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Burnout Contagion and Organizational-Level Interventions in High-Reliability Occupations

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Abstract

Occupations with high reliabilities have their own organizational problem with burnout, as the expectations of constant workload, uncertainty in the operation, emotional expectations, and the need to avoid error can impact not just the individual, as their health declines, but entire teams. This paper addresses the issue of 'burnout contagion' - the spread of burnout attitudes, feelings, fatigue, and withdrawal from work between colleagues via their interactions, their common environment, and collective norms. The study is based on the organizational behavior and human resource management lens and proposes a framework to connect the individual level of burnout with the team-level contagion process and organizational outcomes. Of particular interest are the influence of emotional crossover, workload interdependence, leadership behavior, psychological safety, staffing conditions, and perceived organizational support on collective burnout. The paper also explores elements of organizational-level interventions that can interrupt contagion and enhance the recovery of the workforce, such as workload redesign, staffing and scheduling adjustments, supervisor training, team-based recovery activities, psychological safety, employee assistance programs, and ongoing monitoring of psychosocial risks. The proposed perspective of burnout as a multilevel organizational phenomenon rather than as a coping issue with an individual invites a coordinated response to burnout from human resources and management at the organizational level. The paper emphasizes the need to incorporate practices that prevent, respond to, and work towards recovery in high-reliability work systems in which the operational reliability and service quality are linked to employee functioning. It offers useful tips and insights for managers and HR professionals looking to prevent collective burnout, foster supportive work environments, and keep employees happy and healthy while maintaining organizational productivity. It pinpoints research avenues of multilevel measurement, intervention evaluation, and sustainable workforce practices.

Keywords: Burnout Contagion, High-Reliability Occupations, Organizational Interventions, Employee Wellbeing, Psychological Safety, Occupational Stress, Human Resource Management.

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Introduction

Burnout is now an important issue for both organizational behavior and human resource management, due to the negative impact of overloading job demands on employee health, work attitudes, and organizational functioning. This is especially relevant for safety-sensitive, highly interdependent industries, like health care, aviation, emergency response, energy, and critical infrastructure, where the business of work inherently involves the risk of human life. These are frequently tasks that require prolonged focus, time pressure, emotional engagement, shift work, and the unpredictable occurrence of events, as well as a lack of tolerance for operating mistakes. In the context of the Job Demands–Resources theory, chronic job demands may lead to work exhaustion if employees do not have enough organizational and personal resources to deal with the stressors at work, while organizational and personal resources may promote the ability to handle the stressors of the job situation (Bakker & Demerouti, 2017).

The ramifications of burnout are not just a personal challenge and can impact key aspects of work performance. A systematic review of prospective studies revealed a link between burnout and various physical, psychological, and occupational outcomes, suggesting that both individuals and organizations can be affected by burnout (Salvagioni et al., 2017). In high-risk jobs, these factors could be especially significant as fatigue, emotional exhaustion, lack of involvement, and poor interpersonal relationships can impact coordination and reliable performance of safety-sensitive tasks.

Another worry is that burnout can become a more communal experience, among group members, than a personal one. Emotions, attitudes, perceptions, and behavioral responses are constantly shared among employees as they interact with each other, and exhaustion and disengagement can be socially reinforced. In a social network study of teachers, a pattern of contagion of burnout through social networks was also found, indicating the importance of interpersonal relationships in the study of collective burnout processes (Meredith et al., 2020). This point of view proposes looking at organizational burnout from individual, team, and organizational perspectives, especially for teams where employees rely heavily on each other to ensure reliable functioning.

The growing evidence about organizational interventions additionally shows that individual coping strategies are inadequate to effectively treat burnout. A systematic review and meta-analysis identified both individual and organizational interventions that can help decrease physician burnout, highlighting the importance of structured organizational interventions (West et al., 2016). In the same way, studies of HRH adaptation of HRH principles and practices showed that psychological safety and lower employee exhaustion or high burnout were associated with organizational systems and management practices, as they impact the wellbeing of the workforce (Isaacks et al., 2021).

