
The Impact of Burnout and Professional Rust on Organisational Safety and the Effectiveness of Human Resource Management

Submitted 20/06/25, 1st revision 09/07/25, 2nd revision 18/08/25, accepted 08/09/25

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Abstract:

Purpose: This article examines the impact of burnout and rust-out on organisational safety and the effectiveness of human resource management processes, with particular emphasis on high-risk sectors.

Design/Methodology/Approach: The article is based on a literature review, comparative studies of the phenomenon in various sectors responsible for safety, and case studies of organisations that have implemented effective prevention strategies. The problem was formulated as follows: How do burnout and rust-out affect the safety of an organisation and the effectiveness of human resource management? The research hypothesis assumes that burnout and rust-out significantly reduce the level of organisational safety and the effectiveness of human resource management. Still, implementing appropriate management strategies and support programmes can limit their adverse effects.

Findings: Burnout and professional rust significantly reduce work efficiency and the organisation's ability to maintain high security. Systemic management measures, including human resources policy, psychological support programmes, and competence development, can mitigate these adverse effects and improve operational stability.

Practical implementations: The interdisciplinary approach allows for formulating practical recommendations for management and HR specialists, supporting the maintenance of organisational safety and efficiency.

Originality/Value: The article combines psychological and managerial perspectives in the context of organisational security, while considering two phenomena often considered separately – burnout and professional rustiness.

Keywords: Burnout, rust-out, human resource management, organisational safety.

JEL codes: J24, M12,

Paper type: Research article.

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1. Introduction

The safety of organisations, especially in sectors responsible for protecting life, health and critical infrastructure, largely depends on employees' competence, commitment and mental health. The realities of modern life – characterised by rapid change, time pressure, growing demands and a shortage of resources – are conducive to burnout and rust-out. The former is associated with chronic stress, which leads to a loss of energy, motivation, and a sense of purpose at work. At the same time, the latter is related to a lack of challenges, monotonous tasks and insufficient use of employee potential.

Both phenomena significantly impact the effectiveness of human resource management processes, generating, among other things, higher staff turnover, a decline in the quality of tasks performed and the risk of errors that could threaten the organisation's security. In conditions where every element of the security system must function reliably, the weakening of employees' mental and professional condition seriously threatens operational effectiveness and organisational stability (Ciekanski *et al.*, 2023).

Therefore, effective management strategies must be sought to minimise the risk of burnout and professional rustiness. This includes preventive measures in work organisation and human resources policy, developing psychological support systems, and building an organisational culture that promotes motivation and commitment. Analysing these issues is the starting point for understanding how human capital management can directly influence the level of security in organisations of strategic importance.

2. Characteristics of Burnout and Professional Rusting in the Context of Organisational Security

Burnout has three components: emotional exhaustion, depersonalisation (cynicism) and reduced sense of efficacy (Maslach and Leiter, 2016, pp. 105-106). These are the leading indicators of burnout resulting from chronic occupational stress.

The rust-out (or burnout) concept describes the erosion of commitment resulting from routine and a lack of challenges. Leider (1995) defines it as the effect of 'boredom at work', while Rothlin and Werder (2008/2020, pp. 43-44) consider it more broadly as a reduction in energy and meaning of action. Schaufeli (2014) locates burnout and rust-out on opposite sides of the axis of the relationship between demands and resources – burnout results from an excess of demands, rust-out from a shortage of them.

Bakker (2023, pp. 33-35) confirms this approach in the JD–R model, supplementing it with a contemporary theoretical perspective. Table 1 compares burnout and rust-out.

Table 1. *Comparison of burnout and rust-out*

Aspect	Burnout	Rust-out
Definition	Chronic stress leads to a loss of energy, motivation, and a sense of purpose at work.	A state resulting from a lack of challenges, monotony and insufficient use of an employee's potential.
Main cause	Excessive pressure, high demands, overload of responsibilities.	Lack of stimulating tasks, repetitiveness, boredom and lack of challenges.
Symptoms	Fatigue, reduced motivation, loss of meaning in work, and mental exhaustion.	Feeling of stagnation, boredom, frustration, and disengagement.
Impact on the organisation	Decreased work efficiency, increased risk of errors, and reduced safety.	Decreased task quality, higher staff turnover, and a threat to organisational stability.
Significance in high-risk sectors	Particularly dangerous, as chronic overload can lead to serious operational errors.	Contributes to loss of alertness and motivation, which also increases the safety risk.
Preventive strategies	Introduction of psychological support policies, workload management, and competence development.	Creating opportunities for development, ensuring task diversity, and motivating engagement.

