

7. Burning questions in burnout research

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Burnout has been around for about half a century as a metaphor that refers to a specific psychological state that is characterized by mental exhaustion. It first appeared in the United States (US) in the late 1970s and soon spread across the globe, first to Europe and then beyond (Schaufeli, 2017). Meanwhile, a myriad of scientific publications has appeared, not to mention the attention burnout received in the popular press. For instance, entering “burnout” in Google Scholar (November 2022) yields over 1.4 *million* hits, whereas the psychological research database *Psycinfo* includes over 18 *thousand* peer-reviewed papers on the subject. Despite this overwhelming number of scholarly publications some issues are still hotly debated. With this chapter we hope to clarify some major issues in burnout research. In doing so we intend to separate the wheat from the chaff since a lot of unsubstantiated claims and assertions about burnout exist. This is important because we feel that, for decades, scholars, practitioners, managers, and policymakers are not always on the same page.

The overwhelming number of publications necessitates using a big broom instead of a small brush. That means that we do not discuss all we know about burnout, which would be impossible anyway given the sheer quantity of publications. Rather, we focus on six burning questions which refer to some major issues in current burnout research. These questions deal with four topics: the concept of burnout itself (sections 1 and 2); its assessment and prevalence (sections 3 and 4); its relationship with personality and the body (section 5); and burnout interventions (section 6). In the final part (section 7) we present an outlook and discuss avenues of future research.

WHAT IS THE NATURE OF BURNOUT?

Much has been written about the nature of burnout and it is commonly concluded that a generally accepted definition is lacking. Basically, this is correct because, as usual in psychology, different views on the phenomenon exist. Nevertheless, there seems to be an almost universal agreement that burnout refers to a state of mental exhaustion. For instance, Canu et al. (2021) iden-

tified 13 different definitions of burnout and found that ten of them included exhaustion as a constituting element. However, disagreements revolve around additional constituting burnout symptoms, the seriousness of the symptoms and their work-relatedness.

Constituting Symptoms

Using the Delphi method in a panel of 50 experts from 29 countries, the following consensual definition of burnout was proposed: “In a worker, occupational burnout or occupational physical and emotional exhaustion state is an exhaustion due to prolonged exposure to work-related problems” (Canu et al., 2021, p. 95). Effectively, this definition reduces burnout to mere work-related exhaustion, or to put it more bluntly, the notion of burnout is simply replaced by exhaustion. This straightforward, one-dimensional approach to define burnout is contrasted by a multi-dimensional approach. For instance, recently, burnout has been described by the World Health Organization in the International Classification of Diseases (ICD-11; WHO, 2019) as an “occupational phenomenon” which is characterized by: “1) feelings of energy depletion or exhaustion; 2) increased mental distance from one’s job, or feelings of negativism or cynicism related to one’s job; and 3) reduced professional efficacy”. This definition is commensurate with the three-dimensional conceptualization of Maslach and Jackson (1981). This definition has been criticized because, rather than being based on theoretical considerations, it resulted from factor analysis of a set of questionnaire items that were supposed to measure burnout and which did yield three factors (Schaufeli & Enzmann, 1998). This procedure reminds one of the fairytale of Baron Von Münchhausen who pulled himself out of the swamp by pulling his own bootstraps.

Drawing on the work of the grand old man of psychological fatigue research, Edward Thorndike (1894–1949), who argued that the basic tenet of fatigue is the intolerance of any effort, Schaufeli and Taris (2005) theorized that burnout is the combination of the inability and the unwillingness to no longer spend the necessary effort at work for proper task completion. In their view, “inability” manifests itself in lack of energy and “unwillingness” in mental distancing from work, representing the energetic and motivational dimension of burnout, respectively. By the way “unwillingness” does not refer to volition (i.e., a conscious decision) but to a motivating process that takes place unconsciously, almost as if it were behind the person’s back. Based on this theoretical notion a new conceptualization of burnout was recently proposed: “a work-related state of exhaustion that occurs among employees, which is characterized by extreme tiredness, reduced ability to regulate cognitive and emotional processes, and mental distancing” (Schaufeli, 2021, p. 4). Because all energy has been drained one not only feels extremely tired, but also lacks the energy to

Table 7.1 *Burnout complaints vs. burnout disorder*

	Complaints	Disorder
Discipline	(Occupational health) Psychology	(Occupational) medicine
Assessment	(Multi)dimensional	Diagnosis
Tool	Questionnaire	Clinical interview
Work role	Still working	Sick-listed
Drivers	Primarily work-related	Also non-work-related
Type of intervention	Prevention	Treatment, return to work
Intervention focus	Organization	Individual

effectively regulate cognitive and emotional processes, resulting in cognitive and emotional impairment, respectively. This manifests itself, for instance, in attention and concentration deficits (cognitive impairment) and the inability to control feelings of anger and sadness (emotional impairment). The final constituting element that denotes the motivational dimension of burnout is mental distance, referring to mental withdrawal and psychological detachment from the job. This can be seen as a dysfunctional coping strategy to deal with exhaustion; instead of reducing, it exacerbates exhaustion because it makes the job more stressful.

