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Brief Communication

Burnout Syndrome: Clinical Diagnostic Challenges and Difficulties in Establishing Work-Related Causation in Forensic Practice

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Burnout syndrome: clinical diagnostic challenges and difficulties in establishing work-related causation in forensic practice

Running title: Burnout: clinical and forensic challenges

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Abstract

Objective: To critically examine the conceptual, diagnostic, and forensic dimensions of burnout, with emphasis on its nosological status, symptom validity, and challenges in establishing occupational causation.
Methods: This study was conducted as a narrative review because the objective was to provide a conceptual and forensic synthesis rather than estimate pooled effects. The literature search was performed in PubMed/MEDLINE, Embase, PsycINFO, and Scopus. Searches included publications in English, Portuguese, and Spanish from January 1974 to March 2026 using combinations of the following keywords: burnout, occupational burnout, burnout syndrome, depression, occupational stress, forensic psychiatry, causation, occupational disease, malingering, symptom validity, work-related mental disorders, and ICD-11.

Results: The literature demonstrates ongoing debate regarding the classification of burnout as a distinct nosological entity, an occupational subtype of depressive disorders, or a work-related stress syndrome. Significant overlap with depressive symptomatology has been reported, although occupational context remains a defining feature in most contemporary models. In forensic settings, the assessment of burnout-related claims is complex and requires careful consideration of symptom validity, including malingering, symptom exaggeration, secondary gain, and compensation-related phenomena. The establishment of occupational causation is further challenged by multifactorial and probabilistic models of disease, as well as by the application of epidemiological criteria such as those proposed by Bradford Hill. Psychometric instruments may support evaluation of response validity and symptom consistency, but must be interpreted within a broader clinical and contextual framework.

Conclusions: Burnout remains a concept with evolving boundaries and significant diagnostic and forensic implications. A comprehensive assessment requires integration of clinical evaluation, structured psychometric tools, and contemporary models of causal inference. Greater conceptual clarity is needed to improve diagnostic consistency and enhance the reliability of forensic determinations in occupational contexts.

Keywords : burnout; CFM Resolution No.2.323/2022 ;anxiety; depression ; occupational distress.

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Introduction

Burnout is a condition of psychological distress related to work. The term burnout was first used in 1974 by the German psychologist Herbert Freudenberger, who described a condition observed in young workers at a drug addiction clinic in New York City, United States. He defined burnout as a deterioration in mood, with physical and psychological symptoms leading to exhaustion, caused by demanding working conditions (physical, emotional, and psychological), resulting in emotional stress and chronic stress.[1]

It was the American psychologist Christina Maslach (1976) who defined burnout syndrome and established the conceptualization with the greatest

academic impact and acceptance, defining it as a syndrome of emotional exhaustion, depersonalization, and low personal accomplishment, occurring in individuals whose work requires contact with people, especially when this activity is considered to involve helping others (physicians, nurses, teachers, etc.).[2] Emotional exhaustion is characterized by intense fatigue and lack of energy to fulfill work obligations. The professional feels drained, with little energy available for the next workday, and with the impression of being unable to recover. Depersonalization is a term derived from sociology. It refers to excessive emotional distancing, with coldness and indifference toward the needs of others. Common manifestations include anxiety, irritability, loss of motivation, reduction of goals, and lack of commitment to work. In this context of occupational deterioration, personal and professional accomplishment becomes severely compromised, with frustration and feelings of incompetence and failure.[3]

A systematic review identified 142 different definitions of burnout among physicians, illustrating the marked heterogeneity of the construct[4]. Reported manifestations include reluctance to attend work, stress-related somatic complaints (e.g., headache, insomnia, muscle tension), fatigue, apathy, irritability, impaired concentration, procrastination, reduced productivity, disillusionment, abandonment of professional goals, and interpersonal conflicts in the workplace[5]. These findings underscore the absence of universally accepted diagnostic criteria and contribute to the considerable variability observed across epidemiological studies.[4,6-7]

The prevalence of burnout in the general population has not been robustly established in the literature, as the construct is defined as an occupational phenomenon and does not have universally standardized diagnostic criteria. Available estimates are mainly derived from specific occupational populations with wide methodological variability, while general population studies often use proxy outcomes, such as fatigue and psychological distress. Rotenstein et al.[4] demonstrated that the prevalence of burnout among physicians varies widely in the literature, with estimates ranging from 0% to 80.5%, reflecting substantial methodological heterogeneity and a lack of standardized diagnostic criteria.

