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SOCIAL SAFETY OF PHD CANDIDATES: RISK FACTORS AND STRATEGIES

Julia Houben*	Faculty of Social Sciences, Utrecht University, Utrecht, The Netherlands	j.l.m.houben@uu.nl
Reine C. van der Wal	Faculty of Social Sciences, Utrecht University, Utrecht, The Netherlands	r.c.vanderwal@uu.nl
Marije Lesterhuis	Life Sciences Education Research, University Medical Center Utrecht, Utrecht, The Netherlands	m.lesterhuis@umcutrecht.nl
Harold van Rijen	Medical Sciences, University Medical Center Utrecht, Utrecht, The Netherlands	h.v.m.vanrijen@umcutrecht.nl
Naomi Ellemers	Faculty of Social Sciences, Utrecht University, Utrecht, The Netherlands	n.ellemers@uu.nl

* Corresponding author

ABSTRACT

Aim/Purpose	The aim of this paper is to demonstrate that PhD candidates' social safety is a complex, systemic matter that requires a systemic solution.
Background	Numerous studies and reports highlight that academia is not always a safe working environment for PhD candidates. They, in particular, face heightened vulnerability due to dependent working relationships, temporary contracts, and the often competitive and hierarchical nature of academic institutions. Although attempts are being made to address this issue, current interventions appear to be insufficiently effective.
Methodology	A conceptual, multilevel framework of PhD candidates' social safety is provided by integrating three major theoretical perspectives: Social Safety Theory, Team Psychological Safety, and Psychosocial Safety Climate. Next, through a non-systematic literature review of studies about PhD candidates' experiences, potential risk factors for their social safety are identified. Finally, the paper outlines how

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	this knowledge can inform universities to develop a strategy to promote social safety among PhD candidates and beyond effectively.
Contribution	This paper proposes a shift in perspective – rather than treating the lack of social safety as an isolated problem, university leaders must adopt a systemic approach. This paper demonstrates the complexity of social safety, enabling a better understanding of both risk factors and the formulation of an effective strategy to foster social safety.
Findings	The social safety of PhD candidates exists at three levels (individual, team, and organizational) and is influenced by risk factors within the structure, culture, and system of the academic environment. This paper proposes that a systemic approach is needed to address these issues, rather than focusing on individual interventions alone.
Recommendations for Practitioners	University leaders should conduct a thorough assessment of their organizational structure, culture, and system to identify risks to PhD candidates' social safety. This information should be used to develop a comprehensive safety strategy to promote and monitor the social safety of PhD candidates.
Recommendations for Researchers	This paper recommends that researchers acknowledge and adopt a more comprehensive approach when studying social safety.
Impact on Society	Improving social safety for PhD candidates can lead to improved mental health outcomes, reduced attrition rates, and higher academic performance. It will also contribute to healthier work environments across higher education.
Future Research	Future studies should focus on empirical exploration of the three theoretical perspectives on social safety. Additionally, alternative measures to assess social safety could be explored, such as including neurophysiological measures, as feeling socially unsafe can impact an individual's cognition and emotions.
Keywords	PhD candidate, doctoral studies, social safety, psychological safety, psychosocial safety climate, inappropriate behavior, academic environment

INTRODUCTION

An important task of universities involves training young academics, making PhD candidates an indispensable link in research projects. The strength of this training program is the one-on-one supervision, but this can also be a weakness. In the event of issues, these highly dependent working relationships can compromise the essence of academic training and the continuity of academic work. Unfortunately, issues are not a rare occurrence. Research shows that PhD candidates experience higher levels of depression and anxiety symptoms (compared with young adults in the general population) and, worldwide, attrition rates are high (30–50%) (Castelló et al., 2017; Satinsky et al., 2021; van Rooij et al., 2021). In addition, many PhD candidates feel isolated (Ali & Kohun, 2006; Castelló et al., 2017; Jairam & Kahl, 2012) and, too often, as many studies and reports in the media have shown, have to deal with inappropriate behavior of colleagues or supervisors (Cohen & Baruch, 2022; Mahmoudi, 2019; Nederlandse Arbeidsinspectie, 2024; Rosenthal et al., 2016; Tenbrunsel et al., 2019; Tuma et al., 2021).

Inappropriate behavior can range from bullying, intimidation, and discrimination to sexual harassment, and the consequences of experiencing or witnessing it can be severe. On an individual level, exposure to inappropriate behavior in higher education can lead to depression, anxiety, stress-related symptoms, impaired career opportunities, and reduced job motivation (e.g., Bondestam & Lundqvist, 2020; Keashly & Neuman, 2010; Verkuil et al., 2015). At the team and organizational levels, it impairs

team learning, creativity, and knowledge transfer, resulting in higher absenteeism and the departure of young talent from academia (Edmondson & Bransby, 2023; Edmondson & Lei, 2014; Kis et al., 2022; Law et al., 2011).

