



Well-being report 2021-2022

Independent Survey Results and Recommended Actions.

EQUITY working group of
P-NUT, the PhD Network University of Twente

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Executive summary

From December 2021 to February 2022 the EQUITY working group from P-NUT (former Female Doctoral Candidate Initiative) conducted an independent survey on the current well-being of Doctoral Candidates (PhD and EngD) at the University of Twente. The survey was circulated through the official P-NUT newsletter, the social media platforms from P-NUT (WhatsApp and Instagram), and through e-mails which we asked the secretaries to forward to their PhD/EngD candidates, for which we collected 205 responses in total.

There is a need for Doctoral candidates to be more in contact with industry and scientific partners to be able to decide about their future. The university could improve the connection with Doctoral Candidates after they graduate, which would allow networking. Doctoral Candidates are still impacted by loneliness as a result of the pandemic COVID-19. Doctoral Candidates should be treated equally independent of their employment status. The voices of non-employed Doctoral Candidates are easily overlooked/not heard, doctoral Candidates require more support for housing situation, especially for external/international candidates and more legal support (e.g., with VISA). Doctoral Candidates do not approach HR, TGS and PNUT with their problems, the connection between doctoral candidates between working groups and faculties does not seem too strong.

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Introduction

Being a PhD candidate or a EngD candidate is a complex matter which does not only affect your educational journey but also your personal development. Especially after almost two years of COVID-19 pandemic, starting or continuing a PhD/EngD has been different from the way it has been before.

Additionally, we still witness in our daily lives that we have not yet reached a status where people are offered equal opportunities regardless of gender, origin and path in life. Particularly in technical fields, women are less likely to pursue a PhD/EngD, start at Postdoc positions and further pursue academic careers. Currently, the University of Twente is ranked 12^h (out of 14) in the Netherlands when it comes to the number of female full professor positions, with the number decreasing in 2020 in relation to the amount of 2019.¹

To better understand the current situation of all doctoral candidates at UT, we, the EQUITY group from P-NUT conducted this independent survey among all PhDs and EngDs. We wanted to research how satisfied, burdened or encouraged the candidates currently feel and to see if there are structural differences between genders, origins and other differentiations.

The survey was conducted between the 11th of December 2021 and the 23rd of February 2022 and collected 205 responses in total. The survey is set up to be repeated in the future to further observe how the situation of doctoral candidates evolves at UT and see how current situations e.g., the Covid-19 pandemic impact it. Note that part of the time the survey was conducted, the Netherlands were in partial lockdown due to the pandemic, and the campus was closed, or access to it was limited.

In the next section of the report, we will present the results of our survey. We first discuss the results from a global perspective. We analyze the qualitative data collected with four open questions that were asked in the survey. Further, we also analyze the data based on different demographic groups: gender, year of trajectory, origin, employment status and faculty. In the last section, we draw conclusions and give recommendations. Our recommendations aim to be helpful for everyone interacting with PhD and EngD candidates, including supervisors, us as the EQUITY group and P-NUT, TGS, HR and UT executives.

The survey questions are available in the appendix. Please note that at the time the survey was conducted, PDEng was used instead of EngD. We adapted the name in this report, however, in the questions and direct results, PDEng was kept.

¹The Dutch Network of Women Professors - WOMEN PROFESSORS MONITOR 2021

<https://www.lnvh.nl/monitor2021/EN.html>

Results

In this section, we provide a short overview of the results of the survey, subdivided by the results based on qualitative analysis of the open questions, as well as findings based on quantitative data disaggregated by demographic indicators gender, year of doctoral trajectory, region of origin, employment status or faculty.

Qualitative data

In this section, we present the results from a grounded theory-based analysis of the responses to the optional open questions. Per question, we discuss recurring themes, and illustrate them using exemplary quotes.

Negative experiences

55 doctoral candidates provided answers to the question “Do you want to elaborate on one or more negative experiences you had as a doctoral candidate at the UT?”.

The survey was held partially in times of lockdown and only partial access to the campus and its facilities. Unsurprisingly, numerous responses mention the pandemic and how it impacts them. Doctoral candidates pointed out the connection between the pandemic and feelings of loneliness.

“Covid played an important role for the feeling of loneliness and stress”

“Loneliness: during the lockdown measures in Corona times it sometimes felt a bit lonely alone in my apartment with little physical contacts”

“Mostly loneliness because of the lack of good quality social contact. But that's because if the lockdown and the PhD per se isn't to blame for that. “

The accounts of loneliness due to the pandemic also expand to effects on the workspace. PhD/EngD recount that mandatory working from home makes it hard to connect to peers, also professionally.

“It [starting a PhD working from home] also strengthened the "working on an island" mentality I got from my work: everyone is busy and working on their own project with little opportunity to exchange and bond over shared experiences.”

“mandatory working from home made the PhD much more lonely”

Generally, belonging within the group or department, and having “peer[s] in the relative area of research [with whom to] discuss the ideas” with appear to be desired, and their absence to have negative effects on the well-being of doctoral candidates.

“I don't feel very included in my group . I've only spoken with most of my colleagues once or twice shortly, so I don't have the feeling that I know them or they know me.”

“[Due to the lack of office space] I work from home all the time which has reduced my feeling of being involved with the department and reduced motivation and working pleasure.”

Building forth on the notion of well-being, several accounts recount their mental health being effected. Among the examples that focus on work-induced issues rather than those connected to the pandemic,

“anxiety and severe stress” or “potential depression” are recurring themes. Next to “[s]leep deprivation”, numerous accounts hold the work load accountable.

“A lot of people expect a lot from you, even though their separate requests by themselves are often more than a full time amount of work.”

“[...] continuous pressure to work as hard as possible (including taking as many "side jobs" as possible, such as teaching or project coordination, because this is all for necessary for your CV [...])”

“[...]the difficulty of combining the research workload with that of the educational side requires skills you do not have directly at the beginning. Asking for support takes up even more time, time that you do not have, and thus the conundrum is created.”

Candidates also share negative experiences with supervisors. Responses do describe discontent over the degree and mode of involvement.

“Supervisors spend too much focus on content and technicalities, not enough on atmosphere/team spirit/interpersonal skills”

“My supervisors are rarely involved in what I am doing.”

“Supervisors are there to take the credit when things are going well, but are nowhere to be found when things get difficult.”

Furthermore, a small number of accounts describe cases of intimidation by supervisors or support staff. Due to the sensitive nature of those incidents, we do not describe them here in detail, but respondents indicated that the experiences made them “feel unsafe”, “had a devastating effect on [their] mental health” or made them “leave the project”.

On a more practical note, accommodation is an issue around the university.

“I have been trying to find decent and affordable housing for over a year. The housing situation is a total disgrace.”

Respondents suggest it is not acceptable to spend half a salary on mediocre housing, and that they feel the university should be more active in solving the problem.

Furthermore, even though only a small number of respondents are externally funded, that group indicates less access to facilities, and lacking support for visa applications.

Positive experiences

A second open question asked “What do you enjoy most about life as a doctoral candidate at the UT?”. We recorded 133 responses.

A great portion of the responses mention the enormous freedom they experience in their doctorate, in terms of flexible schedules, research topics and methods, as well as room for personal development.

“The freedom to find my own way in my PhD research”

“I love the freedom, having my own schedule and the support of my supervisor.”

“The freedoms to pursue different angles and directions of research.”

“Freedom. Freedom of research direction, hours, etc”

“[I] like the flexibility (which comes handy with a baby)”

Though it has to be mentioned that a handful of accounts acknowledge that freedom to be a double edged sword.

“The freedom to pursue your own ideas (which on the other hand also gives a lot of stress, because everything is my sole responsibility)”

“Freedom, yet it's the same thing that gives me anxiety”

“I like the flexibility and freedom that you have with a PhD, although this also comes with some difficulties regarding self discipline and perfectionism.”

Another positively recounted aspect is the “research facilities”.

“The amazing facilities and the availability of resources to do my research.”

“Being able to do experiments and having "usually" access to high end facilities.”

In general, many responses mirror pleasure in and passion for the work. That covers the research and knowledge exchange, as well as the “learning curve” and novelty of the field.

“Being able to work on a research topic I am interested in and discussing (research) ideas with colleagues.”

“The opportunity of doing research in the field I love[...]”

“learning and sharing knowledge”

“The work is very state of the art”

Furthermore, the pleasure and pride taken in societal and academic impact was expressed.

“the idea that you can have societal impact with your research”

“rewarding as I am doing something important . My life is not just passing pointless.”