Although this has happened, the literature so far is contradictory when it comes to understanding the pathways of burnout contagion in high-reliability professions and how interventions at the organization can disrupt the spread. Thus, this paper explores the concept of burnout contagion as a phenomenon in multilevel organizations and examines the mechanisms of intervention that include workload management, staffing, leadership, communication, psychological safety, employee support, and organizational learning. The paper aims to link the literature on burnout to the concept of high reliability management and to offer a framework for organizational strategies that can work to protect the health of employees while also promoting high reliability.

Key Contributions

This paper has several significant contributions. This paper has four major contributions. First, it frames burnout contagion as a multilevel process involving individual, interpersonal, team, and organizational factors. Second, it builds on the Job Demands-Resources model and the concepts of burnout contagion and high-reliability organization to describe how stressful work contexts can become "contagious" at the level of the entire group of employees. Third, it is based on designing workloads, staffing arrangements, leadership behaviors, psychological safety, communication, recovery opportunities, and the provision of employee support systems to focus on interventions at an organizational level. Fourth, it provides practical implications for HR professionals and organizational leaders who want to decrease collective burnout in a reliable and coordinated service delivery while keeping services high quality in a high-risk work environment.

Paper Organization

The rest of the paper is organized as follows. The paper is organized into 5 sections; the literature review is presented in Section II. The related work is provided in Section II, the proposed methodology is described in Section III, the organizational-level analysis and intervention framework is discussed in Section IV, and the paper is concluded in Section V with the key findings and directions for future research.

Related work

Burnout Contagion and Interpersonal Crossover

Burnout has become known more as an interpersonal and organizational phenomenon than a purely individual one. Working as part of a closely-knit group means being constantly affected by your fellow workers' and managers' feelings, actions, working loads, and coping strategies. Here, exhaustion can be transmitted via repetition of interactions, and via loss of employment and personal assets. The fact that leaders' burnout can lead to followers' burnout has also been supported by longitudinal research on leader–follower relationships, which found that followers' job resources were depleted after their leader's burnout, suggesting that the phenomenon of burnout crossover can occur through job resources depletion (Huang et al., 2016).

Another powerful way that burnout can emerge as a group is via emotional contagion. Positive or negative emotions from other employees, supervisors, customers, or stakeholders can affect employees, with frequent exposure to negative emotions potentially leading to fatigue and cynicism. Healthcare research reveals that the emotion-induced behavior of nurses and physicians differs based on the occupational group and source of emotion, highlighting a different pattern of emotional absorption and an effect on burnout (Petitta et al., 2017).

Social Networks and Collective Exhaustion

Emotional exhaustion is also transmitted through organizational relationships. Based on the findings of social network research, employees can have a similar level of emotional exhaustion to other employees with whom they have frequent interaction and advice relationships, and to employees in structurally similar positions in the organization's social network. But the similarities were not found in all friendship or supervisor relationships, indicating that patterns of interaction within the organization are especially relevant to the phenomenon of burnout transmission.

This interpersonal cycle can be enhanced further by the processes of communication. Emotional labor involves the need to manage and express emotions in ways that are expected or required by their job, most notably in service-oriented or professionally challenging jobs. A model investigating the relationship between emotional communication at work and burnout showed that emotional contagion had a positive correlation with burnout, which worked best through the pathway of exhaustion. The results suggest that employees' sensitivity to others' emotional expressions and their need for emotional communication can play a role in affective burnout (Powers & Myers, 2020).

High-Reliability Organizations and Intervention Perspectives

In high-reliability organizations, where failure can have serious ramifications, it is imperative that they monitor operational conditions, coordinate activities, and learn and manage risk constantly. According to a systematic review of high-reliability organization (HRO) research, one of the characteristics needed to achieve high reliability is organizational culture (Cantu et al., 2020), and the principles of HRO models are being widely adopted in different contexts, including complex and high-risk settings (Cantu et al., 2020).