These harms highlight why socially safe workplaces are critical for PhD candidates. Here, employees feel connected, included, and recognized (Diamond & Alley, 2022). They are treated respectfully by others and feel free to voice their own ideas, give and receive feedback, and make mistakes (Edmondson & Bransby, 2023; Edmondson & Lei, 2014). Additionally, they feel protected by their organization because they perceive it as prioritizing their psychological health (Dollard & Bakker, 2010). A safe working environment has many positive outcomes for both PhD candidates and the broader team and department, as it increases job performance, learning behavior, job satisfaction, and engagement, which are all essential ingredients in an environment that is characterized by high performance and competitive efforts (Dollard & Bakker, 2010; Edmondson & Bransby, 2023).

Despite well-intended interventions, such as social safety awareness training and individual skill development (e.g., active bystander, leadership, or resilience), universities often struggle to meet the standards of a socially safe working environment (e.g., Bondestam & Lundqvist, 2020; Nederlandse Arbeidsinspectie, 2024; Royal Netherlands Academy of Arts and Sciences, 2022; Tenbrunsel et al., 2019; Zabrodska & Kveton, 2013). Why is this so difficult? This paper argues that this is due to an inability to address the real cause of the problem, which lies within the organizational structure, culture, and system of the academic world; hence, it is more than an individual issue that can be trained. Social safety is a systemic issue that impacts all levels of the university – from the individual to the team to the organization as a whole – and therefore requires a systemic approach.

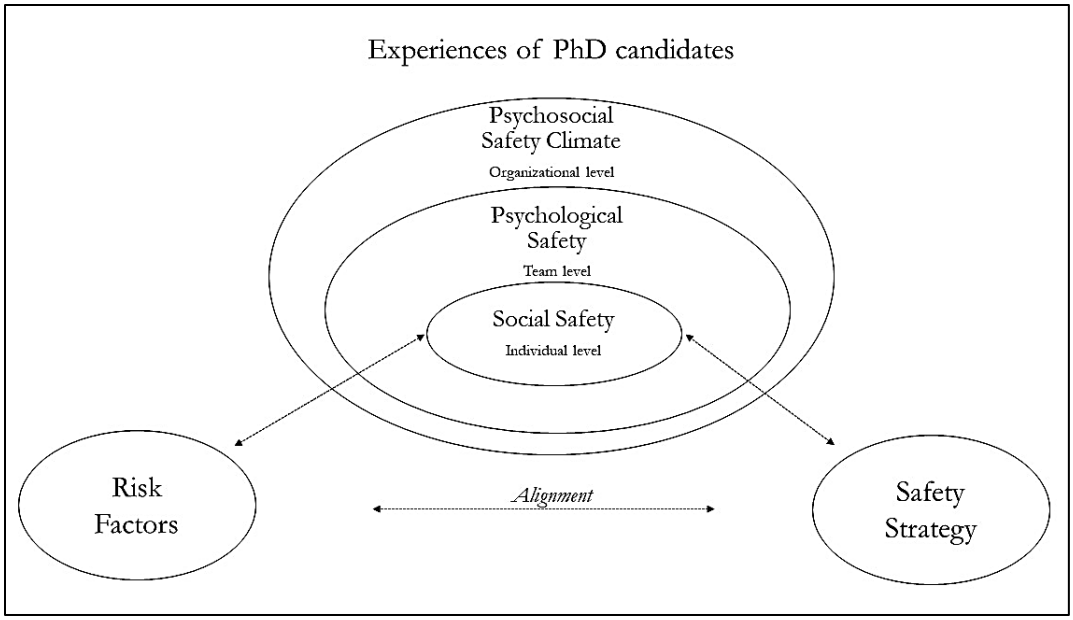

Figure 1. Conceptual framework of PhD candidates' social safety at different levels affected by risk factors and safety strategies in the academic environment

The aim of this paper is to show why social safety is a complex systemic matter that needs a systemic solution. To help researchers and policymakers better grasp what needs to change at universities and how, this paper proposes a relatively simple framework, shown in Figure 1. This framework illustrates risk factors (regarding the structure, culture, and systems within academia) that affect PhD candidates' social safety at three different levels. These levels refer to three theoretical perspectives regarding social safety: Social Safety (individual level), Psychological Safety (team level), and Psychosocial Safety Climate (organization level). Knowledge of risk factors is necessary to design an aligned

and effective safety strategy. Those risks cannot always be avoided, nor is that the goal, but universities can develop more effective strategies by taking them into account. Importantly, the concepts in this framework are not bound to a single disciplinary or national context; they are designed to be broadly applicable across diverse academic cultures and international settings.

This paper unfolds as follows. First, different theoretical perspectives on social safety are discussed, underlying the multilevel framework. Next, a non-systematic literature review of studies on the experiences of PhD candidates is provided, focusing on literature that identifies potential risk factors for social safety. Finally, this paper outlines how this knowledge can inform universities to develop a strategy to promote social safety among PhD candidates and beyond effectively.

THEORETICAL PERSPECTIVES ON SOCIAL SAFETY

The framework is based on three theoretical perspectives on social safety, each conceptualizing social safety at a different level: Social Safety at the individual level (Slavich, 2020), Team Psychological Safety at the team level (Edmondson, 1999; Kahn, 1990), and Psychosocial Safety Climate at the organizational level (Dollard & Bakker, 2010). In this section, these perspectives are linked to PhD candidates' social safety.

