High-Functioning Depression in Organizations: Resource and Neuroplasticity perspective

ABSTRACT

This paper advances a conceptual model of high-functioning depression (HFD), defined as a pattern in which individuals sustain high levels of performance while experiencing persistent internal distress and depletion. Drawing on Conservation of Resources theory, HFD is framed as a form of resource overprotection whereby individuals chronically overinvest in work to avert perceived losses of status, competence, or belonging, thereby initiating loss spirals that gradually erode energy, vitality, and capacity for enjoyment despite continued external success. Integrating this perspective with research on neuroplasticity, the model proposes that repeated pairing of pressure and performance strengthens threat-oriented amygdala–prefrontal pathways that prioritize vigilance and control over rest and emotional flexibility, rendering HFD both subjectively necessary and resistant to change. On this basis, the paper articulates propositions linking HFD to resource overinvestment, neurophysiological overload, and interpersonal strain, and specifies relational interventions that can support the development of more sustainable neural and behavioral patterns conducive to long-term wellbeing. Practical implications highlight how leaders and organizations can redesign development and wellbeing systems to center nervous-system flexibility, recovery, and relational safety as core resources for employees experiencing HFD.

Keywords: Depression; Neuroplasticity; Conservation of resource theory; Wellbeing; Organizational neuroscience

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Mental health challenges are critical concerns of organizations (Rosando-Solomon, Coopmann, Cronin, 2023). Some individuals maintain high levels of performance while experiencing chronic psychological distress, yet this pattern of high-functioning depression (HFD) remains largely under-theorized in psychopathology and organizational research (Joseph et al., 2025). Existing diagnostic frameworks and workplace mental health practices tend to equate depression with overt impairment, missing those who continue to meet or exceed expectations while enduring persistent low mood, fatigue, and emotional numbing (American Psychiatric Association, 2013; World Health Organization, 2019). In competitive organizational environments, such employees are often lauded as committed and resilient, even as they privately draw down their psychological resources in ways that increase vulnerability to burnout, relational strain, and longer-term mental health problems (Gonda et al., 2015; Koutsimani, Montgomery, & Georganta, 2019). Current literatures on depression, burnout, and presenteeism do not fully explain how sustained high performance can coexist with chronic inner depletion, nor how organizational systems and interventions might transform this pattern rather than merely accommodating it. This paper addresses this limitation by theorizing HFD as an emergent phenomenon of resource-preservation dynamics and experience-dependent brain changes that are shaped, reinforced, and potentially reversed within organizational contexts.

This paper integrates Conservation of Resources (COR) theory with a neuroplasticity perspective to develop a multilevel explanatory model of HFD (Hobfoll, 1989, 2011; Davidson & McEwen, 2012). First, HFD is reframed as a pattern of resource overprotection in which high-functioning individuals chronically overinvest in performance to prevent losses of status, competence, and belonging, thereby entering loss spirals that erode energy and vitality despite

sustained external success (Demerouti et al., 2001; Bakker & Demerouti, 2017; Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Second, drawing on neuroplasticity research, the model explains how repeated pairing of pressure and performance engrains threat-based amygdala–prefrontal pathways that privilege vigilance and control over rest and emotional flexibility, making HFD feel both necessary and resistant to change (McEwen & Gianaros, 2011; Barlow et al., 2014; Sherry, Hewitt, Sherry, Flett, & Graham, 2010). Building on this integration, the paper advances a set of propositions that link HFD to resource overinvestment, neurophysiological overload, and interpersonal strain, and articulates how relational interventions such as executive coaching can, under supportive conditions, generate adaptive neuroplasticity and resource gain cycles that support more sustainable neural and behavioral defaults (Cohen & Wills, 1985; Holzel et al., 2011; Boyatzis & Jack, 2018).

The proposed COR–Neuroplasticity Model contributes to theory and practice in several ways. Conceptually, it positions HFD not as a paradoxical coexistence of success and suffering but as a predictable outcome of resource-preservation motives interacting with stress-shaped neural systems, thereby extending COR-based models of strain and adding neural mechanisms to organizational understandings of depression and burnout (Hobfoll, 2011; McEwen & Gianaros, 2011). Methodologically, it suggests new multi-level research agendas that combine self-report, behavioral, physiological, and relational data to capture how everyday work experiences recalibrate both resources and neural regulation over time. Practically, it reframes leadership, HR, and development practices as opportunities to redesign organizational systems around nervous-system flexibility, recovery, and relational safety—shifting wellbeing efforts from peripheral programs toward core resource infrastructures that are especially critical for

employees with HFD, who are often the least visible yet most at risk (Bakker & Demerouti, 2017; Kuyken et al., 2016).