“Being able to work on projects that (hopefully) benefits society”

“The feeling of contributing to something important, doing research in things that people actually want to know.”

The formative nature of the trajectory was stressed as well.

“The integral formation : i.e. professional development skills (presentation skills, personal branding), teaching experience, conferences, courses and research (+ possibility of practising several sports for free)”

Another major recurring theme covered the direct work environment, meaning colleagues and supervisors.

“the atmosphere among the group”

“I got amazing colleagues and supervisors!”

“My research group and professor are very supportive”

“Friendly and supportive supervisors who try to help me release my stress.”

“Knowing that I can receive support whenever I need it, but at the same time being trusted to do things your own way.”

“good supervision, nice atmosphere”

Next to those more prominent themes, salary and employment status, sport facilities, as well as the pleasant experience of “[l]iving in the Netherlands” seemed to add to the overall picture. Two individual responses also appreciatively mentioned how the UT handled the impact the pandemic has on their employees.

“support the UT has given us during corona times (including home office, allowances, streaming of sport lessons, and well-being courses).”

Further appreciation was expressed for PhD communities, although in some cases with the proposition to facilitate a more serious work-related platform for discussion and networking.

“The community of PhDs at all different levels (P-NUT, BMS Phds for PhDs, the small PhD community within my own department)”

“Overall its excellent to be here at UT, but there should be some gathering at the PhD levels so that we can know about each others interests and issues.”

Room for improvement

The third open question was “Is there something the UT could do to improve your life as a doctoral candidate?”

The work environment, and matters related to TGS and employment status were mentioned most frequently. Regarding the work environment, respondents mentioned that they would like to meet and connect with other candidates.

“Promote contact between candidates, I believe that promoting working from home is not very good for the well-being of doctoral candidates”

“UT can't do anything about the pandemic situation, but I really miss being at the UT and my colleagues. There is not an informal way to share thoughts and a sparring partner”

TGS was mentioned regarding the courses that doctoral candidates take throughout their studies.

“Facilitate mindfulness courses”

“More freedom in getting to choose what kinds of (on-topic) courses must be taken as part of the programme, and more importantly, how to fulfill those courses [...]”

“TGS makes a lot of courses mandatory that take up time at the wrong time. Also, different candidates have different needs. Compulsory courses do not necessarily fit those needs [...]”

The employment status concerned the salary that Doctoral Candidates receive and the support that external PhDs have.

“Give PhDs a raise. It is unacceptable to spend half my salary for a house in Twente, which by the way is VERY hard to find [...]”

“higher salary (although this should be changed in the national CAO)”

“UT/HR should respect and honor the contracts they have with PhD-candidates and should make decisions on line with current labour law.”

“UT MUST facilitate the external candidate with visa [...]”

“There are many small things in which external PhDs are casually disadvantaged or not represented within the UT, such as limited access to software or the ineligibility to vote in faculty or university council elections. This is sometimes frustrating to deal with, especially as the UT doesn't like to acknowledge it.”

Also, life after the doctoral studies was mentioned.

“The UT should be aware that for most doctoral graduates, there is simply no place to stay in academia. As such, they should make the system more compliant for transitioning back to industry and make sure that PhD candidates do not become disconnected from industry”

“Provide better guidance via supervisory team to help discover and facilitate the path (i.e., staying in academia or going to industry) you are going to take.”

“I have the feeling that PhD's are not really valued at the UT. Once they are graduated, they are completely let loose and being said farewell to like they were not part of the team for 4 years. I think UT could improve on this by offering stronger alumni program that is intensified in the first 3-6 months after the contract ends. Such a program could consist of job-application courses, maybe a weekly coffee get-together.”

All in all, given the first two questions on negative and positive experiences, those recommendations provide a more complete image of where doctoral candidates see room for improvement, and a first indication on how to realize that potential.

Conclusion qualitative analysis

Overall, it becomes clear that the supervisor and contact with peers are crucial for creating a pleasant, effective and supportive work environment. This is indicated by the number of responses mentioning those groups in both the question about negative and positive experiences, as well as their sometime contradictory contents. Supervisors, for example, are being mentioned for both their good and lacking support to cope with islanding due to working from home regulations. The impact that supervisor and peers have on the work environment and well-being of doctoral candidates is considerable. In contrast, the corona pandemic seems to negatively have affected both the general well-being of doctoral candidates, as well as their integration within their departments.

Doctoral Candidates express that the mandatory courses could be expanded into a variety of options to tailor to each individual need. Together with this, courses that allow candidates to prepare for the industry would be well accepted. Finally, there could be an improvement in the salary of doctoral candidates, taking into consideration the housing situation in The Netherlands.

Quantitative data

Results per Gender

The number of Doctoral Candidates that answered the survey were 205, from which 89 were woman, 109 men, 2 of them preferred to self-describe and 5 to not say. See

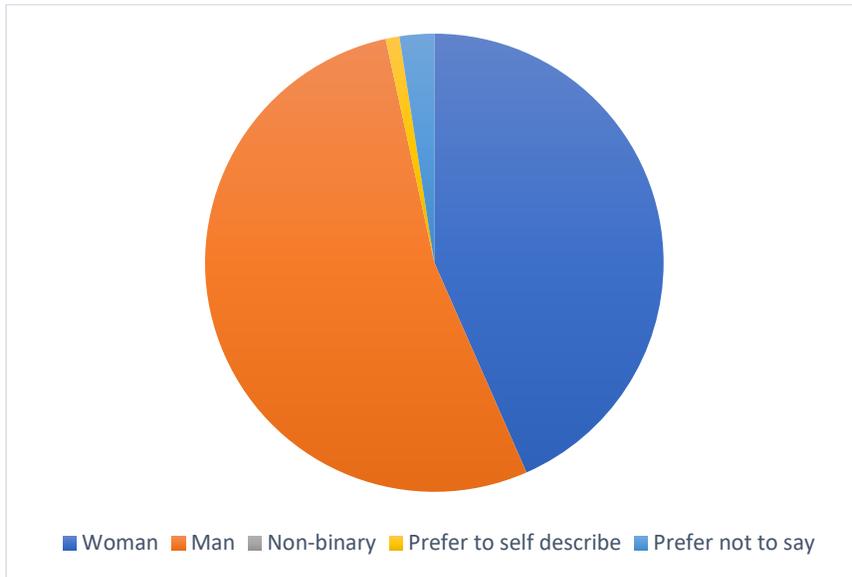


Figure 1 Results of Gender demographic

First, we take a look at the level of satisfaction regarding pursuing a PhD/EngD at the UT. As we can see in Figure 2, 49,76% of the total doctoral candidates is somewhat satisfied pursuing a PhD/EngD at the UT.

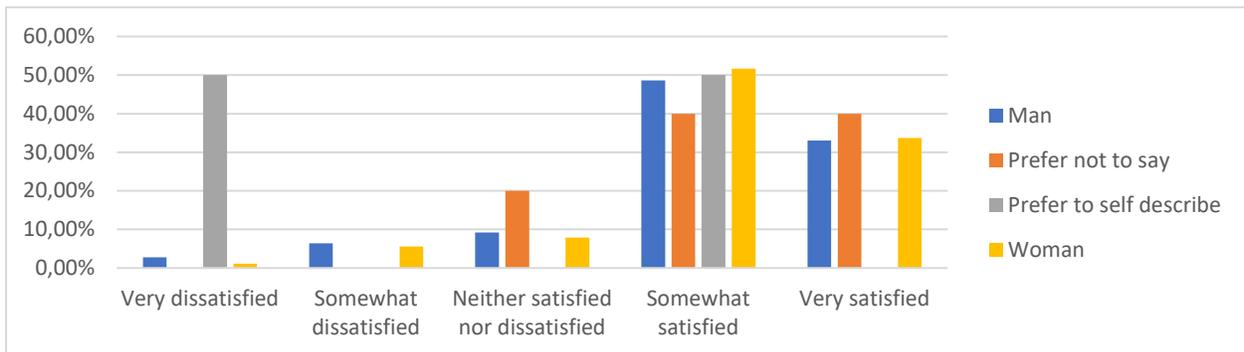


Figure 2 Answer of How satisfied are you with pursuing a PhD/PDEng at the UT?

However, if looking at the journey of the PhD/EngD at the UT (Figure 3) the level of satisfaction remained the same for most Doctoral candidates (41.46%). Is also visible that 22.93% indicates that theirs PhD/EngD Worsened a bit and 22.93% Increased a bit.

