



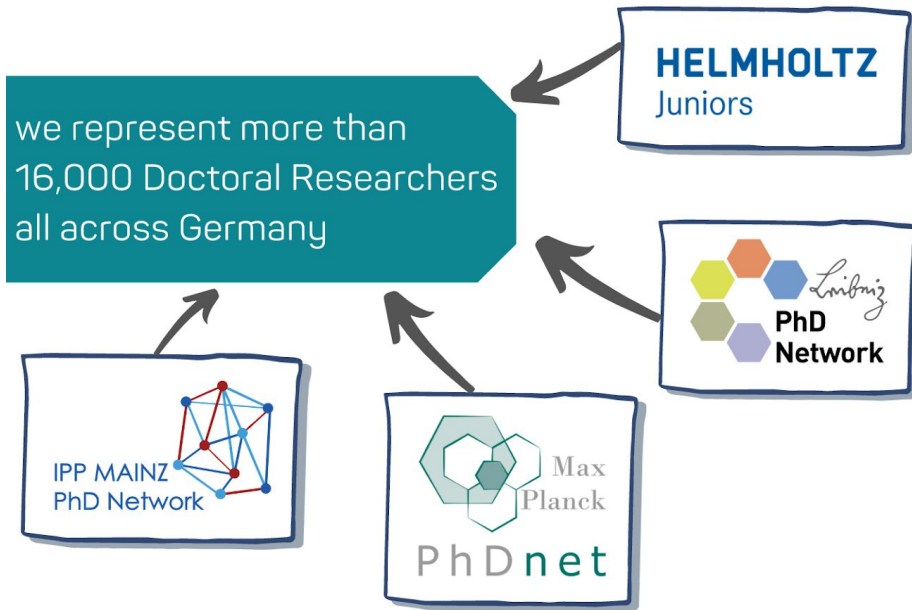
# Mental health among PhDs in Germany's leading research facilities

Lea Heckmann  
(N<sup>2</sup> advisory board member)

# What is N<sup>2</sup>?



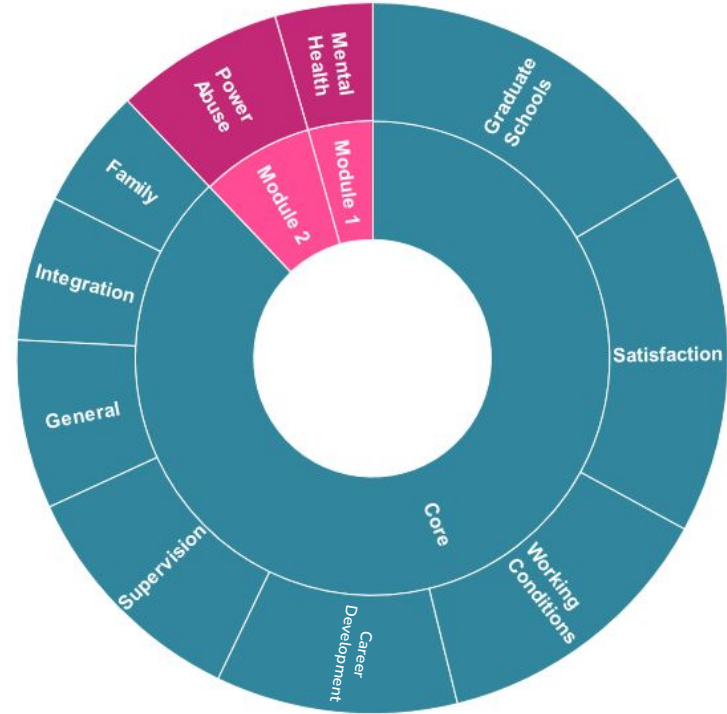
THE NETWORK OF DOCTORAL  
RESEARCHER NETWORKS



- Assessment and improvement of working conditions and scientific environment of doctoral researchers (DRs)
  - institutional level
  - political level
- Harmonized surveys

# N<sup>2</sup> PhD harmonized questionnaire

- Surveys conducted end of 2019
- response rate: ~29%  
(~ 5000 respondents)
- 94 questions
- Individual survey reports published in summer 2020