High-Functioning Depression

Individuals with HFD may appear to be well-adjusted, productive and emotionally stable, yet silently endure persistent low mood, fatigue, irritability and emotional detachment (Joseph et al., 2025). Despite substantial internal distress, their ability to meet or exceed expectations at work, in caregiving, or in academic roles. These symptoms are largely overlooked because diagnostic frameworks and lay prototypes of depression emphasize overt dysfunction and role impairment rather than covert struggle (American Psychiatric Association, 2013; World Health Organization, 2019; Gonda et al., 2015).

Social stigma further reinforces this invisibility: when mental illness is equated with breakdown, individuals who are still “high functioning” may minimize or hide their distress, believing they are not “sick enough” to seek support or fearing negative judgment if they disclose (Corrigan, 2004; Eisenberg et al., 2009). HFD shares features with persistent depressive disorder/dysthymia, which refer to longstanding low mood and anhedonia, but is distinguished by relatively intact external role performance, especially in valued domains such as work (American Psychiatric Association, 2013; World Health Organization, 2019). These dynamics are intensified for women, minoritized professionals, and those in high-pressure roles who face strong normative expectations to appear composed and competent, making the gap between external functioning and internal depletion even more pronounced (Nosek et al., 2002; Settles et al., 2016). As a result, many come to believe they are “not sick enough” to justify seeking support, especially when their suffering is not outwardly apparent (Corrigan, 2004; Eisenberg, Downs, Golberstein, & Zivin, 2009).

Theoretical explanations for HFD

COR theory posits that individuals are fundamentally motivated to acquire, protect, and expand valued resources—broadly defined as objects, energies, conditions, and personal characteristics that facilitate goal attainment (Hobfoll, 1989). Stress arises when these resources are threatened, lost, or insufficiently replenished, with resource loss exerting a more powerful impact than resource gain and often triggering self-perpetuating loss spirals (Hobfoll, 2011; Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). High-functioning individuals frequently cope with chronic demands by overinvesting in performance behaviors to guard against anticipated losses of status, competence, or approval, effectively using achievement as a defensive buffer against perceived scarcity (Leiter & Maslach, 2004; Van der Heijden, Demerouti, & Bakker, 2008). While this strategy can provide short-term stability, it fosters resource rigidity, whereby cognitive and emotional energy is continuously directed toward preservation and control rather than recovery and renewal, increasing vulnerability to burnout and depressive symptoms over time (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Bakker & Demerouti, 2017). In such conditions, individuals may enter loss spirals—recurrent cycles of overextension and depletion that erode emotional resilience and constrain future coping options (Hobfoll, 2011; Halbesleben et al., 2014). COR theory thus richly describes what happens under chronic strain, but it is less explicit about why these self-limiting patterns persist even after environmental demands subside, which motivates integration with insights from neuroplasticity.

Neuroplasticity refers to the brain's ability to reorganize its structure and function through repeated experience, focused attention, and emotionally salient events (Davidson & McEwen, 2012). Neural circuits that are frequently activated—such as those involved in vigilance, perfectionism, or self-monitoring—become more efficient over time, forming well-

myelinated default pathways that bias perception and response toward threat detection, error monitoring, and control (Barlow, Ellard, Sauer-Zavala, Bullis, & Carl, 2014; McEwen & Gianaros, 2011). For high-functioning individuals, years or decades of linking pressure with success can condition amygdala–prefrontal circuitry to interpret uncertainty as threat and to respond with heightened control, overpreparation, and continuous performance optimization, even when demands are objectively manageable (Davidson & McEwen, 2012; Sherry, Hewitt, Sherry, Flett, & Graham, 2010). These pathways prioritize performance over recovery, creating a learned physiological state of readiness and self-surveillance in nonthreatening contexts, a neural analogue of COR's depiction of chronic resource overprotection and loss spirals (Hobfoll, 2011; McEwen & Gianaros, 2011). Conversely, under reliably safe and supportive conditions, functional neuroplasticity enables a gradual redistribution of regulatory control: prefrontal systems can more effectively inhibit exaggerated threat responses, new associations of safety and sufficiency can be learned, and alternative behavioral patterns—such as strategic rest, boundary-setting, and self-compassion—can be consolidated through repeated corrective experiences (Holzel et al., 2011; Kuyken et al., 2016).