INDIVIDUAL LEVEL: SOCIAL SAFETY

As beginning academics, most PhD candidates are trying to feel they belong within the academic community, which is important for their job satisfaction and intentions to quit (van Rooij et al., 2021), but also for feeling socially safe, according to Social Safety theory (SST) (Gunasekera et al., 2021; Slavich, 2020). This theory posits that forming and maintaining friendly social bonds is a way to foster social safety. Fostering social safety could involve reliable social connections, belongingness, inclusion, recognition, and protection. To illustrate, subtle cues and reminders of social connectedness (e.g., respectful treatment, offers of assistance, eye contact, authentic interest) in everyday life allow people to move through social worlds without fear, because these cues remind people that they belong to a protective social fabric (Diamond & Alley, 2022). Threats to social safety, such as social conflict, isolation, rejection, or exclusion, are a key feature of psychological stressors that strongly impact health and behavior (Slavich, 2020).

According to this perspective, for PhD candidates to feel socially safe at work, they need to experience social cues in their work environment, ensuring they feel included (e.g., offers of help from another PhD candidate, a lending ear from a supervisor). Experiencing or witnessing opposite cues, such as bullying, threatens the social safety of PhD candidates, as this elicits feelings of exclusion or rejection. Thus, at an individual level, PhD candidates' feelings of social safety are related to the extent to which they feel included in the academic environment.

TEAM LEVEL: TEAM PSYCHOLOGICAL SAFETY

A PhD candidate's individual social safety is related to the climate of the team they operate in (e.g., supervisory teams, research groups, and departments). Whether this team climate is experienced as socially safe by team members can be explained through the concept of Team Psychological Safety (TPS). TPS is a widely studied phenomenon and can be defined as "the shared belief held by members of a team that the team is safe for interpersonal risk taking" (Edmondson, 1999). A team is considered safe for interpersonal risk taking when employees feel safe to voice ideas (e.g., a PhD candidate sharing their own research ideas with peers or supervisors), willingly seek feedback and provide honest feedback (e.g., a PhD candidate discussing issues with their supervisor), collaborate, and experiment (Edmondson, 1999).

Existing literature reveals that TPS is related to various positive work outcomes (Edmondson & Bransby, 2023). First, it improves interactions that could foster PhD candidates' learning, such as knowledge transfer and knowledge sharing. Second, it facilitates communication and coordination

within a team, which enables (team) performance. Third, TPS may improve PhD candidates' work experience, as it increases job engagement, job satisfaction, and coping with stress and strain on the job. Last, TPS mediates associations between various leadership behaviors or styles and desirable behavior at the individual level. For instance, having a supervisor who communicates openly and authentically enhances TPS, which may help a PhD candidate to speak up about difficult issues.

In summary, a PhD candidate experiences high levels of TPS when they feel safe taking interpersonal risks within their team. This can be influenced by the supervisor's leadership style and is associated with better learning experiences, improved performance, and other positive work outcomes.

Organizational Level: Psychosocial Safety Climate

Social safety is not only about PhD candidates' individual experiences or experiences in the team, but PhD candidates should also feel protected by their organization. Dollard and Bakker (2010) defined this as the Psychosocial Safety Climate (PSC), a climate in which senior management demonstrates a priority for the psychological health of their workers by evidence of relevant policies, procedures, and practices. PSC is therefore seen as an organizational resource that influences the work context. PSC has been linked to the Job Demands and Resources model (JD-R model), in such a way that PSC affects both job demands (e.g., work pressure, workplace bullying, harassment) and job resources (e.g., supervisor support, procedural justice, job rewards), which in turn affect psychological health and employee engagement (Dollard & Bakker, 2010). In line with this, in organizations with lower PSC, rates of workplace bullying and harassment are higher, which is associated with higher psychological health problems and lower engagement (Amoadu et al., 2025; Law et al., 2011). Thus, to experience social safety in the workplace, it is essential that PhD candidates believe their psychological health is prioritized by the organization, such as through management's prompt and appropriate response to social safety issues.

Integration of the Perspectives

The three perspectives together provide a more comprehensive understanding of the mechanisms and connections between individuals, teams, and organizations in relation to social safety (Savela & Ellemers, 2024). To illustrate, when a behavioral code of conduct is implemented at the organizational level, its effectiveness depends on whether it is discussed in teams and whether individuals feel safe to call each other out on this. Also, in order to effectively regulate and promote social safety, it is important to not only handle individual complaints but also investigate what made this behavior possible at the team and organizational levels. Thus, all levels should be considered when aiming to improve PhD candidates' social safety.

Risk Factors to Social Safety: A PhD Candidate's Perspective

Having outlined how PhD candidates experience social safety, it is essential to identify the factors within the work environment that could pose a risk to PhD candidates' social safety. This paper distinguishes between risk factors within the structure, culture, and system of the academic environment, as these are considered important aspects of organizational change (Burke & Litwin, 1992). In this context, structure is defined as the way work is organized, culture as the way behavior is guided by (informal) rules, norms, and beliefs, and system as the way (mis)behavior is adjusted, including policies and mechanisms installed to support and help employees. For each of these three domains, examples are provided of how the risk factors relate to the different perspectives on social safety and what can be done to mitigate their impact. These examples are not exhaustive, but they give an idea of how these factors impact PhD candidates' social safety.

