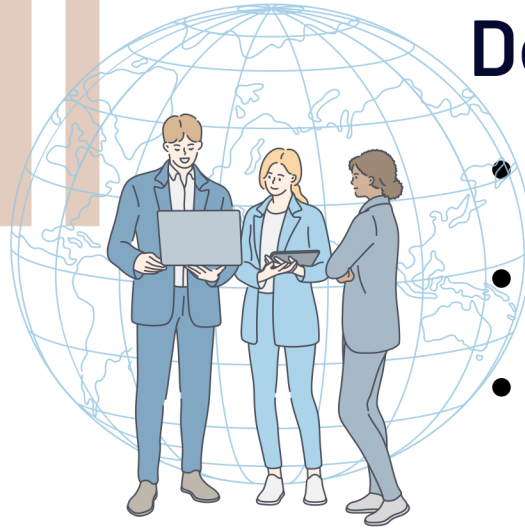


N² Survey Report – 2021

General Information

In 2021 the TUM Graduate Council joined for the first time the survey of the N² Network. In total 9% (N = 647) of all doctoral candidates at TUM took part in the survey.



Demographics

- 54 % Men
- 44% Women
- 1 % other gender representations
- 76 % German
- 12 % other EU countries
- 12 % outside the EU

Working Conditions

Working Hours – Contract

- 44% are expected to work > 39 hours/week
- 36% are expected to work 21-39 hours/week
- 16% are expected to work max. 20 hours/week

Actual Working Hours

- 46% work 41-50 hours/week
- 24% work more than 50 hours/week
- 25% work every weekend or three times per month during weekends/public holidays



Financial Support

1 IN 3 (N = 191) cover living expenses with financial support by*

- parents (46%)
 - another job (28%)
 - partners (27%)
- ~ 82% are depending on it at least weakly!

Predominantly Work

- 23% theoretical/methodological work
- 38% computational work
- 30% lab work

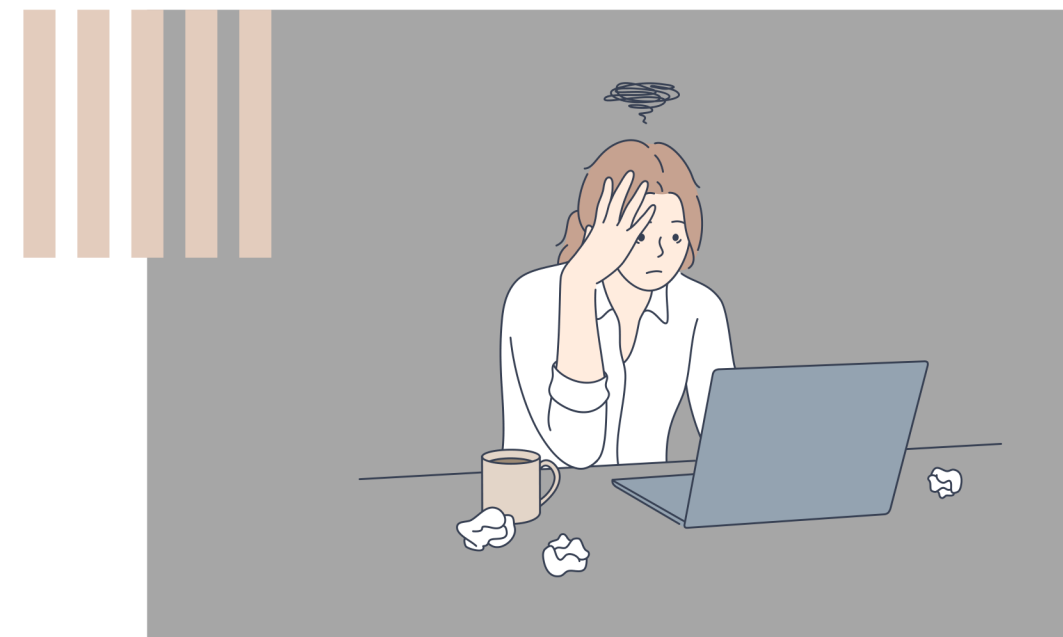
33% of doctoral candidates do not feel free to take holidays, because of high workload

Quitting Doctorate?

