



Yoga-based workplace health promotion: an organizational framework for employee well-being and sustainable workplace performance

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Article Info:

Keywords: Workplace Health Promotion, Yoga, Musculoskeletal Well-Being, Mental Well-Being, Sedentary Office Workers

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DOI:
<https://doi.org/10.64282/phi.v3i3.134>

Received : 22-08-2026
Revised : 10-09-2026
Accepted : 12-09-2026
Published : 14-09-2026

Abstract

Sedentary office work has become an important organizational health concern because prolonged sitting and computer-intensive work are associated with musculoskeletal discomfort, psychological strain, and reduced employee functioning. Although yoga has demonstrated potential benefits for physical and mental well-being, existing research has predominantly examined intervention outcomes, with comparatively limited attention to how yoga can be conceptualized and integrated as an organizational workplace health-promotion strategy. This conceptual paper develops an organizational framework explaining how yoga-based workplace health promotion may enhance employee well-being and contribute to sustainable workplace performance among sedentary office workers. No primary empirical data are collected; instead, the framework is developed through the synthesis and theoretical integration of existing literature on occupational health, workplace wellness, yoga interventions, and organizational behavior. Drawing on the Biopsychosocial Model and the Job Demands– Resources (JD–R) Model, the framework proposes that yoga practices including physical postures, breathing exercises, and mindfulness techniques may influence musculoskeletal and mental well-being through physiological and psychological mechanisms, while organizational support and workplace conditions shape their implementation and effectiveness. The framework contributes to human resource management and organizational behavior by positioning yoga-based workplace health promotion as an organizationally embedded employee well-being resource and by linking employee health, organizational support, work engagement, and sustainable workplace functioning. It also provides a foundation for future empirical validation and practical guidance for managers and HR practitioners seeking to incorporate evidence-informed well-being initiatives into broader employee experience and strategic workplace well-being practices.

1. INTRODUCTION

The transformation of contemporary work through digitalization, automation, and computer-intensive working practices has increased the prevalence of sedentary work,



particularly among office-based employees. Remote and hybrid work arrangements have further extended employees' exposure to prolonged sitting and continuous screen-based activities (Jin et al., 2025). While sedentary work is commonly approached as an occupational-health issue, its implications extend beyond individual health. Musculoskeletal discomfort, psychological strain, fatigue, and insufficient recovery can influence employees' capacity to concentrate, remain engaged, sustain work ability, and perform effectively. Consequently, employee well-being has become an increasingly important organizational and managerial concern, rather than solely an individual health outcome.

From a management perspective, employee well-being can be understood as an organizational resource that supports sustainable work functioning and organizational performance. Employees experiencing persistent physical discomfort, occupational stress, or psychological strain may face difficulties maintaining concentration, engagement, attendance, and effective work performance. Conversely, organizational environments that provide appropriate health resources and supportive working conditions can strengthen employees' capacity to respond to job demands. This perspective is particularly relevant to contemporary organizations because employee health is increasingly connected with productivity, absenteeism, presenteeism, engagement, retention, and organizational sustainability (Wadhen et al., 2025). Accordingly, workplace well-being should form part of broader organizational strategies concerned with human resource management, employee experience, and sustainable performance.

This organizational perspective also highlights the importance of healthy work design. Employee well-being is shaped not only by individual health behaviours but also by workload, job demands, autonomy, ergonomic conditions, opportunities for recovery, leadership practices, and organizational culture. Workplace health promotion should therefore not be conceptualized merely as providing employees with isolated wellness activities. Instead, effective workplace wellness requires organizational conditions that enable employees to participate in and benefit from health-promoting practices. Evidence indicates that employee participation in workplace health-promotion programmes is influenced by organizational culture, perceived relevance, supervisor and peer support, available facilities, and the extent to which programmes are adapted to employee needs. Thus, managerial and organizational conditions are central to the successful implementation of workplace well-being initiatives.

Within this context, organizational support represents an important mechanism connecting workplace wellness initiatives with employee outcomes. Management commitment, supportive leadership, appropriate allocation of time and resources, accessibility, and employee participation can determine whether a wellness programme becomes meaningfully embedded within everyday work or remains a peripheral organizational activity. This gives human resource management (HRM) an important role in workplace health promotion. HRM practices can facilitate employee well-being through programme design, healthy work arrangements, leadership support, employee participation, flexible access to wellness resources, and integration of health initiatives into the broader employee experience. Workplace wellness can therefore be understood as part

of an organization's system of resources and practices for maintaining a healthy, engaged, and sustainable workforce.

The importance of such organizational support becomes particularly evident among sedentary office workers. Prolonged sitting, repetitive computer use, limited movement, and sustained static positioning are associated with musculoskeletal discomfort, particularly in the neck, shoulders, upper back, and lower back ([Tersa-Miralles et al., 2022](#)). At the same time, contemporary office environments expose employees to psychosocial demands arising from high workloads, continuous digital connectivity, multitasking, deadlines, and limited recovery opportunities. These conditions can contribute to occupational stress, anxiety, emotional exhaustion, and reduced psychological well-being. Importantly, physical and psychological difficulties may interact rather than occur independently: persistent physical discomfort can influence psychological functioning, while occupational stress may intensify perceptions of pain, fatigue, and muscular tension. Workplace interventions capable of addressing these interconnected dimensions may therefore provide particular organizational value. Yoga has received increasing attention as a potential workplace health- promotion intervention because it combines physical movement, controlled breathing, mindfulness, relaxation, and meditative practices within a single mind- body approach. Existing evidence indicates that workplace yoga may contribute to improvements in flexibility, mobility, musculoskeletal discomfort, perceived stress, anxiety, and psychological well-being among desk-based workers ([Nath et al., 2024](#); [Wadhen et al., 2025](#)). These multidimensional characteristics distinguish yoga from workplace interventions directed exclusively toward either physical activity or psychological stress management.

However, the organizational value of workplace yoga cannot be inferred solely from evidence of individual health benefits. A yoga programme may demonstrate potential physical or psychological benefits while generating limited organizational impact if employees lack time to participate, managers discourage breaks, workloads remain excessive, programmes are inaccessible, or workplace culture does not support employee well-being. Conversely, when supported by management, incorporated into appropriate work routines, and aligned with broader health and HR practices, yoga may function as an organizationally embedded resource supporting employee recovery and well-being. Workplace yoga should therefore be examined not simply in terms of whether the intervention improves individual health outcomes, but also in terms of how organizational conditions enable it to become a sustainable workplace resource.

Despite growing evidence concerning workplace yoga and employee health, an important management-theory gap remains. Existing workplace yoga research has predominantly evaluated intervention effectiveness at the individual level, particularly in relation to pain, flexibility, stress, anxiety, and other health outcomes. This evidence is valuable, but it provides limited explanation of how workplace wellness interventions become organizational resources embedded within HRM practices, leadership support, healthy work design, and organizational culture. Consequently, the literature provides stronger evidence regarding whether yoga can improve particular employee outcomes

than regarding the organizational mechanisms and conditions through which such interventions can be systematically integrated into workplace management.

A second limitation concerns the separation of employee health from broader organizational processes. Musculoskeletal well-being and psychological well-being are frequently examined as individual-level outcomes, while their potential relationships with employee engagement, work ability, employee experience, and sustainable workplace functioning receive comparatively less conceptual attention. This limits understanding of how improvements in employee health may translate into outcomes that are theoretically relevant to management and organizational behavior.

A third gap concerns the role of organizational support. Workplace wellness programmes do not operate independently of their organizational environment. Leadership commitment, managerial encouragement, work design, accessibility, organizational culture, and opportunities for participation may influence whether employees engage with and benefit from workplace wellness initiatives. Yet these organizational conditions have not been sufficiently integrated into conceptual explanations of workplace yoga. Thus, a management-oriented framework is required to connect the individual health mechanisms associated with yoga with the organizational resources and conditions through which workplace health promotion can contribute to sustainable employee and organizational outcomes.

Against this background, this conceptual paper develops an organizational framework explaining how yoga-based workplace health promotion may enhance employee well-being and contribute to sustainable workplace performance among sedentary office workers. Drawing primarily on the Biopsychosocial Model and the Job Demands-Resources (JD-R) Model, the framework integrates physiological and psychological mechanisms with organizational conditions to explain how yoga-based workplace health promotion may influence musculoskeletal and mental well-being and, subsequently, broader workplace outcomes.