Notably, an important factor that strongly affects the experiences of PhD candidates is the relationship with their supervisor. Multiple studies have shown that supervisors play a major role in the job

satisfaction, academic achievement, and well-being of PhD candidates (Cardilini et al., 2022; Dericks et al., 2019; Peltonen et al., 2017; Sverdlik et al., 2018; van Rooij et al., 2021). This paper argues that this relationship, in turn, is influenced by multiple risk factors. Therefore, the PhD-supervisor relationship is not treated as a separate risk factor but is a common theme that runs across various elements.

Risk Factors in the Academic Structure

There are certain structural characteristics of the academic environment that contribute to a lack of social safety among PhD candidates: power imbalances, competitiveness, and the complexity of the university as an organization.

Power imbalances

The structure of a university is very hierarchical, resulting in large power imbalances between PhD candidates and their supervisors (O'Connor et al., 2021; Zara et al., 2024). PhD candidates often feel highly dependent on their supervisor, who ultimately determines the requirements they must meet to obtain their degree (Cohen & Baruch, 2022; Rathenau Instituut, 2024). Because of this, they may feel a need to please their supervisors by being flexible and complying with their wishes. Also, it can result in perceptions that supervisors have the freedom to function as they please and are able to exert power over their PhD candidates without any checks and balances or accountability for their actions (Tuma et al., 2021). These perceptions are not false, as research reveals that this freedom indeed provides few barriers against inappropriate behavior. Furthermore, employees in influential positions are likely to have connections on investigative committees who can facilitate the dismissal of charges (Cohen & Baruch, 2022).

In power asymmetrical relationships, the occurrence of transgressive behavior (e.g., sexual harassment) is higher (McLaughlin et al., 2012), whereas it is more difficult for victims to speak up about it (Tuma et al., 2021). Half of the PhD candidates who experience intimidation or discrimination do not feel capable of discussing this situation without fear of personal consequences (Woolston, 2019). This allows dysfunctional leadership behaviors and poor candidate-supervisor relationships to develop and persist, resulting in a socially unsafe work environment.

Competitiveness

The academic environment is characterized by an ongoing scarcity of resources and time (e.g., funding for research projects, temporary contracts), which fosters a sense of competition amongst researchers and activities (Edwards & Roy, 2017). Some PhD candidates describe the culture of graduate education and of academia in general as a gauntlet where only "the best" survive. They feel their supervisors act as 'gatekeepers' to deter individuals who do not have the necessary talent or disposition to succeed in academia (Tuma et al., 2021). Due to the temporary contracts of PhD candidates, there is often not enough time to execute all research activities, leading to competition over which tasks should be prioritized. Also, supervisors are often burdened with overseeing an excessive number of PhD candidates due to limited funding and institutional support, which can compromise the quality and consistency of supervision.

This competitiveness has several downsides. First, it is accompanied by high work pressure, which negatively contributes to PhD candidates' job satisfaction and positively to their intentions to quit (van Rooij et al., 2021). One indicator of this pressure is that supervisors are often required to oversee too many PhD candidates, which can compromise the quality of supervision and further impact PhD candidates' work experience. Second, competition may induce different types of inappropriate behavior, such as workplace bullying, academic sabotage, or intimidation, because people (unconsciously) think this is a way to advance their own career (Anderson et al., 2007; Kilduff et al., 2016). Some PhD candidates describe instances where supervisors act in ways that undermine their standing, by gossiping or spreading rumors about them, or making insidious or belittling comments about

them in front of others. (Tuma et al., 2021). Together, the competitive environment clearly negatively impacts PhD candidates' social safety.

Complex organization

The university is a complex organization in which various branches and structures intertwine, and authority is diffused. Many academic employees are involved in different temporary collaborations and operate in different contexts at once (Royal Netherlands Academy of Arts and Sciences, 2022). As a result, it is difficult for those responsible to see when and where inappropriate behavior is occurring (Tenbrunsel et al., 2019). It might be the case that an individual's problematic behavior is known within one collaboration or project, but not within another. As a consequence, individuals who act inappropriately can go unnoticed for a long time, which hinders PhD candidates' social safety.

Dealing with the risk factors

Structural risk factors may impact the social safety of PhD candidates at different levels, often at the same time, as visualized in the framework. For example, due to power imbalances, PhD candidates may not feel included in making decisions about their own project (individual level, SST), are afraid to discuss issues within their supervisory team (team level, TPS), or fear retaliation if they report mistreatment or unethical behavior (organizational level, PSC).

Thus, when addressing the issue of power imbalances, it is important to also keep all three social safety levels in mind. For instance, universities should have a critical look at the hierarchical structure of their organization to identify positions where the risk of power abuse is high (PSC) and take measures to counter this. Supervisors and academic leaders should be educated in responsible leadership (TPS), and PhD candidates should be given the 'power' as a group to address social issues without fear of repercussions (SST).

