



Wellbeing for PhD candidates

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Agenda

- Introduction and motivation
- Literature review
- Common problems for PhD students
- Insight into some problems indicated as 'main' during the sessions
- Example of structure of our well-being sessions

Introduction and motivation



Why are we talking about well-being and mental health?

nature

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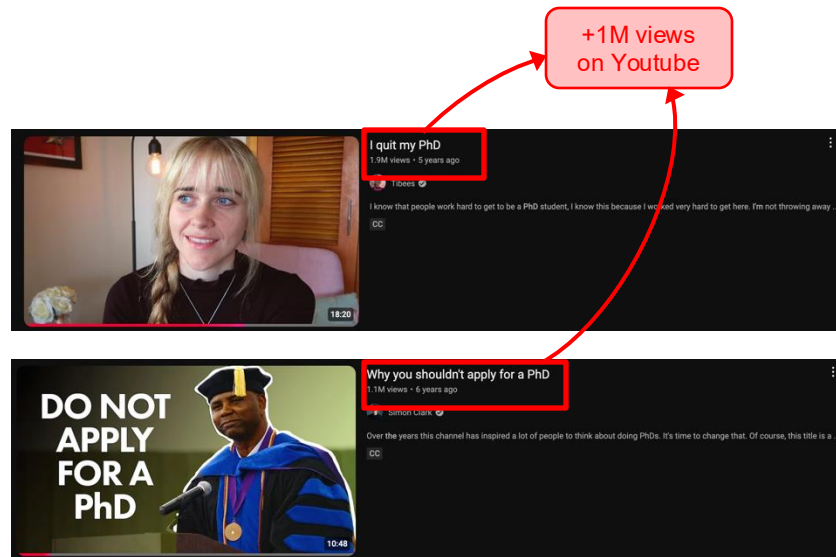
NEWS | 01 October 2024

The huge toll of PhDs on mental health: data reveal stark effects

PhD students in Sweden accessed mental-health services at increasing rates as their studies went on.

By [Fred Schwallier](#)

Me the first year of my PhD versus now:



Why are we talking about well-being and mental health?

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NEWS | 01 October 2024

The huge toll of PhDs on mental health: data reveal stark effects

PhD students in Sweden accessed mental-health services at increasing rates as their studies went on.

By [Fred Schwaller](#)

NEWS FEATURE | 23 May 2023

A mental-health crisis is gripping science — toxic research culture is to blame

With researchers reporting high rates of anxiety and depression, calls are growing to fundamentally change science before it's too late.

By [Shannon Hall](#)

CAREER FEATURE | 28 June 2021

Mental health of graduate students sorely overlooked

Too few resources exist to help early-career scientists deal with the stresses encountered in today's 'publish or perish' culture.

By [Nikki Forrester](#)

NEWS FEATURE | 09 July 2024 | Correction [12 July 2024](#) | Correction [09 August 2024](#)

How PhD students and other academics are fighting the mental-health crisis in science

Universities and institutions across the globe are exploring unique initiatives to help their students and staff cope with the stress of research.

By [Shannon Hall](#)

How are we doing at KU Leuven and in Flanders?

Relevant study for PhD students in Flanders from Prof. K. Levecque et al. [1]:

Comparison of:

- 3659 PhD students in Flanders with
- 769 highly educated individuals (general population)
- 592 highly educated employees and
- 333 higher education students

Results based on 12 symptoms of deteriorating mental health show that among PhD in Flanders:

- 51% report at least two symptoms on the GHQ-12 (GHQ2+)
- 40% report at least three symptoms (GHQ3+)
- 32% experience at least four symptoms (GHQ4+)

The prevalence of having or developing a common psychiatric disorder for PhD students:

- 2.43 times higher compared to the highly educated individuals in the general population.
- 2.84 times higher compared to highly educated employees.
- 1.85 times higher compared to higher education students.

[1] Levecque K., Anseel F., De Beuckelaer A., Van der Heyden J., Gisle L. (2017) Work organization and mental health problems in PhD students, Research Policy, Volume 46, Issue 4, Pages 868-879, ISSN 0048-7333, <https://doi.org/10.1016/j.respo>

How are we doing at KU Leuven and in Flanders?

Employee satisfaction monitor from KU Leuven, 2020 (scale from 1 to 10, 10 the best):

Satisfaction with...