Seriousness

The fact that burnout may refer to relative mild complaints, which do not prevent employees from working, as well as a chronic disorder, which causes long-term sickness absence, creates quite some confusion. The underlying assumption is that mild complaints will develop into serious symptoms and hence an inability to work. However plausible this assumption may be, scientific evidence for this continuity is lacking. Notably, in a unique prospective cohort among 5,000 workers, burnout scores failed to predict future long-term sickness absence (Roelen et al., 2015). Hence it seems that mild burnout complaints do *not* automatically develop into more serious complaints that lead to long-term sickness absence, most likely because workers recover spontaneously. So, it makes sense to distinguish between burnout *complaints* and burnout as a mental *disorder*. Rather than a continuum, burnout may refer to different phenomena (see Table 7.1).

As shown in Table 7.1 both approaches to burnout differ regarding various aspects and below, we demonstrate that disregarding this distinction may lead to wrong conclusions, for instance about the prevalence of burnout (see the section: “Is there a burnout pandemic?”). Recently, this distinction was also made by Van Dam (2021), who considers complaints to be the result

from short-term stress and proposes to use the term “clinical burnout” for the disorder resulting from chronic stress. Moreover, and in line with the study of Roelen et al. (2015), he argues that the development of clinical burnout should not be regarded as a linear process but – like many biological processes – as a process with qualitative different phases. Finally, he maintains that most research – and hence most of our knowledge on burnout – is based on survey research on mild burnout complaints in relatively healthy, working samples. In conclusion, the fact that the same label “burnout” is used for rather different phenomena is confusing and results in a conceptual muddle.

Work-relatedness

Originally, by definition burnout was considered to be a work-related syndrome, but over time the concept of “work” has been stretched. Currently, burnout is also studied among athletes, volunteers, and students, for instance. Although economically speaking these groups do not work, their activities satisfy the psychological definition of work. That is, they engage in meaningful, structured, goal-directed, and mandatory activities. In contrast, this is not the case for pensioners, homecarers or the unemployed, for instance. Hence, also according to the extended definition they cannot burn out (unless they engage, for instance, in volunteer work). Yet, something keeps nagging because pensioners, homecarers and unemployed people can feel dead tired too. However, this does not result from the *activities* they are engaged in but because they experience a lack of meaning, purpose, structure, and social contacts in their social *role*.

The recently introduced concept of parental burnout, defined as “as a state of intense exhaustion related to one’s parental role” (Mikolajczak et al., 2019, p. 1319) seems to occupy the middle ground. Clearly, parents do not work in an economic sense since they are not paid for bringing up their offspring. But although they occupy a social role their parental “job” may also be characterized as work in psychological terms, as it is a meaningful, structured, goal-directed, and mandatory activity. Even though parental activities vary widely, and goals are usually implicit and long-term in nature instead of explicit and short-term. So, it seems that parents may also feel mentally exhausted, not because they play the parental role as such, but because they engage in parental activities that can be understood as work in a psychological sense.

Seen from a different perspective, it seems that *job* burnout is mainly related to work-related stressors and not to private life stressors, such as negative life-events, as layman discourse sometimes states. Non-work-related stressors are likely to have only a minor role in job burnout but the risk for burnout increases when there are simultaneously chronic stressors both at work and

at home (Hakanen & Bakker, 2017). As a state of energy depletion, burnout actually may increase home-related demands (Hakanen et al., 2008).

Universal

Burnout is not only studied in Western countries but also in the Middle East, Africa, Asia, and Latin America. Interestingly, the order in which the interest in burnout spread around the world seems to correspond to the socio-economic developments of the countries involved, for instance, it emerged in India and China before Africa. Most studies in non-Western countries use the original conceptualization of burnout that was developed in the US. So basically, non-Western burnout studies are replications of those that have been conducted in Western countries and also yielding similar results. Yet, at a more fundamental level Rösing (2003) criticized the concept of burnout as being ethnocentric. She argues that burnout is inherently linked to a job or profession and that these two notions are culture-specific constructs. They only exist in modern industrialized societies and not in traditional, rural, agricultural communities. Therefore, job or professional burnout is intrinsically connected with the former and not the latter. Furthermore, drawing upon the original three-dimensional conceptualization of burnout (Maslach & Jackson, 1981) Rösing (2013) argues that particularly mental distance (depersonalization) and reduced professional efficacy are ethnocentric concepts. The former assumes a typical Western distinction between “me” and “you”, whereas the latter presupposes a Western-style notion of personal achievement. By contrast, exhaustion seems to occur universally. For instance, Rösing (2013) observed in her anthropological field studies among the Quechua and Aymaria Indians from the Andes (Bolivia) and the Ladakhs in the Himalaya (Tibet) that what they called “loss of soul” comes very close to mental exhaustion.