The paper makes three principal contributions. First, it extends workplace yoga research beyond an intervention-effect perspective by conceptualizing yoga-based workplace health promotion as an organizationally embedded employee resource rather than solely an individual wellness activity. Second, it connects employee health with management-relevant outcomes by positioning musculoskeletal and mental well-being within a broader pathway involving employee engagement, work ability, employee experience, and sustainable workplace functioning. Third, it highlights the role of organizational support, leadership, work design, and workplace culture in shaping the implementation and potential effectiveness of yoga-based workplace health promotion. In doing so, the framework provides a bridge between occupational-health research and HRM and organizational behavior scholarship, while offering a theoretical foundation for future empirical research and practical guidance for organizations seeking to develop sustainable employee well-being strategies.

2. THEORETICAL REVIEW

Workplace health promotion (WHP) has increasingly evolved from an individual-focused approach centred on employee lifestyle and health behaviour toward a broader organizational perspective that recognizes the influence of work design, organizational culture, leadership, psychosocial conditions, and access to health-promoting resources on employee well-being. From this perspective, employee health is not determined solely by individual choices but is also shaped by the conditions under which work is organized and performed. Workplace health promotion should therefore be understood as an organizational strategy that integrates individual health resources with supportive workplace conditions rather than as a collection of isolated wellness activities (Noblet & LaMontagne, 2006).

The organizational orientation of WHP is particularly relevant to sedentary office work. Employees may be encouraged to participate in physical activity, mindfulness, or other wellness programmes, but the effectiveness and sustainability of such initiatives can be constrained when they are implemented within environments characterized by excessive workloads, insufficient recovery opportunities, poor ergonomics, limited autonomy, or weak managerial support. Consequently, workplace wellness interventions need to be considered alongside healthy work design and organizational support. Managerial endorsement, legitimate time for participation, programme accessibility, supportive workplace norms, and employee involvement can influence whether health-promotion initiatives become integrated into everyday organizational practices or remain peripheral activities. The manuscript similarly recognizes management commitment, health-promoting policies, programme accessibility, and employee participation as conditions that may reinforce sustained engagement with workplace yoga initiatives.

Within this organizational perspective, yoga-based workplace interventions can be conceptualized as one supplementary resource within a broader workplace health-promotion system. Their potential value arises from combining physical movement with breathing, relaxation, mindfulness, and attentional practices that may support employees' physical and psychological recovery. However, providing employees with yoga opportunities does not remove the organization's responsibility to address the underlying conditions that generate physical and psychological demands. Yoga should therefore complement, rather than replace, appropriate ergonomic design, manageable workloads, adequate breaks and recovery opportunities, supportive leadership, and healthy job design.

This distinction is already central to the manuscript's argument that yoga represents one component of a multidimensional workplace health-promotion system rather than a substitute for structural workplace improvements. This organizational interpretation provides an important bridge between workplace health promotion and the Job Demands-Resources (JD-R) Model (Bakker et al., 2023) adopted as the primary theoretical foundation of this paper. From a JD-R perspective, yoga-based workplace interventions may provide supplementary personal and recovery resources, whereas organizational support and healthy work design determine the broader resource environment within which the intervention operates. Workplace health promotion is therefore most appropriately

conceptualized not simply in terms of whether a particular intervention improves employee health, but in terms of how individual-level health resources are supported by organizational conditions that enable sustainable employee well-being and work functioning.

This development is significant because sedentary office employment may simultaneously expose employees to physical and psychological risk factors. Prolonged computer-based work may contribute to musculoskeletal discomfort, whereas workloads, digital connectivity, job demands, limited recovery and reduced control may affect psychological health. Workplace interventions that can address multiple domains simultaneously may therefore have particular practical value.

Yoga is relevant within this context because its combination of controlled physical movement, breathing and attentional practices differentiates it from interventions targeting only exercise or psychological relaxation. This multidimensional character provides a theoretical justification for examining yoga as an occupational health- promotion strategy capable of influencing both musculoskeletal and mental well-being.

WHO Healthy Workplace Framework

The WHO Healthy Workplace Framework provides a useful overarching foundation for positioning yoga within workplace health promotion. The framework identifies four interrelated avenues through which organizations can influence health: the physical work environment, psychosocial work environment, personal health resources, and enterprise involvement in the community. These dimensions operate within a continuous organizational process involving leadership commitment, employee participation, assessment, prioritization, planning, implementation, evaluation, and improvement (WHO, 2010).

For the present paper, workplace yoga can be located primarily within the personal health-resource domain while simultaneously interacting with physical and psychosocial workplace conditions. For example, yoga may provide physical resources for mobility, flexibility and postural control while providing psychological resources associated with relaxation, mindfulness and emotion regulation. Organizational encouragement, workload flexibility, appropriate facilities, and supportive leadership may further determine employees' ability to participate.

The framework therefore supports an important proposition for this paper: the effectiveness of yoga-based workplace health promotion is influenced not only by the intervention itself but also by the organizational environment within which the intervention is delivered.

Modern office work is characterized by extensive computer use, prolonged sitting and relatively limited movement during working hours. Although sedentary work does not inevitably produce musculoskeletal disorders, accumulating evidence associates high occupational sitting exposure with several forms of musculoskeletal discomfort.

Dzakpasu et al. (2021), in a systematic review examining sedentary behaviour and musculoskeletal pain, reported associations between sedentary behaviour and musculoskeletal pain conditions, including neck and shoulder pain. More recently, Dang

[et al. \(2024\)](#) demonstrated that extensive workplace sitting is associated with musculoskeletal complaints and highlighted interactions between sitting duration, working hours and physical discomfort.

[Demissie et al. \(2024\)](#), reviewing work-related musculoskeletal disorders among computer users, further identified the neck, shoulders, upper back and lower back as frequently affected regions among office-based workers. These findings suggest that the sedentary office environment should be considered an important context for preventive musculoskeletal-health interventions.

Neck pain represents one of the most prominent musculoskeletal concerns associated with computer-based and sedentary work. Prolonged periods of relatively static positioning can increase sustained muscular loading, while repetitive screen interaction may contribute to discomfort when combined with inappropriate workstation configuration, insufficient recovery or individual susceptibility.

Recent global estimates also demonstrate that neck pain is an important public-health issue beyond the occupational context. The GBD 2021 Neck Pain Collaborators projected that the global number of neck-pain cases could reach approximately 269 million by 2050, representing an increase of more than 30% compared with 2020.

Evidence specifically examining sedentary behaviour has strengthened this concern. [Meng et al. \(2025\)](#), through systematic evaluation of observational evidence, reported an association between sedentary behaviour and neck-pain risk. Such findings are particularly relevant to employees whose jobs require sustained screen exposure and lengthy sitting periods.

Nevertheless, sedentary behaviour should not be interpreted as an isolated causal explanation. [Fullen et al. \(2023\)](#) emphasize that musculoskeletal pain is better understood through a biopsychosocial perspective in which biological, psychological, behavioural and social factors interact. Therefore, prolonged sitting, muscle loading, stress, sleep, emotional state, physical activity, beliefs about pain and workplace conditions may collectively shape an employee's experience of neck pain.

Shoulder discomfort frequently co-occurs with neck pain among computer users. Static upper-limb positioning, repetitive keyboard and mouse use, inadequate arm support and sustained muscle activation may contribute to discomfort in the neck-shoulder region. [Demissie et al. \(2024\)](#) identified shoulder complaints as one of the most frequently reported forms of work-related musculoskeletal discomfort among computer users and office workers.

Because the neck and shoulders function as an interconnected musculoskeletal region, interventions aimed at mobility, controlled movement, muscular endurance and relaxation may have advantages over interventions targeting a single symptom. Yoga is potentially relevant because many asanas incorporate controlled movement of the cervical spine, shoulder girdle, thoracic region and upper limbs. [Gandolfi et al. \(2023\)](#), for example, discussed specific yoga postures as potentially useful approaches for preventing or managing musculoskeletal discomfort affecting the neck, shoulders and wrists in professionals performing sustained occupational tasks.

The relationship between posture and musculoskeletal pain is more complex than the assumption that a single “poor posture” directly causes pain. Contemporary musculoskeletal research increasingly recognizes that prolonged static positioning, limited movement variation, workstation mismatch, repetitive tasks and psychosocial factors may interact in determining discomfort.

Ergonomic challenges nevertheless remain important in office settings. Monitor height, seating design, keyboard and mouse placement, arm support, desk dimensions and opportunities for movement can influence musculoskeletal loading. Evidence suggests that workstation modification may contribute to the reduction of neck pain, particularly when combined with exercise rather than treated as an isolated solution ([Frutiger et al., 2021](#)).