Integrating COR theory with neuroplasticity therefore suggests that high-functioning but chronically strained coping patterns are both resource-driven strategies and entrenched neural habits, and that meaningful change requires not only shifts in environmental demands and resources but also sustained experiences that "retrain" underlying circuits. In this context, organizations and social environments become critical resource contexts for HFD: supportive leadership, high-quality social support, and psychologically safe climates can function as powerful resource caravans that buffer loss spirals, foster recovery experiences, and create the repeated signals of safety needed to gradually reshape stress-related circuits (Hobfoll, 2011;

Bakker & Demerouti, 2017; McEwen & Gianaros, 2011). Empirical work shows that job resources such as supervisor support, collegial support, and fair, respectful treatment are associated with reduced emotional exhaustion and depressive symptoms, in part by enhancing employees' sense of control and belonging (Leiter & Maslach, 2004; Van der Heijden, Demerouti, & Bakker, 2008). Likewise, social support and high-quality relationships are linked to healthier neuroendocrine profiles and more adaptive emotion regulation, indicating that relational resources can literally "reset" stress physiology over time (Cohen & Wills, 1985; Davidson & McEwen, 2012). For employees with HFD, this implies that organizational interventions that build supportive relationships, protect recovery time, and normalize help-seeking are not merely contextual niceties, but central mechanisms for interrupting resource loss spirals and providing the repeated, safe experiences required for functional neuroplastic change (Holzel et al., 2011; Kuyken et al., 2016).

COR-Neuroplasticity Model

---- Insert Figure 1 here -----

From a COR perspective, the high-functioning facade characteristic of HFD can be interpreted as a resource-preservation strategy rather than a paradox. COR theory posits that individuals are motivated to acquire, protect, and expand valued resources including objects, energies, conditions, and personal characteristics that help achieve goals, and that resource loss is more salient and harmful than resource gain (Hobfoll, 1989, 2011). In demanding organizational contexts, individuals who later present with HFD often respond to chronic evaluative pressure by overinvesting in performance, using achievement as a defensive buffer to protect resources such as competence, control, and social standing (Leiter & Maslach, 2004; Van der Heijden et al., 2008). This strategy stabilizes valued outcomes in the short term but progressively drains self-

regulatory resources, as cognitive, emotional, and temporal effort are constantly mobilized to prevent anticipated loss rather than to support renewal (Demerouti et al., 2001; Bakker & Demerouti, 2017). Over time, individuals enter loss spirals in which resource expenditure to maintain performance prevents replenishment, necessitating further expenditure simply to keep functioning at the same level (Hobfoll, 2011; Halbesleben et al., 2014). In Figure 1, this pattern is depicted in the upper part of the cycle as Resource Overprotection leading into Resource Depletion, illustrating how chronic overinvestment in performance erodes internal reserves even while observable functioning remains high.

> *Proposition 1: HFD represents a resource-preservation strategy characterized by chronic overinvestment in performance-related domains, which protects valued outcomes in the short term but progressively depletes self-regulatory resources and capacity for recovery over time.*

Neuroplasticity helps explain why such resource-preserving overinvestment persists even when external demands are at ease. The brain reorganizes its structure and function in response to repeated experience and emotionally salient events, such that frequently activated circuits become more efficient and dominant (Davidson & McEwen, 2012). For individuals navigating chronic high-pressure environments, circuits underpinning vigilance, perfectionism, and self-monitoring are repeatedly engaged; over time, these amygdala–prefrontal loops are conditioned to interpret uncertainty, ambiguity, or minor deviations from high standards as threats (Barlow et al., 2014; McEwen & Gianaros, 2011). Each instance where anxiety-driven effort "pays off" strengthens the association between heightened arousal and successful performance, consolidating a neural script in which vigilance and overcontrol are treated as prerequisites for safety (Davidson & McEwen, 2012; Sherry et al., 2010). As these circuits become the brain's

default mode for engaging with work and relationships, they sustain high performance but make it increasingly difficult to access flexibility, spontaneity, or rest. Figure 1 captures this process in the transition from Resource Overprotection to Neural Rigidity, emphasizing that repeated reliance on threat-based effort hardwires control-oriented responding into the system.