Additional studies of highly reliable, resilient organizations show that interventions can be analyzed in terms of organizational practices, mechanisms for implementing the intervention, and measures used to evaluate its effect, as well as individual employee support. This view is especially important for considering the potential for contagion in the context of burnout as it relates to workload distribution, communication, leadership interaction, psychological safety, and opportunities for rest and recovery. Interventions that focus on organizational systems can then offer opportunities for addressing the conditions that can help prevent burnout in interdependent teams (Cantu et al., 2021).

The literature, as a whole, supports that burnout contagion may occur via leadership relationships, emotional interactions, organizational communications, and organized workplace networks. However, most of these mechanisms have been studied separately, and few studies have considered their joint importance for high-reliability occupations. This gap is important for an integrated organizational-level perspective to link burnout transmission processes and interventions related to workload management, leadership practices, staffing, communication, psychological safety, and organizational culture.

Proposed Methodology

The method used in the present study is a structured conceptual flow, which involves examining the phenomenon of burnout contagion and determining the organizational-level intervention that can be applied to occupations that have high reliability. The method combines evidence from organizational behaviour, occupational health, the human resource management field and work of high reliability organizations. The methodology aims to shift from identifying demanding working conditions to burnout assessment, study of contagion pathways, selection of organizational

interventions and identification of expected employee and organizational outcomes. A summary of the overall methodological process is given in Fig. 1.

