X	0% (0)	0% (0)	5% (1)	0% (0)	0% (0)	x	2% (1)
Other, namely ...	x	40% (2)	14% (1)	5% (1)	13% (1)	25% (2)	x	14% (7)

Table 14. What were the reasons for not discussing or reporting inappropriate behaviour? Multiple answers possible
For PhD candidates who experienced inappropriate behaviour and did not try to discuss or report this.
Split by gender of the PhD candidates.

	Male	Female	Non-Binary	All
I didn't think it would better the situation.	75% (6)	53% (21)	x	57% (28)
I was uncertain about the consequences (e.g. future job prospects, negative impact for current work environment).	38% (3)	43% (17)	x	41% (20)
I didn't think it was necessary.	25% (2)	40% (16)	x	37% (18)
Because I am afraid no action can be taken if the report is done anonymously	25% (2)	13% (5)	x	14% (7)
Did not get help to find someone to report to.	13% (1)	3% (1)	x	4% (2)
I prefer not to say.	0% (0)	3% (1)	x	2% (1)
Other, namely ...	13% (1)	13% (5)	x	14% (7)

Of the PhD candidates that tried to discuss or report the inappropriate behaviour they experienced, most (62%) sought help with their supervisor or co-supervisor. 29% discussed it with human resources, 14% with the confidential (PhD) advisor of the faculty, 14% with someone else at UU, 10% with an independent advisor, and 5% with the confidential advisor for inappropriate behaviour of the UU.

Of the PhD candidates who tried to discuss or report the inappropriate behaviour most were not satisfied with how it was followed up: 34% were (very) dissatisfied with the follow-up and 48% were neutral (Figure 29).

Figure 29. How satisfied/dissatisfied were you with how it was followed up?
For PhD candidates who experienced inappropriate behavior and tried to discuss or report this (n=21)