Yoga should therefore not be presented as a substitute for proper workplace ergonomics. Instead, an integrated strategy would combine ergonomic optimization with active movement, muscular conditioning and psychological recovery. Such an approach is consistent with contemporary biopsychosocial management of musculoskeletal health.

Musculoskeletal conditions generate substantial health, disability and productivity consequences. WHO estimates indicate that approximately 1.71 billion people globally live with musculoskeletal conditions, illustrating their considerable public-health burden ([WHO, 2022](#)).

At the workplace level, musculoskeletal discomfort can potentially influence work ability, concentration, absenteeism, presenteeism and healthcare utilization. Consequently, preventive interventions that can be implemented efficiently within the workday may offer benefits for both employees and organizations.

The relevance of yoga therefore extends beyond symptom management. If appropriately implemented, workplace yoga may contribute to an organizational strategy aimed at maintaining functional capacity and supporting sustainable participation in work.

Mental well-being has become a central component of contemporary occupational health. The WHO reports that approximately 15% of working-age adults were living with a mental disorder in 2019 and estimates that depression and anxiety lead to approximately 12 billion lost working days globally each year, with around US\$1 trillion in productivity losses ([WHO, 2024](#)).

Office employees may encounter psychological demands arising from workload, deadlines, digital communication, role ambiguity, job insecurity, low autonomy, interpersonal conflict and blurred boundaries between work and personal life. WHO identifies excessive workloads, low job control, discrimination, inequality and job insecurity among workplace conditions that can threaten mental health.

Anxiety is particularly relevant because repeated psychological arousal may interact with musculoskeletal symptoms. Stress and anxiety may increase perceived muscle tension, influence sleep and recovery, heighten pain sensitivity, and shape cognitive responses to physical discomfort. This interaction reinforces the need to examine musculoskeletal and mental health simultaneously rather than as independent outcomes.

Occupational stress emerges when perceived work demands challenge an employee’s ability or resources to respond effectively. Within contemporary office environments, prolonged cognitive demands may occur simultaneously with physical inactivity, creating

a combination of psychological loading and reduced movement. [Chen et al. \(2022\)](#) demonstrated significant relationships between work stress, mental health and employee performance, reinforcing the organizational consequences of chronic psychological strain.

Workplace health promotion should therefore address both the conditions generating stress and employees' capacity to regulate their responses. Yoga is potentially relevant to the second pathway because controlled breathing, mindful attention and physical movement may facilitate relaxation and psychological recovery. However, it should be positioned as complementary to organizational measures addressing excessive job demands.

Burnout is closely related to prolonged exposure to unsuccessfully managed occupational stress. It is commonly characterized by exhaustion, psychological distancing or cynicism toward work, and reduced professional efficacy. Organizational approaches to burnout are increasingly emphasized because individual coping programmes alone cannot correct harmful job design or persistently excessive demands. [Bes et al. \(2023\)](#) found evidence that organizational interventions can contribute to reducing exhaustion, the core component of burnout, highlighting the importance of systemic workplace strategies.

For the proposed framework, yoga may operate as a recovery resource, but its contribution should not be interpreted as transferring responsibility for burnout from organizations to employees. Rather, yoga may function within a supportive organizational system that also addresses workload, recovery opportunities, managerial behaviour and psychological safety.

Psychological well-being represents more than the absence of anxiety or burnout. It encompasses positive functioning, emotional balance, meaningful engagement, perceived competence and the capacity to manage everyday demands.

This distinction is important because the proposed paper should examine yoga not only through a deficit-reduction perspective such as educing pain, stress or anxiet but also through a health-enhancement perspective. Yoga-based programmes may potentially increase relaxation, body awareness, perceived control and positive affect, thereby supporting broader psychological functioning.

This aligns with contemporary workplace health promotion, which increasingly emphasizes flourishing and sustainable functioning rather than merely preventing illness. Work engagement represents a positive work-related state commonly reflected in energy, involvement and absorption in occupational activities. It provides an important positive counterpart to burnout. [Bakker, Demerouti and Sanz-Vergel \(2023\)](#) explain through Job Demands-Resources theory that resources can stimulate motivational processes that enhance engagement, while excessive demands and insufficient resources contribute to strain and exhaustion.

This distinction offers an important extension for yoga research. Rather than examining only whether workplace yoga reduces negative psychological outcomes, future research could investigate whether yoga contributes indirectly to engagement by enhancing employees' personal resources, recovery and perceived well-being. Thus, work engagement can be positioned as a downstream occupational outcome within the proposed framework rather than a direct clinical effect of yoga.

Yoga represents a multidimensional mind–body practice combining physical postures, regulated breathing and attentional or meditative practices. Its integrative character distinguishes it from conventional physical exercise because it simultaneously incorporates movement, respiratory regulation, body awareness and psychological attention.

Asanas involve controlled body positions and movements that can influence flexibility, mobility, balance, muscular function and body awareness. For sedentary office workers, these components are particularly relevant to the neck, shoulder and thoracic regions, which may experience sustained static loading during computer-based work.

Evidence indicates potential benefits for musculoskeletal symptoms. [Garcia et al. \(2023\)](#) found that brief daily yoga practice among home-office workers was associated with improvements in musculoskeletal discomfort and mood disturbance. [Thanasilungkoon et al. \(2023\)](#) similarly reported improvements in pain outcomes following yoga among individuals experiencing neck and shoulder discomfort. [Kuptniratsaikul et al. \(2023\)](#) additionally compared Hatha yoga with stretching exercises and examined pain, physical performance and psychological outcomes, illustrating how yoga can influence multiple domains simultaneously.

Pranayama involves intentional regulation of breathing patterns. In workplace settings, regulated breathing is theoretically relevant because stress often involves physiological arousal, whereas slower and more controlled breathing may facilitate relaxation and attentional regulation. When incorporated with asana and meditation, pranayama contributes to yoga’s integrated mind–body character. It may therefore provide a mechanism connecting yoga participation with psychological outcomes such as perceived stress, anxiety and emotional regulation rather than functioning solely as a physical exercise component.

Mindfulness and meditative attention within yoga encourage individuals to direct attention toward present-moment bodily sensations, breathing and mental experiences. These practices may reduce automatic reactions to stressors while increasing awareness of physical tension and emotional states. [Khajuria et al. \(2024\)](#), reviewing yoga-based stress-reduction research, reported that yoga commonly incorporates meditation, postures and breathing and identified evidence supporting beneficial effects on stress and anxiety. Similarly, [Schleinker et al. \(2024\)](#) reviewed evidence from stressed adults and reported beneficial effects of yoga on perceived stress, while acknowledging variation in intervention design and study quality. This psychological dimension is particularly important for sedentary workers experiencing both neck–shoulder discomfort and anxiety because mindfulness may potentially influence the cognitive and emotional processing of physical symptoms as well as work-related stress.

Several pathways may explain yoga’s potential physiological effects. From a musculoskeletal perspective, repeated controlled movement may enhance mobility, flexibility, muscular coordination and movement variability while interrupting prolonged periods of static posture. From a stress-regulation perspective, yoga may influence physiological arousal through breathing and relaxation processes. Systematic evidence increasingly suggests that yoga can affect stress-related outcomes, although specific

biological mechanisms vary according to intervention style, intensity, duration and study population ([Khajuria et al., 2024](#); [Schleinzer et al., 2024](#)).

Accordingly, the proposed framework should avoid claiming a single physiological mechanism. Instead, yoga can be conceptualized as influencing an interconnected set of pathways involving movement, muscular function, breathing regulation, relaxation and recovery.

Psychologically, yoga may influence well-being through attention regulation, mindfulness, emotional regulation, perceived self-efficacy and stress recovery. These mechanisms may be particularly relevant when employees experience recurring cognitive demands or anxiety.

The physical and psychological mechanisms should not be treated as independent pathways. The biopsychosocial perspective suggests reciprocal relationships: psychological stress can influence perceived pain and muscular tension, while persistent pain may negatively affect mood, anxiety and occupational functioning ([Fullen et al., 2023](#)). This reciprocal relationship provides the central conceptual rationale for positioning yoga as an integrative workplace health intervention.

The theoretical foundation of this conceptual paper is anchored primarily in the Job Demands–Resources (JD–R) Model, with the Biopsychosocial Model serving as a complementary health perspective. This theoretical prioritization reflects the organizational orientation of the proposed framework. Rather than conceptualizing workplace yoga primarily as an individual therapeutic or health-enhancing activity, the present study positions yoga-based workplace health promotion as a potential workplace resource that operates within a broader system of job demands, organizational resources, employee recovery, and work-related outcomes. The Biopsychosocial Model complements this organizational explanation by clarifying how physical, psychological, and social or organizational factors may interact in shaping employee well-being.