	ABAP docto- randi	ABAP post doc	ABAP other	OZK	ZAP	OP3	OP1/ OP2	ATP	Total
Work-life balance	5,84	5,71	6,04	5,60	4,13	5,43	5,77	6,86	6,02

Score from 0 (do not agree at all) to 10 (agree completely)

Positively worded scale, the higher the better: red: < 5/10, orange: ≥ 5/10 and < 6/10, green: ≥ 6/10

Satisfaction with...

	ABAP docto- randi	ABAP post doc	ABAP other	OZK	ZAP	OP3	OP1/ OP2	ATP	Total
Use expertise	7,45	7,78	7,38	7,75	8,15	7,07	7,14	6,81	7,29
Taking initiative	7,48	7,50	7,42	8,10	8,01	7,07	6,85	6,98	7,33
Job content	7,56	7,74	7,70	7,61	8,12	7,50	7,55	7,14	7,49
Workload	5,47	5,49	5,58	4,48	3,69	4,52	5,07	5,68	5,27
Working conditions	6,47	6,45	6,37	7,14	6,38	6,23	5,65	6,80	6,58

Score from 0 (do not agree at all) to 10 (agree completely)

Positively worded scale, the higher the better: red: < 5/10, orange: ≥ 5/10 and < 6/10, green: ≥ 6/10.



How are we doing at KU Leuven and in Flanders?

Employee satisfaction monitor from KU Leuven, 2024 (scale from 1 to 10, 10 the best):

	KU Leuven 2023	KU Leuven 2021	KU Leuven 2018	Statuut		
				ZAP	ABAP	ATP
Vaardigheids-benutting	8,11	7,58	7,67	8,85	8,55	7,48
Rolduidelijkheid	7,23	7,32	7,06	7,39	7,11	7,27
Autonomie	7,57	7,30	7,31	7,71	7,82	7,31
Taakbelang	7,12	6,97	6,96	7,75	6,51	7,44
Av Rolconflict	6,59	6,86	6,57	6,15	6,67	6,66
Av Werkdruk	4,31	4,69	4,54	2,26	4,57	4,76
Av Emotionele belasting	6,17	6,58	6,19	4,73	6,02	6,78
Av Fysieke belasting	5,67	4,7	6,34	5,89	5,68	5,59
Av Omgevingsfactoren	5,45	----	5,09	5,99	5,52	5,22
Av Jobonzekerheid	5,86	----	5,75	7,16	4,76	6,35
Loopbaan-mogelijkheden	5,81	----	5,86	6,36	5,73	5,70
Opleidings-mogelijkheden	6,06	----	6,61	5,71	6,33	5,96
Steun van collega's	8,08	7,84	7,77	7,48	8,09	8,28
Feedback	5,71	5,32	5,38	4,73	6,09	5,72
Leiding geven	6,88	6,74	6,46	----	6,99	6,79
Samenwerking	7,59	6,98	7,34	7,88	7,17	7,83
Lokaal personeelsbeleid	6,53	7,20	6,23	6,38	6,6	6,51
Informatie & inspraak	6,14	6,14	5,86	6,22	5,90	6,31
Deconnectie persoonlijke voorkeur	6,12	6,03	----	4,60	6,41	6,40
Lokale cultuur deconnectie	5,2	4,9	----	4,08	4,64	6,02
Deconnectie tijdens het werk	6,86	----	----	5,59	7,59	6,68
Verloning	5,86	----	----	5,76	6,73	5,17
Effecten van Hybride werken	6,03	----	----	5,99	6,64	6,6
Inspraak in Hybride werken	6,81	----	----	8,44	5,96	6,86

ZAP: Senior academic staff
ABAP: Junior academic staff

Workload

Physical strain

Environmental factors

High Emotional strain
for the senior
academic staff (!)

How are we doing at KU Leuven and in Flanders?