> *Proposition 2: Chronic activation of threat-based neural circuits (e.g., amygdala–prefrontal pathways) in high-demand contexts reinforces vigilance and overcontrol through neuroplastic processes, sustaining high performance while reducing adaptability, creativity, and emotional flexibility.*

Sustained operation in this vigilance-dominant mode is metabolically and psychologically costly. Chronic sympathetic activation and elevated glucocorticoid secretion impose allostatic load, producing cumulative wear and tear that depletes energetic and psychological resources (McEwen & Gianaros, 2011). Under such conditions, attention narrows, memory consolidation is impaired, and the prefrontal cortex's ability to regulate emotional intensity and inhibit impulsive responses is weakened, even as individuals continue to meet external expectations (Davidson & McEwen, 2012). Subjectively, this manifests as decision fatigue, emotional flattening, and a reduced sense of agency and joy, consistent with findings that chronic stress and burnout are associated with emotional exhaustion and depressive symptoms despite ongoing role performance (Barlow et al., 2014; Koutsimani et al., 2019). COR theory describes this as a loss spiral in which resource depletion undermines the ability to invest in renewal, thereby further increasing vulnerability to stress (Hobfoll, 2011). At the neural level, reduced variability and flexibility in brain activity indicate that the system has become highly efficient at responding to threat but increasingly incapable of shifting into restorative or exploratory states (McEwen & Gianaros, 2011). In Figure 1, this stage is represented as Resource

Depletion, closing the upper loop of the HFD maintenance cycle and highlighting how neural rigidity and resource loss reinforce one another.

> *Proposition 3: Sustained engagement of vigilance-related neural systems produces cumulative resource loss—manifested as emotional fatigue, diminished vitality, and relational strain—even when external indicators of performance remain high.*

The COR–neuroplasticity model therefore conceptualizes HFD as the outcome of an interaction between resource-preservation strategies and entrenched neural habits, but it also highlights the potential for change when contexts shift. Organizational climates that emphasize constant availability, perfectionism, and toughness amplify perceived resource threat and reward overinvestment, thereby strengthening vigilance-based circuits and deepening loss spirals (Leiter & Maslach, 2004; Bakker & Demerouti, 2017). By contrast, supportive leadership, collegial support, and psychologically safe climates function as "resource caravans," providing multiple, interrelated resources—emotional support, autonomy, fairness, and opportunities for recovery—that buffer loss and facilitate gain cycles (Hobfoll, 2011; Cohen & Wills, 1985). Empirical studies show that such job resources are associated with lower emotional exhaustion and depressive symptoms, in part by enhancing employees' perceived control and belonging (Leiter & Maslach, 2004; Van der Heijden et al., 2008). Relationally rich environments also promote healthier neuroendocrine profiles and more adaptive emotion regulation, indicating that social resources can "reset" stress physiology and support neural recovery (Davidson & McEwen, 2012; Kuyken et al., 2016). Figure 1 situates these contextual influences in the lower part of the cycle, where relational Intervention enters after Resource Depletion to interrupt the loss spiral and initiate a different trajectory.

Proposition 4: Organizational climates and relational environments that emphasize performance at any cost intensify resource loss spirals and neural rigidity associated with HFD, whereas climates characterized by supportive leadership, social support, and psychological safety foster resource gain cycles and adaptive neuroplastic change that mitigate HFD.

Within such supportive contexts, relational interventions can serve as targeted levers for change. These interventions offer psychologically safe, emotionally attuned relationships in which individuals can experiment with alternative responses (e.g., setting boundaries, expressing vulnerability, slowing down) without immediate relational or performance penalties (Cohen & Wills, 1985; Boyatzis & Jack, 2018). From a COR standpoint, they provide external resources—time, attention, validation—that counterbalance loss spirals and support recovery (Hobfoll, 2011; Bakker & Demerouti, 2017). From a neuroplastic perspective, they introduce "disconfirming" experiences in which previously threatening cues (uncertainty, imperfection, saying no) are paired with safety and acceptance rather than negative consequences (Davidson & McEwen, 2012; Holzel et al., 2011). In Figure 1, this is depicted as the relational intervention node, which channels the trajectory away from the upper maintenance loop and into the lower regenerative loop by providing novel experiences of non-threat.

Proposition 5: Relational interventions characterized by psychological safety, empathic attunement, and emotionally salient reflection stimulate adaptive neuroplasticity by strengthening prefrontal regulatory networks and weakening habitual threat-based responses, thereby reducing HFD.