Job Demands–Resources Model as the Primary Theoretical Foundation

The Job Demands–Resources Model provides the central theoretical mechanism for the proposed framework because it directly connects characteristics of the work environment with employee health, motivation, engagement, and work functioning. The JD–R Model distinguishes between job demands and job resources. Job demands refer to aspects of work that require sustained physical, cognitive, or psychological effort and may contribute to strain when demands remain high over time. Job resources, by contrast, facilitate goal achievement, reduce the consequences of job demands, support learning and development, and promote employee motivation and engagement. Contemporary developments of the JD–R perspective further recognize that personal and organizational resources interact with job demands in shaping employee well-being and work-related outcomes ([Bakker et al., 2023](#)).

This theoretical logic is particularly relevant to sedentary office work. Employees working in computer-intensive environments may experience multiple demands simultaneously, including prolonged sitting, repetitive computer use, restricted movement, cognitive workload, time pressure, sustained attention, digital connectivity,

and limited opportunities for recovery. The manuscript already identifies workload, cognitive intensity, prolonged computer exposure, time pressure, and limited movement as important demands experienced by sedentary employees. When these demands are persistent and insufficiently balanced by appropriate resources, they may contribute to physical discomfort, psychological strain, fatigue, reduced recovery, and impaired work functioning.

Within the proposed framework, a yoga-based workplace intervention is conceptualized as a supplementary personal and organizational resource rather than as a stand-alone solution to workplace health problems. Physical yoga practices may provide opportunities for movement, mobility, muscular relaxation, and interruption of sustained static postures, while regulated breathing and mindfulness practices may support relaxation, attentional control, emotional regulation, and psychological recovery. Through these processes, workplace yoga may contribute to employees' capacity to recover from work demands and maintain physical and psychological functioning.

This resource-based interpretation is important because the organizational value of workplace yoga does not arise merely from participation in yoga activities. Instead, its potential contribution depends on whether the intervention strengthens resources that help employees cope with or recover from occupational demands. Accordingly, the proposed framework shifts attention away from the simple question of whether workplace yoga produces beneficial health outcomes toward a more theoretically relevant question: how does a workplace yoga intervention contribute to personal resources, recovery, employee well-being, and subsequent work-related outcomes within a particular organizational environment?

The JD-R Model also provides the theoretical basis for distinguishing between proximal employee outcomes and more distal organizational outcomes. Improvements in recovery and personal resources are expected to contribute first to employee musculoskeletal and mental well-being. Improved well-being may subsequently support outcomes of greater relevance to organizational behavior and human resource management, including work engagement, work ability, and sustainable work performance. These relationships should not be interpreted as automatic or deterministic. Rather, they are expected to depend on the balance between job demands and available resources within the work environment.

The manuscript already recognizes this distinction by proposing that yoga may function as a personal and organizational health resource that facilitates recovery and strengthens employees' capacity to respond to occupational demands. It further identifies engagement and sustainable work functioning as potential downstream organizational outcomes. The revised theoretical framework therefore places this JD-R mechanism at the centre of the conceptual model rather than treating it as one explanation among several competing theories.

Biopsychosocial Model as a Supporting Health Perspective

Although the JD-R Model explains the principal organizational mechanism of the framework, the Biopsychosocial Model provides an important complementary perspective

for understanding employee health outcomes. The model proposes that health and illness emerge through interactions among biological, psychological, and social factors rather than through isolated physiological mechanisms. This perspective is especially relevant to musculoskeletal and psychological problems among sedentary employees because physical discomfort and psychological strain frequently coexist and may influence one another.

Applied to sedentary office work, the biological dimension may include muscular loading, restricted movement, prolonged static posture, flexibility, mobility, and physical inactivity. The psychological dimension may involve perceived stress, anxiety, emotional regulation, attention, recovery, and perceptions of discomfort. The social and organizational dimension may encompass workload, managerial support, organizational culture, employee participation, ergonomic conditions, and access to workplace health resources. These dimensions are already reflected in the manuscript's existing discussion of the Biopsychosocial Model.

The Biopsychosocial Model is therefore particularly useful for explaining why workplace yoga may influence both musculoskeletal and mental well-being rather than treating these as unrelated outcomes. Physical components of yoga may influence movement, flexibility, muscular coordination, mobility, and perceptions of physical discomfort. Breathing, relaxation, and mindfulness components may contribute to stress regulation, emotional regulation, attentional awareness, and psychological recovery. At the same time, these pathways may interact. Psychological stress may influence muscular tension and perceptions of pain, while persistent physical discomfort may negatively affect mood, anxiety, concentration, and occupational functioning.

The manuscript already recognizes this reciprocal relationship and argues that physical and psychological mechanisms should not be treated as completely independent pathways. Consequently, the Biopsychosocial Model is retained as a supporting health perspective, rather than as the principal organizational theory. Its role is specifically to explain the interconnected nature of physical and psychological employee well-being within the broader JD-R pathway.

The integration of the JD-R Model and the Biopsychosocial Model provides a clearer and more parsimonious theoretical foundation for the proposed framework. The two perspectives perform different but complementary functions.

The JD-R Model explains the organizational process through which yoga-based workplace interventions may operate as a supplementary resource within a system of job demands and organizational conditions. It provides the theoretical basis for linking workplace intervention, personal resources and recovery, employee well-being, and distal work-related outcomes.

The Biopsychosocial Model explains the health-related process through which improvements in physical and psychological functioning may occur. It supports the simultaneous consideration of musculoskeletal and mental well-being and recognizes that employee health is influenced by interactions among physiological, psychological, and organizational conditions.

Accordingly, the integrated theoretical mechanism proposed in this paper can be expressed as:

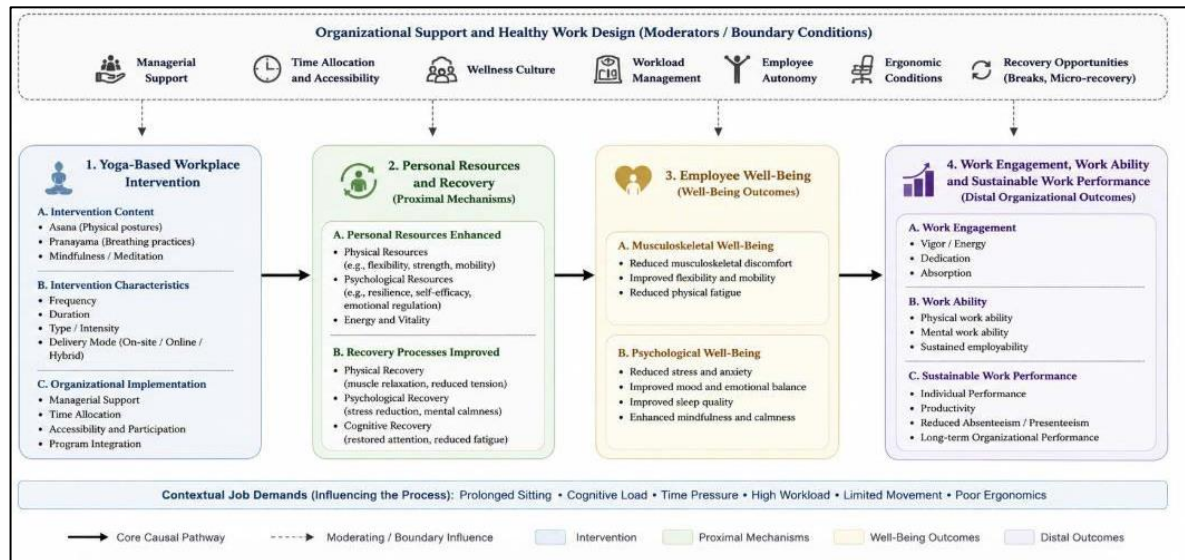


Figure 1. Theoretical Mecanism

The strength of these relationships is expected to depend on broader organizational boundary conditions, particularly organizational support and healthy work design. Managerial support, legitimate time allocation, programme accessibility, wellness culture, manageable workloads, employee autonomy, ergonomic conditions, and adequate recovery opportunities may determine whether workplace yoga functions as a meaningful resource or merely as an isolated wellness activity.