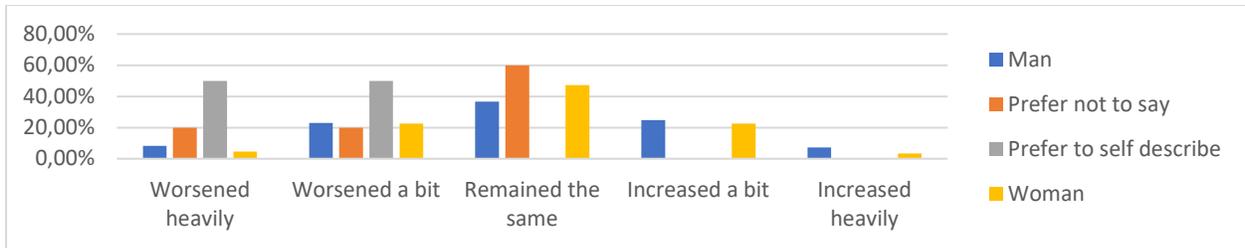


Figure 3 Since the start of your PhD/PDEng at the UT, has your level of satisfaction increased, remained the same or worsened?

Following this, we got results regarding the aspiration of doctoral candidates after graduation (Figure 4). Regarding seeking a career within academia (e.g. becoming a PostDoc, researcher, professor..) or outside academia (e.g. industry), 33.03% of male doctoral candidates and 29.21% of female doctoral candidates are probably seeking outside academia.

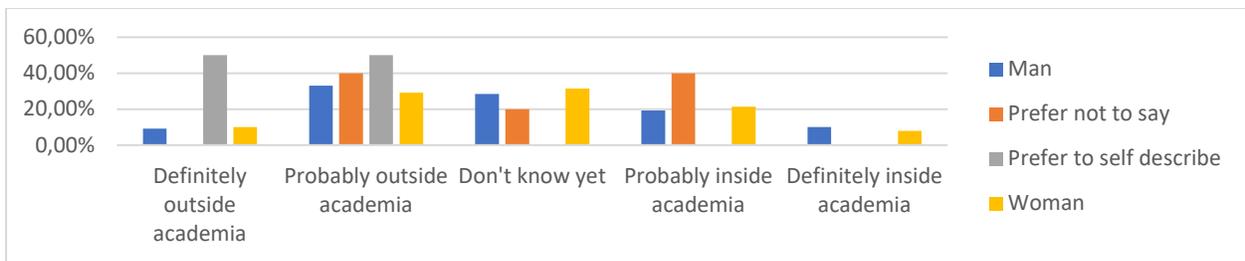


Figure 4 Do you currently aspire a career within academia (e.g. becoming a PostDoc, researcher, professor..) or outside academia (e.g. industry)?

Following this, and align to the topic, the question “Do you have negative thoughts/fears about your future career and/or career decisions after finishing your PhD/PDEng?” was address. Figure 5 shows that 33.94% man and 39.33% woman sometimes have negative thoughts.

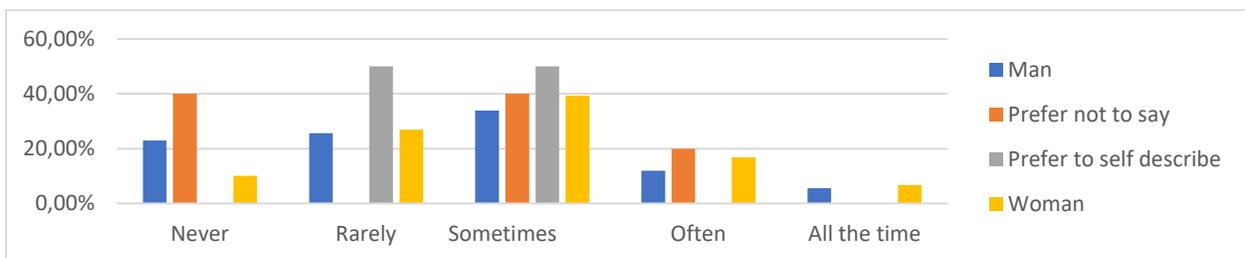


Figure 5 Do you have negative thoughts/fears about your future career and/or career decisions after finishing your PhD/PDEng?”

We also asked if staying in academia could be a factor that negatively could affect their well-being. Figure 6 indicates that, 43.12% of man and 39.33% of woman neither agree nor disagree on this statement.

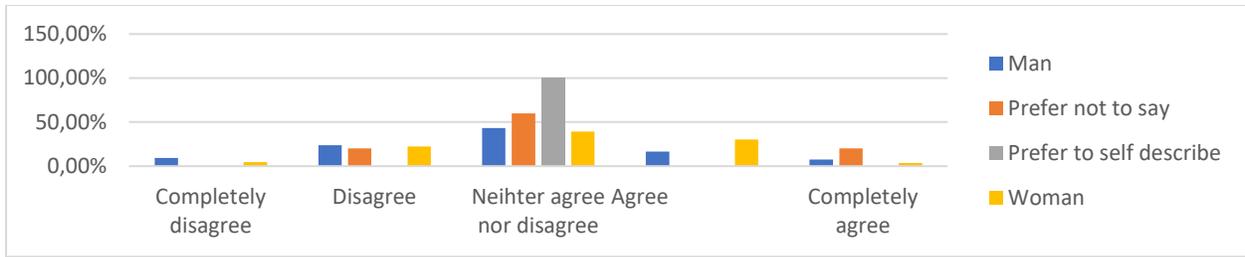


Figure 6 After finishing my PhD/PDEng, staying in academia would negatively affect my well-being.

However, when asked if after finishing the Doctoral studies, going outside of academia (e.g. into industry) would negatively affect my well-being, 44.95% of men disagree and 49.44% women disagree as well(Figure 7).

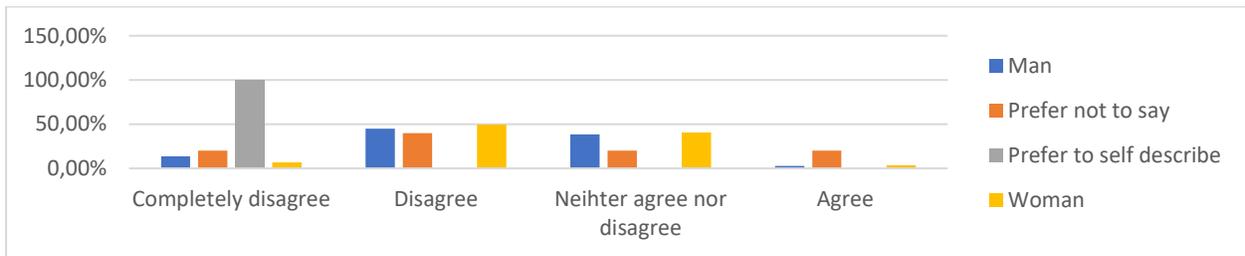


Figure 7 After finishing my PhD/PDEng, going outside of academia (e.g. into industry) would negatively affect my well-being.

In this section, we can conclude that Doctoral Candidates, no matter their gender, face similar feelings about the PhD/EngD Journey.

Results per Year of trajectory

The number of doctoral candidates that answered the survey were 205, from which 63 are in the first year, 56 are in the second year, 48 are in the third year, 30 are in the fourth year, and 8 are above the fourth year, see Table 1. Figure 8 provides a visual representation. The most prominent findings as presented in this section concern the development of career planning over the years.

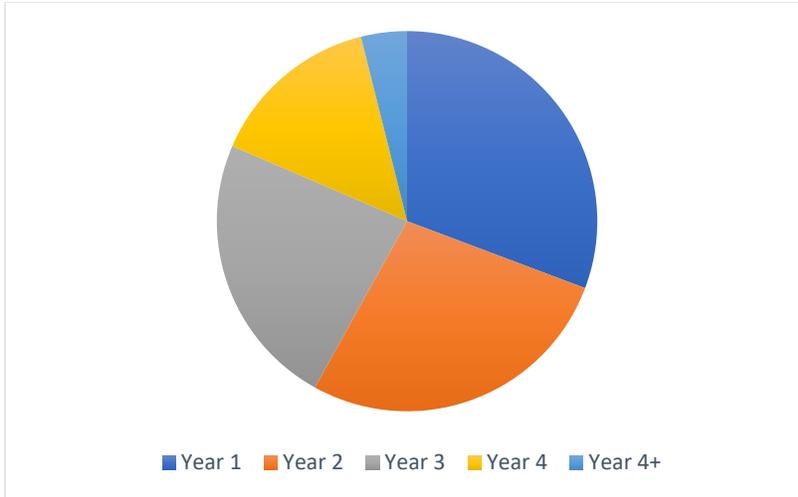


Figure 8 Results of Year of PhD/PDEng trajectory

Table 1 Number of respondents per year of PhD/PDEng trajectory

Year of PhD/EngD	1	2	3	4	4+	total
#respondents	63	56	48	30	8	205

First, we look at the career paths that doctoral candidates envision. The survey responses indicated a decline in the aspirations of doctoral candidates to stay in academia, the farther they are in their trajectory. As can be seen in Figure 9, less than 20% of doctoral candidates in their fourth year expect to stay in academia, as opposed to roughly 30% of candidates in their first or second year.