Source: Own work.

It is worth noting that both burnout and rust-out are similar syndromes. However, they differ in their mechanisms of origin and share a negative impact on the functioning of organisations responsible for safety.

Burnout most often affects people who are subjected to prolonged stress and high demands. In contrast, rust-out occurs in monotonous environments with limited challenges.

Both syndromes can overlap, leading to growing personnel problems, low morale and weakened team commitment. A fast pace of work, pressure to be efficient, and insufficient institutional support increase the risk of these phenomena occurring.

For this reason, it is crucial to implement comprehensive mental well-being management strategies, promote a culture of openness to staff needs, and systematically monitor the level of satisfaction and commitment among employees.

On the other hand, the JD–R (Job Demands–Resources) model indicates that high demands – such as decision pressure, responsibility for human lives, working 24/7 – lead to burnout, while a lack of resources – e.g., lack of support, self-development proposals – promotes rust-out (Schaufeli, 2014, pp. 25-27; Bakker, 2023, pp. 30-32).

In sectors such as healthcare, emergency services and the police, chronic exposure to traumatic events, extended shifts, and excessive administrative procedures increases occupational stress (Maslach and Leiter, 2016, pp. 107-108; Li *et al.*, 2024). Similarly, the monotony of office work within such structures can lead to rust-out, when an employee's skills are underutilised (Rothlin and Werder, 2008/2020, pp. 50-52).

The mismatch between the position's requirements and the available resources is significant among the risk factors. The lack of balance leads not only to long-term overload, but also to professional alienation, reduced satisfaction and withdrawal from active participation in the team's life.

The literature emphasises that effective counteraction of these processes requires constant analysis of the work environment, quick response to warning signs and implementing support mechanisms such as mentoring or soft skills development programmes. It is also worth noting the role of the leader, whose attitude and communication skills can strengthen the team's resilience to mental stress and minimise the risk of adverse effects associated with burnout and rust-out.

Burnout manifests itself in exhaustion, cynicism/depersonalisation and reduced effectiveness, which impairs decision-making, increases the number of errors and absenteeism – all of which contribute to weakening the safety of the organisation (Maslach and Leiter, 2016, pp. 108-110; Schaufeli, 2014, pp. 66-68).

The analysis showed that burnout correlates with lower quality of care and more medical incidents, indicating broad safety consequences (de Lima Garcia *et al.*, 2019). These results are also confirmed concerning nurses – an increase in burnout translates directly into an increased risk of staff errors (Li *et al.*, 2024). Rust-out, on the other hand, leads to apathy, decreased motivation and alertness, which weakens operational readiness, especially in crises (Rothlin and Werder, 2008/2020, pp. 55-57; Fitzsimons, 2025, pp. 2-3).

In practice, preventive measures should be multidimensional – including individual development support, systematic identification of employees' strengths, and implementing flexible work organisation models.

Openness to dialogue, investing in managerial skills in stress management and trust building, and promoting partnership-based relationships within the team contribute to increasing the resilience of the entire organisation to the challenges of the modern work environment.

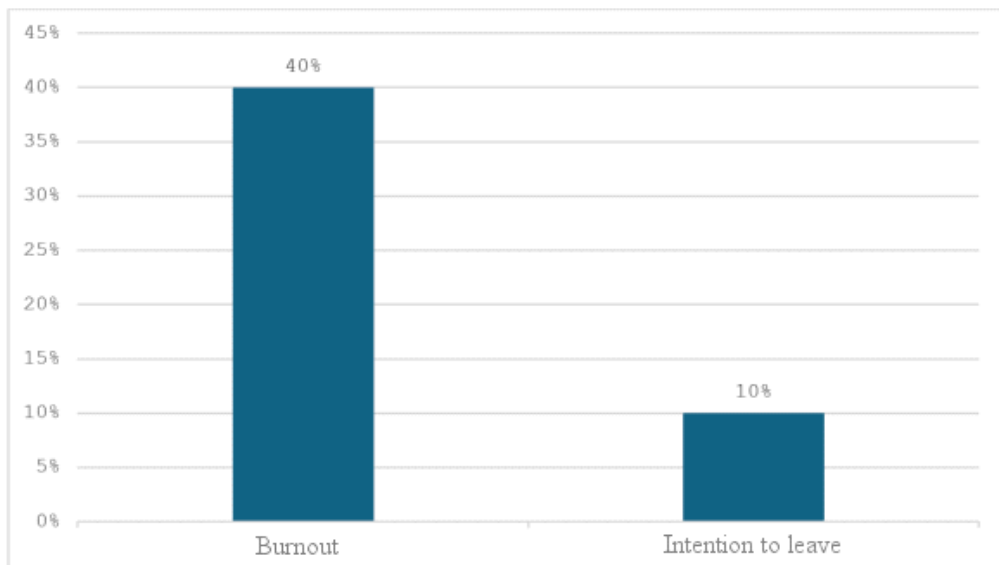
In the long term, it is also crucial to develop an organisational culture based on mutual respect, appreciation of diversity, and fostering a sense of community, which allows for the more effective prevention of burnout and rust-out.