This boundary-condition perspective is particularly important because workplace yoga should not be conceptualized as a substitute for healthy organizational practices. The manuscript itself emphasizes that yoga cannot compensate fully for poor ergonomics, excessive workloads, inadequate breaks, unhealthy job design, or unsupportive management. Instead, workplace yoga should be understood as one supplementary resource embedded within a broader system of organizational resources and healthy work practices.

Although Self-Determination Theory, Conservation of Resources Theory, and Pender's Health Promotion Model offer useful supplementary insights, they are not treated as core theoretical foundations of the revised framework. Self-Determination Theory may help explain voluntary participation and sustained motivation, particularly through autonomy and competence; Conservation of Resources Theory offers complementary insights into resource restoration and protection; and Pender's Health Promotion Model may assist in understanding employees' participation in health- promoting behavior. However, these perspectives are used only selectively to support specific aspects of implementation and participation rather than to define the central causal architecture of the framework.

Sedentary office employees may experience demands such as workload, cognitive intensity, prolonged computer exposure, time pressure and limited movement. Yoga-based workplace health promotion may function as a personal and organizational health

resource that facilitates recovery and strengthens employees' capacity to respond to these demands. JD-R theory thus extends the proposed framework beyond health outcomes toward organizational outcomes such as engagement and sustainable work functioning.

Pender's Health Promotion Model (HPM) provides a behavioural-health perspective explaining why individuals adopt and maintain health-promoting behaviours. The model emphasizes individual characteristics and experiences, perceived benefits and barriers, self-efficacy, interpersonal influences, situational influences and commitment to health-promoting actions (Pender et al., 2011). The model continues to be applied in contemporary health-promotion research to understand participation in preventive and health-enhancing behaviours.

Applied to workplace yoga, employees may be more likely to participate when they perceive meaningful physical or psychological benefits, encounter minimal barriers, feel confident performing the activities, receive encouragement from colleagues and management, and have suitable workplace opportunities.

HPM therefore provides the strongest explanation of participation and behavioural adoption, whereas the Biopsychosocial Model explains health mechanisms, COR and JD-R explain resource and occupational processes, and SDT explains sustained motivation.

Rather than treating all five theories as equally dominant, the present paper can organize them hierarchically. The Biopsychosocial Model should serve as the primary health framework because it explains the integrated relationship between musculoskeletal and psychological well-being. The JD-R model can then provide the principal occupational framework by explaining how workplace yoga operates as a health and recovery resource in response to job demands.

3. RESEARCH METHODOLOGY

Building on the Job Demands–Resources (JD-R) Model as the primary theoretical foundation and the Biopsychosocial Model as a supporting health perspective, the proposed conceptual framework explains how yoga-based workplace interventions may contribute to employee well-being and subsequent work-related outcomes. The framework moves beyond viewing workplace yoga solely as an individual health intervention by positioning it as a supplementary workplace resource operating within a broader organizational environment. Accordingly, the model distinguishes the characteristics of the yoga-based workplace intervention, the personal resources and recovery processes through which its effects may occur, employee well-being as the primary outcome, and work engagement, work ability, and sustainable work performance as more distal organizational outcomes. Organizational support and healthy work design are incorporated as boundary conditions that may strengthen or weaken these relationships, reflecting the JD-R proposition that employee outcomes depend on the interaction between workplace demands and available resources. This structure provides a management-oriented explanation of how workplace wellness interventions may become meaningfully embedded within organizational practices rather than functioning as isolated employee

health activities. Figure 2 illustrates the proposed conceptual framework. The proposed framework is illustrated conceptually as follows:

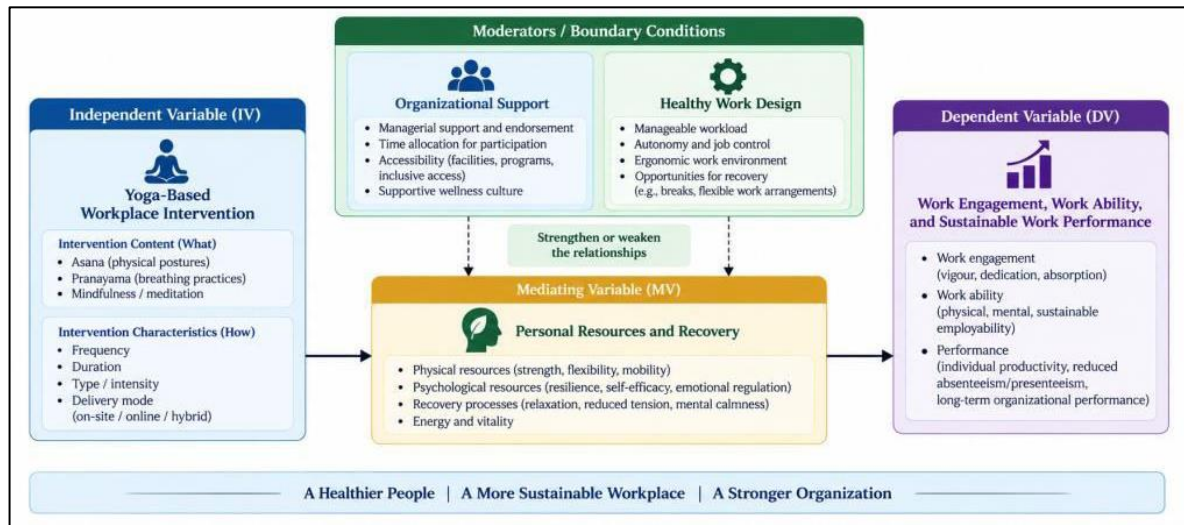


Figure 2. Conceptual Framework

The proposed conceptual framework reconceptualizes yoga-based workplace health promotion from an individual wellness activity into an organizationally embedded workplace resource. Grounded primarily in the Job Demands–Resources (JD–R) Model and supported by the Biopsychosocial Model, the framework proposes a sequential mechanism through which a yoga-based workplace intervention may contribute to employee and organizational outcomes. Rather than assuming a direct relationship between yoga participation and workplace performance, the model distinguishes the intervention itself from the proximal mechanisms through which it operates, the employee well-being outcomes that may subsequently emerge, and the more distal work-related consequences. Accordingly, the central pathway is conceptualized as Yoga-Based Workplace Intervention → Personal Resources and Recovery → Employee Well-Being → Work Engagement, Work Ability, and Sustainable Work Performance. This sequential structure strengthens the management orientation of the framework by explaining not simply whether yoga may benefit employees, but how an employee-focused intervention may generate resources that ultimately contribute to sustainable work functioning.

Yoga-Based Workplace Intervention constitutes the primary antecedent in the framework. The construct is operationally separated into intervention content and intervention characteristics. Intervention content comprises asana or physical postures, pranayama or regulated breathing practices, and mindfulness or meditation. Intervention characteristics describe how these practices are structured and delivered, including frequency, duration, type or intensity, and delivery mode. This distinction is theoretically important because interventions containing similar yoga practices may differ substantially in dosage, accessibility, intensity, and delivery format. The framework therefore does not assume that all workplace yoga interventions are equivalent. Rather, their potential contribution to employee outcomes may depend on both what the intervention contains and how it is implemented.

The first explanatory mechanism is Personal Resources and Recovery. Consistent with the JD-R perspective, workplace yoga is conceptualized as a supplementary resource that may help employees restore or strengthen resources depleted by sustained job demands. These resources may include physical capacities such as mobility and flexibility, psychological resources such as emotional regulation and self-efficacy, and recovery processes involving relaxation, reduced tension, restored attention, and psychological detachment from work demands. This mechanism is particularly relevant to sedentary office workers, who may simultaneously experience prolonged sitting, repetitive computer use, cognitive demands, time pressure, and limited opportunities for physical and psychological recovery. The manuscript already recognizes yoga as a potential resource-building and recovery mechanism capable of strengthening employees' capacity to respond to workplace demands. Accordingly, Proposition 1 (P1) proposes that yoga-based workplace interventions are positively associated with employees' personal resources and recovery.

Employee Well-Being represents the primary employee-level outcome arising from these resource and recovery processes. Informed by the Biopsychosocial Model, the framework conceptualizes employee well-being through interconnected musculoskeletal and mental well-being dimensions. Physical recovery may contribute to improved mobility, reduced muscular tension, greater postural awareness, and reduced musculoskeletal discomfort, while psychological recovery may contribute to reduced stress and anxiety, improved emotional regulation, and enhanced psychological functioning. Importantly, these pathways are not assumed to operate independently. Psychological stress may influence muscular tension and perceptions of physical discomfort, while persistent musculoskeletal problems may negatively affect mood, concentration, and occupational functioning. This reciprocal relationship is consistent with the manuscript's existing biopsychosocial argument. Consequently, Proposition 2 (P2) proposes that higher levels of personal resources and recovery are positively associated with employee well-being.