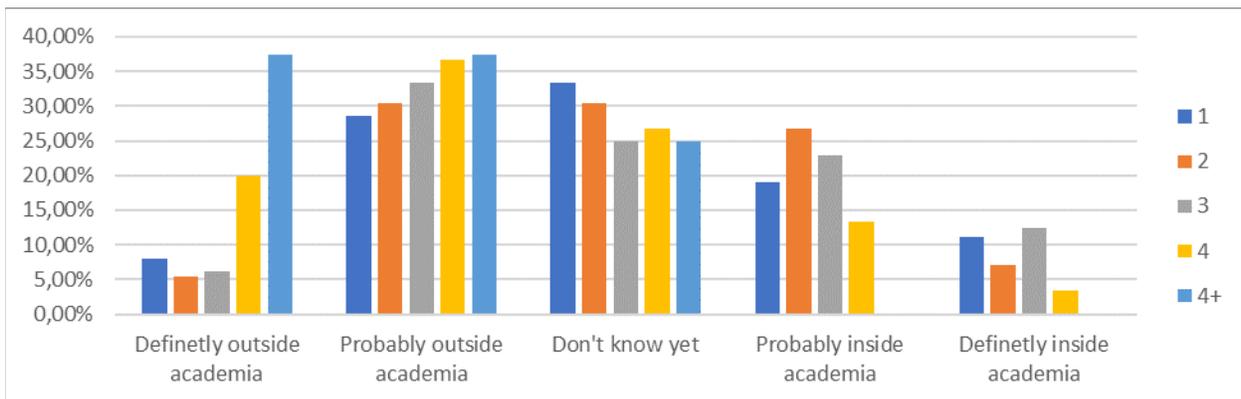


Figure 9 Responses to "Do you currently aspire a career within academia (e.g. becoming a PostDoc, researcher, professor..)", given in fractions relative to total of respondents per year of PhD/PDEng.

In Figure 10 we observe a shift of responses towards the agreement-side of the spectrum for the question whether staying in academia would negatively impact the respondent's well-being. That is in line with the decline in academic aspirations. We see that doctoral candidates expect fewer negative effects for their well-being caused by leaving academia, compared to staying (compare Figure 10 and Figure 11). Generally, we observe that PhD/EngD in the later stages of their trajectory indicate to more

often have negative thoughts about their future career and career decisions, as shown in Figure 12. That last trend is not surprising.

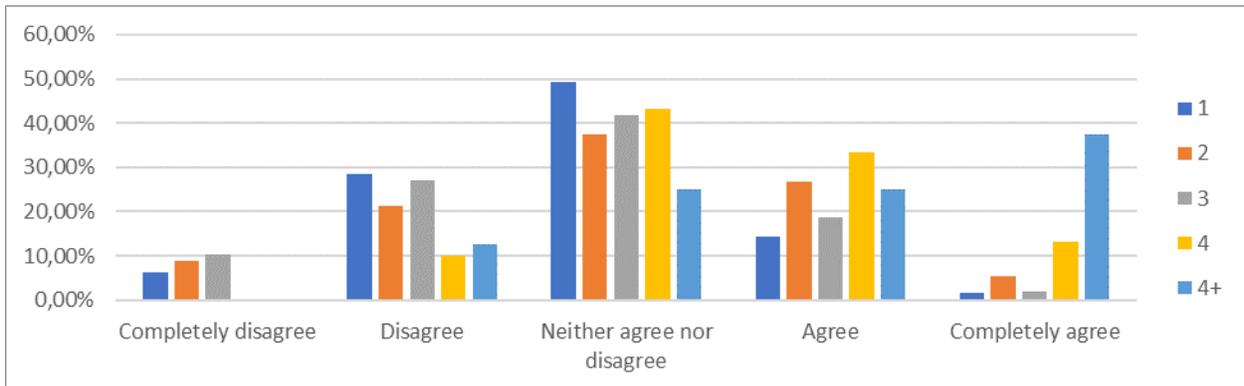


Figure 10 Responses to "After finishing my PhD/PDEng, staying in academia would negatively affect my well-being.", given in fractions relative to total of respondents per year of PhD/PDEng.

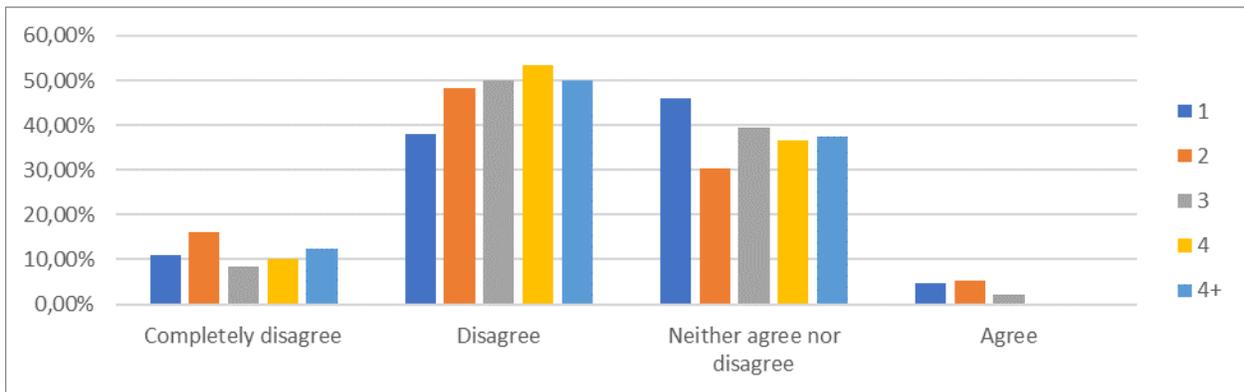


Figure 11 Responses to "After finishing my PhD/PDEng, going outside of academia (e.g. into industry) would negatively affect my well-being.", given in fractions relative to total of respondents per year of PhD/PDEng.

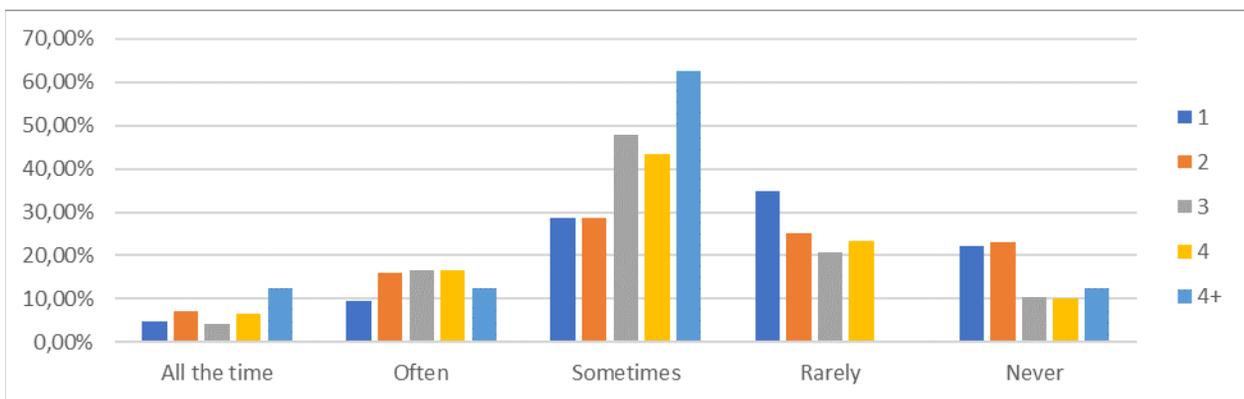


Figure 12 Responses to "Do you have negative thoughts/fears about your future career and/or career decisions after finishing", given in fractions relative to total of respondents per year of PhD/PDEng.

Results per Origin

The number of Doctoral Candidates that answered the survey were 205, 99 correspond to The Netherlands, 42 other country in Europe, 62 Outside of Europe and 2 prefer not to say.

International and local students feel somewhat satisfied with their decision in pursuing a PhD/EngD.