3. Impact on Human Resource Management and Safety Levels

From a human resource management (HRM) perspective, burnout and professional rust affect two critical dimensions, staff stability (retention, absenteeism, turnover) and operational safety (errors, accidents, adverse events).

In healthcare, comparative data from the OECD for 2024 show that among primary care physicians under the age of 55, on average nearly 40% report burnout, and more than 10% are considering leaving direct patient care — which directly affects staffing planning, service continuity and recruitment/training costs (selection of replacements, overtime) on the HR side. The data is presented in Figure 1.

Figure 1. *Percentage of primary care physicians under the age of 55 who, on average, report burnout and are considering leaving their profession.*

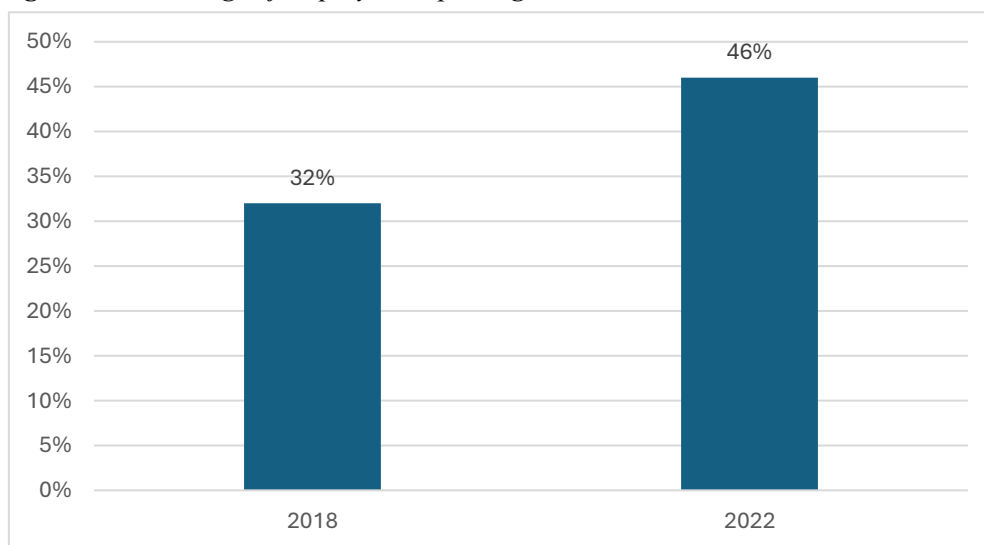


Source: *OECD, 2024.*

The report's findings also indicate a link between poorer working conditions and system quality and a higher incidence of employee injuries/illnesses, which translates into operational risk and a decline in patient safety. Population data confirm the scale of the problem.

The CDC (Vital Signs, 2023) has reported an increase in the number of healthcare workers reporting frequent/constant burnout. Figure 2 shows the percentage of workers reporting burnout.

Figure 2. Percentage of employees reporting burnout in 2018 and 2022.



Source: *Vital Signs, 2023.*

At the same time, the frequency of harassment has also increased, further undermining well-being and encouraging intentions to leave. For HR departments, this means higher turnover, more difficult recruitment, and the need to implement prevention and psychosocial support programmes (e.g., teamwork, flexible schedules, regeneration breaks) (VitalSigns, 2023).

The consequences of burnout for safety are best documented in healthcare, but the conclusions are generalisable to safety professions. Systematic reviews and meta-analyses show that higher levels of burnout are associated with poorer work quality and a higher number of adverse events (medical errors, safety incidents), which translates into risks for patients and an increased burden on organisations — both reputational and financial (claims, remedial costs).