The framework subsequently differentiates employee well-being from the distal organizational outcomes of work engagement, work ability, and sustainable work performance. This distinction is particularly important for strengthening the management contribution of the paper. Work engagement reflects employees' capacity to remain energetic, dedicated, and psychologically involved in their work, while work ability concerns their physical and psychological capacity to meet work demands. Sustainable work performance refers more broadly to the capacity to maintain effective work functioning over time rather than to short-term productivity alone. Improved employee well-being may provide employees with greater physical and psychological capacity to remain engaged and function effectively, but these organizational outcomes are not conceptualized as automatic consequences of yoga participation. The existing manuscript similarly recognizes work ability, engagement, and organizational productivity as broader outcomes that may follow improvements in physical and psychological well-being. Accordingly, Proposition 3 (P3) proposes that employee well-being is positively associated with work engagement, work ability, and sustainable work performance.

A distinctive feature of the revised framework is the positioning of Organizational Support and Healthy Work Design as moderators or organizational boundary conditions. This represents an important departure from models that treat workplace wellness interventions primarily as employee-level activities. The proposed framework recognizes that the potential benefits of yoga depend partly on the organizational environment within which employees are expected to participate and recover.

Organizational Support encompasses managerial endorsement, legitimate time allocation for participation, programme accessibility, and a supportive wellness culture. These conditions may determine whether employees perceive participation as feasible and organizationally legitimate. For example, offering yoga sessions is unlikely to provide a meaningful workplace resource when employees cannot participate because of workload pressures, when supervisors implicitly discourage breaks, or when programmes are inaccessible to particular groups of employees. Conversely, managerial encouragement, protected participation time, accessibility, and supportive workplace norms may enable employees to engage more effectively with the intervention. Organizational support is therefore conceptualized as strengthening or weakening the resource-generating potential of workplace yoga. Accordingly, Proposition 4 (P4) proposes that organizational support positively moderates the relationship between yoga-based workplace intervention and personal resources and recovery.

Healthy Work Design represents the second organizational boundary condition and encompasses manageable workload, employee autonomy, appropriate ergonomic conditions, and adequate opportunities for movement and recovery. Its inclusion reflects a central theoretical principle of the framework: an individual wellness intervention cannot reasonably be expected to compensate for structurally unhealthy working conditions. A yoga programme may provide additional recovery resources, but persistent excessive workload, inadequate ergonomics, restricted autonomy, or insufficient recovery opportunities may continuously deplete those resources and constrain improvements in employee well-being. The manuscript already emphasizes that yoga should complement rather than replace ergonomically appropriate workstations, manageable workloads, healthy job design, adequate breaks, and supportive leadership. Consequently, Proposition 5 (P5) proposes that healthy work design positively moderates the relationship between personal resources and recovery and employee well-being.

Taken together, the framework establishes a multilevel management-oriented explanation of yoga-based workplace health promotion. At the intervention level, yoga provides physical, breathing, and mindfulness practices structured through particular programme characteristics. At the proximal employee level, these practices may contribute to personal resource development and recovery. At the well-being level, restored resources may support musculoskeletal and mental well-being. At the distal organizational level, improved well-being may contribute to work engagement, work ability, and sustainable work performance. Finally, at the organizational level, organizational support and healthy work design determine important boundary conditions under which these relationships may be strengthened or constrained. The theoretical contribution of the framework therefore lies not in proposing simply that “yoga improves employee health,” but in

explaining how, through which mechanisms, and under what organizational conditions yoga-based workplace interventions may contribute to employee well-being and sustainable workplace outcomes.

4. DISCUSSION

The proposed framework has several implications for human resource management (HRM) because it positions employee well-being not simply as an individual health concern but as an organizational resource that may support sustainable employee functioning. From a strategic HRM perspective, workplace well-being initiatives should therefore be aligned with broader organizational objectives concerning workforce sustainability, employee experience, engagement, retention, and performance. Yoga-based workplace interventions may form part of this strategy, but their organizational value depends on how effectively they are integrated into HR practices and the wider work environment rather than on their availability as isolated wellness activities.

From an employee experience perspective, HR managers should consider how employees encounter workplace wellness throughout their everyday work. Providing a wellness programme while employees simultaneously experience excessive workloads, inadequate recovery time, poor ergonomics, or managerial discouragement may create inconsistency between formal organizational well-being initiatives and employees' actual work experiences. Effective wellness strategies therefore require alignment between the intervention and the conditions under which employees work. Participation should remain voluntary, accessible, inclusive, and compatible with employees' responsibilities and working arrangements. The existing manuscript similarly emphasizes accessibility, adaptation to different employee needs, and voluntary participation.

Organizational support is particularly important in translating wellness initiatives into credible HR practices. Employees are more likely to perceive workplace well-being as an organizational priority when managers provide legitimate time for participation, communicate support for recovery, ensure programme accessibility, and demonstrate consistent commitment to employee health. HR functions can facilitate these conditions through wellness policies, manager training, communication practices, resource allocation, and mechanisms that allow employees to participate without being disadvantaged by workload expectations. Organizational support therefore functions not merely as an implementation consideration but as a boundary condition influencing whether yoga-based workplace interventions can operate as meaningful employee resources.

The framework also highlights the relationship between HRM and healthy work design. Workplace yoga should complement rather than substitute for organizational interventions addressing workload, autonomy, ergonomics, movement opportunities, breaks, and recovery. This distinction is particularly important from an ethical and managerial perspective because organizations should not transfer responsibility for managing structurally generated occupational strain entirely to employees. The manuscript already emphasizes that yoga cannot replace ergonomically appropriate workstations, manageable workloads, healthy job design, adequate breaks, or supportive

leadership. HR managers should therefore integrate wellness interventions with job-design and occupational-health practices rather than treating employee wellness as a separate programme.

Leadership represents another important HRM mechanism. Supervisors and line managers influence whether employees perceive wellness participation and recovery as legitimate workplace behaviours. Leadership practices that normalize appropriate breaks, encourage participation without coercion, respect employee autonomy, and demonstrate concern for employee well-being may strengthen the organizational conditions under which workplace wellness resources become effective. Conversely, managerial practices that implicitly discourage participation or reward persistent overwork may weaken the value of formal wellness initiatives.

The proposed framework also has implications for employee engagement and retention. Improved employee well-being and recovery may support employees' capacity to remain energetic, psychologically present, and functionally capable at work. However, engagement and retention should be treated as downstream organizational outcomes rather than direct effects of yoga participation. Their development is likely to depend on the broader combination of employee resources, job demands, organizational support, leadership, and work design. This interpretation is consistent with the JD-R perspective and avoids overstating the organizational effects of individual wellness interventions.

Finally, workplace well-being should be incorporated carefully into performance management. Organizations may evaluate wellness initiatives through participation, employee perceptions, well-being indicators, work ability, absenteeism, and engagement, but participation in yoga or other wellness programmes should not itself become an individual performance criterion. Employees should not be rewarded or penalized based on participation in voluntary health activities. Instead, HR analytics can be used at an appropriate aggregate level to evaluate whether workplace health strategies contribute to sustainable employee functioning and whether modifications to programme design or organizational conditions are required. In this way, HRM can position employee well-being as part of sustainable workforce management while preserving employee autonomy and avoiding the individualization of responsibility for organizationally generated health risks.

Implementation should emphasize accessibility and compatibility with the working environment. Short sessions during designated work breaks, appropriately adapted desk-based practices, scheduled group sessions, or hybrid delivery may reduce barriers associated with time and participation. Programs should also recognize differences in employee physical ability, health status, work arrangements, and previous yoga experience. Participation should remain voluntary, and organizations should avoid presenting yoga participation as evidence that employees themselves are responsible for overcoming structurally stressful working environments.

A particularly important managerial implication is that workplace yoga should complement rather than replace interventions targeting the underlying work environment. Employers should simultaneously address workstation ergonomics, opportunities for movement, workload management, break practices, managerial support, psychological

safety, and appropriate job design. WHO (2024) emphasizes that protecting mental health at work requires organizational interventions that address psychosocial risks as well as initiatives that strengthen employees' capacities to manage stress. Consequently, employers adopting yoga-based programs should embed them within broader preventive occupational-health strategies rather than relying on yoga as a stand-alone response to stressful working conditions.