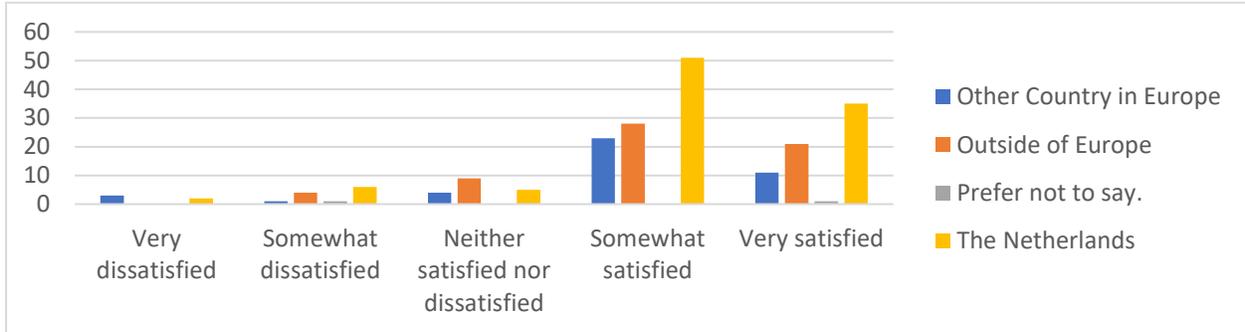


Figure 13 Responses to "How satisfied are you with pursuing a PhD/PDEng at the UT?"

For most of the doctoral candidates, the level of satisfaction, since the start of their PhD/EngD at the UT until now have remained the same.

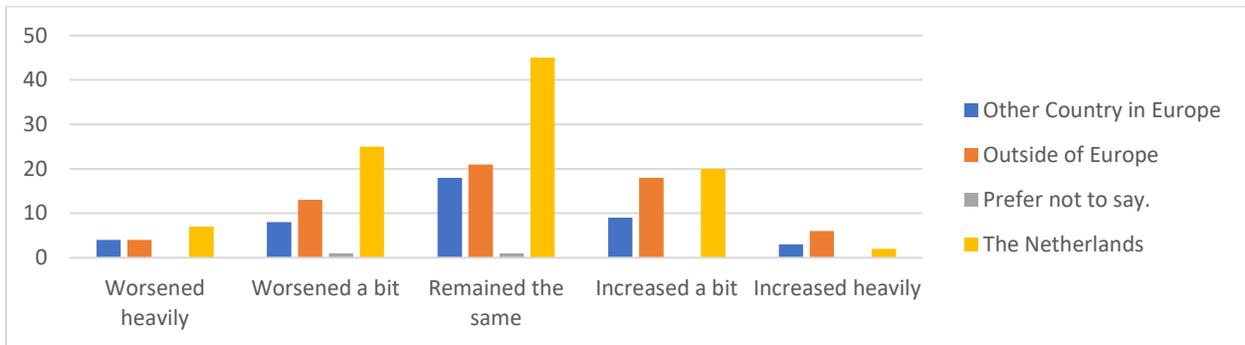


Figure 14 Responses to "Since the start of your PhD/PDEng at the UT, has your level of satisfaction increased, remained the same or worsened?"

We can observe in Figure 14 that PhDs and EngDs from outside Europe aspire a career within academia more often than their peers.

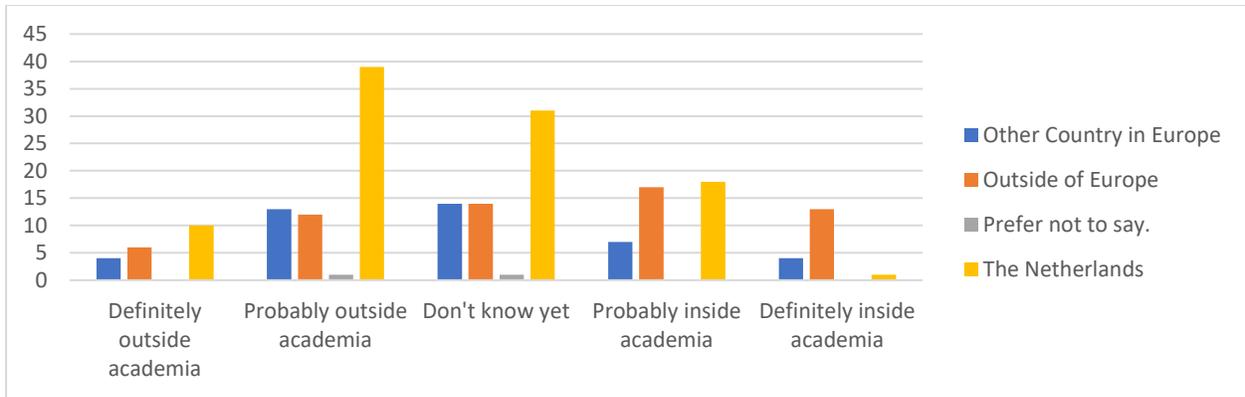


Figure 15 Responses to "Do you currently aspire a career within academia (e.g. becoming a PostDoc, researcher, professor..) or outside academia (e.g. industry)?"

In majority, PhDs and EngDs sometimes have negative thoughts/fears about their future career and/or career decisions after finishing their Doctoral Study

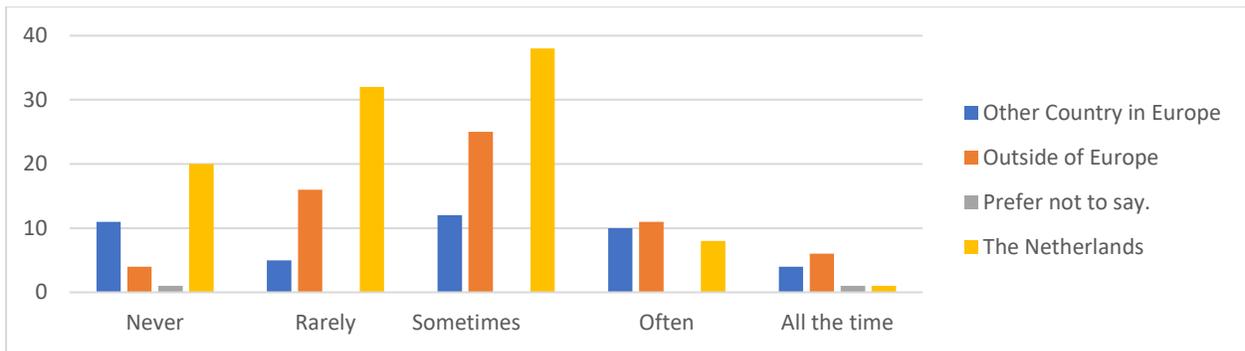


Figure 16 Responses to "Do you have negative thoughts/fears about your future career and/or career decisions after finishing your PhD/PDEng?"

Results per Employment status

In the survey we asked people about their employment status at the UT: employed PhD candidate, employee or staff with PhD/EngD track, Scholarship PhD/EngD, externally financed PhD/EngD, self-funded PhD/EngD. Unfortunately, the number of answers from not-employed PhD/EngD candidates is much lower than the number of answers from employed PhD/EngD candidates.

The number of Doctoral Candidates that answered the survey was 205 of which 155 indicated their status as employed PhD/EngD candidates. The second largest group where the external financed PhD/EngDs with 25 responses, the third- largest group being Employee or Staff with PhD/EngD track with 13 responses.

The number of not-employed PhD/EngD candidates was too small to draw any meaningful conclusions. For the next version of this survey, we will take this into account and contact PhD/EngD candidates from the other subgroups in a more targeted way.

Results per Faculty

The number of Doctoral Candidates that answered the survey was 205, 42 from Behavioral, Management and Social sciences (BMS), 81 from Electrical Engineering, Mathematics and Computer

Science (EEMCS), 45 from Engineering Technology (ET), 3 from Geo-Information Science and Earth Observation (ITC), and 34 from Science and Technology (TNW).