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From an economic perspective, burnout is associated with considerable direct and indirect costs, including increased absenteeism, presenteeism, staff turnover, and reduced productivity, all of which contribute to substantial financial burden on healthcare systems and employers[8]. More recently, Bianchi and colleagues have reinforced this concern by demonstrating substantial overlap between burnout and depressive disorders, suggesting that many individuals diagnosed with burnout may actually fulfill diagnostic criteria for depression[9].

Contemporary work environments impose additional cognitive demands through pervasive digital distractions, including e-mails, instant messages, notifications, and multitasking. Frequent interruptions and task switching can fragment sustained attention, increase cognitive load, and produce “attention residue,” potentially impairing subsequent performance. In high-demand occupational settings, this digitally mediated cognitive burden may represent an additional contemporary stressor contributing to burnout[10]

In addition, the medicolegal relevance of burnout has gained increasing attention, as it is linked to higher risk of clinical errors, compromised patient safety, and potential liability implications for institutions and professionals. These dimensions collectively position burnout as not only a clinical and occupational concern but also a significant public health, economic, and medico-legal issue requiring systemic interventions at organizational and policy levels.[8]

This conceptual heterogeneity has important implications not only for clinical diagnosis but also for forensic psychiatric evaluations, in which diagnostic uncertainty may directly influence disability determinations, compensation claims, and the establishment of occupational causation.

Considerable overlap exists between burnout and anxiety and depressive disorders, making differential diagnosis one of the greatest challenges in clinical practice. Although some individuals with burnout may retain the capacity to experience pleasure in non-work-related activities, exhibit symptom improvement during weekends or vacations, and report psychological distress more specifically linked to occupational demands, these features are neither universal nor sufficiently specific to distinguish burnout from major depressive disorder. Current evidence suggests that clinical evaluation should consider symptom severity, functional impairment across multiple life domains,

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longitudinal course, and the presence of depressive cognitions rather than relying solely on individual symptoms.[9, 11-12]

Table 1 Clinical and contextual features distinguishing burnout from major depressive disorder

Aspect	Burnout	Major Depressive Disorder
Primary context	Work-related	Pervasive across multiple life domains
Anhedonia	Usually limited or context-dependent	Marked and generalized
Feelings of guilt	Less prominent and often realistic	Frequent and often excessive
Symptom improvement during time away from work	Commonly reported	Less frequent
ICD-11 status	Occupational phenomenon	Mental disorder

Note. This table summarizes selected clinical and contextual features that may assist in differentiating burnout from Major Depressive Disorder (MDD). The parameters include the predominant context of symptoms, pattern of anhedonia, characteristics of guilt, symptom variation during periods away from work, and classification status in the *International Classification of Diseases, 11th Revision* (ICD-11)[13]. These features should not be interpreted as standalone diagnostic criteria, and clinical overlap between burnout and depressive symptoms may occur. Burnout is classified in ICD-11[13] as an occupational phenomenon rather than a medical condition, whereas Major Depressive Disorder represents a mental disorder requiring assessment according to established diagnostic criteria.

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Methods

This study was conducted as a narrative review because the objective was to provide a conceptual and forensic synthesis rather than to estimate pooled effects. The literature search was performed in PubMed/MEDLINE, Embase, PsycINFO, and Scopus for publications in English, Portuguese, or Spanish published between January 1974 and March 2026. The search strategy combined terms using the Boolean operators AND and OR. The core search string was: (“burnout” OR “occupational burnout” OR “burnout syndrome”) AND (“depression” OR “occupational stress” OR “work-related mental disorders”) AND (“forensic psychiatry” OR “causation” OR “occupational disease” OR “malingering” OR “symptom validity” OR “ICD-11”). Additional searches combined the burnout terms with each of the forensic and occupational terms individually to identify relevant studies that might not have been retrieved by the core search.

Studies were included if they addressed burnout in relation to occupational stress, depressive disorders, work-related mental disorders, diagnostic classification, causation, functional impairment, malingering, symptom validity, or forensic assessment. Original studies, systematic and narrative reviews, meta-analyses, consensus or guideline documents, and relevant official publications were considered. Studies were excluded if they were not published in English, Portuguese, or Spanish; did not substantively address burnout or its occupational, clinical, or forensic implications; focused exclusively on unrelated psychiatric or medical conditions; or consisted solely of conference abstracts, editorials, letters, or other publications without sufficient substantive information for the objectives of this review. Reference lists of relevant articles were also screened to identify additional eligible publications.