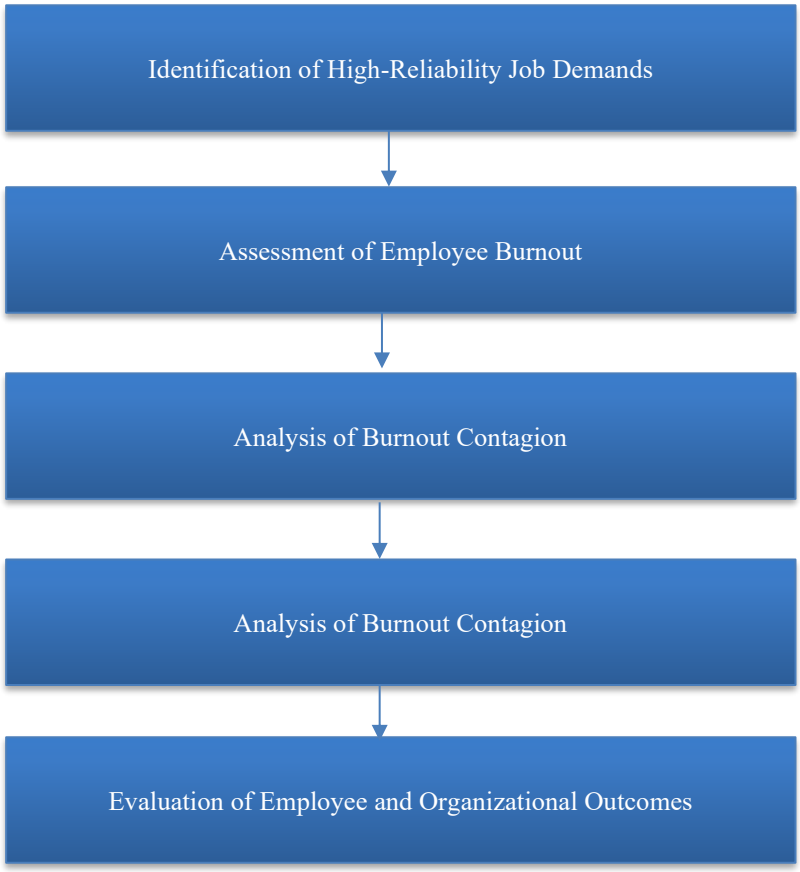


Fig. 1: Methodological Flow for Burnout Contagion and Intervention Analysis

Identification of High-Reliability Job Demands

The first phase aims at determining the occupational attributes that cause enduring psychological, emotional, cognitive, and operational requirements. High-reliability occupations have these features: complex tasks, continuous monitoring, interdependent teams, time-sensitive decisions, shift-based work, high responsibility, and significant consequences of errors. The following job-demands are used as dimensions of workload intensity: role conflict, staffing pressure, emotional labour, work interruptions, lack of recovery opportunities and critical incidents. These factors set the organizational framework in which the symptoms of burnout first emerge and then affect fellow employees.

Assessment of Employee Burnout

Stage 2 assesses burnout on the individual level and incorporates three key dimensions: emotional exhaustion, depersonalization/cynicism, and decreased professional competence. The effect of workload, work pressure, competence and support from the organization, leadership behaviour, recovery opportunities and psychological safety on employee burnout is explored. Frequence and intensity of burnout experiences are also taken into account as this can raise the risk of interpersonal transmission if this is a frequent and/or strong experience. The individual-level assessment is used as a basis for deciding if there is a pattern of burnout in the organization or it is just an isolated issue.

Analysis of Burnout Contagion

In the third part, the mechanisms by which burnout can spread among employees are explored. The concept of burnout contagion is viewed in terms of interpersonal interaction, emotional crossover, leader–follower relationship, team identity, communication processes, the sharing of work and organizational social networks. Co-workers in highly interdependent working settings can encounter and react to other workers' levels of exhaustion, frustration, disengagement, or negative attitudes more frequently. These interactions can result in reinforcing cycles in which

burnout for individuals goes over to the collective level. The analysis thus examines how the individual burnout indicators relate to the team and organization level factors and thereby potential contagion pathways are detected.

Implementation of Organizational-Level Interventions

The end goal of the fourth stage is to identify intervention strategies at the organizational level. The methodology does not limit interventions to individual coping programmes, but als o takes into account interventions that will impact the working environment and organizational processes. These are some examples of the various initiatives that can be undertaken to create a supportive work environment: Workload Redistribution, Appropriate Staffing, Shift and Scheduling Redesign, Supervisor and Leadership Development, Psychological Safety Initiatives, Team Based Recovery Practices, Employee Assistance Programs, Communication Improvement, Recognition Programs, and Organizational Learning Practices. Selection of interventions is determined by the identified burnout and contagion mechanism(s) in the previous stages.

Evaluation of Employee and Organizational Outcomes

The final stage is assessing what is expected to happen to employees' wellbeing and organizational functioning as a result of organizational interventions. Some of the employee outcomes are emotional exhaustion, job engagement, job satisfaction, psychological safety, resilience, and job intention. The outcomes of an organization can be measured in terms of absenteeism, turnover intention, teamwork, quality of communication, reliability of services provided, safety performance, and continuity of operations. The last step creates a feedback loop for the outcomes of the observations to be incorporated into organizational interventions and to continually track burnout risks.

Organizational-Level Analysis and Intervention Framework

It is important to consider burnout as a multilevel organizational problem as work demands, interpersonal interactions, and organizational practices all have the potential to affect feelings of burnout and the ripple effect of burnout to other teams. This study's analysis posits a relationship between occupational demands and individual burnout, interpersonal contagion, organizational reactions, and employee and organizational results. The proposed framework is more focused on strategies aimed at changing the work environment, leadership practices, staffing approaches, communication patterns, and team climate, as opposed to strategies that focus solely on coping at the individual level. This is in line with research indicating that burnout can spread from employees in connected organizations and that the workplace environment can affect the emergence and maintenance of burnout.