- 39% consider it occasionally or often & 28% consider it rarely

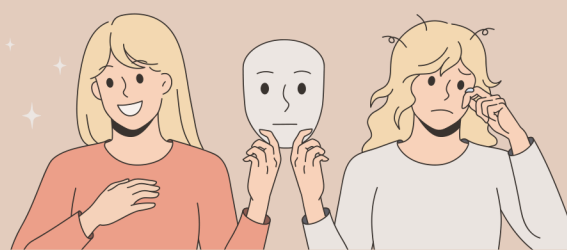
Reasons often named are (N = 436)*:

- 22% not feel qualified enough
- 22% not like working conditions
- 19% cannot cope with the high workload



Doctoral Candidates are Satisfied with*

- 79% vacation days
- 72% work environment and atmosphere
- 67% adherence to good scientific practice



Doctoral Candidates are Dissatisfied with*

- 41% bureaucracy and administrative support
- 35% psychological support
- 35% workload

68-72% would recommend a doctorate at TUM



SCAN for Questionnaire

The TUM Graduate Council is the official representative body of all doctoral candidates at the Technical University of Munich.
The N² is a network representing ~16,000 doctoral researchers in Germany's non-university research sector (Helmholtz, Leibniz, and MPS).

N² Survey Report – 2021

Supervision

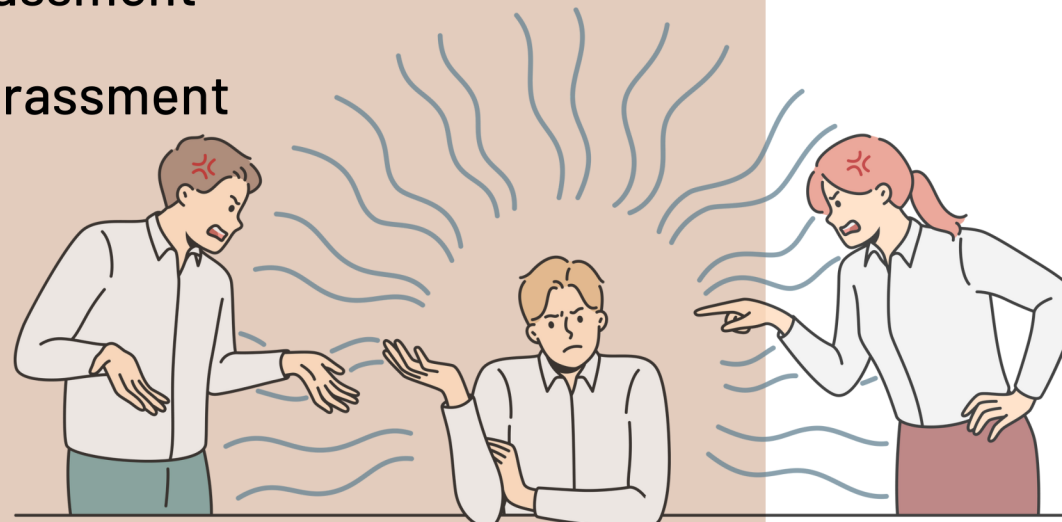
- 81% agree that their formal supervisor^a treats them professionally (N = 218)
- 42% disagree that their formal supervisor is well informed about the current state of their doctoral project (N = 218)
- 34% disagree that their formal supervisor is available when advice is needed (N = 218)
- Most doctoral candidates (~80-85%) are quite satisfied with their direct supervisor:^b encourages to work independently, treats them politely and professionally, open to and respects research ideas, adheres to good scientific practice, is available for advice



Discrimination & Harassment

Doctoral students stated negative workplace experiences:

- 1 IN 26 felt discriminated against because of nationality
- 1 IN 12 felt discriminated against because of gender identity
- 1 IN 13 witnessed sexualized harassment^c
- 1 IN 9 experienced sexualized harassment
- 1 IN 5 experienced bullying^d
- 1 IN 4 witnessed bullying