Additional references were identified through manual searches of the reference lists of relevant articles and international guidelines. Studies discussing clinical diagnosis, epidemiology, differential diagnosis, forensic assessment, occupational causation, burnout-depression overlap, ICD-11[13] classification, and medicolegal aspects were preferentially included. Editorials without substantial scientific discussion, duplicate publications, and studies unrelated to occupational mental health were excluded. After applying the

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predefined eligibility criteria and completing the screening process, 36 articles were included in the final narrative synthesis**.**

Results

The reviewed literature shows that burnout is a clinically relevant but conceptually heterogeneous construct. Despite its widespread use, no universally accepted diagnostic criteria or specific biological markers are available[6]. Instruments such as the Maslach Burnout Inventory are useful for research purposes but are insufficient for diagnosis when used in isolation.[6]

The growing relevance of burnout in clinical practice and occupational health gained new momentum after its inclusion in the World Health Organization International Classification of Diseases (ICD-11)[13]. In ICD-11[13], burnout was not classified as a mental disorder, but rather as an occupational phenomenon related to work, described as a syndrome resulting from chronic workplace stress that has not been successfully managed.[3] The definition includes three dimensions: feelings of energy depletion or exhaustion, increased mental distance from one's job or feelings of negativism and cynicism related to work, and reduced professional efficacy. The WHO emphasizes that burnout refers specifically to the occupational context and should not be used to describe experiences in other areas of life[13].

The literature also demonstrates that establishing a causal nexus between work and psychological illness is complex. Non-occupational factors, including personality vulnerabilities, family stressors, financial difficulties, and traumatic experiences, may significantly contribute to symptom development.[4] In Brazil, CFM Resolution No. 2.323/2022 states that physicians must not determine a work-related causal nexus solely on the basis of patient reports or clinical symptoms.[14] Instead, occupational history, epidemiological evidence, scientific literature, reports of similarly exposed workers, and analysis of workplace and organizational conditions must be considered.[14]

Although burnout has gained increasing international recognition, important differences remain regarding its conceptualization and occupational recognition across countries, as summarized in Table 2.

International approaches to the occupational recognition of burnout vary considerably, reflecting differences in legal, compensation, and occupational

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health frameworks. In Spain, burnout may be recognized as an occupational contingency under specific circumstances, whereas in Germany claims are generally assessed on a case-by-case basis and affected workers may instead receive diagnoses such as depression or adjustment disorder. Canada shows additional heterogeneity because workers' compensation systems are administered provincially, resulting in jurisdiction-dependent approaches. In the United Kingdom, burnout is primarily addressed within occupational health and work-related stress frameworks rather than recognized as an independent diagnosis. Colombia adopts a broader regulatory approach by incorporating occupational psychosocial risk factors into its occupational health framework. These discrepancies demonstrate that the medico-legal significance of burnout depends not only on its clinical presentation but also on the regulatory and compensation framework of each jurisdiction (15–24).

Table 2. Recognition of burnout as an occupational condition in selected countries

Country	Burnout recognition
Spain	Occupational contingency under certain circumstances[15,16]
Germany	Case-by-case evaluation; frequently diagnosed as depression or adjustment disorder[17,18]
Canada	Provincial variability in workers' compensation systems1[19,20]
United Kingdom	Managed through occupational health frameworks rather than as an independent diagnosis[21,22]
Colombia	Recognition within occupational health and psychosocial risk regulations[23,24]

Forensic challenges: symptom validity and malingering

Forensic assessment requires a comprehensive and methodologically rigorous approach. Diagnostic evaluation should include detailed occupational history, chronology of symptoms, assessment of workplace organization,

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predisposing personal factors, psychiatric comorbidities, and objective data such as medical records, prior sick leaves, and functional impairment.[11]

Objective data and a detailed occupational history are particularly important in high-demand environments, where exposure to intense physical and psychological stressors can be systematically documented. Police training provides a relevant example: Dhahbi et al.[25] reported that 41.4% of 979 male police cadets sustained at least one musculoskeletal injury during the initial training phase, with most injuries occurring between weeks 2 and 5. The authors emphasized the value of monitoring training load and integrating subjective and objective assessments to identify occupational demands and adverse outcomes. In forensic evaluations, such evidence illustrates the importance of examining documented workload, training intensity, temporal relationships, medical records, and functional consequences rather than relying exclusively on self-reported symptoms when assessing the relationship between occupational exposure and health outcomes.

