

MENTAL HEALTH DURING DOCTORAL STUDIES

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Abstract

The general health of students in Germany has deteriorated significantly between 2015 and 2023. In addition to extensive changes in the higher education system, such as increasing internationalisation and digitalisation, as well as study-related factors such as exam and performance pressure, social and political crises such as the consequences of the COVID-19 pandemic and the Middle East conflict also have an impact on the psychosocial stress experienced by students. Furthermore, intersectional inequalities based on socio-structural characteristics (e.g. chronic illness, sexual orientation) within higher education institutions can influence the development and maintenance of mental health and thus have individual effects on (mental) health equity. Doctoral students are also affected by these developments. The diverse challenges they encounter during their doctoral studies can lead to individual and structural overload due to various factors and impair their mental health. As a result, doctoral students have an increased risk of mental illness, such as anxiety disorders and depression, compared to the general population. As educational institutions, universities are becoming increasingly aware of their responsibility to create a health-promoting environment in order to recognise the effects of crises and disadvantages within their organisational structures and to take these into account by shaping their university culture accordingly. As a result, universities increasingly see themselves as actors in health promotion and anchor the associated values in their self-image, e.g. in the form of a Student Health Management (SHM) system. Based on this approach, this article presents the research project 'Mindful Campus' (MinCa). MinCa aims to strengthen the mental health literacy (MHL) of students and doctoral candidates and to establish an SHM system at the university in order to create a health-promoting environment and integrate it sustainably into the university structures. The continuous inclusion of the perspectives of students and doctoral candidates is essential in this context. The planned presentation and the resulting article will therefore explore how supporting the individual development of MHL, especially among doctoral candidates, can contribute to developing a participatory approach that structurally enables the integration of MHL in order to establish sustainable SHM at the university. To illustrate this, the planned article will present anchor examples from primary data: a qualitative study with ten semi-structured, problem-oriented interviews with doctoral students, which were analysed using theoretical coding according to Flick (2017).

Keywords: *Health promotion, mental health, mental health literacy, health management for doctoral candidates, participation.*

1. Mental health literacy among doctoral students

The mental health and well-being of doctoral candidates have increasingly become the focus of international academic and higher education policy discourses. A growing body of empirical evidence consistently indicates that doctoral candidates are exposed to a substantially higher risk of psychological distress compared to the general population and report nearly twice the prevalence of symptoms associated with anxiety disorders and depression (Evans, Bira, Gastelum, Weiss, & Vanderford, 2018; 2019; Park, Sibalis, & Jamieson, 2021). This development points to a worsening situation within the global academic landscape, in which structural demands, institutional cultures, and individual coping mechanisms interact in complex and often detrimental ways.

Within the heterogeneous group of students, doctoral students constitute a distinct status group that can increasingly be considered as particularly vulnerable in regard to mental health outcomes. Empirical studies show that doctoral candidates experience significantly elevated levels of stress, psychological strain, and burnout symptoms (Haberlin, Boote, & Bradshaw, 2025; Park et al., 2021). In addition, they tend to rate their overall health status lower than both doctorate holders and a national reference population (Briedis, Carstensen, & Jaksztat, 2020). These findings underline that the doctoral phase represents a critical risk phase for mental health and therefore requires targeted institutional and structural measures.

The doctoral phase is characterised by a tension between high scientific expectations, institutional uncertainty, and personal concerns about the future. Doctoral candidates are required to manage complex research processes independently, cope with epistemic uncertainty, develop individual academic or non-academic career paths, and at the same time fulfil responsibilities in teaching, research, and academic

self-administration. These cumulative demands are often exacerbated by structural conditions such as fixed-term contracts, unclear career prospects, and, in some cases, problematic supervisory relationships. Taken together, these factors can result in chronic overload and, in severe cases, significant mental health problems (Gardner, 2009; Harvey et al., 2011; Nicholls, Nicholls, Tekin, Lamb, & Billings, 2022). At the same time, mental health issues remain widely stigmatised within academic work cultures, which significantly hinders prevention efforts and early intervention (Guthrie et al., 2017).

Against this backdrop, promoting mental health literacy (MHL) has gained increasing relevance within institutional health strategies at universities. MHL refers to knowledge and skills that enable individuals to recognize mental health problems, seek appropriate support, and apply effective coping strategies. Strengthening the MHL of doctoral candidates can help to improve individual resilience while simultaneously supporting the preventive reduction of structural stressors in the academic environment (Banek, Gillen, Michele, & Steuber, 2025). Universities thus have a dual responsibility. On the one hand, they have a duty to promote the individual health-related resources of doctoral candidates. On the other hand, they must establish organisational structures that systematically support mental health across different status groups.

A participatory approach embedded within a university-wide framework for student health management (SHM) offers a promising way to address these challenges. Such approaches enable the systematic identification of the specific needs of doctoral students and their implementation in tailored health-promoting measures at both the curricular and structural levels (Freġian, Kirchhoff, Bauer, & Okan, 2023; Zaza & Yeung, 2023). Against this background, the planned presentation and the resulting article examine how supporting the individual development of MHL, particularly among doctoral students, can contribute to the development of participatory approaches that enable the structural integration of MHL and thus promote the establishment of sustainable SHM at the university level.