The data is consistent with appeals from regulatory bodies (e.g., HSSIB in the NHS), which warned in 2025 that staff fatigue and overload pose a ‘significant threat’ to patient safety, leading, among other things, to errors in procedures and logistics, and accidents on the way to/from work. For management, this means modifying schedules, providing rest facilities and enforcing breaks (The Guardian, 2024).

In law enforcement, research indicates a strong link between psychosocial stressors and burnout, as well as co-occurrence with PTSD, which reduces decision-making efficiency and operational readiness (Ugwu *et al.*, 2024, pp. 5-6; Alves *et al.*, 2023).

Recent systematic reviews and meta-analyses emphasise that improving working conditions and psychological support programmes reduce symptoms and improve

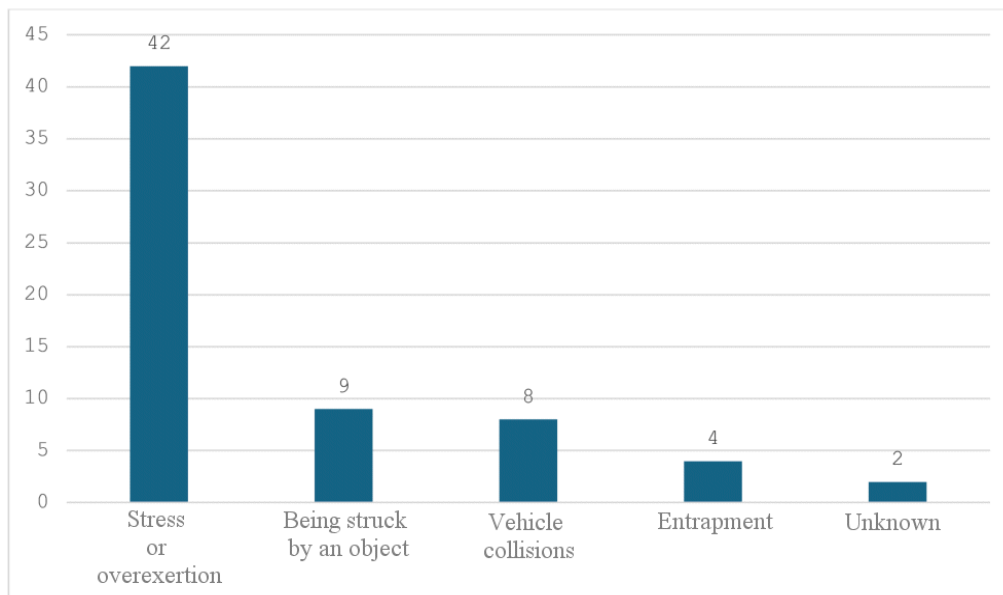
functioning, which, from an HRM perspective, translates into lower absenteeism and better operational performance (e.g., shorter response times, fewer procedural errors) (Santre, 2024).

However, this requires systemic solutions: training for line managers, workload monitoring and 'early warning' indicators in HR dashboards (e.g., overtime reports, satisfaction indicators, psychosocial signals from surveys).

In rescue and firefighting teams, physiological and psychosocial stressors contribute to the risk profile. USFA/FEMA reports and NFPA analyses indicate that a significant proportion of firefighter deaths on duty are related to stress/overwork and cardiovascular events. Although not every case is formally classified as 'burnout,' from an occupational safety and health (OSH) perspective, they indicate physical overload and insufficient recovery.

Integrating HR policies (fatigue monitoring, fitness for duty, recovery periods, sleep hygiene training) with OSH policies reduces the risk of serious incidents and long-term absenteeism. Figure 3 shows the causes of firefighter mortality in 2024.

Figure 3. *Causes of firefighter deaths in 2024 in the United States.*



Source: *U.S. Fire Administration (USFA) "Firefighter Fatalities in the United States".*

European data confirm that psychosocial factors are one of the key threats to health and safety at work today, and that addressing them effectively requires organisational solutions, not just individual interventions. EU-OSHA points out that many employees report work-related stress, anxiety or depression; the agency's recommendations include psychosocial risk assessment, participatory work design

and prevention programmes covering organisational culture, leadership and psychosocial ergonomics (e.g. autonomy, predictability, procedural justice). From an HR perspective, this means incorporating psychosocial measures into HR KPIs and safety audits (OSHA, 2025).

Finally, conclusions from reports by the US Department of Health (Surgeon General, 2025) and OECD/EPHA reviews suggest that burnout prevention is an investment with a proven return: lower turnover, shorter staffing gaps, higher engagement and fewer errors.