Employee satisfaction monitor from KU Leuven (scale from 1 to 10, 10 the best):

ZAP: Senior academic staff
ABAP: Junior academic staff

	KU Leuven 2023	KU Leuven 2021	KU Leuven 2018	Statuut		
				ZAP	ABAP	ATP
Algemene tevredenheid	7,24	6,85	7,16	7,27	7,12	7,32
Vitaliteit	5,54	5,35	5,88	5,98	5,21	5,65
Toewijding	6,69	6,40	6,57	7,17	6,69	6,54
Absorptie	6,24	6,28	6,58	7,11	6,41	5,81
Werk-privé balans	5,75	5,52	6,09	3,90	5,33	6,73
Burn-out	13%	12%	7%	13%	18%	9%
Organisatiebetrokkenheid	6,65	6,56	6,7	7,27	6,13	6,87
Afdelingsbetrokkenheid	7,44	7,25	7,28	7,81	7,06	7,62
Employee referral	7,65	----	----	7,61	7,60	7,70
verbale agressie	30%	27%	30%	34%	23%	34%
lichamelijk geweld	0,3%	----	0,4%	0,2%	0,3%	0,4%
ongewenst seksueel gedrag	1,1%	----	1,6%	0,9%	1,7%	0,8%
pesten	7%	----	9%	9%	7%	7%
machtsmisbruik	19%	----	----	27%	18%	18%
discriminatie	8%	----	7%	12%	10%	6%

Willpower/vitality/energy level

Work-life balance (!)

Burnout (!)

Literature review



Selected Relevant literature (Nov '23 session)

We have done a small literature review on recent papers related to PhD students' wellbeing. These are some works we recommend:

- 1) Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). The PhD Experience: A Review of the Factors Influencing Doctoral Students' Completion, Achievement, and Well-Being. International Journal of Doctoral Studies, 13, 361-388. <https://doi.org/10.2>
- 2) Gin LE, Wiesenthal NJ, Ferreira I, Cooper KM. (2021) PhDepression: Examining How Graduate Research and Teaching Affect Depression in Life Sciences PhD Students. CBE Life Sci Educ. Sep;20(3):ar41. doi: 10.1187/cbe.21-03-0077. PMID: 34309412; PMCID: PMC8715
- 3) Patricia C. Jackman, Rebecca Sanderson & Lisa Jacobs. (2023) Developing inductions to support mental health and wellbeing in doctoral researchers: findings from a qualitative co-design study with doctoral researchers and university stakeholders. European

Main findings from the selected literature

1) Sverdlik, A., Hall, N. C., McAlpine, L., & Hubbard, K. (2018). The PhD Experience: A Review of the Factors Influencing Doctoral Students' Completion, Achievement, and Well-Being. International Journal of Doctoral Studies, 13, 361-388. <https://doi.org/10.2>

Positive and negative impact factors on research

• Positive Factors:

- Accomplishing significant/small tasks
- Passion for the topics being studied
- Relationships with colleagues and psychosocial support
- Collaboration with others

• Negative Factors:

- Failures, setbacks and rejected manuscripts
- Unstructured nature of research
- Comparison with peers is detrimental
- Isolating nature of research

Main findings from the selected literature

2) Gin LE, Wiesenthal NJ, Ferreira I, Cooper KM. (2021) PhDepression: Examining How Graduate Research and Teaching Affect Depression in Life Sciences PhD Students. CBE Life Sci Educ. Sep;20(3):ar41. doi: 10.1187/cbe.21-03-0077. PMID: 34309412; PMCID: PMC8715

University vs Student Factors

• University Factors:

- Encompass compatibility with supervisors.
- Adherence to institutional expectations and regulations, especially within departments.

• Student Factors:

- Involve demographic traits.
- Disciplinary background.
- Aptitude.
- Personal life elements, such as financial support, living arrangements, ...

External vs internal factors

• External Factors:

- Include relationships, structures, and influences outside the student.
- Examples: supervision, personal/social aspects, departmental dynamics, and financial support opportunities.

• Internal Factors:

- Focus on psychological and mental processes directly linked to academic work.
- E.g.: motivation, writing skills, self-regulation, ...

Main findings from the selected literature

3) Patricia C. Jackman, Rebecca Sanderson & Lisa Jacobs. (2023) Developing inductions to support mental health and wellbeing in doctoral researchers: findings from a qualitative co-design study with doctoral researchers and university stakeholders. European

Four main areas:

- Ratings of mental health and wellbeing
- Impact of transition to doctoral study on mental health and wellbeing
- Factors related to mental health and wellbeing
- Interventions targeting mental health and wellbeing

List of other relevant sources per (some) problems

@[Huberman lab podcast](#) (#1 health podcast in the world),

from Prof. Dr. Andrew D. Huberman ([Stanford University School of Medicine](#))

- **(Mental) Health issues**

[Mental Health Toolkit: Tools to Bolster Your Mood & Mental Health](#)