Both COR and neuroplasticity literatures emphasize that durable change requires repetition and emotional salience. Isolated insights or occasional supportive conversations rarely rewire

entrenched patterns; instead, repeated, emotionally meaningful experiences are needed for structural remodeling and stable behavioral shifts (Holzel et al., 2011; Doidge, 2007). In practice, this means that individuals with HFD need multiple experiences of being supported in uncertainty, validated in vulnerability, and encouraged to rest or set limits—without adverse consequences—before new neural pathways can compete with well-established vigilance-based circuits (Davidson & McEwen, 2012). As these experiences accumulate, they consolidate into new defaults, and from a COR perspective, they initiate resource gain spirals: restored energy and perceived safety increase willingness to invest in further recovery and relational connection, which in turn deepens resource pools (Hobfoll, 2011; Bakker & Demerouti, 2017). These processes are represented in Figure 1 as Adaptive Neuroplasticity followed by Resource Regeneration, where repeated, emotionally salient intervention sessions gradually shift the system toward more flexible regulation and replenished resources.

> *Proposition 6: The magnitude and durability of movement away from HFD are positively related to the frequency and emotional salience of repeated, safety-based experiences in everyday work and relationships, which consolidate new neural pathways and generate resource gain spirals.*

Metacognitive awareness, which refers to the capacity to notice internal states without immediate reaction, emerges as a central mechanism linking these contextual and relational changes to individual resilience (Ochsner & Gross, 2005). Relational interventions that foster reflection, labeling of internal experience, and nonjudgmental inquiry help individuals recruit prefrontal inhibitory systems that downregulate amygdala activation and reduce automaticity (Ochsner & Gross, 2005; Holzel et al., 2011). From a COR viewpoint, metacognition acts as a multiplier resource: it lowers the "cost" of each stressor by interrupting reactive cycles and

transforming moments of activation into opportunities for recalibration and learning (Hobfoll, 2011; Bakker & Demerouti, 2017). Over time, repeated metacognitive practice supports functional neuroplasticity that stabilizes regulation across contexts, enabling individuals to tolerate discomfort without reflexive overwork, avoidance, or self-criticism (Kuyken et al., 2016). This capacity contributes to the development of "resource caravans"—clusters of interdependent strengths such as patience, empathy, clarity, and self-compassion that accumulate together and provide robust buffers against future stress (Hobfoll, 2011; Cohen & Wills, 1985). Although not labeled separately in Figure 1, metacognitive awareness operates within the Adaptive Neuroplasticity and Resource Regeneration phases as the psychological mechanism that translates neural change into sustained resource gains.

> *Proposition 7: Metacognitive awareness cultivated through emotionally attuned relational practices functions as a multiplier resource, enhancing emotion regulation and facilitating ongoing resource accumulation through adaptive neural restructuring, thereby increasing protection against HFD.*

Ultimately, the COR–neuroplasticity model proposes that sustainable movement from HFD to what might be termed "high-functioning sustainability" occurs when adaptive neural and behavioral patterns become structurally integrated. At this point, individuals no longer rely primarily on effortful control or external structures to maintain healthier patterns; instead, flexible, resource-conserving responses are encoded as the nervous system's preferred operating mode (McEwen & Gianaros, 2011; Holzel et al., 2011). COR theory predicts that when resource gain cycles become automatic—such that investments in rest, reflection, and relational connection reliably yield replenishment—resource stability and well-being become self-sustaining and vulnerability to future loss spirals diminishes (Hobfoll, 2011; Bakker &

Demerouti, 2017). In the case of HFD, this structural integration describes a qualitative shift from threat-driven functioning to safety-anchored vitality and flexibility, where individuals can pursue challenge and excellence without chronic overactivation or hidden depletion. Figure 1's full cycle—from Resource Overprotection through relational intervention to Resource Regeneration—illustrates this transformation from a loss-driven loop to a more sustainable, regeneration-oriented pattern of high functioning.

> *Proposition 8: Sustainable reduction of HFD emerges when adaptive neural and behavioral patterns become structurally integrated, enabling automatic self-regulation and ongoing resource conservation, such that effort in valued domains no longer depends on chronic vigilance and overinvestment.*

Discussion

This paper proposes an integrated COR–Neuroplasticity Model to explain how HFD individuals can sustain significant distress while maintaining performance, and how relational interventions in organizational contexts can help reverse these patterns (Hobfoll, 1989, 2011; Davidson & McEwen, 2012). The model argues that what appears as paradoxical "high functioning distress" is better understood as a resource-preservation strategy that has become neurally entrenched through repeated exposure to pressure, threat, and contingent reward in work settings (Sherry, Hewitt, Sherry, Flett, & Graham, 2010). By linking COR's resource loss and gain cycles to neuroplastic mechanisms in corticolimbic and prefrontal systems, the framework reframes relational interventions as levers for both resource recalibration and neural reorganization rather than solely cognitive or behavioral change (McEwen & Gianaros, 2011; Holzel et al., 2011).