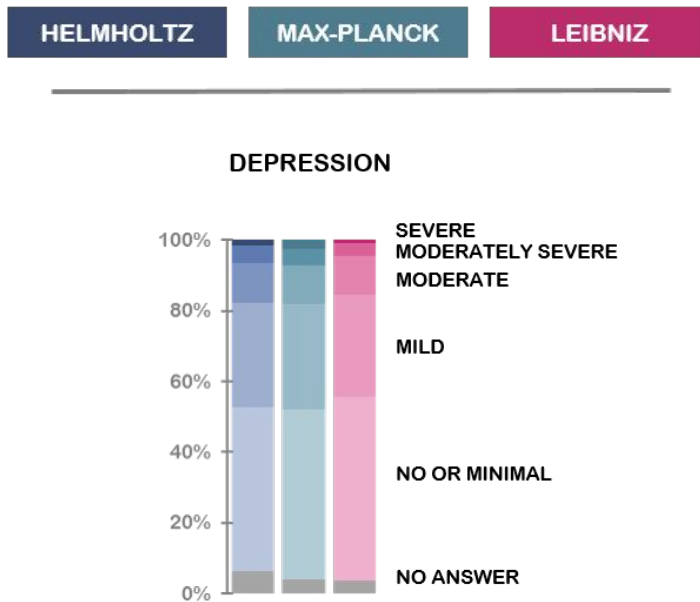


presented data does not include IPP

# Mental Health - Depression

- Patient Health Questionnaire - PHQ-9
- 15-18% of DRs moderate to severe depressive symptoms
- German population: ~9.9% (age group 18-29)
- Socio-economic status correlates negatively with depressive indicators

Busch *et al.*, Bundesgesundheitsblatt, 2013



# Mental Health - Anxiety

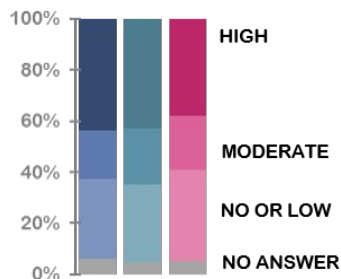
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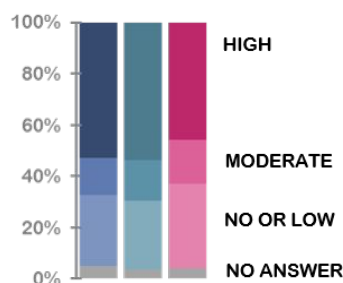
Current

TRAIT ANXIETY



General

STATE ANXIETY



- Spielberger State-Trait Anxiety Inventory (STAI):

- State Anxiety: Current level of anxiety
- Trait Anxiety: General level of anxiety

- High anxiety levels

- ~ 38% show high trait anxiety
- ~ 46% show high state anxiety

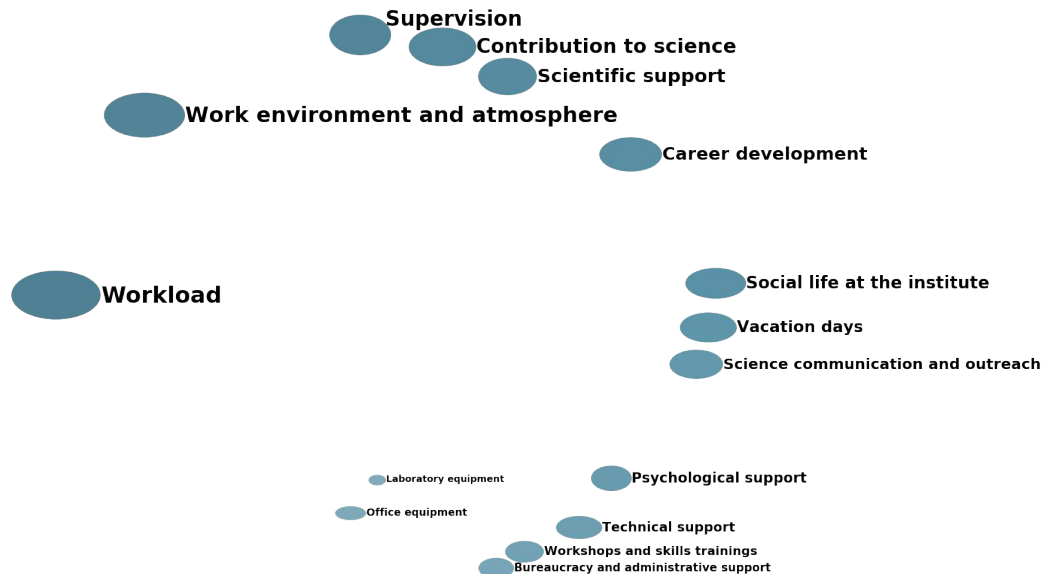
- Similar to earlier studies among PhDs ~ 36%