Analysis of Burnout Risk Factors

The first part of the analysis is concerned with the key workplace factors that will start and perpetuate burnout. It is not surprising that high-reliability jobs often have high cognitive demands, require constant concentration, are subject to random events, are emotionally stressful, and carry a great deal of responsibility. If these demands continue without adequate organizational resources, employees can become emotionally exhausted and have decreased engagement and professional effectiveness. These conditions can also lead to burnout contagion in highly interdependent teams as employees often come in contact with each other in similar situations of stress.

The different dimensions of the burnout at the workplace that would be taken into account in the proposed framework are summarized in Table 1.

Table 1: Burnout Risk Dimensions in High-Reliability Occupations

Risk Dimension	Key Workplace Indicators	Potential Burnout Effect
Workload Intensity	Excessive tasks, prolonged working hours, workload accumulation	Emotional exhaustion
Time Pressure	Urgent decisions, compressed deadlines, continuous task demands	Cognitive and emotional fatigue
Staffing Pressure	Staff shortages, uneven workload distribution, insufficient replacement	Persistent overload
Emotional Demands	Exposure to critical events, distressed individuals, emotional labour	Emotional exhaustion and detachment
Shift and Schedule Demands	Night shifts, irregular schedules, inadequate recovery time	Fatigue and reduced recovery
Role Ambiguity	Unclear responsibilities, conflicting expectations	Stress and reduced efficacy
Limited Organizational Support	Inadequate supervisor assistance, weak HR support	Reduced coping resources
Psychological Safety Deficits	Fear of speaking up, limited participation in decision-making	Withdrawal and reduced engagement
Interpersonal Strain	Conflict, negative communication, emotionally exhausted coworkers	Burnout contagion
Limited Recovery Opportunities	Insufficient breaks, restricted leave, continuous availability	Accumulated exhaustion

The dimensions listed in Table 1 are not independent. For instance, lack of staffing can lead to workload and time pressure and insufficient recovery can exacerbate the impacts of extended exposure to workload. Likewise, bad communication and lack of psychological safety can discourage staff from talking about excessive workload or asking for help. These interactions can create a scenario where burnout is considered acceptable in a team. Additionally, social-network data indicates that the nature and timing of employee interactions at work could affect the homogeneity of emotional exhaustion, that is, the extent to which employees are similar with respect to emotional exhaustion.

Burnout Contagion Mechanisms

The second part discusses the potential for burn-out as a phenomenon that can shift from individual to organizational level. Crossover can happen when staff members are routinely exposed to co-workers' frustration, fatigue, cynicism, and disconnection. Supervisor–subordinate relationships are especially relevant since supervisors have an impact on workload assignments, communication, expectations and perceptions of support. When leaders suffer burnout, it can also have an impact on followers when the available job resources and personal resources are affected (Huang et al., 2016).

Another possible avenue is the communication in the workplace. The repeated exposure to negative emotional expressions can affect employees' emotions, and communication can influence the perception that overwork and fatigue is part of the job. Emotional contagion is thus recognized as a key burnout mechanism in high-stress situations at work (Petitta et al., 2017; Powers & Myers, 2020).

For high-reliability work, the impact of this process can go beyond the wellbeing of the employees. If the burnout is focused on a team, the quality of communication, coordination, concentration, and the desire to report on emerging issues can be impaired. Thus, it is recommended that interventions take place before burnout becomes a collective team norm.

Organizational-Level Intervention Strategies

The third category focuses on converting the recognized risk factors and mechanisms in the organization. The interventions in this category are aimed at modifying the sources of burnout, not the workers themselves. Changes in workload or staff and appropriate scheduling practices can affect chronic work demands and create more rest and recovery opportunities. Leadership interventions can help leaders identify workers who have burnout risks, adequately apportion responsibilities, set realistic expectations, and provide necessary support.

Psychological safety should be prioritized since workers need a secure environment where they can report workload intensities, exhaustion risks, interpersonal issues, and concerns over work processes without feeling under pressure. Organization culture and climate are critically important for high-reliability organizations because such entities need

to establish a persistent awareness, communication, learning, and response capability regarding human factors and their impact on operational safety.