[Dr. Paul Conti \(Stanford University School of Medicine, Pacific Premier Group\): How to Improve Your Mental Health | Huberman Lab Guest Series](#)

- **Isolation**

[Dr. Immordino-Yang \(University of Southern California\): How Emotions & Social Factors Impact Learning Leverage Dopamine to Overcome Procrastination & Optimize Effort](#)

[Dr. Anna Lembke \(Stanford University School of Medicine\): Understanding & Treating Addiction](#)
(with her book '[Dopamine Nation](#)')

- **Health issues**

[Dr. Andy Galpin \(California State University\): Optimize Your Training Program for Fitness & Longevity | Huberman Lab Guest Series](#)

List of other relevant sources per (some) problems

@[Huberman lab podcast](#) (#1 health podcast in the world),

from Prof. Dr. Andrew D. Huberman ([Stanford University School of Medicine](#))

- **Time management**

[Focus Toolkit: Tools to Improve Your Focus & Concentration](#)

[Dr. Wendy Suzuki \(New York University\): Boost Attention & Memory with Science-Based Tools](#)

[Tim Ferriss \(blog\): How to Learn Better & Create Your Best Future](#)

[Goals Toolkit: How to Set & Achieve Your Goals](#)

[Optimizing Workspace for Productivity, Focus, & Creativity](#)

[Time Perception & Entrainment by Dopamine, Serotonin & Hormones](#)

- **Substances to enhance performance***

[Using Caffeine to Optimize Mental & Physical Performance](#)

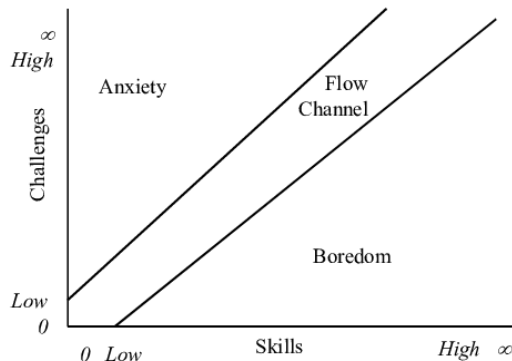
[Dr. Nolan Williams \(Stanford Brain Stimulation Lab\): Psychedelics & Neurostimulation for Brain Rewiring](#)

[Dr. Robin Carhart-Harris \(Imperial College London\): The Science of Psychedelics for Mental Health](#)

Reminder: “ ‘Mental health’ contains ‘health’, it relates to improving one’s health, not only mental illness” (May ‘24)

[Andrew Huberman ‘Dr. Matt Walker: Improve Sleep to Boost Mood & Emotional Regulation | Huberman Lab Guest Series’](#)

A crash course on Positive Psychology:



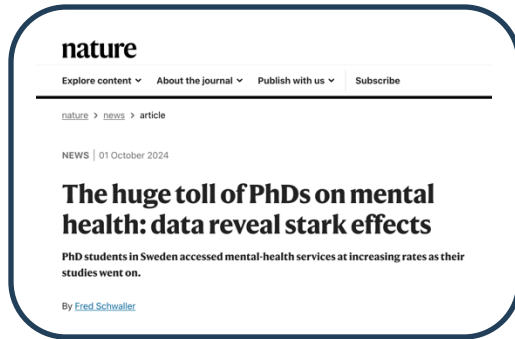
[*Flow: the Psychology of Optimal Experience* \(Csikszentmihalyi, 1990\).](#)



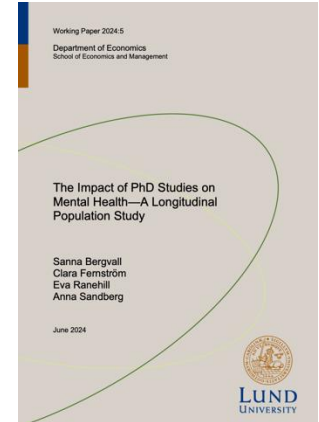
Muro-Rodríguez A., Jiménez-Villamizar M.P., [‘The Third half: towards the creation of healthier research careers’](#),



Some recent relevant literature (Nov '24 session)



Bergvall, S., Fernström, C., Ranehill, E., & Sandberg, A. (2024). The Impact of PhD Studies on Mental Health—A Longitudinal Population Study. (Working papers; No. 2024:5).