Conclusion

The nature of burnout is still debated beyond the fact that almost universally mental exhaustion is considered its hallmark. Some restrict burnout exclusively to this hallmark, so that its specificity is lost (Schaufeli, 2021). Others in contrast favor a multi-dimensional definition, whereby disagreement exists about the additional constituting elements of burnout. We favor a deductive, theory-based rather than an inductively derived definition because of the inevitable arbitrariness of the nature and number of burnout dimensions that is involved in the latter. In addition, it seems important to discriminate between mild and serious burnout symptoms because instead of a continuum (quantitative difference) it is likely that we are talking about different phenomena (qualitative difference). Finally, in our view burnout is always work-related,

albeit not in the narrow economical but in the broader psychological sense. However, ultimately, the work-relatedness of burnout is a matter of definition as the case of parental burnout illustrates. Taken together, we define burnout as a work-related state of mental exhaustion which is characterized by extreme tiredness, cognitive and emotional impairment, and mental distancing.

IS BURNOUT A MEDICAL DIAGNOSIS?

The answer to this question differs whether it is answered in North America or Europe. Originally, the term burnout was deliberately introduced in North America to avoid medical stigmatization. Burnout was regarded as a normal reaction to an abnormal, demanding work situation. Therefore, in North America burnout is considered in terms of complaints rather than a disorder (see Table 7.1). However, in Europe burnout became part of the socio-medical discourse. The reason is that European welfare states require formal diagnoses as an entrance ticket for social and medical services, such as sickness and work incapacitation pensions, and prevention and treatment programs, which are funded by public resources. Despite the fact that burnout is not included in the Diagnostic and Statistical Manual (DSM-V), an official catalogue that lists all mental disorders, it is officially recognized as an occupational disease in nine European countries, namely: Denmark, Estonia, France, Hungary, Latvia, the Netherlands, Portugal, Slovakia, and Sweden (Lastovkova et al., 2018). Soon this will be the case in Belgium as well. As we have seen above burnout was recently included in the ICD-11, but curiously enough *not* as a medical condition but as an occupational phenomenon. Hence, it seems that the WHO takes neither side in the transatlantic debate; burnout is included in its official list of diseases, but as an occupational phenomenon instead of a medical diagnosis.

Some countries, notably Sweden¹ (Glise et al., 2010) and the Netherlands (Van der Klink & Van Dijk, 2014), issued detailed, officially sanctioned guidelines for health professionals on the assessment, treatment, and prevention of burnout. Healthcare professionals in these countries are assumed to use these guidelines so that burnout patients have access to public medical and social services. The criteria for burnout that are used in these guidelines are discussed in greater detail below and not only include the nature of the symptoms, but also their duration, and the loss of social roles.

From the onset, the relationship between burnout, seen as a disorder (“clinical burnout”) and depression has been debated and this debate still continues. In a way, burnout and depression are considered rival diagnoses. This is not surprising because mental exhaustion plays a prominent role in mood disorder, whereas a depressed mood – the hallmark of mood disorder – is often found in burnout. Roughly, two opposing schools of thought exist; those who believe that burnout and mood disorder are two distinct entities, and those who believe

that both are identical. The latter would imply that the notion of burnout is redundant. It is important to realize that different mood disorders exist; for instance, DSM distinguishes between melancholic, catatonic, and atypical types of mood disorders. It is claimed that burnout would mostly resemble the atypical type (Bianchi et al., 2014). Interestingly, both schools of thought claim scientific evidence for their view. But what are the facts? Almost all psychometric studies show that burnout and depression questionnaires measure something different; technically speaking both load on separate factors (e.g., Glass & McKnight, 1996). Nevertheless, an overlap of 20–50 percent is observed, which is by far not enough to conclude that both concepts are *identical*. For instance, after meta-analyzing 67 studies on burnout and depression (and 34 with anxiety) Koutsimani et al. (2019, p. 14) conclude: “Overall, according to our results burnout and depression and burnout and anxiety appear to be different constructs that share some common characteristics and they probably develop in tandem, rather they fall into the same category with different names being used to describe them”. Indeed, longitudinal studies that follow employees across time either showed that burnout leads to depression and not the other way around (Hakanen & Schaufeli, 2012), or that both influence each other mutually and develop simultaneously in tandem (Hatch et al., 2019). The first finding agrees with the popular generalization hypothesis that initially burnout symptoms are work-related and then spill over to other life domains, resulting in a more generalized depressed mood. The second finding agrees with the notion that burnout and mood disorder are intertwined.