Program evaluation is equally important. Employers could assess participation, perceived usefulness, musculoskeletal discomfort, stress, psychological well-being, functional capacity, absenteeism, and employee feedback before and after implementation. Evaluation would allow organizations to distinguish genuine improvements from short-term participation effects and refine interventions according to employee needs.

The proposed framework also has implications for occupational-health policy. Contemporary office work increasingly involves prolonged sitting, intensive computer use, digital communication, and psychologically demanding tasks. Occupational-health frameworks therefore need to recognize both musculoskeletal and mental-health risks arising from sedentary work environments. The WHO (2024) identifies safe and healthy working environments as fundamental to mental health and emphasizes preventive action at the organizational level.

Within this policy context, yoga-based workplace health promotion may be regarded as a complementary preventive strategy rather than a clinical treatment. Workplace-health guidelines could encourage organizations to offer opportunities for structured physical activity, movement breaks, relaxation and recovery practices while simultaneously ensuring ergonomic and psychosocial risk management. Such integration would reflect a shift from reactive treatment of workplace health problems toward proactive health promotion and prevention.

However, policy frameworks should guard against an excessive individualization of occupational-health responsibility. Employees experiencing pain or psychological strain should not simply be advised to practise yoga while organizational causes including excessive workload, inappropriate workstation design, inadequate staffing, insufficient recovery opportunities, or unsupportive management remain unchanged. Virtanen et al. (2025) emphasize that workplace-health interventions encompass diverse approaches and that effectiveness varies considerably. Therefore, policy should promote multilevel interventions combining organizational change, ergonomic prevention, health education, physical activity, and appropriate access to professional care.

From an occupational-health governance perspective, the proposed framework could also encourage collaboration among employers, occupational-health practitioners, physiotherapists, human-resource departments, wellness professionals, and employees. Such multidisciplinary coordination can help ensure that yoga programs are safe, inclusive, evidence-informed, and appropriately integrated within existing workplace health and safety systems.

The proposed framework has several implications for human resource management (HRM) because it positions employee well-being not simply as an individual health

concern but as an organizational resource that may support sustainable employee functioning. From a strategic HRM perspective, workplace well-being initiatives should therefore be aligned with broader organizational objectives concerning workforce sustainability, employee experience, engagement, retention, and performance. Yoga-based workplace interventions may form part of this strategy, but their organizational value depends on how effectively they are integrated into HR practices and the wider work environment rather than on their availability as isolated wellness activities.

From an employee experience perspective, HR managers should consider how employees encounter workplace wellness throughout their everyday work. Providing a wellness programme while employees simultaneously experience excessive workloads, inadequate recovery time, poor ergonomics, or managerial discouragement may create inconsistency between formal organizational well-being initiatives and employees' actual work experiences. Effective wellness strategies therefore require alignment between the intervention and the conditions under which employees work. Participation should remain voluntary, accessible, inclusive, and compatible with employees' responsibilities and working arrangements. The existing manuscript similarly emphasizes accessibility, adaptation to different employee needs, and voluntary participation.

Organizational support is particularly important in translating wellness initiatives into credible HR practices. Employees are more likely to perceive workplace well-being as an organizational priority when managers provide legitimate time for participation, communicate support for recovery, ensure programme accessibility, and demonstrate consistent commitment to employee health. HR functions can facilitate these conditions through wellness policies, manager training, communication practices, resource allocation, and mechanisms that allow employees to participate without being disadvantaged by workload expectations. Organizational support therefore functions not merely as an implementation consideration but as a boundary condition influencing whether yoga-based workplace interventions can operate as meaningful employee resources.

The framework also highlights the relationship between HRM and healthy work design. Workplace yoga should complement rather than substitute for organizational interventions addressing workload, autonomy, ergonomics, movement opportunities, breaks, and recovery. This distinction is particularly important from an ethical and managerial perspective because organizations should not transfer responsibility for managing structurally generated occupational strain entirely to employees. The manuscript already emphasizes that yoga cannot replace ergonomically appropriate workstations, manageable workloads, healthy job design, adequate breaks, or supportive leadership. HR managers should therefore integrate wellness interventions with job-design and occupational-health practices rather than treating employee wellness as a separate programme.

Leadership represents another important HRM mechanism. Supervisors and line managers influence whether employees perceive wellness participation and recovery as legitimate workplace behaviours. Leadership practices that normalize appropriate breaks, encourage participation without coercion, respect employee autonomy, and demonstrate concern for employee well-being may strengthen the organizational conditions under

which workplace wellness resources become effective. Conversely, managerial practices that implicitly discourage participation or reward persistent overwork may weaken the value of formal wellness initiatives.

The proposed framework also has implications for employee engagement and retention. Improved employee well-being and recovery may support employees' capacity to remain energetic, psychologically present, and functionally capable at work. However, engagement and retention should be treated as downstream organizational outcomes rather than direct effects of yoga participation. Their development is likely to depend on the broader combination of employee resources, job demands, organizational support, leadership, and work design. This interpretation is consistent with the JD-R perspective and avoids overstating the organizational effects of individual wellness interventions.

Finally, workplace well-being should be incorporated carefully into performance management. Organizations may evaluate wellness initiatives through participation, employee perceptions, well-being indicators, work ability, absenteeism, and engagement, but participation in yoga or other wellness programmes should not itself become an individual performance criterion. Employees should not be rewarded or penalized based on participation in voluntary health activities. Instead, HR analytics can be used at an appropriate aggregate level to evaluate whether workplace health strategies contribute to sustainable employee functioning and whether modifications to programme design or organizational conditions are required. In this way, HRM can position employee well-being as part of sustainable workforce management while preserving employee autonomy and avoiding the individualization of responsibility for organizationally generated health risks.

Perhaps the most fundamental implication of yoga-based workplace health promotion concerns employee quality of life. Employees spend a substantial proportion of their daily lives within work environments, meaning that occupational conditions can influence their physical comfort, psychological functioning, social relationships, energy, and overall well-being. [WHO \(2024\)](#) emphasizes that decent work can support mental health by providing purpose, achievement, social connection, structure, and economic security, whereas adverse working conditions can create mental-health risks.

For sedentary office workers, quality of life may be affected when neck-shoulder discomfort, reduced mobility, fatigue, stress, or anxiety persist beyond working hours. Improving physical comfort while developing strategies for psychological recovery may therefore have benefits extending beyond immediate job performance. Yoga is potentially valuable in this respect because it combines movement with breathing, attentional processes, relaxation, and awareness. [Hagen et al. \(2024\)](#) reported that yoga practitioners described benefits related to occupational stress management and well-being, supporting the proposition that its influence can extend beyond physical symptoms alone.

The framework consequently proposes employee quality of life as a broader distal outcome arising from improvements in musculoskeletal and mental well-being. Reduced discomfort may facilitate daily physical functioning, while reduced stress and improved self-regulation may enhance emotional well-being. Over time, these outcomes may contribute to greater perceived work ability, energy, work-life functioning, and overall life

satisfaction. These relationships, however, require further longitudinal investigation because much of the existing evidence evaluates relatively short intervention periods.

Taken together, the proposed framework shifts yoga-based workplace health promotion from a narrow exercise intervention toward an integrated occupational-health strategy. Its central theoretical proposition is that yoga can influence employee outcomes through interconnected physical and psychological mechanisms. Improvements in movement, flexibility, postural awareness, and muscular comfort may contribute to musculoskeletal well-being, while breathing, relaxation, mindfulness, and stress regulation may contribute to mental well-being. These proximal outcomes may subsequently influence broader outcomes including quality of life, work ability, engagement, and potentially organizational productivity.

The framework also emphasizes that organizational context is fundamental. Workplace yoga is unlikely to compensate fully for unhealthy job design, excessive workload, poor ergonomics, or unsupportive management. Accordingly, yoga-based interventions should be embedded within comprehensive workplace-health systems that simultaneously address physical environments, psychosocial risks, organizational culture, employee participation, leadership, and access to appropriate occupational-health services. This integrated position is consistent with contemporary evidence showing that workplace health promotion is most appropriately understood as a multidimensional organizational endeavor rather than a collection of isolated wellness activities (WHO, 2024; Virtanen et al., 2025).

The contribution of the framework therefore lies not merely in proposing that yoga improves employee health, but in explaining how yoga may operate within the wider workplace ecosystem. By connecting yoga-based practices, physical and psychological mechanisms, employee well-being, organizational conditions, and distal workplace outcomes, the framework provides a basis for future empirical investigation and offers employers a more systematic foundation for designing sustainable workplace health-promotion initiatives.