Nature 575, 257-258 (2019)

- German population: 15.4-21% (age group 18-34)

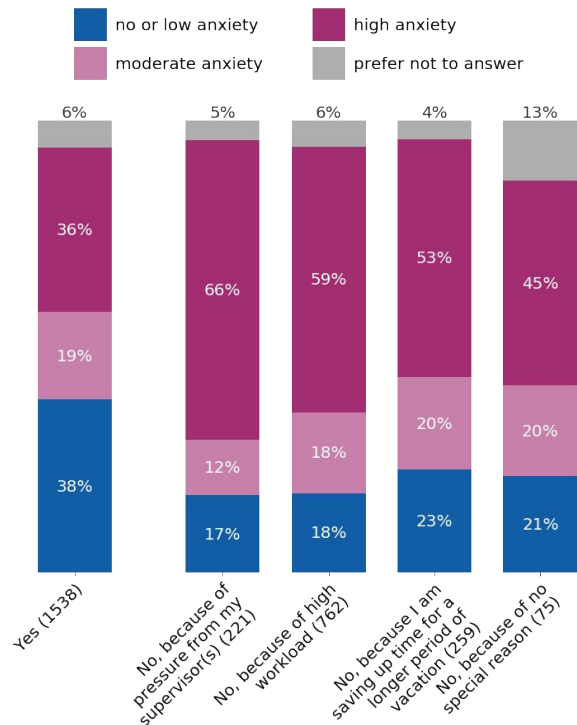
Jacobi et al., Int J Methods Psychiatr Res. 2014

# Mental Health - Correlating Factors



- Workload
- Work environment & atmosphere
  - Working conditions
  - Scientific environment
  - Power abuse
- Supervision
- Disclaimer: Indicated causality is solely an interpretation

# Mental Health - Correlating Factors



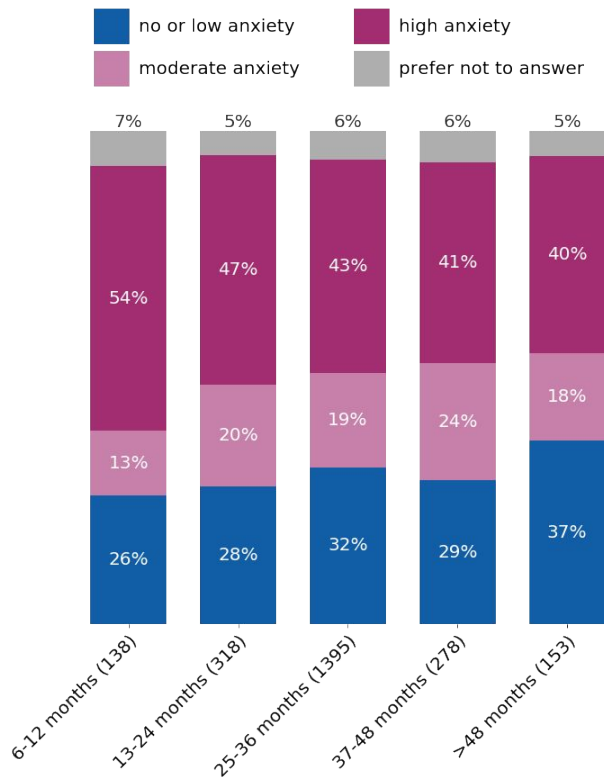
## Workload:

- Working hours
- Weekend work
- Holidays taken
  - especially the perception of freedom to take holidays

**“Do you feel free to take days off?”**

Max Planck PhDnet report 2019

# Mental Health - Correlating Factors



## Working conditions

- Less stable situations increase mental health scores
  - Being on a stipend instead of a contract
  - Short duration contracts