Please note that the previous studies used workers with mild burnout symptoms, rather than those who suffer from burnout disorder. What about the latter? A Finnish study by Ahola and colleagues (2014) showed that 53 percent of burnout patients also satisfied the diagnostic criteria for mood disorder. At first glance this co-morbidity seems to be quite high, yet a systematic review showed that half of primary care patients with a mood disorder also suffer from an anxiety disorder, and vice versa (Hirschfeld, 2001). So rather than an exception, co-morbidity seems to be a quite common psychiatry.

Conclusion

Although burnout was deliberately not introduced as a diagnostic label, it is, in fact, used as an official diagnosis in European welfare states such as Sweden and the Netherlands. We welcome this because by using burnout as a medical diagnosis employees who suffer from it are eligible for specialized treatment, sickness and disability pensions, and welfare programs. Clearly using burnout as a medical diagnosis that refers to a serious, chronic mental condition may cause some miscommunication because in North America “burnout” signifies relatively mild job stress. On balance, it seems that burnout and depression

overlap, but this psychometric, temporal, and clinical overlap is not strong enough to conclude that they are identical. This also meshes with personal communications from numerous health professionals for whom it is obvious that burnout differs from depression (Schaufeli & Verolme, 2022).

HOW TO ASSESS BURNOUT?

As noted earlier, it is essential to distinguish between burnout *complaints* and burnout as a *disorder*. The former can be assessed by self-report questionnaires, whereas for the latter a clinical interview is necessary.

Questionnaires

Various burnout questionnaires exist, of which the Maslach Burnout Inventory (MBI) is by far the most popular; it is estimated that it is used in about 90 percent of all scientific publications (Boudreau et al., 2015). Unfortunately, the MBI does not allow discrimination between burnout cases and non-cases because validated cut-offs for high scores are lacking. This is not surprising since the MBI was developed as a research tool and not as an assessment instrument. Another complication is that instead of a single burnout score, the MBI produces three scores for each of its dimensions: exhaustion, cynicism, and reduced efficacy. Tellingly, the MBI test manual explicitly states: “Note that responses to MBI items should not be combined to form a single ‘burnout’ score” (Maslach et al., 2017, p. 44). In fact, this is odd since burnout is considered a syndrome in the same test manual, which – by definition – denotes a set of related symptoms that refer to the *same* entity. Finally, the MBI is based on an outdated conceptualization of burnout as, on the one hand, it does not include cognitive and emotional impairment (see the section: “What is the nature of burnout?”), whereas on the other hand it includes reduced efficacy, which, rather than being a constituting element, seems to be the consequence of burnout (Schaufeli & Taris, 2005). These are the main reasons that an alternative burnout inventory has been introduced by a team at KU Leuven in which Hans de Witte plays a key-role; the Burnout Assessment Tool (BAT; Schaufeli et al., 2020).

The BAT is based on the conceptualization of burnout that was discussed earlier (see “What is the nature of burnout?”) and includes four subscales: exhaustion, cognitive and emotional impairment, and psychological distancing. So compared with the MBI, the BAT includes two new subscales (i.e., cognitive and emotional impairment), whereas reduced efficacy was deleted. In addition to the original Dutch version, Brazilian, Ecuadorian, Italian, Polish, Japanese, Korean, Portuguese, and Romanian versions have been validated, and the BAT is being used in many more countries.² Most importantly, it

Table 7.2 *Diagnostic criteria for clinical burnout*

1	Physical and mental exhaustion after minimal effort
2	Reduced mental energy, which is expressed by a lack of initiative and the inability for perseverance, poor endurance, and inability to recover
3	Loss of control or ineffectiveness of the usual coping systems
4	Loss of social/work roles for at least 50 percent
5	Distress symptoms (daily) in the following areas Cognitive (lack of concentration, memory deficits, inefficient thinking) Emotional (irritability, instability)
6	Supplemented by (daily) distress symptoms in at least one of the following areas: Sleep Psychosomatic (e.g., chest pain, palpitations, muscle aches, gastro-intestinal problems) Psychological (e.g., dizziness, oversensitivity to stimuli like sounds, tension, nervousness, worrying, inability to relax, gloomy mood)
7	These symptoms should be present for at least six months

appears that the subscales of the BAT are invariant across seven national samples, meaning that they can be used in similar ways across countries (De Beer et al., 2020). Moreover, it appears that the BAT fulfills the measurement criteria according to the Rasch model so that the four subscales can be combined into one overall burnout score (Hadžibajramović et al., 2021). Recently, also a shortened, time-saving 12-item version of the BAT was introduced, which like the original 23-item version works invariantly for older and younger age, women and men, and across countries (Hadžibajramović et al., 2022).

Clinical Interview

For diagnosing burnout as a disorder, a clinical interview is used that might be based on specific guidelines, that are, for instance, available in Sweden and the Netherlands (see the section: “Is Burnout a Medical Diagnosis?”). The diagnostic criteria for burnout in both countries largely overlap and are displayed in Table 7.2.