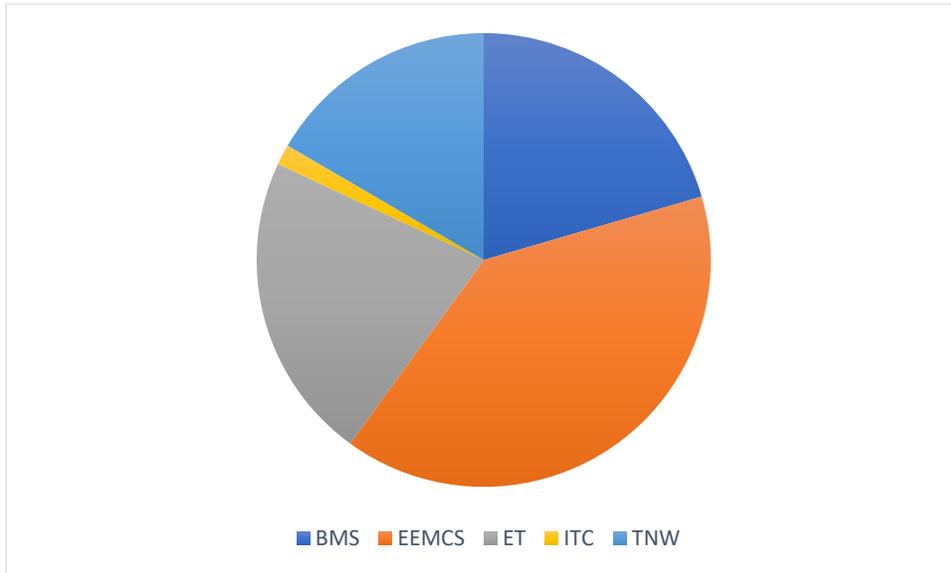


Figure 17 Results of respondents for each faculty

Table 2 Number of respondents per faculty of PhD/PDEng

Faculty of PhD/PDEng	BMS	EEMCS	ET	ITC	TNW	total
#Respondents	42	81	45	3	34	205

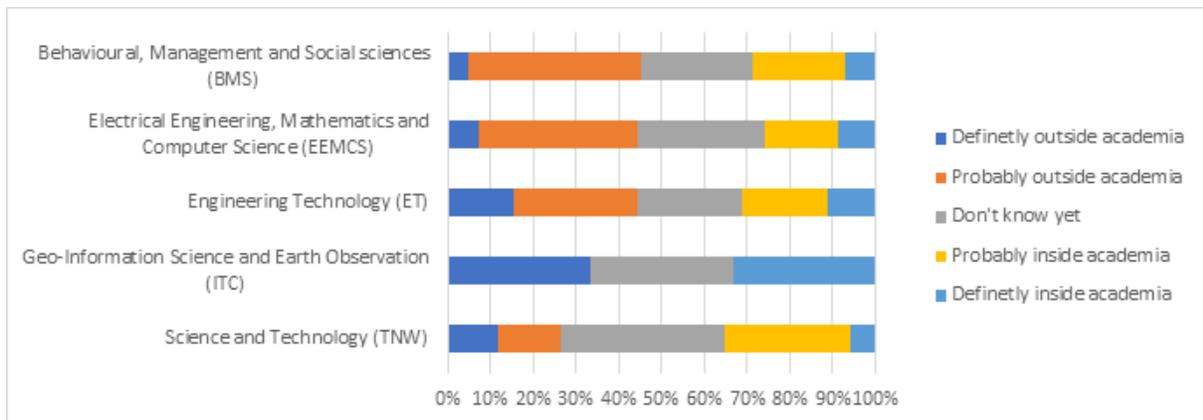


Figure 18 Responses to "Do you currently aspire a career within academia (e.g. becoming a PostDoc, researcher, professor..)", given in fractions relative to total of respondents per faculty of PhD/PDEng

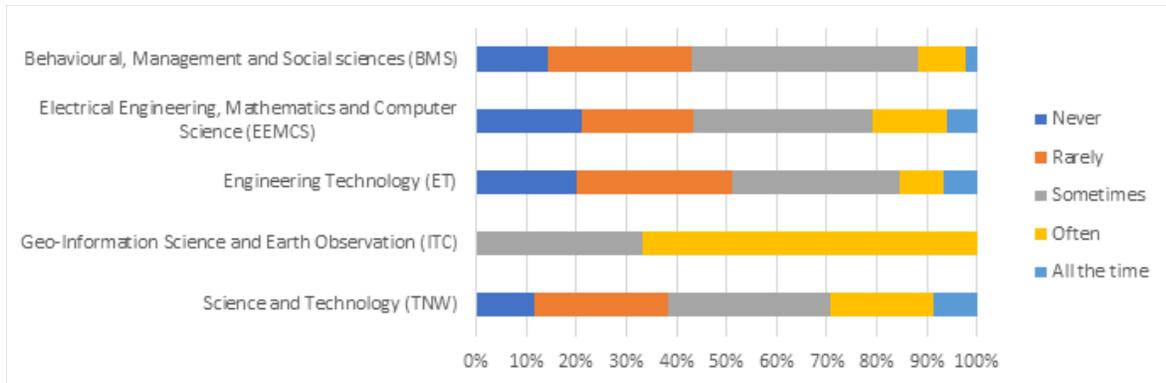


Figure 19 Responses to "Do you have negative thoughts/fears about your future career and/or career decisions after finishing", given in fractions relative to total of respondents per faculty of PhD/PDEng.

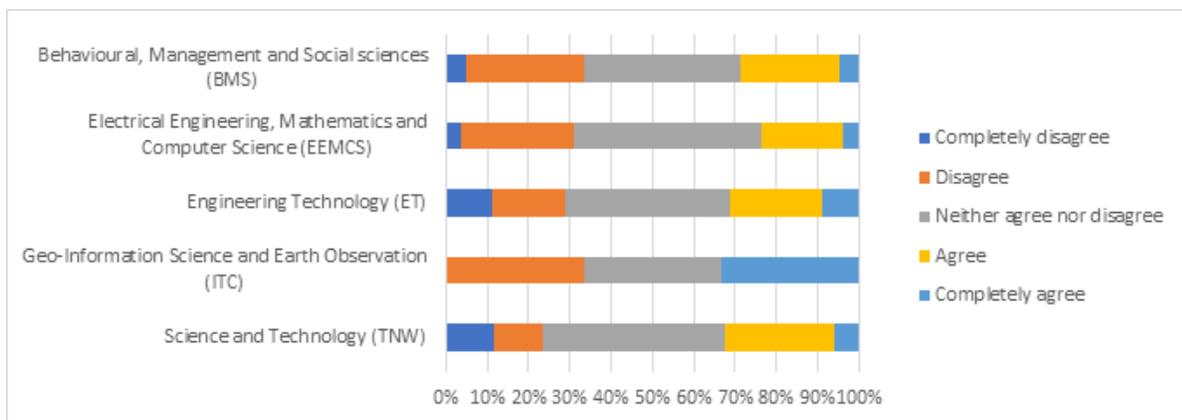


Figure 20 Responses to "After finishing my PhD/PDEng, staying in academia would negatively affect my well-being.", given in fractions relative to total of respondents per faculty of PhD/PDEng.

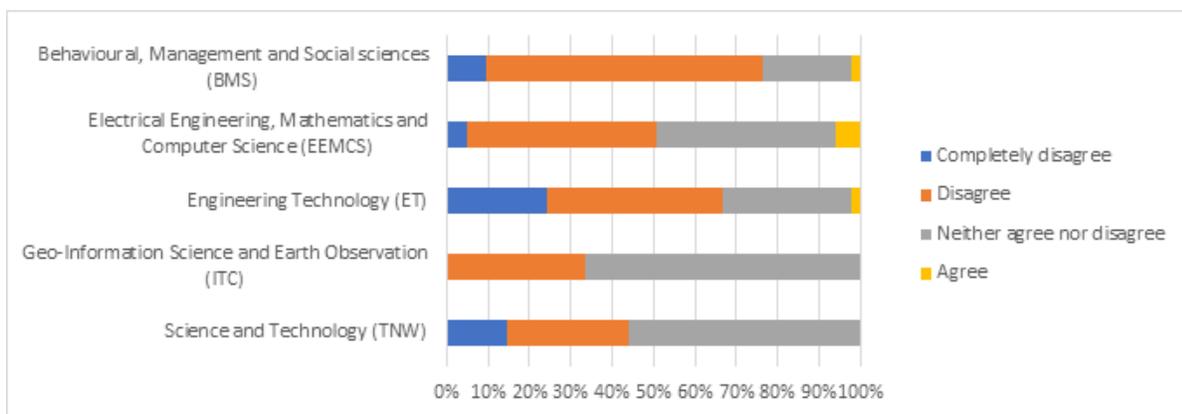


Figure 21 Responses to "After finishing my PhD/PDEng, going outside of academia (e.g. into industry) would negatively affect my well-being.", given in fractions relative to total of respondents per faculty of PhD/PDEng.