2. Project Mindful Campus

The participatory project *Mindful Campus* (MinCa), which is funded by Techniker Krankenkasse (TK) for a period of two years, has been implemented at Leibniz University Hannover (LUH) since January 2025 with a specific focus on MHL among students. The overarching aim of the project is to develop and pilot a participatory concept and strategic framework for establishing a SHM approach that systematically promotes MHL among students and doctoral candidates through coordinated curricular and structural measures at the university level.

At the outset of the project, the focus is on central guiding questions: How can the individual development of MHL among students and doctoral candidates be effectively supported? How can the promotion of MHL be sustainably integrated into doctoral candidate advisory structures and curricula? And how can organisational framework conditions at the university contribute to the establishment of a participatory and structurally anchored SHM system at LUH? In the long term, MinCa aims to expand existing internal university structures into a comprehensive, health literacy-oriented health management approach that explicitly includes doctoral students as an independent status group, thus extending beyond the institutes and central facilities that have been involved in health promotion initiatives at the university to date.

The conceptual foundation of the project is based on a salutogenetic understanding of health, which deviates from a normative dichotomy of health and illness and instead conceptualises health as a dynamic continuum. In line with this perspective, physical, psychological, and social dimensions are understood as interconnected conditions that shape the emergence and development of individual health states (Antonovsky, 1991). Building on this framework, the promotion of MHL aims to strengthen constructive stress coping mechanisms and the cognitive, social, and motivational skills that enable doctoral students to independently access, evaluate and apply health-related information to cope with psychological distress, prevent illness and promote health (Sørensen et al., 2012).

2.1. Participation as a research approach

MinCa is based on a participatory research approach that aims to simultaneously strengthen the individual MHL of students and doctoral candidates and to structurally anchor a comprehensive SHM concept at the university level. Participation is understood as the individual and collective involvement of individuals in health-related decision-making processes that affect their lives (Wihofszky, Hartung, & Narimani, 2020). Accordingly, students are closely involved in the conceptual and operational phases of the project as co-researchers. As part of the initial needs analysis, this participatory approach was implemented through exploratory workshop formats and qualitative, problem-centred interviews. In addition, students contributed to the analysis of empirical data, the design of curricular for MHL offerings, and the further development of health-promoting measures. Their participation also extends to regular steering group meetings and university-wide mental health initiatives, including training formats and health promotion events conducted in collaboration with existing occupational health management structures.

2.2. The university as health actor

This participatory approach is consistent with the understanding of universities as active health actors, as articulated in the Okanagan Charter (2015). In recent years, universities have increasingly taken responsibility for creating health-promoting learning and working environments and have begun to institutionalise corresponding values, for example by establishing SHM structures (Brock et al., 2024). The overarching goal of SHM is to create a health-promoting university environment and to strengthen the individual health resources of various status groups, including doctoral students. Research and practice emphasise the importance of systematically implementing such structures and embedding them sustainably in the governance and organisational processes of the university (Kompetenzzentrum Gesundheitsfördernde Hochschulen, 2024). Central to this approach is the setting perspective, which focuses on promoting health literacy in individuals' actual living and working environments and therefore addresses both structural conditions and individual behaviour. As a result, the university is conceptualised as a socio-spatial system in which health-promoting processes are implemented across learning and working contexts, with networking serving as a key strategy for sustainable development (TK, 2020).

3. Methods

In a first step, a qualitative needs analysis was conducted using ten semi-structured, problem-centred interviews with doctoral students in the field of vocational education at LUH according to the methodological framework proposed by Witzel (2000). A qualitative design was chosen in order to capture subjective perceptions, lived experiences, and processes of meaning-making in relation to MHL in the doctoral context, which are not sufficiently accessible with standardised instruments. Problem-centred interviews were considered particularly suitable as they allow for a structured examination of predefined topics while giving participants the opportunity to articulate individual experiences and priorities.

Participants were recruited via snowball sampling method. Initial contacts were made through project-related networks, and further participants were identified through peer referral. Inclusion criteria were current enrolment as a doctoral candidate at LUH and active participation in doctoral training. The sample size was guided by considerations of analytical depth and thematic saturation, which was achieved when no significant new topics emerged in the later interviews.

The primary goal of the interviews was to identify content-related and structural factors that shape doctoral students' subjective perceptions of their mental health in everyday life and, in particular, in the university environment. All interviews were audio-recorded, transcribed verbatim, and analysed using theoretical coding procedures according to Flick (2017). The analysis followed an iterative and predominantly inductive process, in which categories were developed from the data and continuously refined through constant comparison.

This analytical approach enabled the identification of focal points that form the basis for the empirical analysis. In particular, it allows for an examination of how doctoral students perceive, develop, and implement MHL in the university context and how organisational and structural conditions promote or constrain these processes. By systematically linking individual coping strategies with social support structures and institutional frameworks, the analysis highlights both enabling factors, such as accessible counselling services, and structural barriers, including the limited institutional anchoring of mental health promotion.