If employees satisfy the criteria that are shown in Table 7.2, they are considered to suffer from burnout disorder.³ The first two criteria are seen as the most distinctive for burnout. In addition to the inclusion criteria listed in Table 7.2, two additional exclusion criteria are used: (1) psychiatric disorder such as mood disorder, anxiety disorder, PTSD, chronic fatigue syndrome, or fibromyalgia; and (2) the symptoms should not be due to substance abuse, medication, or a somatic disease (e.g., diabetes, hyperthyroidism, or arthritis). These diagnostic inclusion and exclusion criteria were also used for establishing clinically validated cut-off scores of the BAT. More specifically, cut-off

values were determined in such a way that they differentiate optimally between a healthy group without burnout symptoms and a group with burnout disorder that satisfies the diagnostic criteria for clinical burnout (Schaufeli et al., 2020).

Conclusion

Although burnout complaints can be measured by the MBI at group level, this tool cannot be used to assess burnout at the individual level because clinically validated benchmarks are lacking. Moreover, because the MBI is outdated the BAT has been introduced as an alternative burnout measure. The first psychometric results with the BAT are very promising but more research on the concurrent validity vis-à-vis the MBI is needed. Diagnostic criteria for severe burnout exist that are being used in some countries in clinical interviews to assess burnout disorder. It seems that – as expected – those who suffer from burnout disorder have higher scores on the BAT than, for instance, those with mood disorder (Schaufeli et al., 2022).

IS THERE A BURNOUT PANDEMIC?

The term “burnout” appeared on the scene in the late 1970s, although many examples of burnout *avant-la-lettre* exist. Particularly interesting is the resemblance with neurasthenia – literally “nerve weakness” – that emerged at the end of the nineteenth century and was seen at the time as the result of modern, hectic life (Schaufeli, 2017). Continuous overstimulation by phone, telegraph, newspapers, and trains, weakened the nerves and resulted in mental exhaustion, it was reasoned. The parallel with burnout is striking because today’s burnout is thought to result from modern, hectic life as well embodied by the 24/7 economy, social media, mobile phones, and the internet. If the popular media are to be believed, currently a burnout pandemic exists. But is that true?

Burnout Complaints

Unfortunately, no trustworthy data exists that documents the prevalence and development of burnout over the years. For instance, using the MBI with various thresholds and definitions in a sample of nearly 7,000 US surgical residents, Hewitt et al. (2020) found that between 3.3 percent and 91.4 percent suffered from burnout. In a similar vein, a meta-analysis of 56 MBI-studies among European physicians found that between 2.5 percent and 72 percent suffered from burnout (Hiver et al., 2022). Such results are not credible for two reasons because; (1) the variation is too high for a reliable estimation of the burnout prevalence; and (2) these high prevalences are unlikely because healthcare would collapse when most physicians would suffer from burnout.

Once more, these studies illustrate that the MBI cannot be used for estimating the prevalence of burnout complaints since it depends on the chosen arbitrary threshold.

When it comes to the development of burnout across time, virtually no information exists. The closest we can get involves data from the Dutch annual working conditions survey that monitors levels of work-related exhaustion since 1997, using a national representative sample of the national workforce. In the first decade or so the rate of exhaustion fluctuated around 10 percent, after which an increase is observed amounting to 17 percent in 2019 (Schaufeli & Verolme, 2022). The increase has particularly occurred in women aged between 25 and 35 years. It is interesting to note that during the Covid pandemic in 2020 exhaustion rates *fell* by 1.3 percent compared to the pre-Covid year before. The highest prevalence was observed in education (21 percent), information and communication (18 percent), and healthcare and social services (17 percent). Although it is clear that burnout complaints – or more precisely feelings of exhaustion – are steadily increasing over the years, the true prevalence of burnout remains unclear. First, instead of burnout only work-related exhaustion is assessed and second, a rather liberal and not clinically validated cut-off is used identifying cases. Using the BAT with more rigorous and clinically validated cut-offs it is estimated that 12–13 percent of the Dutch working population suffers from more severe burnout complaints (Schaufeli et al., 2020).

In Finland the prevalence of burnout in the general working population was assessed in 1997, 2000 and 2011 with the MBI, and starting from 2019 with the BAT. Burnout was more common in 1997 than in 2000 and 2011. In 1997, 7 percent reported severe burnout and 48 percent mild burnout, whereas the corresponding figures in 2000 and 2001 were around 2.5 percent and 25 percent, respectively. It may be that the higher prevalence of burnout in the late 1990's was due to the economic recession that hit Finland harder than most other Western countries. An ongoing follow-up study with the BAT that started in 2019 investigates the impact of the Covid pandemic. Preliminary results suggest that 6.6 percent of the Finnish working population suffers from severe burnout and 12 percent from mild burnout complaints. Moreover, levels of burnout did not increase up to 1.5 years after the outbreak of the pandemic (Kaltainen & Hakanen, 2022).