Theoretical contributions

First, the model reframes HFD as a resource-preservation phenomenon rather than a paradox of simultaneous success and suffering. Individuals who chronically overwork, overprepare, or suppress vulnerability are conceptualized as attempting to conserve status, competence, and belonging under perceived threat, consistent with COR's emphasis on resource protection and loss spirals (Hobfoll, 1989, 2011; Halbesleben, Neveu, Paustian-Underdahl, & Westman, 2014). Neuroplasticity clarifies why these patterns persist even when individuals recognize their unsustainability: emotionally charged experiences of evaluation and performance success repeatedly strengthen neural pathways that couple performance with safety and vulnerability with danger, biasing perception and behavior toward rigid overprotection (Davidson & McEwen, 2012; McEwen & Gianaros, 2011).

Second, the COR–Neuroplasticity model introduces a multi-level integration of neurobiological and organizational theory. Whereas JD–R and other COR-based models typically stop at the psychological level, explaining strain through appraisals and behavior (Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; Bakker & Demerouti, 2017), this framework specifies how resource loss and gain cycles manifest in the nervous system as changes in stress-related and regulatory circuits (Hobfoll, 2011; McEwen & Gianaros, 2011). By connecting COR's motivational tenets with Hebbian learning ("neurons that fire together, wire together"), it explains why resource-enhancing relational experiences must be repetitive, emotionally salient, and embedded in safety to reconfigure entrenched neural habits rather than producing only transient insight (Holzel et al., 2011; Kuyken et al., 2016).

Third, the model reconceptualizes relational interventions (e.g., leadership conversations, mentoring, and structured developmental relationships) as neurobiological mechanisms for

resource regeneration. These interventions are described as applied relational neuroplasticity: structured, emotionally safe interactions in which individuals repeatedly experience disconfirmation of threat-based predictions ("if I slow down or set a boundary, I will be rejected or fail") and instead encounter acceptance, support, and continued competence (Cohen & Wills, 1985; Boyatzis & Jack, 2018). Rather than centering on goal attainment or performance advice, effective relational work under this model focuses on trust, reflection, somatic awareness, and carefully paced behavioral experiments that allow the nervous system to learn safety without constant performance, thereby recalibrating resource appraisals and neural responses (Holzel et al., 2011).

Finally, the framework contributes to the neuroscience of leadership by specifying how emotional safety, reflection, and relational attunement can produce measurable shifts in neural activation patterns—particularly in prefrontal regions associated with self-regulation, perspective-taking, and meaning-making (Boyatzis & Jack, 2018; Davidson & McEwen, 2012). It proposes that sustainable leadership depends less on sheer cognitive capacity or "grit" and more on neurobiological adaptability: the ability of leaders' nervous systems to return to regulated baselines amid volatility, supported by resource-rich environments and high-quality relationships (McEwen & Gianaros, 2011; Koutsimani, Montgomery, & Georganta, 2019).

Practical implications

For organizational leaders, our study suggests that leaders play a pivotal role in shaping resource and neural climates for themselves and others. Cultures that implicitly reward constant availability, perfectionism, and emotional suppression create collective neuroplastic conditioning toward hypervigilance and overcontrol, thereby reinforcing HFD patterns (Bakker & Demerouti, 2017). Leaders can counteract this by modeling boundary-setting, recovery, and open discussion

of distress as compatible with high performance, offering relational experiences that signal safety rather than threat when employees reduce overwork, ask for help, or show vulnerability (Cohen & Wills, 1985; Hobfoll, 2011). Leadership development should therefore emphasize emotional regulation, relational attunement, and recovery skills alongside traditional strategic and cognitive competencies, so leaders become agents of resource gain and neural recalibration, not just performance drivers (Boyatzis & Jack, 2018; McEwen & Gianaros, 2011).

HR systems can use this framework to design integrative support ecosystems grounded in the principle that sustainable performance requires nervous-system flexibility, not just skill acquisition or stress management tips. Rather than relying solely on one-off workshops, organizations can offer ongoing relational interventions—such as peer groups, mentoring structures, and psychologically informed development programs—that provide repeated, emotionally safe experiences of non-threat and support for recalibrating performance–worth linkages (Cohen & Wills, 1985; Holzel et al., 2011). Metrics like heart rate variability (HRV), sleep quality, and subjective emotional regulation can complement traditional engagement and burnout measures as indicators of leadership capacity and resource regeneration, aligning HR analytics with the COR–Neuroplasticity perspective (McEwen & Gianaros, 2011; Kuyken et al., 2016).