3.1. Empirical anchor examples of mental health challenges and resources during the doctoral phase

The following section presents selected empirical findings in the form of illustrative anchor examples from the ten problem-centred interviews. These examples focus on doctoral-specific stress factors as well as articulated needs and expectations during the doctoral phase and reflect central dimensions of MHL in the higher education context. Doctoral students describe a range of mental stress factors during the doctoral phase, including stress-related symptoms such as burnout experiences and mental illnesses, such as depressive episodes. One interviewee illustrates the fluctuations in perceived resilience and exhaustion and emphasises recurring feelings of overload, which in retrospect interpreted are interpreted as burnout symptoms:

“Today, I would say that I feel pretty stable and resilient overall. Two weeks ago, I thought I would have to go to the doctor to get a burnout diagnosis. So, I keep having this feeling that I’m experiencing burnout.” (IP2, lines 158-159)

In addition to general tension, doctoral students report other stress symptoms such as psychological disorders, e.g. compulsive skin picking or scratching, as well as an increased need for sleep, which may indicate depressive symptoms. This is reflected in the following statement:

“I notice that I am tense in certain situations. Skin picking is always a very clear expression of this for me, or another expression of stress for me is that I am simply extremely tired and can sleep a lot. When other people hardly sleep, I just don’t get up anymore.” (I5, lines 179-182)

The fulfilment of basic needs such as rest and sleep, also seems to be closely linked to doctoral students' self-perception and self-esteem. One interviewee describes that only when these basic needs are

met do they regain a sense of agency and perceived performance. Adequate recovery is thus experienced not only as physical regeneration but as a prerequisite for mental stability and renewed confidence in one's own abilities:

“Exactly, those are moments when I actually feel better, when I notice that I feel more rested, fitter and more positive, and also have the impression that I can cope with things again. It's crazy how this also affects your self-esteem, because at some point you ask yourself whether you will ever be able to do things the way you used to” (I6, lines 167-170).

Given that many doctoral students report feelings of social isolation during their doctoral studies (Ali & Kohun, 2007; Ray, Coon, Al-Jumaili, & Fullerton, 2019; Gin, Wiesenthal, Ferreira, & Cooper, 2021), fulfilling social needs alongside basic physiological needs is particularly important for maintaining mental health. The interviews highlight the importance of maintaining regular social contacts and consciously reserving time for non-academic activities despite intensive writing requirements. One participant emphasises the stabilising role of recurring social interactions and protected leisure time as a source of emotional resources:

“I basically always have a kind of regular meeting with my guys, with my friends, where we meet once a week. And this appointment is very important to me, also because I notice that I regain a lot of social energy there.” (I8, lines 205-208)

4. Discussion

The empirical anchor examples derived from the problem-centred interviews illustrate a multifaceted pattern of doctoral-specific stressors that extends well beyond isolated individual experiences. The results indicate a broad spectrum of psychological stress, ranging from symptoms of exhaustion and burnout to manifest mental illnesses such as depressive episodes and compulsive behaviour, including skin-picking disorders. These individual experiences are closely intertwined with structural and organisational stressors characteristic of the doctoral phase, including parallel employment obligations and precarious employment conditions. In their cumulative effect, these conditions contribute to an intensified perception of performance pressure and chronic overload.

The needs articulated by doctoral students in the interviews underscore the relevance of considering basic physiological and psychosocial requirements, such as adequate rest and sleep, stabilisation of self-esteem, and sustainable social integration. These dimensions point to an understanding of MHL in the doctoral context that goes beyond the acquisition of knowledge about mental health. Rather, MHL emerges as a dynamic set of competencies that enables doctoral students to actively engage in self-care practices, recognise early warning signs of mental distress, and critically reflect on structural conditions that influence their well-being.

5. Conclusions

Overall, the results of the interviews suggest that promoting MHL in the doctoral phase is a complex, multi-layered task that cannot be adequately addressed by measures at the individual level alone. Rather, coordinated interventions are needed that work across individual, organisational, and structural domains. Supporting the individual development of MHL, especially among doctoral students, proves to be a central starting point for initiating participatory processes, as it promotes reflective capacity, awareness of mental health needs and the ability to articulate demands in an institutional context. In this way, individual MHL functions not only as a personal resource, but also as a prerequisite for meaningful participation in the joint development of health-promoting structures. Embedding such participatory processes within institutionally anchored frameworks enables the systematic integration of MHL into existing university structures and decision-making processes. The results thus underscore that strengthening individual MHL can contribute to the development of participatory approaches that structurally support the establishment of sustainable SHM by linking individual empowerment with organisational learning and long-term structural development at the university level.

Acknowledgements

I would like to thank Techniker Krankenkasse for their support. I would also like to thank all doctorate students who participated in the project as interview partners, as well as all the students who participated in the project as co-researchers.

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