Burnout Disorder

Another source of information are reports by occupational physicians of burnout as an occupational disease (Schaufeli & Verolme, 2022). From 1999 till 2011 the rate of occupational mental disease remained rather stable at about 20 percent, but then it increased to over 60 percent of all occupational diseases

in 2020. Currently, mental disorders are the most common occupational disease, followed by musculoskeletal diseases and hearing disorders, respectively. However, despite the relative increase of mental diseases compared to other diseases in the past decade, the *proportion* of burnout remains relatively stable among those with mental diseases at 75–80 percent. In absolute numbers 1,329 burnout cases were reported by occupational physicians in 2020 – 25 percent *less* than in the pre-Covid year 1999. Most likely this is the tip of the iceberg because not all employees have an occupational physician and not all occupational physicians report burnout cases to the national register – although by law they should. Taking underreporting into account, it has been estimated that the annual number of employees suffering from burnout disorder is about 6,000, which corresponds with less than 1 percent of the Dutch workforce (Houtman, 2020).

Strictly speaking, there is little to nothing to say about the occurrence of burnout across countries. To be able to make a meaningful comparison, the same reliable and valid instrument must be used in various nationally representative samples with the same cut-off value. To date no such research exists. In Scandinavian countries such as Norway, Sweden and Finland, large-scale surveys on burnout have been conducted, but these focus on specific regions or professional groups and use different questionnaires and cut-off values. Nonetheless, it is striking that one of the better designed studies estimates the prevalence of burnout in Northern Sweden at 13 percent, slightly lower but in the same range as in the Netherlands (Norlund et al., 2010).

Conclusion

Burnout is *not* typical of our time, as suggested by the historical parallel with neurasthenia. Contrary to what the popular press wants us to believe there is *no* burnout pandemic and studies that suggest otherwise are untrustworthy. The most reliable estimates come from the Dutch annual working conditions survey, which shows an increase in burnout complaints during the last decade. Currently 17 percent of Dutch and 12 percent of Finnish employees report mild burnout complaints, which is too low to speak of a pandemic, particularly because the threshold for burnout complaints is rather low. Besides it is estimated that only about 1 percent of the Dutch workforce suffers from burnout disorder (occupational disease) which comes close to the 2.5 percent in Finland that experiences severe burnout. Tellingly, it seems burnout complaints as well as burnout disorders did *not* increase during Covid (2020). To date, with the exception of Finland and the Netherlands, virtually nothing can be said with certainty about the occurrence of burnout across countries. In fact, this is quite astonishing 40 years after the introduction of the concept.

IS BURNOUT ROOTED IN THE PERSON AND THE BODY?

From the onset it was hypothesized that burnout is related to personality, as it was observed that those suffering from burnout complaints were characterized by diligence and perfectionism, for instance. Also, particularly laymen assume that burnout is – in one way or another – rooted in the body. The debate about the biological nature of burnout is intimately linked with legitimacy of the concept itself. For many, burnout exists to the extent that it is associated with objective biological features. They have internalized biomedical thinking that doesn't allow them to accept that people may suffer from psychological distress unless it can be objectified by the readings of any instruments. It is therefore not surprising that the general opinion is that with burnout the biological balance is disturbed; it is argued that burnout is not so much mental, but mainly physical.

Personality

There have been quite a few studies on the relationship between burnout and personality. A meta-analysis comprised over 100 studies, from which a fairly consistent picture emerges; the Big Five personality traits explain 25–30 percent of the variance in burnout (Swider & Zimmerman, 2010). By far the most important trait is neuroticism, also called emotional instability, followed by extraversion and to a lesser degree conscientiousness. The remaining two traits, agreeableness and openness to experience, hardly matter. Hence, those with burnout complaints are emotionally unstable and not extraverted. Another meta-analysis (Alarcon et al., 2009) adds that those high in burnout also have low levels of self-esteem and self-efficacy and feel dependent from others or from the situation (external locus of control). This meta-analysis also found positive relationships of burnout with perfectionism, and negative relationships with optimism and personal initiative.

The Body

Large epidemiological studies suggest a link between burnout complaints and cardio-vascular disease (Melamed et al., 2006) and common infections (Mohren et al., 2003), for instance. This could indicate an underlying biological mechanism, such as an excessive production of blood lipids and a less effective immune system, respectively. However, a recent meta-analysis of over 30 studies that included almost 40 different biomarkers, including blood lipids and immune parameters, concluded that, "... no potential biomarkers

for burnout were found” (Danhof-Pont, 2011, p. 505). For instance, in spite of the popular belief, no difference was found in the level of the stress hormone cortisol in those with and without burnout. These disappointing results were corroborated in a more recent review that focused on the dysregulation of the hypothalamus-pituitary-adrenal (HPA) axis (Jonsdottir & Dahlman, 2019). This review concludes likewise that: “... research cannot confirm any homologous reliable endocrinological or immunological changes related to burnout” (p. 147).