This model reframes leadership sustainability as a question of regenerative capacity rather than endurance. In volatile, uncertain environments, leaders who rely solely on cognitive intelligence and effort-based resilience face diminishing returns as resource loss spirals and neural rigidity accumulate (Bakker & Demerouti, 2017; Koutsimani et al., 2019). Relationally rich, resource-supportive environments that foster repeated experiences of safety, authenticity, and mutuality help leaders unlearn maladaptive neural conditioning and access creativity,

empathy, and foresight (Boyatzis & Jack, 2018). Thus, leadership development is repositioned not as adding competencies but as helping leaders' nervous systems experience presence without fear.

Methodology to conduct HFD research

The COR–Neuroplasticity Model suggests several methodological directions for rigorous HRD research in organizational contexts. At the individual level, multi-wave and longitudinal designs can track changes in resource states (e.g., emotional energy, self-efficacy, perceived safety, and emotional regulation) before, during, and after relational interventions designed in line with this framework (Hobfoll, 2011; Bakker & Demerouti, 2017). Incorporating physiological indicators such as HRV, cortisol profiles, or EEG indices of frontal asymmetry and regulatory connectivity can operationalize neurobiological adaptation as outcomes of resource regeneration (McEwen & Gianaros, 2011; Davidson & McEwen, 2012).

At the interpersonal and team levels, dyadic and multilevel designs could examine how leaders' resource states and regulatory profiles relate to team psychological safety, burnout, and HFD indicators via crossover and contagion processes (Hobfoll, 2011; Koutsimani et al., 2019). Experience-sampling or diary methods can capture the micro-dynamics of vigilance, perceived threat, relational experiences, and recovery episodes in daily work, shedding light on how moment-to-moment relational cues contribute to or mitigate HFD patterns (Demerouti et al., 2001).

Mixed-method approaches that integrate qualitative interviews, narratives, and diary reflections with quantitative and physiological data will be particularly valuable for illuminating

the subjective experience of shifting from vigilance to presence and linking it to measurable neural and resource changes (Holzel et al., 2011; Kuyken et al., 2016).

Suggestions for future research

Future research should first establish clearer operationalizations and measurement tools for HFD in organizations. Currently, researchers and practitioners are employing establish depression measures such as DSM-5 or ICD-11, to measure HFD. However, these measures do not fully capture the concept of HFD such as paradoxical aspects of peoples' states. Thus, developing and validating scales that capture the combination of sustained performance and internal depletion, building on existing work on perfectionism, presenteeism, and subclinical depressive symptoms is required.

Further, additional studies exploring organizational interventions. Sanatkar and colleagues' meta-analysis (2025) suggest that employees completing work-focused interventions were better supported in the short term than those who received usual care or no intervention. Future research may whether relational interventions that are explicitly designed to enhance resource safety and trigger adaptive neuroplasticity produce durable changes in both subjective distress and objective resource indicators, beyond short-term mood or performance gains (Kuyken et al., 2016; McEwen & Gianaros, 2011).

Second, future work should examine boundary conditions such as distress severity, clinical comorbidity, and individual differences in neuroplastic potential (e.g., age, sleep quality, baseline stress physiology) to identify who benefits most from this type of intervention and under what conditions (Davidson & McEwen, 2012; Koutsimani et al., 2019). Third, cross-cultural research is essential, as the meanings of "safety," "control," "distress," and "high functioning"

vary across cultural, gender, and occupational contexts; examining HFD and resource-preservation strategies in collectivist versus individualist settings, and in different professional groups, will test the generalizability of the model (Hobfoll, 2011; Bakker & Demerouti, 2017).

Finally, ethical inquiry should accompany empirical work, clarifying how neuro-informed relational interventions can be used responsibly in organizations without pathologizing normal stress responses or blurring boundaries between development and therapy (Boyatzis & Jack, 2018; Cohen & Wills, 1985).