Conflict Experience

- 85% never experienced a serious conflict
- 9% had a serious conflict, but never reported it
- 3% reported a serious conflict to an official authority
- 16% are not aware of any official authority for reporting conflicts with superior

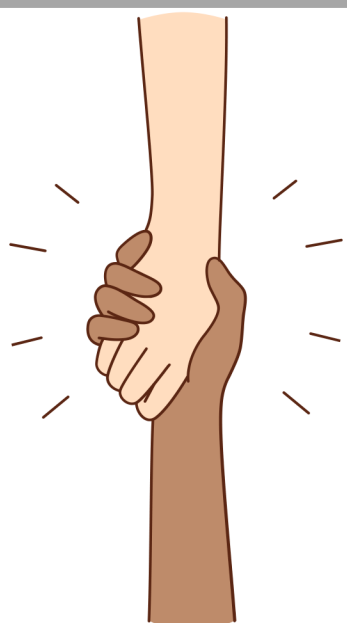
Mental Health

based on the State-Trait Anxiety Inventory (STAI) by Spielberger et al. (1983)

- 70% had difficulties doing their work because of mental health problems (N = 592)
- Doctoral candidates reported feelings or behaviors of

51% depression ^e	66% trait anxiety ^f	67% state anxiety ^g
(N = 538)	(N = 578)	(N = 578)

62% are not aware of any centers, institutes, or mental health resources



Various offices in Munich offer students and employees of TUM **free and anonymous help** in challenging life situations. All students who would like to talk about their problems with experienced psychologists can contact the Munich Student Union. Further information about the service can be found at <https://www.studentenwerk-muenchen.de/en/advisory-network/psychotherapeutic-and-psychosocial-advisory-service/>

The staff of the Evangelical and Catholic University Congregations of the TUM is also available for **counseling, regardless of your ideological convictions**. Further information on opportunities for counseling or coaching can be found at <https://www.ehg-tum.de/beratung> and <https://www.khg-tum.de/beratung.html>

N² Survey Report – 2021

Satisfaction with Academia

Aspects of an academic research career rated as (very) attractive:

- 92% interesting work
- 81% skill development
- 80% diversity of work



Dissatisfaction with Academia

Aspects of an academic research career rated as (very) unattractive:

- 73% availability of permanent positions
- 57% applying for and obtaining funding & salaries
- 51% workload

Longest Contract related to Doctorate

- 14% max. 12 months
- 33% 13-24 months
- 33% 25-36 months
- 9% 37-48 months
- 7% more than 48 months



Expected Doctorate Duration & Possibility of Contract Extension

- average expected duration of the doctorate: 4 years (SD = 1.11)
- contract can be extended, if more time is needed to complete doctorate:
 - 46% yes
 - 23% no
 - 31% I don't know



Future Perspective

- 39% want to work in academia after their doctorate very much or rather yes
- 76% feel (very) well prepared for jobs inside academia
- 56% feel (very) well prepared for jobs outside academia

Terminology

- ^a Formal supervisor refers to the main advisor of your thesis as present in your committee.
- ^b Direct supervisor refers to the main advisor of your thesis as present in your committee.
- ^c Sexualized harassment describes unwanted behavior of a sexual nature, including non-physical approaching (e.g., catcalling, staring), verbal remarks, messages, or calls, spreading sexualized rumors, touching or physical contact, requests for sexual favors, pressure to engage with someone sexually, and physical acts of sexual assault.
- ^d Bullying describes repeated and persistent negative behavior including indirect bullying (e.g., spreading rumours), destabilization (e.g., constant non-constructive criticism), pressured overwork (e.g., impossible deadlines), verbal harassment (e.g., name-calling, yelling), social isolation (e.g., damage to friendship networks), threat to professional status (e.g., degrading one's opinion) and physical attack (e.g., pushing).
- ^e Depression is defined as a "mood disorder that is marked by varying degrees of sadness, despair, and loneliness and that is typically accompanied by inactivity, guilt, loss of concentration, social withdrawal, sleep disturbances [...]"
- ^f Trait anxiety is a general anxiety propensity.
- ^g State anxiety is a temporary state influenced by the current situation.
- * Multiple selection was possible for this question.