This translates into measurable benefits for safety — fewer incidents and critical events — and operational stability across entire systems. In terms of implementation, this means combining HR policies (workforce planning, development paths, coaching and support) with safety policies (fatigue management, exposure limits, root cause analysis of incidents) and reporting to management on a single, integrated dashboard.

4. Counteraction Strategies and Recommendations for Management Practice

Effectively limiting the adverse effects of burnout and professional rust in organisations responsible for safety requires a systemic approach that includes preventive and intervention measures. According to the Job Demands–Resources model (Bakker, 2023, pp. 40–42), it is crucial to balance the demands placed on employees with adequate resources, both material and psychosocial. In practice, this means controlling workloads, providing sufficient tools, and strengthening the sense of autonomy, meaning of work, and social support.

One of the basic prevention tools is implementing psychological support and career counselling programmes (Król *et al.*, 2025, p. 705). Regular access to psychological consultations, support groups and training in stress management significantly reduces the risk of burnout and rust-out (EU-OSHA Report, 2022, pp. 15-17).

In high-risk sectors, such as rescue services or the police, it is also recommended to conduct periodic employee well-being surveys and monitor early warning indicators in HR systems (Ugwu *et al.*, 2024, pp. 10-11).

The second pillar of an effective strategy is work reorganisation, which reduces task monotony and excessive exposure to stress. Job rotation, the opportunity to participate in development projects and task diversification mitigate the risk of professional rust-out while strengthening engagement (Rothlin, Werder 2008/2020, pp. 83-85). In the case of burnout, it is imperative to introduce realistic work standards, optimise schedules and ensure adequate recovery periods, as confirmed by the HSSIB (2025, pp. 9-10) recommendations for NHS staff.

An essential element of the strategy is the development of managerial staff competencies in recognising early symptoms of reduced well-being. As shown in the report by the US Surgeon General (2025, pp. 11-12), line managers play a key role in creating an organisational culture that encourages open problem reporting and early response to signs of overload or work fatigue. In this context, training in emotional intelligence, supportive communication, and stress management becomes essential to HRM policy.

Integrating occupational safety and health (OSH) activities with human resource management should also be considered. Data from the NFPA (2024, pp. 6-7) and USFA/FEMA (2024, pp. 13-14) indicate that implementing fatigue monitoring procedures, providing rest infrastructure, and providing ergonomics and sleep hygiene training reduce critical incidents and improve personnel health indicators.

Finally, from a strategic perspective, organisations should treat burnout and professional rust prevention as an investment with a high rate of return. The OECD (2024, pp. 22-24) emphasises that such measures reduce staff turnover and recruitment costs and increase operational safety while improving the organisation's reputation in the eyes of employees and stakeholders. Stress in the workplace is a common organisational phenomenon that can affect employee performance (Pfejfer-Buczek *et al.*, 2023, p. 139).

Therefore, a consistent policy combining workload monitoring, professional development, psychological support and a culture of open communication is crucial to maintaining a high level of safety in sectors where the margin for error is minimal.

5. Conclusion

An analysis of burnout and rustiness in organisational safety and human resource management indicates that both phenomena seriously challenge the stability and effectiveness of systems responsible for protecting life, health and critical infrastructure.

Burnout, resulting from chronic overload and stress, and rustiness, resulting from monotony and underutilisation of employee potential, lead to reduced motivation, a decline in the quality of tasks performed and an increased risk of operational errors.

A review of research results, reports and analyses shows that the effects of both phenomena include psychological and operational dimensions – from a deterioration in employee well-being, through increased absenteeism and staff turnover, to real threats to the safety of processes and service recipients. Particularly worrying are the data for high-risk sectors such as healthcare, emergency services and the police, where the margin for error is minimal.

The conclusions drawn from the literature analysis and reports by international organisations clearly indicate that counteracting burnout and professional rust requires an integrated approach within the framework of HRM policy.

This includes preventive measures—balancing requirements and resources, providing psychological support, developing competencies, and diversifying tasks—and intervention measures, such as reorganising work, monitoring early warning indicators, and adjusting schedules.

Treating prevention as an investment rather than a cost allows organisations to achieve measurable benefits in the form of lower staff turnover, better quality of work and higher levels of safety. In sectors responsible for public safety, implementing comprehensive strategies in this area is an element of good management practice and a key condition for maintaining the efficiency and resilience of the entire system.

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