The clinical and diagnostic challenges associated with burnout have important implications for forensic assessment. The overlap of burnout symptoms with depression, anxiety, and other stress-related conditions, together with the absence of a universally accepted diagnostic definition, may complicate the attribution of symptoms and functional impairment to occupational factors. These difficulties become particularly relevant in medico-legal settings, where conclusions may affect disability claims, compensation, or occupational disputes. Accordingly, forensic assessment must extend beyond clinical diagnosis to evaluate the validity, consistency, and longitudinal course of reported symptoms.

In forensic psychiatric evaluations, symptom validity therefore represents a critical aspect of the assessment. Clinicians should consider the possibility of symptom exaggeration or malingering without assuming that claimants intentionally fabricate symptoms. Evaluation should include consistency analyses, collateral information, longitudinal medical documentation, and standardized psychometric instruments when appropriate. Secondary gain may influence symptom presentation, particularly in compensation settings.[26]

Several psychometric instruments may contribute to forensic assessment, although none should be interpreted in isolation. Instruments

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commonly employed include the Minnesota Multiphasic Personality Inventory-3 (MMPI-3)[27], the Personality Assessment Inventory (PAI)[28], the Structured Inventory of Malingered Symptomatology (SIMS)[29], and the Structured Interview of Reported Symptoms-2 (SIRS-2)[30]. These instruments assist in evaluating symptom validity, response consistency, and possible feigning while complementing clinical judgment.

Discussion

Burnout occupies a unique position between clinical psychiatry and forensic psychiatry. Its recognition as an occupational phenomenon in ICD-11 reinforces its relevance in clinical practice and occupational health.[13] However, the lack of specific biomarkers, the absence of universally standardized diagnostic criteria, and the significant overlap with depressive and anxiety disorders continue to generate controversy.[7-9]

In clinical practice, careful differential diagnosis is essential to avoid misclassifying major depressive disorder or other psychiatric conditions as burnout. In forensic and occupational settings, the challenge is even greater because conclusions regarding work-related causation may have important legal and social security consequences, including compensation claims, occupational benefits, temporary job stability, and employer liability.[26]

In forensic and occupational medicine, establishing causal relationships between exposure and health outcomes is a complex and inherently probabilistic task. Contemporary causal inference moves beyond simplistic single-cause explanations and is grounded in multifactorial and multilevel models.[31]

Multifactorial causation recognizes that most health conditions arise from the interaction of multiple determinants, including biological vulnerability, environmental exposures, and psychosocial factors. In this framework, no single factor is considered sufficient on its own, but rather part of a broader causal network.[31] Recent conceptual models further emphasize the interaction between chronic stress, circadian disruption, sleep disturbances, and neuroendocrine responses. Dhahbi et al.[32] proposed a tripartite circadian-neuroendocrine framework in which concurrent stressors may interact to disrupt sleep architecture, hormonal regulation, metabolic function, and recovery

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processes. Although originally developed for athletes exposed to extreme environmental stress, this hypothesis-generating model illustrates how multiple stressors may converge through interconnected biological pathways, providing a useful framework for understanding individual vulnerability to chronic occupational stress and potentially burnout.

Probabilistic causation further emphasizes that causal relationships are not deterministic but expressed in terms of increased risk or likelihood of an outcome. This perspective is particularly relevant in occupational settings, where exposures contribute to disease development in a non-uniform and dose-dependent manner across individuals.[31]

Occupational causation rarely follows a deterministic model. Contemporary forensic medicine recognizes multifactorial causation, in which occupational, personal, biological, and psychosocial factors interact. Consequently, work may represent a contributory rather than exclusive cause of illness. The Bradford Hill considerations[33], although originally developed for epidemiology, remain useful in evaluating causality by examining temporality, biological plausibility, consistency, strength of association, and coherence with available scientific evidence. Therefore, forensic opinions should avoid simplistic attributions of causality based exclusively on temporal association.

Contributory causation is widely used in forensic practice to determine whether a given exposure meaningfully contributed to the development or aggravation of a condition, even if it was not the sole or primary cause. This approach is especially relevant in legal contexts where partial causation may still have compensatory implications.[34]

Finally, the distinction between necessary and sufficient causes is central to modern epidemiological reasoning. A necessary cause is one that must be present for the outcome to occur, whereas a sufficient cause is a complete set of conditions that inevitably produces the outcome. Most occupational health conditions are understood as resulting from sufficient-component cause complexes rather than single necessary causes.[31]

An ongoing debate concerns whether burnout constitutes an independent nosological entity or represents an occupational manifestation of depressive disorders. Bianchi and colleagues[9] have consistently argued that burnout substantially overlaps with depression across symptomatology, biological

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correlates, cognitive profiles, and treatment response. According to this perspective, burnout may be better conceptualized as a work-attributed depressive condition rather than a distinct psychiatric syndrome. Conversely, other investigators maintain that burnout possesses sufficient contextual specificity to justify its conceptual distinction, particularly following its inclusion in ICD-11[13] as an occupational phenomenon rather than a mental disorder.