Control samples:

- 7,045,134 individuals for the general population
- 306,430 individuals for the highly educated population,
- 20,085 PhD candidates, Individuals entering any Swedish PhD education between 2006 and 2017 across all academic fields

Main results:

Prospective PhD candidates collect psychiatric medication in the years preceding their PhD education at:

- A similar rate as individuals with a corresponding master's degree
- A lower rate than the general population.

→ The rate of increase in PhD students is significantly higher than both highly educated individuals and the general population during the PhD years

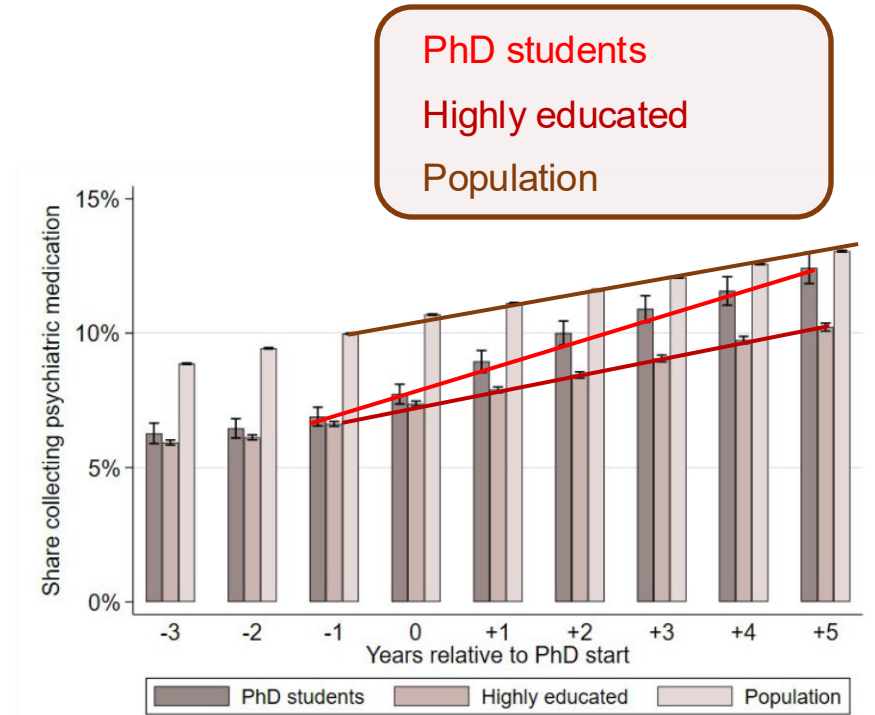
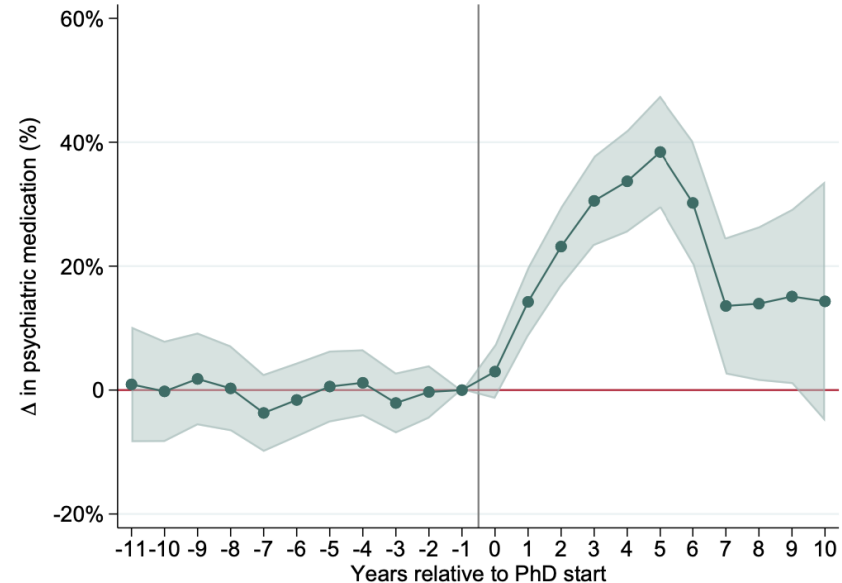


Fig. 1. Prescribed psychiatric medication relative to PhD start. The figure shows the share of individuals that

Main results:

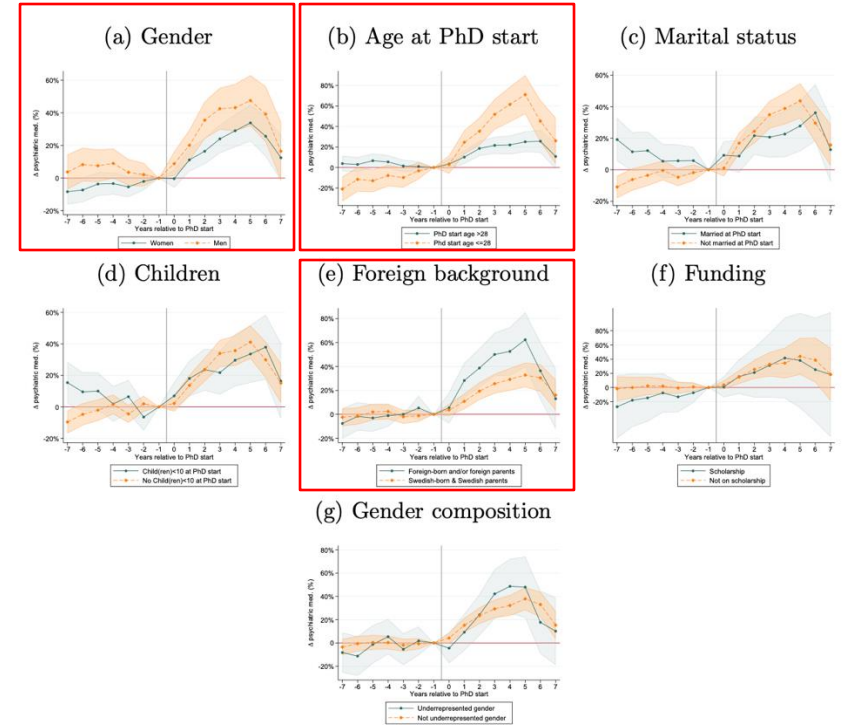
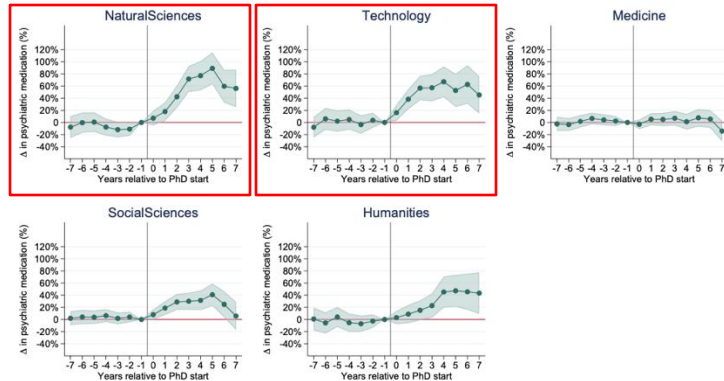
- The use of psychiatric medication increases among the PhD students during their PhD journey.
- After the end of the PhD, the use of psychiatric medication decreases.

Figure OA7: Event study of the impact of PhD studies on prescribed psychiatric medication, longer event time



Main results:

- Higher increase in the use of psychiatric medications for younger and foreign candidates in particular.
- Higher increases in the use of psychiatric medications for PhDs in natural sciences and technology.



Results from: Bergvall, S., Fernström, C., Ranehill, E., & Sandberg, A. (2024). The Impact of PhD Studies on Mental Health—A Longitudinal Population Study. (Working papers; No. 2024:5).

Some recent relevant literature (May '25 session)

Four Years of Contract, Five+ Years of Work

Factors Hindering and Supporting
a Timely PhD Completion

A Publication of PNN | Promovendi Network Nederland



Main findings (I/II):

1. Planning and scope of a PhD project: PhD projects are not always feasible in the given time. It is often forgotten that a PhD candidate requires start-up time as well as time to finish up.
2. Supervision quality: Supervision plays a key role in the duration and completion of the PhD. Good and timely feedback plays an important role in this.
3. (Mis)match between official regulations, unofficial norms and expectations: Lack of transparency in requirements leads to hidden workload and uncertainty, contributing to delays.