Table 2 below illustrates the main organizational order interventions linked to the mechanisms and outcomes described in the model.

Table 2: Organizational Interventions and Expected Outcomes

Organizational Intervention	Primary Target	Burnout Mechanism Addressed	Expected Employee Outcome	Expected Organizational Outcome
Workload Redesign	Excessive demands	Chronic overload	Reduced exhaustion	Improved task continuity
Staffing Optimization	Staffing pressure	Resource depletion	Lower work strain	Improved workforce availability
Shift and Schedule Redesign	Irregular work patterns	Inadequate recovery	Improved recovery and wellbeing	Better continuity of operations
Leadership Development	Supervisor behaviour	Leader–follower crossover	Greater perceived support	Improved team functioning
Psychological Safety Programs	Team climate	Silence and emotional suppression	Greater willingness to report stress	Earlier risk identification
Team-Based Recovery Practices	Team exhaustion	Accumulated fatigue	Better recovery and engagement	Improved coordination
Employee Assistance and Support	Individual and collective strain	Insufficient coping resources	Increased access to support	Lower disruption associated with burnout
Communication Improvement	Negative emotional exchange	Emotional contagion	Healthier interpersonal climate	Improved information flow
Recognition and Feedback Systems	Low perceived value	Disengagement and cynicism	Greater motivation	Stronger employee retention
Continuous Burnout Monitoring	Emerging burnout	Delayed intervention	Earlier support	More responsive HR management

Evaluation of Intervention Outcomes

The last step is to assess whether organizational interventions are effective in resolving both employee wellbeing and organizational reliability issues. The evaluation should feature individual-level indicators, such as emotional exhaustion, work engagement, and job satisfaction, along with psychological safety and organizational commitment. Team-level processes should be related to communication, cooperation, interpersonal conflicts, and workload distribution. Finally, the indicators at the organizational level may include absenteeism, turnover rates, service performance, safety incidents, and other relevant metrics.

In my opinion, burnout interventions should be continuous and dynamic to respond to shifting demands and loads. Thus, the most effective way to operate is to design the cycle of risk identification → evidence-based intervention → outcome assessment → and adjustment of organizational processes. This way, HR managers and department leaders will see the formation of a burnout risk at early stages and address either individual or team-related causes before negative attitudes, behaviours, and outcomes manifest.

Overall, I find this analysis helpful in understanding the nature of burnout contagion, which is attributed to complex relationships between job demands, interpersonal relationships, and organizational context. As a result, organizational interventions may focus on adjusting processes at the team level to prevent individual burnout from spreading to other employees or entire units. In other words, the framework above allows managers to combine individual and team-level preventative measures to resolve the organizational reliability problem.

Conclusion

Burnout in high-reliability professions is a critical organizational phenomenon because the strains associated with this concept can undermine the wellbeing of individuals while also being transmitted among people in a team. The study

undertaken in this paper demonstrated that organizational levels of burnout contagion could be impacted by the intensity of the work, the imbalances in staffing, the emotional requirements of the job, the nature of shifts, the behaviours of leaders, communication, and psychological safety. It is essential to manage burnout beyond individual-level mechanisms because the structures of organizations can facilitate the appearance and development of this phenomenon. The suggested evidence-based intervention framework addresses such factors as workload, staffing, shift organization, leadership, and psychological safety while also considering team-level recovery resources, employee support programs, communication, and ongoing monitoring of the situation. These aspects could help organizations prevent and manage the consequences of burnout contagion because they respond to the conditions enabling it. In turn, employees of high-reliability facilities have an impact on the safety and effectiveness of processes by ensuring continuous and coordinated work. Thus, the study presented a framework connecting burnout to organizational behaviour while intervening on multiple levels. Further research should investigate the relationships suggested in the present paper, utilizing practice-related settings, longitudinal methodologies, multilevel and social-network approaches in order to operationalize the phenomenon in different high-reliability professions.

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