However, indications have been found in some fMRI studies of reduced activity of certain areas of the brain in people with burnout complaints (e.g., Tei et al., 2014). This concerns areas of the brain that have to do with empathy or with certain cognitive functions. Apart from the fact that there are still very few studies on the subject, the chicken-or-the-egg problem remains unresolved: is burnout caused by impaired brain activity or does burnout cause certain areas of the brain to work differently?

Conclusion

When it comes to burnout personality matters, particularly less emotionally stable people are more likely to develop burnout complaints. However, lack of emotional stability is not specific for burnout, as it is also a risk factor for all sorts of other problems such as addiction, psychoses, affective disorders, and medically unexplained symptoms. Furthermore, it seems premature to assume that there is a biological substrate of burnout, albeit that burnout can lead to certain diseases. Some indications exist that burnout symptoms are associated with reduced activity in certain areas of the brain, but cause and effect still need to be disentangled.

ARE BURNOUT INTERVENTIONS SUCCESSFUL?

Throughout the years, an entire burnout industry emerged with countless suppliers of various, sometimes the most esoteric interventions, such as Tibetan singing bowls. Compared to the size of this industry, the evidence base of burnout interventions is relatively limited.

In principle, burnout can be targeted at the individual, team, and organization level. The vast majority of interventions are aimed at the individual, probably because interventions are more difficult to implement at both other levels since they interfere with organizational practices. Moreover, by far, most interventions focus on the prevention of burnout complaints among working employees, rather than the treatment or rehabilitation of those with a burnout disorder. In addition to the relatively small number of intervention studies,

they often lack a proper design; for instance, a non-intervention control group is lacking.

Burnout Complaints

Among the thousands of burnout studies, at most a few dozen well-designed intervention studies exist that qualify for meta-analyses. Yet, the results from various meta-analyses are highly consistent, though; burnout interventions have a statistically significant, yet small *positive* effect, with effect sizes around 0.20. For instance, a meta-analysis of Maricuțoiu and colleagues (2014), including almost 50 studies, showed the strongest effect for relaxation, followed by learning new role behaviors and cognitive-behavioral interventions, such as changing dysfunctional thinking patterns and gradual exposure to demanding situations. Another meta-analysis (Iancu et al., 2018) found positive effects in teachers for mindfulness, stimulating professional development, and learning to organize social support. Generally speaking, effects of person-centered interventions are stronger than for organization-centered interventions. Typically, both meta-analyses focused on those with mild burnout symptoms who are still at work.

Burnout Disorder

Today, only a single review is available of interventions for those with burnout disorder that includes almost 20 studies, of which only four are adequately designed and qualify for a meta-analysis (Ahola et al., 2017). Unfortunately, none of these studies showed a significant decrease in burnout symptoms in the intervention group compared to the control group.

Return to Work

In addition to a decrease in burnout symptoms it is, of course, also important that burned-out employees return to work. A meta-analysis also shows a somewhat disappointing picture regarding work resumption (Perski et al., 2017). First, only eight eligible studies could be included that satisfied quality criteria and second, *no* intervention effect was observed for full return to work. Whether employees received specific burnout treatment, were on the waiting list, or received “treatment as usual” did not matter for *full* resumption of work. However, compared to the control group, those who received burnout treatment *partially* returned to work somewhat sooner. Strikingly, burnout, anxiety and depression complaints did *not* significantly decrease as a result of the intervention, which indicates that work resumption and symptom reduction are two different things that do not necessarily go together.

Recently, a systematic review of ten interventions studies that focused on return to work *as well as* symptom reduction drew a somewhat more optimistic picture (Pijpker et al., 2020). Most likely this is because half of the studies did not include a proper non-intervention control group. It appeared that *all* interventions were effective – at least to a certain extent – in facilitating return to work. With regard to symptom reduction, the combined interventions also led to greater improvement in both the short term (after four months) and the long term (after 12 months).

Conclusion

Most striking is the paucity of high-quality intervention studies, which are predominantly aimed at the person and not at the job, the team, or the organization. Relatively mild burnout complaints seem to decrease as a result of person-centered interventions, such as relaxation, mindfulness, and cognitive-behavioral approaches. For people with severe burnout complaints, things look less promising, though. Interventions that exclusively focus on work resumption are successful in promoting partial instead of full return to work. There are some indications that combined interventions which focus on symptom reduction as well as work resumption might be successful in achieving both goals. Yet, some caution is warranted because many of the reviewed combined interventions did not include a control group.

OUTLOOK – HOW TO SOLVE THE PARADOX?

