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## Chapter

# Panic Disorder and Burnout in the Workplace: Review of the Evidence and Recommendations for Future Research

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## Abstract

Both panic disorders and burnout are significant challenges in the workplace. However, to date knowledge in these areas has progressed in parallel and there have been few attempts to systematically connect these overlapping syndromes. The objectives of this chapter are to address this gap in the literature by addressing the following: how panic disorder symptoms can be masked under the “burnout-umbrella” meaning they can go under-the-radar, how the overlap between sub-clinical anxiety physical symptoms and panic disorder symptoms might lead to the latter remaining undiagnosed, and the extent to which burnout can contribute to experiencing panic disorder symptoms. Particularly, we will focus on professions that require high levels of emotional labor (e.g., healthcare employees, teaching professions) and which are characterized by pathological altruism, where individuals feel that they are not allowed to experience a panic attack in their work environment—and if they do, they will have to hide it. Moreover, such hiding leads to increased feelings of guilt and apathy, which in turn increases the likelihood of a depressive symptomatology to be developed. Finally, we argue that the field is hampered by the fact that employees are less likely to report the real intensity of their anxiety and stress-related symptoms.

**Keywords:** panic attack, burnout, anxiety, workplace stress, workplace well-being

## 1. Introduction

Panic disorder is a significant challenge in the workplace. Personal stories of experiencing a panic attack at work or because of work-related stressors can be easily found in anecdotal evidence, blogs, and informal conversations. However, the literature looking directly into the relationship between work stressors and panic disorder is scarce, and we believe does not reflect the real extent of the issue nor what work-related problems can be hidden behind employees’ panic attacks. For example, the concept of “workplace phobia” (WP) – which from a clinical perspective is characterized by similar symptoms as agoraphobia – however, has had very limited research

interest, as a quick search with no time restrictions on some of the main databases (e.g., Pub Med) yields only eight results with the words “workplace phobia” in their title. While WP incorporates psychophysiological symptoms that manifest upon exposure (*in vivo* or *in vitro*) to the workplace, it is considered to be mainly characterized by avoidant behaviors and there is insufficient evidence to consider how often it might manifest in the form of panic attacks [1, 2].

Asai et al. [3] explored the relationships between job stressors (e.g., job strain; effort reward imbalance; workplace social support) and panic attack/panic disorder in a Japanese working population. Panic attacks/disorders were measured by self-report. The results indicated that for the Japanese working population, high effort/reward imbalance is more likely to lead to PA/PD compared with low effort/reward imbalance. Of course, the clinical psychology literature has indicated cultural differences in the definitions and experiences of anxiety among different countries that might result from the differences in sociocultural norms, values, and expectations [4]. As such, findings on the subject might differ by different cultures/countries.

More is known about the prevalence of panic attacks among healthcare professional after the COVID-19 pandemic compared with either pre-pandemic times or other occupations. Alonso et al., [5] in their longitudinal study on the impact of COVID-19 on Spanish healthcare workers, measured probable current mental disorders including major depressive disorder (MDD), Generalized Anxiety Disorder (GAD), Post-Traumatic Stress Disorder (PTSD), and Substance Use Disorders (SUDs) and work-related factors (e.g., care center preparedness, weekly working hours) among other variables. Panic attacks were measured as the number of panic attacks experienced in the 30 days prior to the interview. The prevalence of Panic Attacks was 23.9% at baseline and 19.5% at 4-month follow-up; MDD, GAD, and PTSD followed a similar tendency, however, there was a slight increase in self-reported SUDs. Panic attacks have also been recently studied among teachers with evidence suggesting that teachers may suffer from panic attacks and anxiety and often feel alone and unsupported [6].

In the following sections, we identify some reasons behind the lack of clear evidence on the relationship between work stressors and panic attacks as well as potential ways that this kind of evidence could potentially help us understand better the literature around work stress and burnout.

## **2. Job Burnout and panic disorder: the missing links**

### **2.1 Job Burnout**

The increasing evidence on occupational burnout among different professional groups has highlighted that burnout is potentially a “human” aspect of work, meaning that all individuals might experience burnout symptoms at some point in their life in most occupations. While this book focuses on panic disorder, we believe that we cannot position panic disorder in the workplace well-being literature without discussing the relationship between burnout and anxiety. Though experiences of burnout have appeared across cultures and history for a very long time, the systematic study of burnout did not start until the 1970s, when Freudenberger [7] described occupational burnout for the first time, focusing on the experiences of weariness and/or exhaustion as a result of the work demands in one’s occupation. Christina Maslach later defined burnout as a psychological syndrome that involves a prolonged response to chronic

emotional and interpersonal stressors on the job [8]. The three key dimensions of job burnout are exhaustion, feelings of cynicism/depersonalization, and a sense of professional inefficacy/lack of accomplishment [9]. Exhaustion is the individual stress dimension of burnout, and it refers to feelings of being physically overextended and depleted of one's emotional resources; cynicism (or depersonalization) refers to a negative, callous, or excessively detached response to other people; and inefficacy (or lack of accomplishment) refers to a decline in one's feelings of competence and successful achievement in one's work [10].