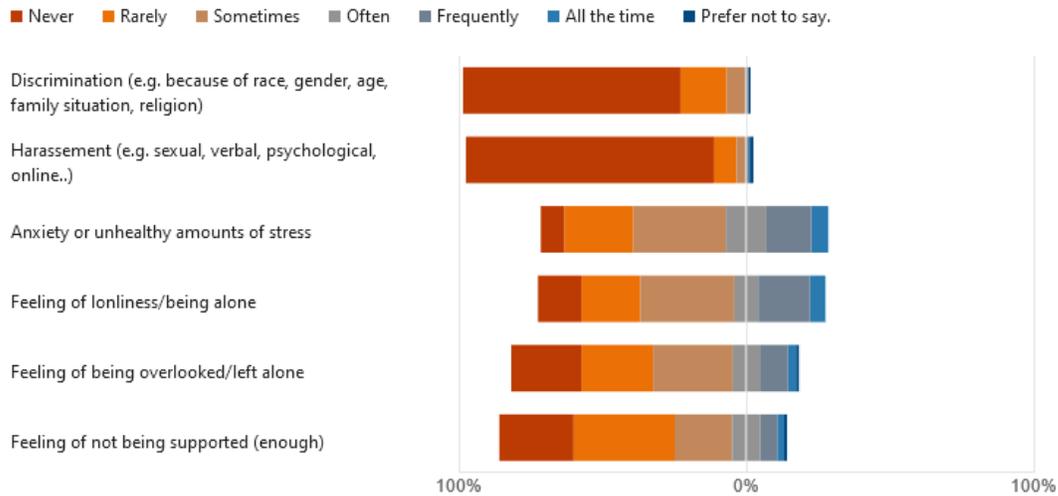
Generic/Overall Results

Next to the results presented per demographic group, we also shed light on three questions asked during the survey in general.

The first question is question 12 and asks if and how often Doctoral Candidates experienced discrimination, harassment, anxiety and unhealthy amount of stress, feeling of loneliness, feeling of being overlooked and not being supported enough.

12. Did you experience as a doctoral candidate at the UT? (0 point)

[More Details](#)



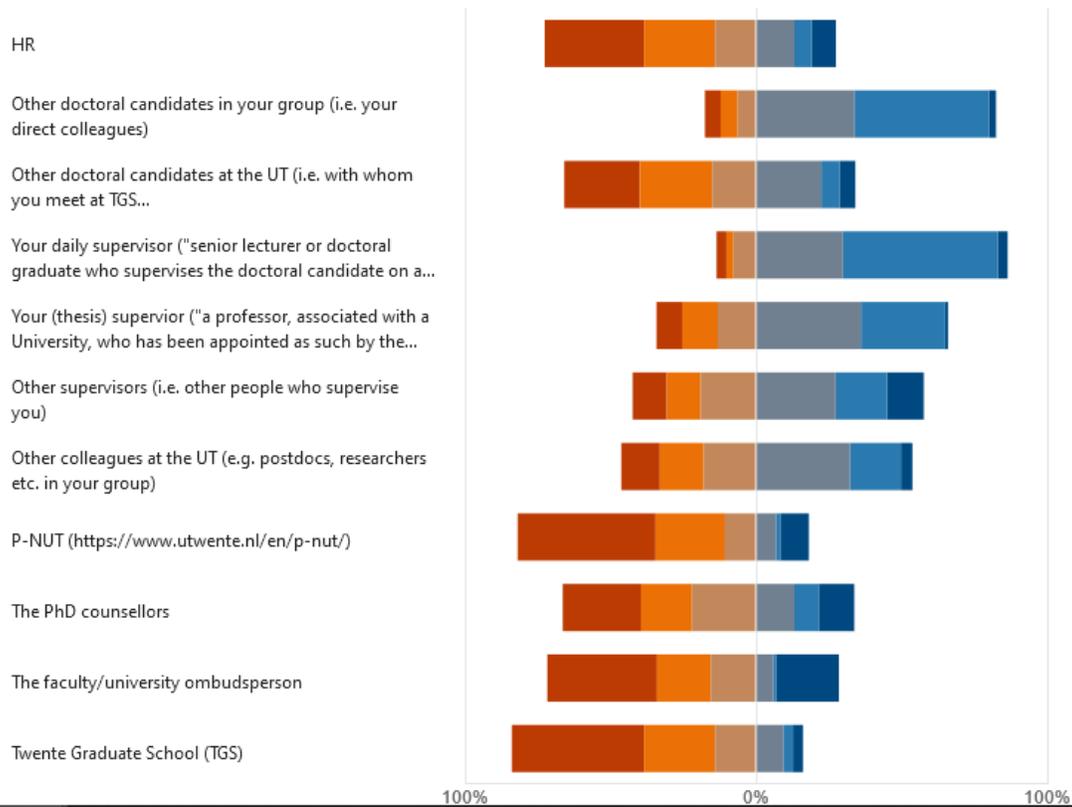
We are happy to see that the vast majority of Doctoral Candidates never faced any sort of discrimination and harassment. However, this is one of the questions we will closely examine in the future upon repeating the study.

With question 14, Doctoral candidates were asked how likely they would contact different institutions and people within UT if they face a problem.

14. If you face a problem (of any kind) during your PhD/PDEng, how likely is it that you contact the following persons/institutions? (0 point)

[More Details](#)

■ Very unlikely
 ■ Somewhat unlikely
 ■ Neither likely nor unlikely
 ■ Somewhat likely
 ■ Very likely
 ■ I don't know them.

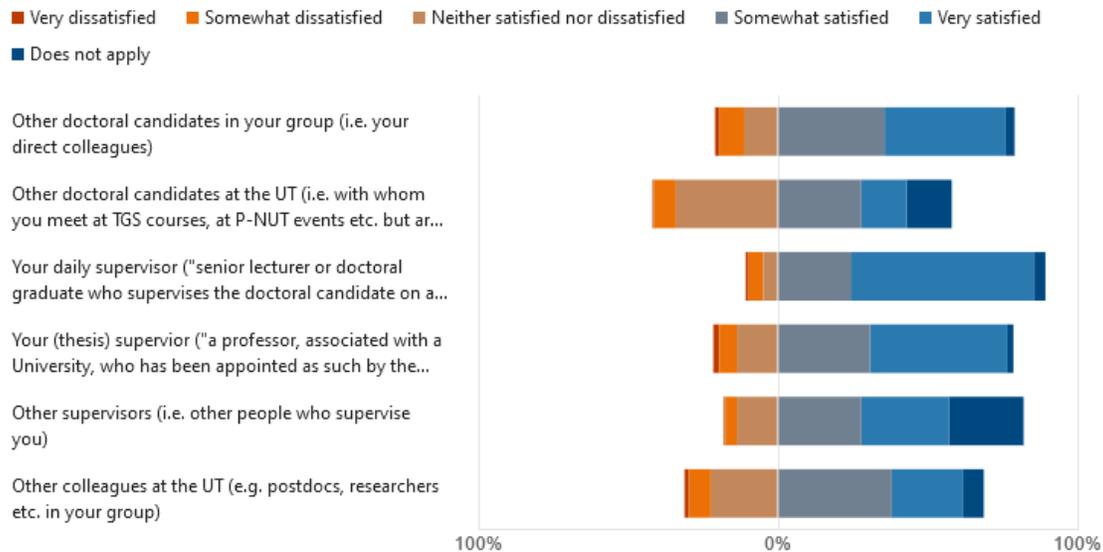


What stuck out most from our point of view was that HR, P-NUT and TGS are very unlikely to be contacted but in general are important contact points for Doctoral Candidates.

Lastly, question 16 asked about the relationship between the Doctoral Candidate and other people at UT. We notice that Doctoral Candidates are mostly at least somewhat satisfied with their relationships with other people. However, the relationship between doctoral candidates who do not work in the same group, could definitely be improved.

16. How satisfied are you with the relationship between you and? (0 point)

[More Details](#)



Recommendations

Resulting from the observations within our survey, we want to share a few recommendations, some more generic and some more specific and targeted for a direct institution within UT, to improve the life of all Doctoral Candidates on campus.

- 1) Doctoral candidates in their later stage often have negative thoughts about their near future and how to make good career decisions. Here, a closer contact with the industry, academic partners or former Doctoral Candidates could help.
- 2) There is no strong bond between current Doctoral Candidates and previous ones at UT also not with those who recently graduated. Events where graduates are invited to speak about their current careers and what helped them finish their degree and make further decisions could improve this.
- 3) Further, there is also no strong bond felt between Doctoral Candidates who are not in the same group. We, as EQUITY, believe that a stronger connection could not only help interdisciplinary knowledge exchange and problem-solving but also help everyone feel more integrated on campus. Therefore, we have three possible directions for improvement:
 - a. P-NUT: While planning events for the whole PhD/EngD community, P-NUT could take such events into account that target connection creation between different faculties.
 - b. TGS: Especially during the first years courses and the introduction courses we see room for improvement, to create connections between Doctoral Candidates regardless of their working group.