To counter the negative effects of the competitive environment, universities should focus more on rewarding team efforts and less on individual accomplishments, to make better use of available job resources (PSC), stimulate collaboration within academic teams (TPS), and, as a result, hopefully, lower PhD candidates' experiences with inappropriate behavior by competitive colleagues or supervisors (SST).

Risk Factors in the Academic Culture

Three risk factors are discussed that are related to academic culture: culture of silence, lack of supervisory support, and being a minority member.

Culture of silence

The first cultural risk factor, a culture of silence, refers to a lack of discussion about behavioral norms and providing feedback on behavior, thus creating a culture that tolerates harmful behaviors (Zara et al., 2024). PhD candidates often perceive faculty members as reluctant to address or confront their colleagues about negative behavior, due to reasons ranging from academic freedom and seniority to program or departmental needs (Tuma et al., 2021). When it is uncommon to discuss what behavior is or is not acceptable in the workplace, it becomes more difficult to speak up in the event of inappropriate behavior. Often, individuals are afraid of harming their relationship with other team members (Milliken et al., 2003), due to the power position of the violator (Hershcovis et al., 2021), or because they believe speaking up is not safe within the team climate (Morrison et al., 2011).

This lack of discussion about behavior can create a vicious cycle, as individuals who misbehave are not held sufficiently accountable and therefore do not learn to change their behavior. It can lead to "snowball effects" (minor misbehaviors developing into bigger misbehaviors if not corrected in time) and "infection effects" (the misbehavior of one person can encourage others to behave the same way) (Klarenbeek & van Eijbergen, 2024; Tenbrunsel & Messick, 2004), resulting in a slippery slope where social safety issues can escalate (Alabdali & Basahal, 2024).

Lack of supervisory support

PhD candidates rely greatly on their supervisors for professional, emotional, and practical support (Doloriert et al., 2012; García et al., 2025; Murphy et al., 2007; Nielsen et al., 2017). However, research by Tuma et al. (2021) revealed that PhD candidates often perceive supervisors as lacking effectiveness in offering psychosocial support and as struggling with interpersonal skills, including interacting, communicating, or working with others. Half of them also report that their relationships are generally of poor quality or lack positive relational elements.

The issues described above may arise because supervisors are often not evaluated or rewarded for the quality or effectiveness of their supervisory tasks, but rather for research productivity (i.e., grant funding, publications) (Social Sciences Feminist Network Research Interest Group, 2017; Tuma et al., 2021). Investing in their own supervisory skills may not be sufficiently stimulated and prioritized. In addition, leadership roles are often viewed as an obligation rather than an aspiration, are frequently temporary, and are not accompanied by sufficient training or time (Rowley & Sherman, 2003; Tenbrunsel et al., 2019). Poor supervision exacerbates stress and feelings of isolation, undermining PhD candidates' social safety (Ali & Kohun, 2006; Friedrich et al., 2023; García et al., 2025)

Intersectional vulnerability

PhD candidates who belong to one or more minority groups (e.g., ethnic minorities, LGBTQ+ individuals, or female candidates within male-dominated departments) feel excluded, prejudiced, or discriminated against more often (Davidovitz & Cinamon, 2024; Hussain & Jones, 2021; Posselt, 2021; Woolston, 2022). For instance, LGBTQ+ PhD candidates sometimes feel excluded or sidelined in a heteronormative environment and may face direct instances of homophobic and/or transphobic behavior (English & Fenby-Hulse, 2019). Additionally, international PhD candidates often experience conflicts with their supervisors due to cultural differences (Kong et al., 2023). Next to this, female or ethnic minority faculty members are awarded fewer grants than their male or white counterparts (Prince & Francis, 2023). Simply identifying as female also heightens the risk of being a victim of sexual harassment (National Academies of Sciences, Engineering, and Medicine, 2018; Tenbrunsel et al., 2019; Zara et al., 2024).

These experiences are not isolated incidents. They reveal how exclusion becomes more severe when individuals face multiple forms of disadvantage simultaneously. Recent research supports this finding by showing that the more types of differences individuals perceive between themselves and their colleagues – such as those related to gender, ethnicity, culture, or sexual orientation – the less included they tend to feel (Şahin et al., 2024). Such intersectional experiences often lead to a heightened state of alertness and a greater need for explicit social cues to feel safe and included (Diamond & Alley, 2022). Over time, this chronic state of alertness can result in more stress symptoms and increased vulnerability to mental health issues (Evans et al., 2018). Intersectional vulnerability also implies that when other risk factors – such as power imbalances, lack of supervisory support – are present, PhD candidates with marginalized identities are particularly at risk of feeling socially unsafe.

Dealing with the risk factors

Cultural risk factors impact all three levels of PhD candidates' social safety. To illustrate, a culture of silence where people lack the motivation, capacity (i.e., lack of supervisory support), or opportunity to talk about inappropriate behavior, can result in perseverance of PhD candidates' socially unsafe situations (individual level, SST), might lead PhD candidates struggling to speak up within their supervisory team (team level, TPS) and give them the idea that their psychological health is not prioritized by their employer (organizational level, PSC).