There is significant debate over the "nature" of burnout; in a nutshell, some researchers support the conceptualization of burnout as a *psychological condition that reflects some disordered functioning in the individual*, and as such, should be approached as a psychological disorder [11]. Thus, we should advocate for solutions on the individual level. Other researchers, however, support that burnout is an *organizational problem* [12]; thus, we advocate for solutions on the organizational level. Over time, there have been several suggestions regarding burnout being the same as or an expression of *depression or/and anxiety or/and stress*. There is still some disagreement over the causes and mechanisms of job burnout, as not everyone gets burnt out by doing the same job in the same organization; it does not take the same time for all individuals to experience feelings of burnout; people respond to burnout differently; some professions might exacerbate either of the dimensions more or faster than others.

Despite the literature suggesting that burnout should be viewed as a psychological condition, it is not classified as a disorder by the American Psychiatric Association in their latest Diagnostic and Statistical Manual [13]. However, it has been added in the latest International Disease Classification (ICD-11) by the World Health Organization [14] as a "syndrome that results from chronic workplace stress that has not been successfully managed," providing the three dimensions of exhaustion, cynicism, and professional efficacy as its manifestation. As it is included in the section related to employment/unemployment, it has been suggested that the ICD-11 definition reflects an occupational phenomenon and not a medical condition, and as such the emphasis should be put on the work environment and the fact that job demands and resources are in a mismatch, thus not allowing the person to do their work in a meaningful and non-distressing way.

## **2.2 Burnout and panic disorder**

As panic attack disorder is one of the anxiety disorders [13], in order to better understand the literature around panic disorder in the workplace, it is important that we first briefly discuss the relationship between job burnout and anxiety. To this end, both burnout and anxiety share a significant positive relationship with neuroticism [15]—a personality trait that indicates emotional instability and sensitivity to stress. Thus, the higher the neuroticism, the more likely that somebody will experience anxiety and/or burnout. Extroversion, on the other hand, has been found to have a negative relationship with burnout and with anxiety [15]; thus, the more extroverted someone is, the less likely it is for them to experience anxiety and/or burnout. Meta-analytic findings have also suggested that job burnout is a predictor of 12 somatic diseases, including coronary heart disease, headaches, respiratory diseases, and early mortality (before the age of 45 years old) [16]. This increases the need for further research on the extent to which stress-response mechanisms are in fact underlying burnout in a way similar to anxiety disorders. So, if the two actually share important physiological and psychological mechanisms, can job burnout exacerbate the

experience of panic attacks? Can work contribute so much to anxiety that employees experience panic attacks in or out of the workplace?

The direct evidence linking job burnout and panic disorder is limited [17]. From a physiological point of view, burnout and panic disorder share common neural circuits as frontal and limbic brain structures appear to underlie both syndromes. Indeed, meta-analytic findings show that there is a significant relationship between burnout and anxiety [18] while there has been some evidence in favor of a common neurobiological basis. A systematic review regarding the potential impact of burnout on limbic brain structures has concluded that there is an impact in terms of HPA dysregulation (hypothalamus-pituitary-adrenal axis), impaired neurogenesis, and limbic structures atrophy; this could be an indication that stress is an integral part of burnout from a physiological perspective that could be further expressed in the form of a comorbid anxiety disorder, especially when no other measures are taken to relieve the stress caused by burnout [19].

Four key brain regions that are implicated in burnout and panic disorder are the prefrontal cortex (PFC), the cingulate cortex, the amygdala, and the hippocampus.