Promovendi Network Nederland. (2025). Four years of contract, five+ years of work: factors hindering and supporting a timely PhD completion. 10.5281/zenodo.14946489

Some recent relevant literature (May '25 session)

Four Years of Contract, Five+ Years of Work

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Main findings (II/II):

4. The PhD candidate taking charge of their trajectory: Successfully finishing a PhD on time requires proactivity of the PhD candidate. Not all PhD candidates knew this was expected of them, and some had difficulties with the expected proactivity and autonomy.

5. Supportive environment: The environment of the PhD candidate is important for a timely completion. Particularly, seeking support when needed is crucial.

6. Tension between professional development and thesis completion: the need to achieve a balance between doing activities that contribute to the candidate's professional development and completing the thesis.

Promovendi Network Nederland. (2025). Four years of contract, five+ years of work: factors hindering and supporting a timely PhD completion. 10.5281/zenodo.14946489

Some recent relevant literature (May '25 session)

Four Years of Contract, Five+ Years of Work

Factors Hindering and Supporting
a Timely PhD Completion

A Publication of PNN | Promovendi Network Nederland



Main recommendations:

1. PhD planning should include time to get started, and to write up the full thesis.
2. Graduate schools and supervisors should be responsible and accountable for the timely PhD completion.
3. Expectations of when the PhD thesis is completed should be discussed at the beginning, and they have to be feasible.

Promovendi Network Nederland. (2025).
Four years of contract, five+ years of work:
factors hindering and supporting a timely
PhD completion. 10.5281/zenodo.14946489

Common problems for PhD students



Common problems for PhD students

Source:



- Time Management
- Isolation
- Unclear Expectations
- Financial Strain
- Research Challenges
- Writing Difficulties
- Burnout
- Inadequate Support
- Imposter Syndrome
- Health Issues
- Job Market Concerns
- Personal Issues
- Ethical Dilemmas
- Lack of Resources
- Changing Research Direction



Do you feel any of these problems?

How to tackle these issues?

Common solutions for PhD students

Source:



- **Time Management:**
 - Set realistic goals and prioritize tasks.
 - Use tools like calendars and project management apps.
 - Learn to say no to additional commitments when necessary.
- **Isolation:**
 - Attend departmental events, conferences, and workshops.
 - Join or create peer support groups.
 - Seek out collaborative research opportunities.
- **Unclear Expectations:**
 - Have regular meetings with your supervisor to clarify expectations.
 - Seek guidance from other faculty members or experienced PhD students.
 - Establish a clear timeline for your research and milestones.
- **Financial Strain:**
 - Explore additional funding opportunities such as grants or scholarships.
 - Consider part-time work or freelance opportunities.
 - Develop a budget and financial plan.
- **Research Challenges:**
 - Be adaptable and open to modifying research plans when necessary.
 - Collaborate with colleagues or seek advice from mentors.
 - Break down research into manageable tasks.
- **Writing Difficulties:**
 - Take writing courses or workshops.
 - Seek feedback from peers and supervisors.
 - Break down writing into smaller, manageable sections.
- **Burnout:**
 - Prioritize self-care, including regular breaks and vacations.
 - Set boundaries for work hours.
 - Seek counseling or support services if needed.

Common solutions for PhD students

Source:



- **Inadequate Support:**

- Communicate with your supervisor about your needs.
- Build a network of supportive colleagues and mentors.
- Seek out resources offered by the university's support services.

- **Imposter Syndrome:**

- Acknowledge your achievements and successes.
- Share your feelings with peers or mentors.
- Focus on continuous learning and improvement.

- **Health Issues:**

- Prioritize physical and mental well-being.
- Seek medical help when needed.
- Consider talking to a counselor or therapist.

- **Job Market Concerns:**

- Develop transferable skills throughout your PhD.
- Network with professionals in and outside academia.
- Seek career counseling services offered by the university.

- **Personal Issues:**

- Communicate with supervisors about personal challenges.
- Seek support from friends, family, or counseling services.
- Consider taking a temporary break if necessary.

- **Ethical Dilemmas:**

- Consult with your supervisor and ethics review board.
- Seek guidance from experienced researchers or ethicists.
- Clearly document ethical considerations in your research.

- **Lack of Resources:**

- Communicate with your supervisor about resource needs.
- Explore collaborations with other institutions.
- Take advantage of available university resources.

- **Changing Research Direction:**

- Discuss changes with your supervisor early on.
- Leverage existing skills that can be applied to the new direction.
- Seek additional training or collaboration to bridge gaps.