To change a culture of silence into a culture of dialogue and supervisory support, it is therefore important that all social safety levels are considered. For example, regular intervision sessions with fellow PhD candidates could help to recognize and deal with difficult situations by exchanging experiences and offering advice (individual level, SST). However, this is only fruitful when PhD candidates

feel safe enough to speak up within their supervisory teams or research groups. Therefore, it is essential that supervisors are encouraged to develop their interpersonal and communication skills, enabling them to set a good example when discussing behavior within the team and providing support for their PhD candidates (team level, TPS). The latter could be achieved by integrating more coaching methods into supervision, as these methods can support the growth, development, and mental health of PhD candidates (Bordogna & Lundgren-Resenterra, 2023). Finally, universities need to assess the extent to which assessment criteria imperceptibly reward and perpetuate the 'wrong' behavior, and what can be changed to prioritize supervision quality or leadership skills more effectively (organizational level, PSC).

Risk Factors in the Academic System

While the academic system (e.g., policies and mechanisms) is aimed at supporting employees and monitoring and adjusting (inappropriate) behavior of employees, they could actually harm the social safety of PhD candidates if certain risk factors are present: ineffective policies and interventions, and a lack of transparency in communication.

Ineffective policies and interventions

Existing policies and interventions addressing social safety issues have proven largely ineffective (Täuber et al., 2022). Too often, policies in academic institutions remain symbolic and poorly implemented in practice. This is especially evident in the functioning of reporting systems. PhD candidates frequently report not knowing where to find confidentiality advisors, being unaware of relevant policies, or perceiving a lack of procedures and practices to support them in cases of social safety concerns (Cohen & Baruch, 2022; Tuma et al., 2021; Van Den Bossche et al., 2025). Confidentiality advisors themselves are often excluded from the development of institutional safety policies, placing them in a passive role that reduces their visibility and approachability (Klarenbeek & van Eijbergen, 2024). They indicate spending most time listening to those who have something to report, but not enough time on informing the organization or signaling to management (De Graaf, 2019). This undermines PhD candidates' perceptions of the effectiveness of (informal) reporting systems and therefore makes them feel less protected by their employer.

The underlying issue here is the tendency to treat inappropriate behavior as isolated incidents rather than manifestations of systemic problems. Too often, the focus lies on eliminating the "bad apples" while ignoring the conditions that continue to produce them (van Raalte et al., 2023). Current interventions rarely account for underlying risk factors such as power imbalances or a culture of silence. Several studies emphasize the need for interventions to be embedded within multilevel programs to be effective (Bosma et al., 2025; Leake et al., 2025; Täuber et al., 2022). Leake et al.'s (2025) systematic review of 40 workplace mistreatment interventions reveals that individual-level interventions yield limited results, precisely because they fail to address the organizational and systemic conditions that enable such behavior to persist.

Lack of transparency in communication

In the case of a conflict (regarding social safety) between employees, the university must abide by the rules of employment law. If a PhD candidate files a formal complaint of harassment against a colleague, such as their supervisor, this colleague deserves protection and confidentiality until the investigation into what has happened is concluded. However, this can often hinder transparent communication about the state of affairs, next steps, and when to expect them. Both the supervisor and PhD candidate may experience a long and uncertain waiting period, during which it is challenging for them to obtain further clarification (Royal Netherlands Academy of Arts and Sciences, 2022). This creates an image of the university giving too much priority to limiting legal liability rather than to effectively reducing the inappropriate behavior (Tenbrunsel et al., 2019). As a result, PhD candidates do not feel that they are taken seriously, and a negative spiral ensues. The way the reporting of the issue is handled does not show that the organization prioritizes social safety, and makes them feel reluctant to report inappropriate behavior in the future.

Dealing with the risk factors

Risk factors within the current academic system impact social safety at different levels. For instance, the ineffective implementation of the reporting system makes PhD candidates feel socially unsafe as they potentially have to keep dealing with inappropriate behavior (SST), makes them reluctant to speak up because of skepticism (TPS), and lets them perceive their organization as not prioritizing their psychological health by the way issues are handled (PSC). Thus, the current system does not help but hinder the social safety of their employees.

When developing a solution, it is again essential to consider all social safety levels. With regard to the implementation of reporting systems, it could help to unite social safety officials and experts within the organization in a peer group, making it easier to communicate with each other and learn from each other (PSC, TPS). In addition, universities could consider hiring external advisors who are accessible to everyone to help mediate difficult cases. This way, confidentiality advisors are hopefully better informed and equipped to deal with PhD candidates' complaints, improving their social safety (SST).

DISCUSSION

LIMITATIONS

There are a few limitations that should be acknowledged. First, the literature review can be characterized as a non-systematic rapid review: rather than following a strict protocol with predefined search terms, we selected literature that addresses doctoral experiences in relation to the risk factors outlined in our framework. The aim of this review was to elucidate the analysis provided in the model with relevant studies, not to give a complete overview of potentially relevant literature. Although some studies may not have been included, we did take care to include recent reviews of empirical studies, as well as grey literature and organizational reports.