Based on the JD-R Model and the supporting Biopsychosocial perspective, the proposed framework assumes that yoga-based workplace interventions operate through a sequential process involving resource development and recovery, employee well-being, and subsequent work-related outcomes. Importantly, these relationships are embedded within the organizational environment and are therefore expected to vary according to organizational support and healthy work design. The following propositions translate the conceptual framework into relationships that can be examined in future empirical research.

Yoga-based workplace interventions combine physical movement, regulated breathing, and mindfulness or meditative practices that may provide employees with opportunities for physical and psychological recovery. Physical practices may support mobility, flexibility, movement variability, and relief from sustained static positioning, while breathing and mindfulness practices may facilitate relaxation, attentional regulation, emotional regulation, and psychological detachment from work demands. From a JD-R perspective, these processes can be conceptualized as the development or restoration of personal resources and recovery capacity, enabling employees to respond more effectively

to ongoing physical and psychological job demands. The effectiveness of this resource-building process may also depend on intervention characteristics such as frequency, duration, intensity, and delivery mode.

5. CONCLUSION AND RECOMMENDATIONS

Because the proposed model is conceptual and no primary empirical data are collected, future research should empirically test the relationships specified in the framework. Priority should be given to examining the sequential pathway from yoga-based workplace intervention to personal resources and recovery, employee well-being, and distal work-related outcomes. Studies should distinguish intervention content from intervention characteristics and assess whether differences in frequency, duration, intensity, and delivery mode influence recovery and well-being.

Future research should also test the proposed moderating effects of organizational support and healthy work design. In particular, research could examine whether managerial support, legitimate time allocation, accessibility, and wellness culture strengthen intervention effectiveness and whether workload, autonomy, ergonomic conditions, and recovery opportunities alter the relationship between personal resources and employee well-being. Longitudinal and multi-wave designs would be particularly valuable because they could establish temporal ordering between intervention exposure, resource recovery, well-being, engagement, work ability, and performance. Comparative studies across organizational, occupational, cultural, and hybrid-work contexts could further determine the boundary conditions under which the proposed relationships are most likely to occur.

Integrating wearable technologies with yoga interventions offers another promising research direction. Wearable activity trackers and physiological sensors can provide objective information regarding physical activity, sedentary behavior, heart rate, sleep, stress-related indicators, and adherence to health interventions. Evidence indicates that wearable activity trackers can support increases in physical activity, although their effectiveness depends on intervention design and behavioral engagement ([Ferguson et al., 2022](#)).

Recent occupational-health research nevertheless identifies important challenges surrounding wearable implementation, including privacy, interoperability, employee engagement, and the organizational use of personal health data ([Virgillito et al., 2025](#)). Consequently, future workplace yoga studies incorporating wearables should explicitly address informed consent, confidentiality, employee autonomy, data ownership, and ethical governance. Technology should function as a supportive mechanism for employee health rather than as a mechanism for intrusive employee surveillance.

A particularly important gap concerns the economic value of yoga-based workplace health promotion. Demonstrating improvements in pain, stress, or well-being alone may not be sufficient for organizations considering long-term implementation. Employers also need evidence concerning whether such programs represent efficient investments relative to their financial and operational costs.

Future studies should therefore integrate economic evaluation alongside clinical and psychological outcomes. Potential indicators include program implementation costs, healthcare utilization, sickness absence, presenteeism, employee turnover, workability, and productivity. Systematic evidence concerning workplace physical-activity programs suggests that such interventions may positively influence employee health and workability, although variation across interventions remains substantial ([Marin-Farrona et al., 2023](#)).

Cost-effectiveness analyses could compare yoga programs with ergonomic interventions, conventional exercise programs, stress-management programs, and multimodal workplace wellness initiatives. Calculating cost per health improvement, return on investment, and organizational productivity gains would provide managers and policymakers with stronger evidence for deciding whether yoga-based workplace health promotion should be implemented at scale. Recent reviews of occupational wearable technologies similarly indicate that economic evidence in workplace health remains comparatively underdeveloped, reinforcing the need to integrate economic outcomes into future intervention research ([Virgillito et al., 2025](#)).

Collectively, these future research directions suggest that the next stage of workplace yoga research should move beyond simply asking whether yoga works. Greater attention should be directed toward understanding how it works, for whom it works, under what workplace conditions it works, how long its effects remain, how it can be delivered effectively, and whether its benefits justify organizational investment.

Sedentary office work represents an increasingly important occupational health concern because prolonged sitting, repetitive computer use, static posture, and psychological job demands may simultaneously affect employees' musculoskeletal and mental well-being. Within this context, yoga-based workplace health promotion provides a potentially valuable integrative strategy because it incorporates physical movement, stretching, breathing, relaxation, and mind-body regulation within a single intervention.

Emerging empirical evidence supports this perspective. Research involving sedentary office workers indicates that yoga can contribute to improvements in neck and shoulder pain and related health outcomes ([Kuptniratsaikul et al., 2023](#)). Evidence from other occupational populations further suggests potential benefits for musculoskeletal discomfort, perceived stress, fatigue, burnout, sleep, and quality of life ([Pravalika et al., 2023](#); [Fogawat et al., 2024](#)). These findings suggest that yoga should be considered not merely as recreational physical activity but as a potentially multidimensional component of workplace health promotion.

An important contribution of the framework proposed in this paper is its integration of musculoskeletal and mental well-being. Workplace health challenges are frequently investigated separately, with physical interventions focusing primarily on musculoskeletal symptoms while psychological programs concentrate on stress or mental health. Yoga challenges this separation because its physical and psychological components are inherently interconnected. Movement and postural practices may address physical discomfort and functional limitations, whereas breathing, relaxation, and mindful awareness may support psychological regulation. Accordingly, the proposed framework

adopts an integrated perspective in which improvements in physical and psychological health represent complementary rather than competing outcomes.

From an occupational health perspective, this approach extends existing discussions of workplace wellness by positioning yoga within a broader preventive health framework. The objective should not be to portray yoga as a substitute for ergonomic design, appropriate workload management, organizational support, professional healthcare, or other evidence-based occupational health measures. Instead, yoga can be conceptualized as one component within a comprehensive workplace health strategy. This distinction is important because sustainable health promotion requires attention to both individual health behaviors and the organizational conditions that shape employee well-being. Research on worksite physical-activity interventions similarly emphasizes the importance of implementation processes, organizational conditions, facilitators, and barriers when attempting to sustain programs beyond short-term trials ([Grønningsæter & Kiland, 2023](#)).

The proposed perspective also contributes to the occupational health literature by shifting attention from isolated clinical outcomes toward an interconnected pathway linking yoga-based workplace health promotion, physical and psychological mechanisms, employee well-being, and sustainable workplace outcomes. This framework provides a foundation for investigating not only reductions in neck-shoulder pain, anxiety, and stress but also broader consequences such as workability, engagement, absenteeism, presenteeism, quality of life, and organizational productivity. Such an approach is consistent with contemporary workplace health research emphasizing that physical activity interventions can influence both employee health and work-related outcomes ([Marin-Farrona et al., 2023](#)).

The implications for sustainable workplace wellness are therefore significant. Rather than treating wellness as a short-term organizational initiative, employers could integrate appropriately designed yoga programs into broader occupational health systems involving ergonomics, active breaks, mental health support, healthy work design, leadership commitment, and employee participation. Flexible delivery through physical, hybrid, and virtual formats may further increase accessibility, particularly as work arrangements become increasingly decentralized.

Nevertheless, the current evidence base does not justify assuming that all workplace yoga programs will produce equivalent outcomes. Intervention design, employee characteristics, cultural context, adherence, organizational support, delivery format, and workplace conditions are likely to influence effectiveness. Recent evidence concerning desk-based workers continues to highlight methodological heterogeneity, reinforcing the importance of rigorous future research before broad conclusions regarding effectiveness can be established.

In conclusion, yoga-based workplace health promotion offers a promising integrative pathway for advancing both musculoskeletal and mental well-being among sedentary office workers. Its principal value lies in its capacity to connect physical movement with psychological regulation within an accessible workplace health strategy. By integrating yoga with broader occupational health and organizational wellness practices rather than positioning it as a standalone solution, organizations may develop more comprehensive

and sustainable approaches to employee health. Further rigorous, multidisciplinary, and context-sensitive research will be essential for translating this potential into evidence-based workplace practice and policy.

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