Burned-out employees and individuals suffering from panic attack disorder show deactivation of the prefrontal and cingulate cortex, reduced hippocampal activation, and an increased amygdala engagement [20–22]. The PFC is mainly responsible for executive functions such as inhibition, working memory, and decision-making; a set of cognitive functions that support goal-directed behavior and adaptive responses—thus, it is no surprise that a fundamental symptom of burnout and panic attack disorder is the sense of lack of control. The cingulate cortex is involved—among others—in the formation and processing of emotions; the hippocampus is a key area for learning and memory while the amygdala is mostly known about its role in emotional responses. Disconnection between the frontal and limbic brain regions results in behaviors and emotions common to burnout and panic attack disorder as well (e.g., lack of control, feeling of detachment, difficulty in regulating one's emotions), as well as to anxiety disorders generally.

These physiological responses are mediated by “bottom-up” and “top-down” processes. The “bottom-up” process, as the term suggests, involves the ventral nervous system; i.e., the amygdala and the hypothalamus. The amygdala is responsible for appraising and detecting threatening stimuli and regulates the hypothalamus, which, in turn, controls the neuroendocrine response toward the stressful stimulus [23]. The “top-down” (i.e., the dorsal nervous system) process includes the PFC and hippocampal brain regions. One major role of the PFC is to regulate the neuroendocrine response, the effects of the stress hormones in the amygdala and the hippocampus [24], and negative emotions [25]. In layman's terms, when the working environment cultivates stressful situations (e.g., strict deadlines, toxic supervisors/coworkers etc.), the bottom-up network perceives these situations as threats that need to be dealt with by fighting or fleeing. Prolonged activation of the bottom-up network leads to a dysregulation of the top-down network; thus, the individual is no longer able to evaluate and manage the environmental stimuli in a more rational manner. Meanwhile, extended stressful periods ultimately result in an under-activated top-down network that is unable to effectively assess the incoming environmental stimuli and hence, inhibit the over-activation of the bottom-up network. This process leads to a limited ability in appraising the (in)significance of the environmental stimuli; making the individual more vulnerable to the stressful situations they encounter in both their work and personal lives, and thus more susceptible in burnout and/or panic attacks.

All in all, this underlying common physiological mechanism not only indicates that the onset of one of the two disorders can exacerbate (or initiate) the symptoms of

the other disorder, but also suggests that the distinction between the two syndromes based on a limited array of diagnostic techniques can be a tricky and difficult task. Neuroimaging techniques, for instance, are an essential diagnostic tool in the field of neuroscience as they aid experts to gain a better understanding of the neurobiological mechanisms responsible for the expression of a set of behaviors, assisting this way the differential diagnosis. All the same, one could argue that both burnout and panic disorder fall under the umbrella of stress, hence the common neurobiological background of the two syndromes and the likelihood of the two syndromes co-occurring come as no surprise. An observation that also raises the question if and in what way and degree burnout and panic attack disorder are differentiated from each other. Therefore, the shared mechanism between the two syndromes demands careful and detailed screening with the use of thorough clinical interviews for detecting burnout or panic disorder or a potential comorbidity of the two, if burnout is approached as a psychological disorder (based on the previously discussed debate on the nature of burnout). On the other hand, approaching burnout as an organizational problem allows considering the possibility of burnout being a cause of stress—and thus a cause of panic attacks. The context of one's thoughts, emotions, and behavior should be taken into consideration when assessing for psychological disorders that fall under the spectrum of anxiety. Indicatively, [17] reported a significant positive relationship between job burnout and panic disorders among nurses in Canada; nurses reporting higher burnout levels were 23 times more likely to screen positive for panic disorder while 20.3% of Canadian nurses were positively screened for panic disorder. However, the cross-sectional design of the study does not provide information regarding the causal linkages between the two syndromes. That is, are burned-out employees more sensitive to panic attacks; and if so, how burnout severity and duration affect the onset/duration of these panic attacks? Is there a specific burnout dimension that shows stronger associations with panic attack disorder? On the other hand, do individuals who have been diagnosed with panic attack disorder develop burnout more often compared with the individuals with no such diagnosis—perhaps, due to the emotional wear out that accompanies (frequent) panic attacks? We need to look further into the relationship between burnout and panic attack disorder.

The aforementioned ICD-11 classification [14] highlights that when “diagnosing” burnout, it is important to rule out any potential adjustment disorders; anxiety disorders and mood disorders (i.e., depression). Meanwhile, in the literature it remains unclear whether and to what extent burnout can be differentiated from anxiety or depression as well as whether burnout can “exist” without some level of anxiety and/or depressive symptoms, even of subclinical level. The activation of the HPA axis has also been linked to anticipatory anxiety, which in turn can increase the probability of a panic attack [26]. Research on the relationship between anxiety and job burnout, however, is not “anxiety-disorder” specific, in that research related to occupational health and workplace well-being mostly consists of self-reported measures of anxiety (e.g., HADS, STAI, etc.) [18], thus measuring the very common psychological condition of responding to stressors on a cognitive, emotional, behavioral, or physiological level in general, and the state/trait anxiety dimensions are usually not controlled for.