Second, most of the literature discussed in this paper focuses on Western academic contexts. It is important to acknowledge that cultural differences may shape PhD candidates' experiences of social safety. For example, in the Netherlands, a PhD candidacy is a paid position, whereas in many other countries this is often not the case. At the same time, global studies indicate that PhD candidates' mental health issues related to academic incentives and supervision practices are a widespread problem, suggesting that similar experiences may arise across different contexts (Evans et al., 2018; Woolston, 2019, 2022).

Third, while this paper primarily focuses on risk factors in the academic structure, culture, and system, it is important to acknowledge that individual-level characteristics may also influence PhD candidates' experiences of social safety. Psychological Capital (PsyCap) – a combination of resilience, self-efficacy, hope, and optimism – has been shown to buffer the impact of negative experiences such as toxic supervision (Hermana et al., 2025). Interventions to promote individuals' PsyCap or related characteristics may enhance individual coping mechanisms, but they do not address the root cause of social safety issues (Demerouti et al., 2021). In other words, although PsyCap may help PhD candidates cope with risk factors in the workplace, it cannot substitute for the systemic change advocated in this paper.

RECOMMENDATIONS FOR A SAFETY STRATEGY

For each domain, this paper has provided suggestions for improving the social safety of PhD candidates. In this final section, it is emphasized that these suggestions should not be isolated initiatives, but part of an integrated social safety strategy. This means that the strategy should cover all domains (structure, culture, and system) within the organization, as a culture change will only be effective when it is embedded in the structure and system of the organization (Bosma et al., 2025; Leake et al., 2025). To enhance the effectiveness of such a strategy, this paper proposes a few recommendations.

First, when developing a safety strategy, all three levels of social safety should be aligned in interventions (Savela & Ellemers, 2024). To illustrate, when PhD candidates experience stress due to an unsafe work environment (SST), it is advised to broaden the perspective for treatment and policy to other levels within the organization. At the organizational level, revising and designing policies that protect PhD candidates' psychological health could contribute to an enhanced socially safe working environment (PSC). However, to know if these policies have an effect on individual PhD candidates' health, it is important to consider team-level mechanisms and perceptions (TPS). For instance, certain behaviors or skills of the supervisor could influence the way organizational policies are perceived by PhD candidates. Including all three levels will therefore enhance the effectiveness of a safety strategy.

Second, it is advised to first conduct a risk analysis to identify which risk factors are present in the (academic) environment that can threaten PhD candidates' social safety. This will improve universities' understanding of the current situation, which risk factors are the most detrimental, and thus, which risk factors the safety strategy should target. The three risk factors within the academic environment (structure, culture, and system) often interrelate or reinforce one another (Tenbrunsel & Messick, 2004). For instance, power imbalances can make it difficult for PhD candidates to speak up to their supervisor (i.e., structural risk factor), which is made even more difficult by a culture of silence (i.e., cultural risk factor) and perceptions of a lacking reporting system (i.e., system risk factor). A risk analysis will help untangle this complex set of related factors and provide a clear overview of what is actually going on.

Third, the safety strategy should explicitly address the heightened vulnerability of PhD candidates from marginalized identities or backgrounds. Research shows that many existing policies aimed at reducing inappropriate behavior are largely "identity-neutral". This means they fail to account for the unequal distribution of exposure to harassment among employee groups within the faculty. As a result, such policies often fall short for those most in need of protection. Instead, to ensure a truly inclusive and safe work environment, universities should adopt an "identity-conscious" approach that considers how intersecting identities shape individuals' experiences and risks (Avery et al., 2025; Mor et al., 2025; Şahin et al., 2024). Only an identity-conscious approach can make safety measures effective for all employees, regardless of their group identity.

Fourth, when developing a safety strategy, attention should be given to different types of action: prevention, monitoring, and adjustment of behavior in the workplace. Currently, most actions appear to be focused on improving behavioral adjustments, such as complaint handling, but less so on whether these adjustments are effective, and on monitoring and preventing behavioral issues. In terms of prevention, the focus could be on promoting a culture in which people address each other's behavior before situations escalate (i.e., improving feedback culture). This could be monitored by evaluating supervisors on their ability to provide a safe feedback culture (e.g., by collecting 360° feedback for annual performance reviews) and structurally checking whether PhD candidates indicate they feel safe giving feedback to their supervisor, rather than waiting for complaints. With regard to the adjustment of behavior, clear performance agreements need to be made with supervisors who do not meet these standards, to show that signals of unsafe environments are taken seriously. In sum, prevention, monitoring, and adjustment actions should all be included in a safety strategy.

Lastly, when designing and implementing a safety strategy, it is important to anticipate potential challenges and resistance. For instance, there might be resistance from faculty, who may perceive such changes as a threat to academic freedom. This principle is often defined as the freedom of teachers and researchers in higher education to engage in appropriate academic activities without interference from others (Åkerlind & Kayrooz, 2003). It influences the structure, culture, and system within academic organizations, as these should not conflict with this principle. As a result, efforts to improve social safety through new policies, procedures, and practices may raise concerns if there is a perception that academic freedom is being overly limited (Tenbrunsel et al., 2019). To address this, it may help to explicitly state (e.g., in a code of conduct) that academic freedom is meant to ensure critical

discussions of research and teaching topics but does not give license to behave in any way one sees fit. In fact, the code of conduct might specify that it is a key responsibility of research supervisors to teach students how to discuss differences of opinion without violating interpersonal respect, and to model such behavior. Moreover, involving stakeholders early in the process, for instance through consultation rounds or pilot-testing, can foster shared ownership and help ensure that the safety strategy is both effective and broadly supported.