A critical examination of the burnout construct reveals an ongoing international debate regarding its nosological status and conceptual boundaries. Burnout has been variously interpreted as a distinct clinical entity, an occupationally specific manifestation of depressive pathology, or a work-related stress syndrome that reflects chronic exposure to occupational stressors without constituting a discrete psychiatric diagnosis.[3,13] From one perspective, burnout is considered a syndrome confined to the occupational context, characterized primarily by exhaustion, mental distancing from work, and reduced professional efficacy, as described in the ICD-11[13] classification. Alternatively, several authors argue that burnout substantially overlaps with depressive disorders, particularly in relation to affective, cognitive, and somatic symptoms, raising questions about its diagnostic independence.[9] A third perspective conceptualizes burnout as part of a broader continuum of work-related stress responses, emphasizing organizational determinants and the role of chronic occupational strain in its development.[3] Despite these differing interpretations, there is consensus that burnout is strongly associated with occupational context and requires careful differential diagnosis within clinical and forensic settings.

The importance of differential diagnosis in forensic psychiatric and occupational assessments lies in the need to distinguish genuine clinical conditions from presentations influenced by external incentives or non-credible symptom reporting.[26,35] In this context, malingering and symptom exaggeration are relevant constructs that must be considered, particularly in disability evaluation, compensation claims, and medico-legal disputes. Malingering refers to the intentional production of false or grossly exaggerated physical or psychological symptoms motivated by external incentives, such as financial compensation or avoidance of occupational responsibilities.[26] Symptom exaggeration may occur along a continuum and does not necessarily imply

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deliberate deception, but rather an amplification of subjective complaints that may affect clinical presentation and assessment outcomes.[35]

Secondary gain refers to the external advantages associated with the sick role, including financial benefits, workplace adjustments, or legal recognition of impairment, and may influence symptom persistence or reporting even in the absence of conscious intent.[36] The historical concept of compensation neurosis has been used to describe the development or persistence of symptoms in the context of compensation-related processes, reflecting the interaction between psychological factors and external incentives.[35] Together, these constructs are essential in forensic evaluations to support a structured and comprehensive appraisal of symptom validity and clinical functioning.

The Brazilian ethical framework established by CFM Resolution No. 2.323/2022 appropriately requires a high evidentiary standard before attributing a mental disorder to occupational factors[14]. As a result, many clinicians prudently document that symptoms may be related to occupational stressors rather than definitively diagnosing “work-related burnout” without objective corroboration.

At the same time, indiscriminate use of the burnout label may promote excessive medicalization of organizational conflicts, inappropriate disability claims, and underdiagnosis of more severe psychiatric disorders, particularly major depression[9]. Conversely, minimizing genuine occupational distress may delay appropriate recognition and treatment. Therefore, the main challenge is to preserve the clinical usefulness of burnout while avoiding both trivialization of the concept and neglect of legitimate work-related psychological suffering.

Limitations

This study has several methodological limitations. First, as a narrative review, it does not employ the systematic study selection, formal risk-of-bias assessment, or quantitative synthesis characteristic of systematic reviews and meta-analyses. Consequently, the selection and interpretation of the literature may be influenced by the authors’ judgment, and relevant studies may have been overlooked. Second, the review places particular emphasis on the Brazilian medicolegal context, especially Conselho Federal de Medicina

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Resolution No. 2.323/2022, which may limit the generalizability of some conclusions to jurisdictions with different legal, occupational health, and compensation frameworks.

Separate from these methodological limitations, limitations inherent to the burnout construct should also be acknowledged. Burnout lacks universally accepted diagnostic criteria, and its clinical manifestations substantially overlap with depression, anxiety, and other stress-related conditions. These conceptual and diagnostic uncertainties complicate both clinical identification and forensic attribution of burnout to occupational factors. Diagnosing burnout and proving that it was caused mainly by work can be difficult. In forensic practice, conclusions should be based on a careful evaluation of clinical findings, work history, objective records, and other personal or environmental factors that may have contributed to the symptoms. Further research is therefore needed to improve diagnostic standardization and strengthen evidence-based approaches for assessing the relationship between burnout and occupational exposures.

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