- c. Faculties: Each faculty could think of event inviting their Doctoral Candidates, to create more connections for people working on similar directions but haven't met yet. We are convinced that this will also help the overall connection between groups within the faculty.
- 4) From the results, we can see that HR, TGS and P-NUT are not necessarily viewed as institutions within the UT to talk to in case of a problem. As we cannot give direct recommendations on how to create trust in this regard, we recommend HR, TGS and P-NUT reflect on how to improve this.
- 5) The impact of the Covid-19 crisis is still heavily felt within the doctoral community. Especially Doctoral Candidates who started during that time still feel lonely and not too well integrated.
- 6) Within our study, Doctoral Candidates requested more support regarding the housing situation and more legal support when applying for e.g. a VISA. We recommend HR check if there are possibilities to improve the onboarding phase, especially regarding such practical matters for new (international) Doctoral Candidates could be improved

Limitations

In this report, we have not considered intersectionality of dimensions that we disaggregated data by. For example, it might be interesting to investigate how the year of the doctoral trajectory combined with gender of origin of the PhD/EngD influences the motivation to stay in academia. What are the groups most likely to be discouraged from an academic career? This kind of analysis was not done here.

Also, the number of external candidates or candidates of marginalized groups is too small to properly analyze statistically. To draw conclusions on how they are impacted compared to the global PhD/EngD population, a more qualitative approach would be needed. This counts especially for the non-employed PhD/EngD candidates, which should be targeted more in the next round of such survey or in specific qualitative interviews.

Lastly, the survey should be repeated to discover trends, as well as to survey experiences somewhat more independently from the latest pandemic lockdowns. As of now, we, as EQUITY, plan to repeat the survey mid 2023.

Appendix

Survey questions

Section 1

Demographics

1.What gender do you identify with?

Required to answer. Single choice.

- Woman
- Man
- Non-binary
- Prefer to self describe
- Prefer not to say

2.Optional: Please describe your gender identity

Single line text.

- Enter your answer

3.Where do you come from (e.g. the place where you were born/spent (most) of your childhood)?

Required to answer. Single choice.

- The Netherlands
- Other Country in Europe
- Outside of Europe
- Prefer not to say.

4.Where did you get your Masters degree?

Required to answer. Single choice.

- The Netherlands
- Other countries within Europe
- Outside of Europe
- Prefer not to say.
- I don't have a Masters degree.

5.In which year of your PhD/PDEng are you in?

Required to answer. Single choice.

- 1
- 2
- 3
- 4

- 4+

6. With which UT faculty are you associated?

- Behavioural, Management and Social sciences (BMS)
- Engineering Technology (ET)
- Electrical Engineering, Mathematics and Computer Science (EEMCS)
- Science and Technology (TNW)
- Geo-Information Science and Earth Observation (ITC)
- I am not sure.

Prefer not to say.

Insert new

7. With which UT faculty are you associated?

Required to answer. Single choice.

- Behavioural, Management and Social sciences (BMS)
- Engineering Technology (ET)
- Electrical Engineering, Mathematics and Computer Science (EEMCS)
- Science and Technology (TNW)
- Geo-Information Science and Earth Observation (ITC)
- I am not sure.
- Prefer not to say.

8. With what type of contract are you employed?

Required to answer. Single choice.

- Employed PhD/PDEng candidate
- Employee/Staff with PhD/PDEng track
- Scholarship PhD/PDEng candidate
- Externally financed PhD/PDEng candidate
- Self-funded PhD/PDEng candidate
- I am not sure.
- Prefer not to say.

Section 2

General experience as a doctoral candidate

9. How satisfied are you with pursuing a PhD/PDEng at the UT?

Required to answer. Single choice.

- Very satisfied
- Somewhat satisfied
- Neither satisfied nor dissatisfied

- Somewhat dissatisfied
- Very dissatisfied

10. Since the start of your PhD/PDEng at the UT, has your level of satisfaction increased, remained the same or worsened?

Required to answer. Single choice.

- Increased heavily
- Increased a bit
- Remained the same
- Worsened a bit
- Worsened heavily

11. How much do you agree with the following statement:

I have a good balance between my personal life and my work life as a doctoral candidate.

Required to answer. Single choice.

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree

12. Did you experience as a doctoral candidate at the UT?

Required to answer. Likert.

	Never	Rarely	Sometimes	Often	Frequently	All the time	Prefer not to say.
Discrimination (e.g. because of race, gender, age, family situation, religion)							
Harassment (e.g. sexual, verbal, psychological, online..)							
Anxiety or unhealthy amounts of stress							
Feeling of loneliness/being alone							

Feeling of being overlooked/left alone							
Feeling of not being supported (enough)							

13.Optional: Do you want to further elaborate on one or more negative experiences you had as a doctoral candidate at the UT?

Multi Line Text.

- Enter your answer

14.If you face a problem (of any kind) during your PhD/PDEng, how likely is it that you contact the following persons/institutions?

Required to answer. Likert.

	Very unlikely	Somewhat unlikely	Neither likely nor unlikely	Somewhat likely	Very likely	I don't know them.
HR						
Other doctoral candidates in your group (i.e. your direct colleagues)						
Other doctoral candidates at the UT (i.e. with whom you meet at TGS courses, at P-NUT events etc. but are not your direct colleagues)						
Your daily supervisor ("senior lecturer or doctoral graduate who supervises the doctoral candidate on a daily basis")						
Your (thesis) supervisor ("a professor, associated with a University, who has been appointed as such by the Doctorate Board.")						

Other supervisors (i.e. other people who supervise you)						
Other colleagues at the UT (e.g. postdocs, researchers etc. in your group)						
P-NUT (https://www.utwente.nl/en/p-nut/)						
The PhD counsellors						
The faculty/university ombudsperson						
Twente Graduate School (TGS)						

15. What do you enjoy most about life as a doctoral candidate at the UT?

Multi Line Text.

- Enter your answer

Section 3

Relationships at the UT

16. How satisfied are you with the relationship between you and?

Required to answer. Likert.

	Very dissatisfied	Somewhat dissatisfied	Neither satisfied nor dissatisfied	Somewhat satisfied	Very satisfied	Does not apply
Other doctoral candidates in your group (i.e. your direct colleagues)						
Other doctoral candidates at the UT (i.e. with whom you meet at TGS courses, at P-NUT)						

events etc. but are not your direct colleagues)						
Your daily supervisor ("senior lecturer or doctoral graduate who supervises the doctoral candidate on a daily basis")						
Your (thesis) supervisor ("a professor, associated with a university, who has been appointed as such by the Doctorate Board.")						
Other supervisors (i.e. other people who supervise you)						
Other colleagues at the UT (e.g. postdocs, researchers etc. in your group)						

17. How much do you agree with the following statements?

Required to answer. Likert.

	Completely disagree	Disagree	Neither agree nor disagree	Agree	Completely agree
I have strong academic relations within the UT.					
I have strong personal relations within the UT.					
I have a strong belonging within the UT.					

Section 4

Career after the PhD/PDEng

18. Do you currently aspire a career within academia (e.g. becoming a PostDoc, researcher, professor..) or outside academia (e.g. industry)?

Required to answer. Single choice.

- Definetly inside academia
- Probably inside academia
- Don't know yet
- Probably outside academia
- Definetly outside academia

19. Do you have negative thoughts/fears about your future career and/or career decisions after finishing your PhD/PDEng?

Required to answer. Single choice.

- Never
- Rarely
- Sometimes
- Often
- All the time

20. How much do you agree with the following statement:

After finishing my PhD/PDEng, staying in academia would negatively affect my well-being.

Required to answer. Single choice.

- Completely agree
- Agree
- Neither agree nor disagree
- Disagree
- Completely disagree

21. How much do you agree with the following statement:

After finishing my PhD/PDEng, going outside of academia (e.g. into industry) would negatively affect my well-being.

Required to answer. Single choice.

- Completely agree
- Agree

- Neither agree nor disagree
- Disagree
- Completely disagree

Section 5

Last Section - Improvement

22. Is there something the UT could do to improve your life as a doctoral candidate?

Multi Line Text.

- Enter your answer

23. Is there something P-NUT could do to improve this survey?

Multi Line Text.

- Enter your answer

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