### *2.2.1 How can burnout be linked to panic disorder?*

Though burnout seems to share variance with depression, anxiety and anxiety-related disorders [18, 19], existing evidence indicates that burnout and anxiety are not overlapping constructs [18]; this suggests that this is probably the case with burnout

and panic disorder as well. As mentioned before, very little has been reported on the relationship between burnout and panic attacks, though we believe that further exploration of that relationship could help us better understand the nature of burnout and its relationship to anxiety. One of the main difficulties in burnout research is the inability to identify when somebody starts experiencing burnout symptoms, as these do not appear in an acute form and can build up over days, weeks, months, or years of exposure to a profession or a work environment or work-related stressors. Moreover, not all professionals in the same profession experience burnout working in different organizations and not all employees of the same organization experience burnout [27]—as burnout highly varies within and between individuals. We believe that exploring the relationship between burnout and panic attacks/disorder can provide some significant benefits that can shed more light on the burnout literature. For example, unlike burnout, panic attacks are “episodic,” which means that it is probably easier for an employee to recall when they experienced their first panic attack compared with when they started experiencing burnout symptoms. The symptoms experienced during a panic attack are probably clearer and more agreed upon by clinicians and researchers (see chapter of this book on what is a panic attack) compared with those of burnout, which makes identifying burnout more challenging than diagnosing panic attacks. On many occasions, employees might not be aware that they have started to feel burnt out until the subjective experience of their work starts having a spillover effect on other aspects of their life (e.g., quality of sleep; health-related behaviors; interpersonal stress, depressed/cynical mood, etc.). However, it is more likely that they will start noticing physical symptoms of stress that might resemble to those of a panic attack, even if they have not experienced a complete panic attack yet—and not consider that experience as being necessarily work-driven. This might also contribute to our understanding of the burnout-anxiety-depression timeline as still it is not clear which comes first: anxiety, burnout, or depression; and whether these appear in some chronological order or as a vicious cycle with stress being in the center. For example, do entry-level employees experience physical stress symptoms more intensely than their senior counterparts, if the latter are emotionally exhausted and more cynical toward their job demands (i.e., higher burnout level)?

Obviously, the aforementioned relationships are more complicated than linear, direct effects, and we do not expect that one pathway might be sufficient to explain how the experience of panic attack symptoms relates to burnout or vice versa. To that end, we propose three initial pathways as potential starting points. These are merely suggestions and hypotheses aiming to drive an interest in the relationship between burnout and panic attack symptomatology.

The first pathway is related to the sense of control/autonomy that employees might experience in their work environment. Karasek’s [28] model of workplace stress—the demand-control model—suggests that while high job expectations are not inherently detrimental, they might cause stress if they are combined with little room for control. The importance of having a sense of control as a psychological resource is known to have stress-buffering effects in and out of the work-related literature. Many researchers have since corroborated these findings; when given greater job control, employees exhibit lower levels of anxiety and role overload, but when given less job control, employees exhibit higher levels of worry and a sense of role overload [29, 30]. Low or no sense of control over one’s environment (work) can be a significant stressor that could possibly initiate a strong stress response leading to panic attack symptoms. This is expected to be more common among lower-ranking workers, who usually have a lot less control and autonomy. Interestingly, such a hypothesis was tested on

non-primates, showing an interesting link between social rank and stress. In particular, studying baboons, Sapolsky [31] found that lower ranking individuals in a society of baboons that had less control due to their hierarchy, had also higher levels of cortisol, the stress hormone. Building on this rationale, a study from Harvard in 2022 [32] came to test these findings in the workplace, by researching the relationship between leaders, control, and stress. Up to that point being a leader had been portrayed as being extremely stressful in both the social scientific and practitioner literatures, as the higher rank one holds in their workplace, the higher the responsibilities—and the higher the expected levels of stress. However, research on leaders' physiology came to contradict that. Leaders have a unique psychological resource—a sense of control—that may act as a stress-reduction mechanism and was seen by their lower cortisol levels and self-reports on stress. To that end, further research into biomarkers of stress, experiences of panic attack symptoms, and screening for panic disorder among workers with low sense of control/autonomy is required to examine whether looking into physiological stress due to low control/autonomy will actually contribute to redesigning jobs and healthy workplaces for lower-ranking positions more effectively than diagnosing burnout has. What is more, cognitive neuroscience could also focus on the extent to which brain functioning and thus, cognitive functioning affect stress responses; e.g., do employees with low sense of control demonstrate by nature a “top-down” deactivation (and thus, lower executive function skills) and “bottom-up” over-activation?