CONCLUDING THOUGHTS

A multilevel framework of social safety, inspired by Social Safety Theory, Team Psychological Safety, and Psychosocial Safety Climate (Savela & Ellemers, 2024), was applied to PhD candidates' experiences within broader structural, cultural, and systemic contexts. This framework shows that the social safety of PhD candidates is impacted by different risk factors within the academic environment, such as power imbalances, a culture of silence, and ineffective reporting systems, which should be targeted in a systemic safety strategy. Since creating such a strategy is challenging, this paper has listed a few recommendations on what should be taken into account.

The hope of this paper is also to inspire future research on social safety. First, future research should integrate theoretical perspectives on social safety. For instance, how do individual experiences of social safety of PhD candidates relate to their shared perceptions of TPS within their own research group or lab, and to shared perceptions of PSC within the faculty or university? Research could also explore in what context these levels overlap or affect each other. Second, future research could explore the applicability of this multilevel framework across different cultural contexts and academic settings. Third, next to the experiences of PhD candidates themselves, it is important to include other perspectives, such as the supervisor or the organization. Supervisors are affected by the same academic risk factors, impacting their own social safety, and therefore possibly impairing their ability to set a good example. Finally, existing research into social safety and related constructs is largely based on self-reports. However, explicit measures of self-report do not capture the actual experiences that people have. Perhaps, especially in the case of a socially unsafe environment, where people might be reluctant to answer honestly or feel suppressed by a culture of fear, rendering such measures less reliable or noisy (e.g., Donaldson & Grant-Vallone, 2002). To capture social safety experiences at a more implicit level (neuro)physiological measures might be an important addition.

To conclude, this paper contributes a conceptual framework that enables institutions to diagnose and respond to social safety risks in a systemic, evidence-based manner. Prioritizing PhD candidates' social safety is more than a personal concern; it is an investment in the wellbeing and sustainability of the next generation of academics.

REFLEXIVITY STATEMENT

This research was conducted by a multidisciplinary team with expertise in social and organizational psychology, educational sciences, and doctoral education policy. Three authors have backgrounds in social and organizational psychology, including one PhD candidate focusing on social safety in academia, one associate professor in interpersonal relations, and one full professor in organizational behavior with a focus on social safety, diversity, and inclusion, and ethical conduct. The team also includes an educational scientist and the director of a large graduate school, both actively engaged in doctoral education and policy development. This diverse composition enables the team to critically reflect on systemic and relational dimensions within academic environments and ensures sensitivity to the experiences of PhD candidates.

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AUTHORS

Julia Houben is a PhD Candidate at Utrecht University in the field of organizational behavior. Her research focuses on social safety within academia and is part of the Sustainable Cooperation Framework (SCOOP). Her academic background includes a bachelor's degree in psychology and a master's degree in social work and organizational psychology. Before starting her PhD, she worked as a teacher within academia for several years, specifically at the VU Amsterdam (Psychology) and Utrecht University (Interdisciplinary Social Sciences). Additionally, she has experience as a coach and trainer.

Reine van der Wal is an associate professor in social and organizational psychology at Utrecht University. She obtained her PhD at Radboud University Nijmegen on the topic of forgiveness among children, which sparked a lasting interest in how people maintain and repair valuable relationships. Her current research focuses on relationships at work, examining how organizational systems can strengthen or undermine them, and what is needed to restore trust and social safety when these systems fail. She collaborates closely with HR to study and improve social safety policies and is involved in the national Recognition & Rewards program, aimed at creating a more inclusive academic culture.

Marije Lesterhuis is an assistant professor in training and education at the University Medical Center Utrecht. She obtained her PhD at Antwerp University (Belgium), with a focus on the validity of assessments. Currently, her research focus has shifted more towards workplace learning and supervision, considering the ecosystem in which learning takes place. In her work, she is bridging research with educational innovations, aiming to improve the quality of learning for students and professionals in biomedical sciences and healthcare.

Harold van Rijen is a full professor of innovation in biomedical education at the University Medical Center Utrecht. He is the program director of the master's Biomedical Sciences and director of the Utrecht University Graduate School of Life Sciences. His current design-based educational research focuses on future-proof education, comprising research on online learning, generic skills, flexible curricula, AI, and the supervisor role in research integrity and social safety.

Naomi Ellemers is a distinguished university professor at Utrecht University and an honorary professor at the University of Queensland. As a social and organizational psychologist, she conducts research into diversity and inclusion and ethical behavior in the workplace. Based on this research data, she and her organizational behavior research group developed measurement tools and interventions for practical use, such as the Dutch Inclusivity Monitor. She was chair of the KNAW committee that issued advice on social safety in science, and a member of the Van Rijn Committee, which investigated behavior and culture within Dutch public broadcasting. She is also a member of the European Commission's Group of Chief Scientific Advisors and a crown member of the SER.