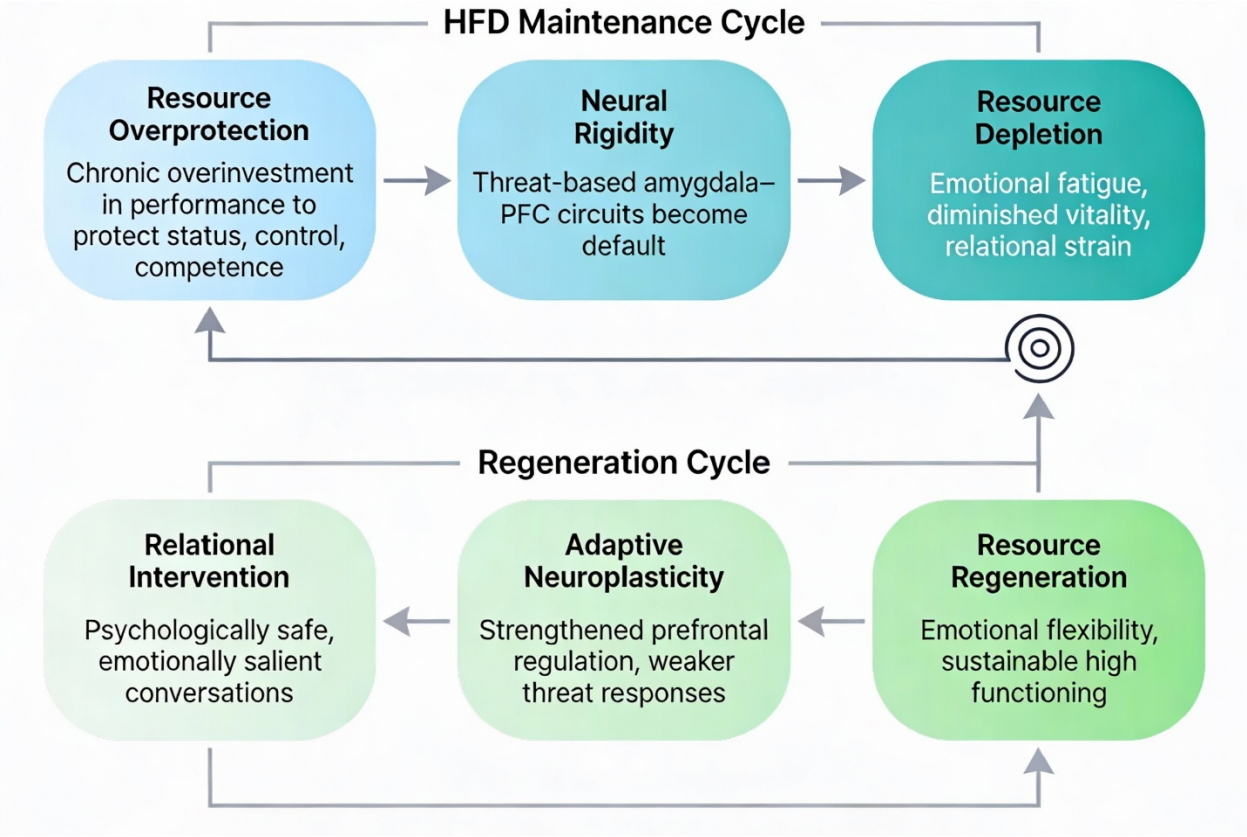
Conclusion

In the COR–Neuroplasticity Model, HFD is framed as short-term adaptive resource overprotection that helps individuals maintain status, competence, and belonging. Over time, however, this pattern becomes self-depleting as loss spirals erode energy, vitality, and capacity for joy despite continued success (Demerouti et al., 2001; Bakker & Demerouti, 2017). Integrating COR with neuroplasticity links psychological resource dynamics to neural processes. Repeated pairing of pressure and achievement engrains threat-based amygdala–prefrontal pathways. These circuits make HFD feel both necessary and resistant to change (Davidson & McEwen, 2012; Sherry et al., 2010). In this view, relational interventions act as applied relational neuroplasticity. When they are psychological safe, emotional salient, and repeated, they help employees develop more flexible and sustainable ways of functioning. These insights invite organizations to reconceptualize resilience. Resilience should not be understood as toughness under chronic overwork. Instead, it should be seen as nervous-system flexibility, recovery capacity, and relational safety embedded in everyday practices and systems (Hobfoll, 2011; Kuyken et al., 2016). Organizations that take HFD seriously will invest in resource-rich climates

and high-quality developmental relationships. Doing so enables sustained performance without sacrificing long-term wellbeing (Bakker & Demerouti, 2017; Davidson & McEwen, 2012).

FIGURE 1.

COR-Neuroplasticity cycle of HFD and relational intervention



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