The second pathway looks at work-related stress beyond “working in a stressful environment” but in fact as a source of “survival anxiety,” since job security is critical for meeting the foundational physiological and psychological needs in order to survive. A recent study on the effects of income and job loss on mental health indicated that panic attacks are significantly more common among individuals experiencing income loss. [33] focused specifically on employees with job loss and income loss during the COVID-19 Pandemic indicating that approximately 11% of the participants had experienced at least one panic attack in the last 30 days and income loss was identified as a significant predictor of panic attacks with the highest odds ratio compared to depression and PTSD. The relationship between income loss and panic attacks remained significant in the model adjusting for age, gender, marital status, and educational level. For people experiencing income loss, the probability of experiencing at least one panic attack was 39% higher compared with individuals who did not experience an income loss. Panic attacks are, thus, a stress response to the uncertainty and insecurity caused by a work-related income loss; this highlights the overarching effect of work-related stressors as for a majority of people work-related income is crucial for survival, as perceived financial stress partially mediated the relationship between income loss and presence of panic attacks. This study highlighted that these work-related stressors are not only related to the work environment (e.g., toxic leadership, relationships with colleagues, etc.) but also to the realistic role that having a job plays in having an income that allows for meeting physiological and psychological needs. To that end, panic attack symptoms are expected to be more common among employees with low job security; minimum wage employees; employees who are at risk of job loss and/or income loss/reduction and could be ignored or misdiagnosed as burnout due to the emotional exhaustion or pessimist stance toward their work.

The third pathway is related to the aspects of emotional and personal involvement in one's profession through what is known as emotional labor. Emotional labor is based on the idea that employees are often forced to display emotions at odds with what they truly feel and is the result of the groundbreaking work of sociologist

Arlie Hochschild [34]. A good example for the understanding of emotional labor is the teaching profession. Being a teacher implies a considerable amount of personal involvement, availability, and constant interaction with others. Further occupational stressors may also be present, such as tremendous workloads [6] and imbalance between social and emotional demands [35]. Teachers who have higher job involvement are significantly more likely to develop anxiety disorder symptoms [36]. In addition, burnout symptoms are commonly developed among individuals in teaching positions; however, it is not something that is openly discussed due to the stigma around it. Maslach's three-dimensional model of burnout [8] applies for teaching positions as well, involving emotional exhaustion, depersonalization, reduced productivity, and decreased personal accomplishment. These represent great losses in the educational field for both teachers and learners. However, teachers are invited to control and regulate their emotional expressions in the classroom, and this involves tremendous effort for emotional suppression and regulation, which might lead to increased stress levels that could result in panic attacks. The latter might happen in the workplace or be "brought home"; in the latter case, it is less likely for the individual to identify the panic attack as work-related. Working as a teacher involves maintaining professionalism through all kinds of interactions, inside and outside the classroom. The pressure to remain constantly strong and emotionally available and the feeling of failure when this cannot be delivered have a great impact in teachers' well-being. Furthermore, it is very common that expressing emotional exhaustion, work overload, and burnout carries a big amount of guilt, as these are assumed to be part of the job. This might sometimes mean that teaching positions require plenty of personal time and dedication, which are frequently taken in the cost of private life. Most of these negative emotions and feelings, however, cannot not be displayed and experienced at work, where teachers are expected to display emotions that are aligned with their professional identity, leading a form of a dark cycle where burnout is symptomatic of anxiety and panic attacks, trying to remain professional in the classroom.

### **3. Are work-related panic attacks going under the radar?**

The answer is YES—but it is difficult to demonstrate this via empirical research, and our supposition is corroborated by anecdotal evidence, informal conversations and "off the record" interviews, pop-psychology articles, and blog pieces. While there is an increasing research interest regarding the relationship between anxiety and workplace well-being and work-place stressors, the specificity of the scientific knowledge on the topic is significantly limited by (some) critical factors:

#### **3.1 Research tools measuring anxiety "in general"—and not always!**

Most of the literature looking into anxiety/stress in the workplace fails to report on experiences of physiological stress symptoms, including panic attack symptomatology. We will use the well-known Hospital Anxiety Depression Scale (HADS) [37] as an example to further explain. HADS is probably the most common tool used to measure anxiety in studies related to workplace well-being and anxiety in the workplace; meta-analytic findings suggest that studies that used the HADS reported stronger relationships between burnout and anxiety compared to studies that used other scales, while interestingly the relationship was slightly less strong among healthcare professional than in the general employed population. These limitations

can be further highlighted by the fact that between 2013 and 2018, only one longitudinal study was identified on the relationship between anxiety and burnout [18].