Insight into some problems indicated as ‘main’ during the sessions



(Trying to) Optimize time management

Two pieces of advice:

Set Clear Goals: Define your short-term and long-term objectives. Break down your research project into smaller tasks and set specific, achievable goals for each day, week, and month.

Prioritize Tasks: Identify the most critical tasks that contribute directly to your research progress or deadlines. Focus your energy on these tasks during your peak productivity hours. Learn to delegate and Collaborate

Create a Schedule: Develop a structured daily or weekly schedule that allocates time for research, writing, reading, meetings, and other commitments. Stick to your schedule as much as possible to build consistency and momentum.

Use Time Blocking: Allocate blocks of time for specific activities, such as conducting experiments, analyzing data, writing chapters, or attending seminars. Avoid multitasking and dedicate your full attention to each task during its designated time slot.

Example of Useful tools:



Notion



Forest app



One Sec app



Notion Calendar



IEEE
STUDENT BRANCH
LEUVEN

(Trying to) Optimize time management

Two pieces of advice:

Take Breaks: Incorporate regular breaks into your schedule to rest and recharge. Short breaks can help prevent burnout, maintain cognitive function, and enhance overall productivity.

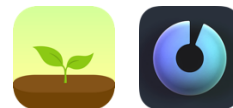
Limit Distractions: Minimize distractions by turning off notifications, silencing your phone, or using website blockers during focused work sessions. Create a conducive work environment that promotes concentration and minimizes interruptions

Seek Support: Reach out to your supervisor, mentor, or peers for guidance and support. They can offer valuable advice, accountability, and encouragement to help you overcome challenges and stay on track.

Practice Self-Care: Prioritize self-care activities such as exercise, adequate sleep, healthy eating, and relaxation techniques. Taking care of your physical and mental well-being is essential for sustaining productivity and resilience.



Example of Useful tools:



Talk to People: other people matter!

Listen to yourself

List of relevant sources regarding time management

[@Huberman lab podcast](#) (#1 health podcast in the world),

from Prof. Dr. Andrew D. Huberman ([Stanford University School of Medicine](#))

[Focus Toolkit: Tools to Improve Your Focus & Concentration](#)

[Dr. Wendy Suzuki \(New York University\): Boost Attention & Memory with Science-Based Tools](#)

[Tim Ferriss \(blog\): How to Learn Better & Create Your Best Future](#)

[Goals Toolkit: How to Set & Achieve Your Goals](#)

[Optimizing Workspace for Productivity, Focus, & Creativity](#)

[Time Perception & Entrainment by Dopamine, Serotonin & Hormones](#)

[Dr. Cal Newport: How to Enhance Focus and Improve Productivity](#)

[Dr. Adam Grant: How to Unlock Your Potential, Motivation & Unique Abilities](#)

[Dr Lex Fridman: Navigating Conflict, Finding Purpose & Maintaining Drive](#)

Making expectations clearer

- 'How Big Things Get Done' from Prof. [Bent Flyvbjerg](#) has several good pieces of advice about project management, e.g. [right to left thinking](#).
- [Jeff Bezos at Lex Fridman podcast](#):
 - Divide the operations between:
 - Big things: likely not to change in the next 10 years (e.g. fast delivery, the broad range of products, low prices).
 - Paper cuts (small things): e.g. tiny customer experience deficiencies.
 - Write a crisp document (memo) about each important meeting:
 - Managers/supervisors speak last in meetings so as not to spoil the thoughts of others.
 - The author needs to be vulnerable. It is a nerve-breaking but useful experience.
- From previous sessions:
 - Set clear deadlines to organize your work better
 - Ask clear questions
 - Dare to say you did not understand and ask further questions



Example of structure of our well-being sessions



Example of structure of our well-being sessions

*Questionnaire distributed some weeks before the session to collect anonymous answers from colleagues.

- Introductory slides (5')
- Based on the results of the questionnaire, review of science-based methods to cope with the most recurrent problems for PhD candidates (10-15')
- Discussion with senior experts invited to share their experience (45')

The moderator starts asking the questions collected with the questionnaire, but everyone can ask questions

- Slides showing how the research group, the university, and the country support people's wellbeing (5')
- Slides showing suggestions for the research group and the university on how to improve employees' wellbeing (5')

Thank you for your attention!

Any questions?