**“What was or is the longest duration of your contract or stipend related to your PhD project?”**

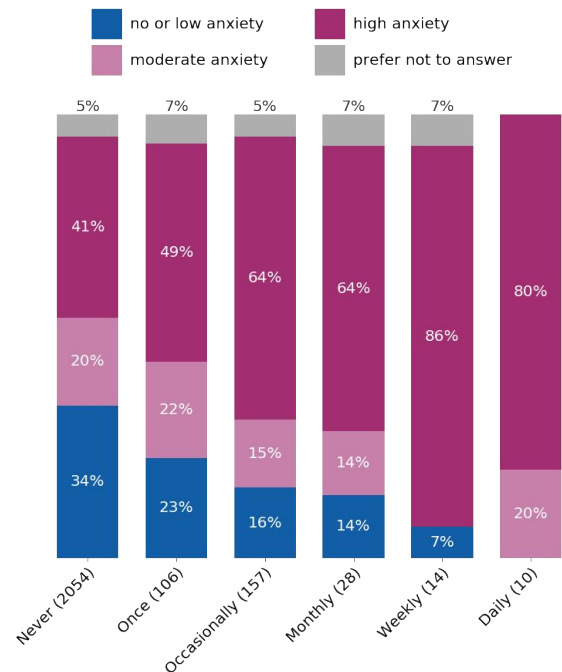
Max Planck PhDnet report 2019



# Mental Health - Correlating Factors

## Power abuse

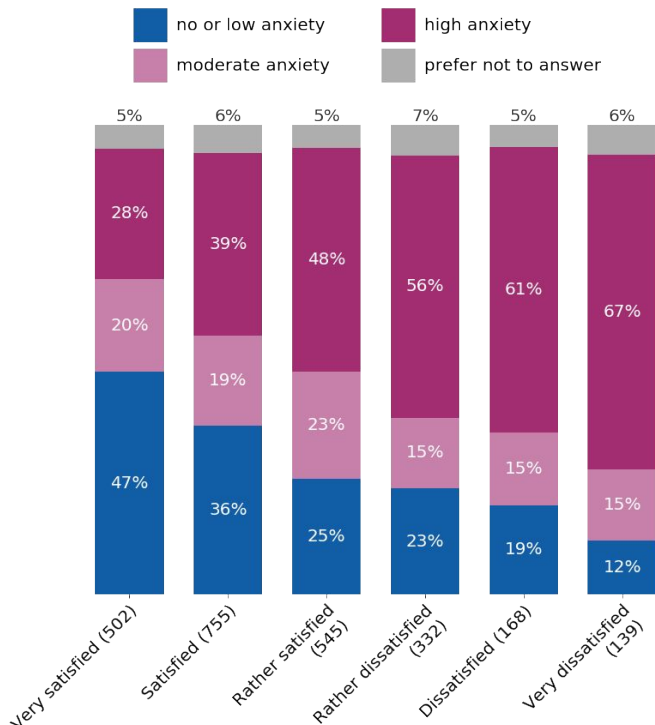
- Cases of bullying or sexualized harassment increase mental health scores
- Increasing scores with increasing regularity



**“While working at your institute/center, have you at any point been subjected to bullying by a superior?”**

Max Planck PhNet report 2019

# Mental Health - Correlating Factors



## Supervision:

- Key point
- But what makes good supervision?
  - TAC
  - Frequency of meetings
  - Supervision agreements
  - ...

**“How satisfied are you with your supervision in general?”**

Max Planck PhDnet report 2019

# Mental Health - Recommendations

- Stop normalizing overwork:

- Work hour tracking
  - balance periods of high workload and periods of rest
- Reasonable contract durations
- Start changing the working culture in research
  - Peer-to-peer and social activities
  - Lead by example

- Improve financial security:

- Full-time pay for full-time work
- Abolishment of stipends in the current form
- Adjust contract durations to average durations of a PhD

# Mental Health - Recommendations

- Redefine supervisory roles
  - Distribute responsibilities away from one person
  - Identify required skills:
    - Mandatory leadership and supervision training
    - Adjust recruitment criteria
  - Supporting measures: Supervision agreements, TACs,...
- Improve scientific environment
  - Prevention of power abuse
    - van Scherpenberg et al. 2021, <https://doi:10.5281/zenodo.4580544>
    - Lasser, J. et al. 2021, Beiträge zur Hochschulforschung. 43, 1-2, p. 48-61
  - Onboarding measures
  - Mental Health services

# Summary and outlook

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- The abundance of Mental Health symptoms among PhDs is almost double as high as among the general population
- Working conditions and the scientific environment can influence the mental health of doctoral researchers immensely
- Financial security, prevention of power abuse and healthy supervisory relationships are key factors
- Our 2021 survey will help to gain more insights and compare pre-pandemic to current state data

# Thank you for your attention

we represent more than  
16,000 Doctoral Researchers  
all across Germany

HELMHOLTZ  
Juniors



IPP MAINZ  
PhD Network

## We thank:

- Survey groups
- Theresa Kuhl (N<sup>2</sup> figures)
- N<sup>2</sup> board & advisory board
- General Administrations

find out more about us  
and our networks!

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THE NETWORK OF  
DOCTORAL RESEARCHER  
NETWORKS