HADS was designed to help measure anxiety symptoms in patient/hospital settings (e.g., patients with coronary heart disease), and there is no evidence of a latent variable structure, being frequently criticized for not being sensitive enough to differentiate between depression and anxiety as clearly as claimed [38]. A 10-year systematic review [38] revealed anomalous factor loadings of both anxiety and depression items on depression and anxiety respectively or on both factors. This suggests that some of the items included in the HADS do not represent clearly depressive or anxiety symptoms, as these could be potentially present in both cases. With regard to the experience of somatic symptoms that might be an indicator of anxiety or panic attacks, no somatic items had been included in the construction of this scale—mostly due to the fact that the scale was designed for hospital/patient samples, and thus, somatic symptoms are expected to be common due to health conditions (e.g., cardiovascular heart disease) [39]. The scale includes one item that reads “I get sudden feelings of panic” (answered on a four-point Likert scale), which, although at a face validity level seems relevant to panic disorder, the phrasing “feelings of panic” is up for interpretation by each participant; the word “panic” when used in daily life and not in clinical/psychological contexts might indicate excessive worry, intense fear or anxiety, feelings of helplessness, or “not knowing what to do,” anticipation anxiety, distress (etc.). Thus, one of the most widely used measures for anxiety in studies looking into working populations does not have any references to somatic symptoms or the experience of panic attacks, as it has been developed to be administered to patient/hospital samples. In that case, if participants from working populations experience panic attacks or even somatic symptoms that can indicate panic-disorder risk, this is most likely to go under radar due to the instruments that are most commonly used in quantitative studies. In practical terms, this means that if the employees of an organization are screened for anxiety with the use of the HADS, the screening results will not provide any information on whether any of the employees suffer or are at risk of suffering from panic attacks. Thus, despite the findings connecting work with anxiety—such as the relationship between anxiety and job burnout—the evidence on how/whether work contributes to panic attacks and/or panic disorders is rare and cannot be validly deduced from screening instruments such as the HADS.

### **3.2 A technocratic approach to anxiety among working populations: differentiating or compartmentalizing?**

Measuring anxiety in working populations has almost become a “habit,” especially when researchers include measures of burnout in their studies. Moreover, there are references to work-related anxiety [40]; job anxiety [41] or job-related anxiety, which is separated into team-job related anxiety and individual job-related anxiety [42]; employee anxiety [43]; to these we would also like to add other closely related concepts such as work stress [44]; work-related stress [45]; job-related stress [46]; job stress [47]; occupational stress [48]; organizational stress [49]. This is indicative of one of the well-recognized difficulties in conducting research related to stress and anxiety, as discrepancies in the operationalization and definition of the concepts are wide and very common, while each field and discipline is looking at stress and anxiety from different perspectives. There is no consensus as to whether stress and anxiety are independent variables (i.e., causes or contributing factors), whether they are outcomes (i.e., results from other causes and contributing factors), or whether they are

mediating processes critical in understanding how work-related life impacts overall mental and physical health and general quality of life. Especially in the work-related literature, the almost nonexistent experimental studies along with the very few longitudinal studies with limited validity regarding causal models testing and the overwhelming number of cross-sectional studies have led to a reciprocal understanding of the relationship between the different types of work-related stressors and anxiety outcomes. In this difficult to navigate literature, the use of generic anxiety measures as explained before makes practical implications even more difficult to delineate, as although we know that during difficult times at work, working populations are more likely to report higher anxiety levels, our understanding of what type of anxiety symptoms they are experiencing, when and where those symptoms are more intense as well as their meaning-making process is extremely limited. In addition, although the compartmentalization of anxiety might make it easier for quantitative analysis, the proof that work anxiety is indeed a “distinct” construct that is mainly the result of work-related stressors is also mostly built on theoretical assumptions and cross-sectional data; and in the meantime, there is no proof that work-related anxiety cannot be reduced by improving out-of-work quality of life or is different to anxiety induced from a toxic family culture. Such an assumption suggests that “compartmentalizing” anxiety into types based on the sphere of life might have some practical benefits, but it could also lead to several potential methodological artifacts, especially given that work life is mostly explored without controlling for personal and family life variables when it comes to quantitative research. We are not in any way implying that work life cannot be the main source of anxiety in a person’s life; our concerns are related to the potential biases stemming from quantitative research that might overlook individual (e.g., personality, predisposition etc.) and out-of-work factors (e.g., contextual and socio-cultural factors) that could be significant in explaining work related anxiety.