In spite of the countless scientific publications on burnout that have appeared in the past half century, most burning questions could only be answered preliminarily. Table 7.3 below displays an overview that also includes proposed actions, particularly as far as future research is concerned.

The fact that plentiful research on burnout exists but that many questions still wait for a final answer illustrates the paradox of burnout between quantity and quality. How is it possible that so much research about burnout has been carried out over the years and yet relatively little is known? We believe that three reasons can be identified for that.

First, there is no agreement about what burnout really is, except that it refers to a state of mental exhaustion (see the section: “What is the nature of burnout?”). In the absence of a credible alternative, the definition that is implied in the MBI came to be *the* definition of burnout. But this circularity does not solve the problem, despite the fact that the WHO recently adapted the definition of burnout that is implied in the MBI. What adds to the confusion is that this tool does not yield a total burnout score so that as a stopgap measure, work-related exhaustion is often used as *pars pro toto* for burnout. However,

Table 7.3 Summary of burning questions, answers, and actions

Burning question	Preliminary answer	Proposed action
What is the nature of burnout?	No agreement exists beyond that burnout is a state of mental exhaustion.	Full agreement may be an illusion, yet a theory-based conceptualization was proposed that might spur future research.
Is burnout a medical diagnosis?	The scientific community is not completely convinced that burnout can – and should – be considered a psychological disorder as well.	Practitioners in Europe consider burnout as a disorder and scholars should follow suit.
How to assess burnout?	Burnout complaints can be assessed with questionnaires, and burnout disorder with a clinical interview.	Research should focus more on the use of diagnostic guidelines and clinical interviews.
Is there a burnout pandemic?	No burnout pandemic exists, particularly not when it comes to burnout disorder.	Improvement of deteriorating working conditions is key for prevention of mild burnout complaints.
Is burnout rooted in the person and the body?	Burnout is related to personality characteristics but not to biomarkers.	Instead of research on popular personality models (Big 5), brain research and rigorous psychophysiological research.
Are burnout interventions successful?	Individual-based interventions for mild burnout complaints are successful.	Strong focus on team- and organization-based interventions and on interventions for burnout disorder.

this is a dead-end street since burnout is more than mere occupational fatigue or exhaustion, as was argued above. As a result, much of our knowledge of burnout is limited to exhaustion. For instance, the distinctive annual Dutch Working Conditions survey has monitored work-related exhaustion and not burnout for more than two decades. Future research using the BAT might increase our knowledge of burnout.

Second, virtually all research focuses on burnout complaints and not on burnout as a psychological disorder. As is illustrated throughout this chapter, both are very different phenomena that should not be interchanged. The former refers to work-related stress symptoms, from which most people recover spontaneously or continue to work with. The latter refers to severe, chronic, and disabling symptoms that are associated with long-term sickness absence. Historically speaking the metamorphosis from job stress to disorder occurred when the concept of burnout crossed the Atlantic. As a result, almost

all research on severe burnout was carried out in Europe, most notably in Scandinavia and the low countries (the Netherlands and Belgium). However, European findings on burnout disorder are also interesting for North America. Severe burnout also exists there but may be less visible than in Europe because no public welfare and healthcare system exists for which an entry ticket is required in the form of an officially sanctioned medical diagnosis.

Finally, there is a pragmatic and perhaps even trivial reason why many questions about burnout have not been answered conclusively so far. Researchers often choose the path of least resistance. Carrying out prospective longitudinal research using representative samples or controlled intervention studies among those suffering from clinical burnout, takes much more time and effort than cross-sectional research on burnout symptoms using readily available convenience samples of healthy employees. There is plenty of such easy-to-do burnout research so that we propose a moratorium on one-shot studies about possible antecedents and consequences of burnout because that does not add to our knowledge. In a similar vein, we should also stop studying the prevalence of burnout using unvalidated cut-off values and convenience samples. Epidemiological research only makes sense when clinically validated test norms and representative samples are used. The time and effort that is saved by refraining from this type of easy-to-do research can be much better spent by investigating burnout disorder – including its assessment, biological substrate, epidemiology, and interventions.

How do we solve the quantity–quality paradox of burnout research? We feel that this can only be done by returning to the drawing board, and armed with our current empirical and theoretical knowledge, reflect on the concept of burnout and its assessment, as we have tried to do in this chapter. In doing so it is crucially important to acknowledge the distinction between mild burnout complaints and burnout disorder.

NOTES

1. Clinical burnout is referred to as “stress-related exhaustion disorder”.
2. For more information see: www.burnoutassessmenttool.be.
3. In the Dutch guidelines two other, less severe diagnoses are distinguished; job stress and overstrain (surmenage). The former does not include criteria four and seven and instead of distinctive core symptoms, exhaustion and reduced mental energy are considered on equal terms with other distress symptoms. The latter does not include criterion seven.

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