We should be careful not to throw the baby out with the bathwater; of course, the research on work and anxiety has produced significant findings and has highlighted that working populations are undergoing extreme amounts of anxiety and stress to meet work demands—and many times beyond what is necessary for the job to be done (e.g., working with toxic supervisors). The identification of work-related mental health challenges is a very important step in creating healthy workplaces, and the work of several scholars has served as a milestone in advancing our understanding of the real impact that work life has on people’s mental health [50, 51]. We wonder, however, whether this approach has now limited practical implications mainly driven by the need to produce generalizable and representative findings that serve the methodological axioms of quantitative research, which sometimes might result in a metaphysical obsession with method [52] rather than with how to identify who needs support and how we can provide it better. And while there are several taxonomies and sub-definitions of stress and anxiety for working populations, very little has been reported in studies regarding how often, e.g., employees in different professions and industries experience panic attacks in the work environment or out of it, when are panic attacks more likely to happen (e.g., prior, during, or after the shift), what percentage of affected employees seek help, whether they share this information with supervisors and coworkers, whether panic attacks at work are exacerbated during work-related crises or times of personal difficulty (etc). The need to address this gap in the literature becomes even more evident considering the several blogs, pop-psychology articles, personal testimonies, and anecdotal evidence that panic attacks in the workplace or panic attacks triggered by work demands are in fact very common. Articles and blog pieces entitled “Managing a Panic Attack

at Work”<sup>1</sup> “Managing your panic Disorder at Work”<sup>2</sup> “I had a panic attack at work. This is what happened”<sup>3</sup> “What to do when a Panic Attack hits at work”<sup>4</sup> frequently include information transferred from general therapeutic protocols for anxiety and panic attacks (e.g., CBT; Mindfulness etc.) in the form of tips. One article, however, entitled “My stressful job is giving me panic attacks, but I feel guilty leaving”<sup>5</sup> by Alison Greens, owner of the blog “Ask a Manager”<sup>6</sup> can help further understand the complexity of dealing with panic attacks (e.g., CBT; Mindfulness etc.) in the form of tips. One article, however, entitled “My stressful job is giving me panic attacks, but I feel guilty leaving” by Alison Greens, owner of the blog “Ask a Manager” can help further understand the complexity of dealing with panic attacks at work or because of work, which goes beyond collecting data on the relationship between anxiety and burnout: employees and managers need support and help making sense out of the subjective experience of having a panic attack and what to do when it happens or when an employee informs them that they have been having panic attacks. The latter article highlights the guilt that employees might be experiencing when considering leaving a job that is potentially contributing to the decline of their mental and/or physical health, which in this case might also stem from a need for the employee to feel valuable and needed by their team and organization; e.g., “I cannot abandon my team because they need me”; “I feel guilty towards the manager who offered me the job,” etc. Clinical literature supports that guilt is a key theme when it comes to mental health disorders [53], and literature on burnout has showcased that employees very often experience feelings of guilt as they cannot cope with the job demands due to insufficient resources (personal or organizational) [54]. And to that end, although compartmentalizing anxiety might help quantitative researchers, a multidisciplinary view of anxiety in the workplace might be more productive when looking into the experiences of the working populations.

### **3.3 “It’s your fault you can’t handle the pressure”: panic attacks as “personal weakness” and the idolization of resilience**

Work stress has been a major research topic especially with regard to healthcare professionals—not surprisingly so, as healthcare professionals rank among the top burnt-out work groups [55, 56]. All the available evidence points to the fact that the most healthcare systems in the world (e.g., the NHS in the UK) are under considerable stress. The overwhelming majority of healthcare workers wake up every day motivated to positively impact the patients they serve. Employees with a high calling intensity (such as healthcare professionals) are especially prone to the detrimental effects of emotionally disturbing work. The drive for healthcare employees, for example, to “keep going” and “get the job done” has a dark side referred to as pathological altruism, which refers to behaviors that attempt to promote the welfare of another but can have pernicious long-term consequences for the care giver [57].

<sup>1</sup> <https://hbr.org/2022/03/managing-a-panic-attack-at-work#:~:text=Common%20triggers%20at%20work%20include,Racing%20heart%20rate>

<sup>2</sup> <https://www.verywellmind.com/panic-disorder-and-the-workplace-2584191>

<sup>3</sup> <https://www.abc.net.au/everyday/i-had-a-panic-attack-at-work-this-is-what-happened/101115920>

<sup>4</sup> <https://www.forbes.com/sites/stephaniesarkis/2019/11/21/what-to-do-when-a-panic-attack-hits-at-work/?sh=252b9b869427>

<sup>5</sup> <https://www.thecut.com/article/my-job-started-giving-me-panic-attacks.html>

<sup>6</sup> <https://www.askamanager.org/about>

Such an approach very frequently idolizes resilience—in the sense of enduring hardship at any cost—to a degree that being able to handle any hardship, stress, and difficulties happening at or stemming from one's job becomes a badge of honor. Healthcare can exploit the professional ethic of healthcare professionals, which results in a form of dysfunctional professionalism that supports maladaptive healthcare structures in education and practice and which can influence staff at all levels.

We believe that this culture of “performance first” no matter the cost and the admiration of abnormally resilient employees has been transferred to many sectors and industries over time and has been further exacerbated by the economic crises, as these give permission to organizations and employers to use the “limited resources” narrative when imposing extreme demands on employees with non-equivalent benefits. The culture of “performance first” implies that showing any sign of difficulty to deal with work demands is a weakness and as such it is not “allowed.” Personal stories from blogs include references to occasions when employees have managed to “press pause” on an upcoming anxiety or panic attack until they find themselves in a space where nobody can witness this “proof of personal weakness.” A work culture like this adds more stress to an already stressful work life where, for example, meeting tight deadlines is one of the most valued attributes for corporate executives or managing to care for a disproportionate number of patients during a pandemic is one of the most valued attributes for nurses. Such cultures usually involve a non-speaking-up dimension as well, where employees feel that they are not actually allowed to express themselves and if they do so, this might have serious consequences. Therefore, symptoms of anxiety and panic disorder are more likely to be developed and usually left unattended. But the fact remains that having the “resilience” to endure the aforementioned along with several other stressors in both one's work and personal life has been an idolized profile for a very long time; this means that employees are less likely to openly communicate facing mental health difficulties, including experiencing panic attacks in or outside of work. Is it, then, any surprise that these highly motivated individuals feel numb or cynical toward interventions that seek to increase their “resilience” or “engagement”?

#### **4. Recommendations and conclusions**

Our knowledge about panic disorders in the workplace is significantly limited. This is an evidence gap when we consider the unclear field of coexisting and partially overlapping conditions that exists with the more frequently studied phenomena of burnout, stress, and anxiety. Moreover, a more fine-grained understanding of panic disorder and panic attacks in relation to work stressors might help better understand the role of the stress response mechanism in burnout.

This chapter has demonstrated that quantitative organizational researchers have ignored or overlooked the panic symptomatology in their use of generic scales (e.g., HADS) that purport to measure anxiety. We can speculate that panic disorders are more easily viewed as being under the remit of clinical psychology rather than that of occupational/organizational research. However, this is a missed opportunity as concepts such as rumination have been successfully imported from clinical psychology into occupational/organizational psychology. Additionally, panic disorders have the potential to help understand the nexus between work and non-work domains better, in that a panic disorder is more likely to be “brought home” in occupations with high levels of burnout.

## 5. Summary of main points

Panic attacks are often described by psychologists as “attacks” taking place to notify the person that there is something wrong in their lives. Lack of control in one’s life could be a reason a panic attack can occur—a red button alarm that is flashing and screams danger. The experience is acute and extremely uncomfortable as the person experiencing it thinks that death is near. The danger might not be “real”—they are not actually dying—but they might have a low control over their lives that is causing this overwhelming feeling of fear and lack of safety. If we could use a metaphor to describe it, the experience of stressful work can be like that of an animal facing grave danger but is locked in a cage and cannot act toward its safety. Work environments with low sense of psychological safety can resemble a cage, meaning that they limit the employees’ ability for control and autonomy; this results in a sense of helplessness, which can lead to high stress levels and potentially panic attacks. The culture of stress and the strict hierarchies is common in most sectors and industries, with employees facing high demands, little control, and often a lack of empathy and attention to well-being. A closer focus on experiences of panic symptoms with the use of interviews (qualitative research) and scales measuring physiological stress symptoms/panic attack symptoms (quantitative research) will contribute to our understanding of how to create healthier workplaces.

### Conflict of interest

The authors declare no conflict of interest.

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