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PSYCHOSOCIAL RISK ASSESSMENT AND MANAGEMENT: CRITICAL APPRAISAL AND ADVANCEMENT OF MALAYSIA's PRISMA 2024 GUIDELINES

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Abstract:

The critical appraisal and advancement of Malaysia's PRiSMA 2024 Guidelines signify a pivotal step in the nation's commitment to the management of psychosocial hazards as part of Occupational Health and Safety (OHS) frameworks. This paper evaluates the shifting landscape of modern workplaces, emphasizing how psychosocial risks have emerged as fundamental factors influencing employee well-being and organizational success, underscored by mounting evidence from international agencies and adverse workplace outcomes. The enactment of the Occupational Safety and Health Amendment Act 2022 renders psychosocial risk management a statutory requirement, placing Malaysia at the forefront of legislative progress in Asia and harmonizing its practice with global standards such as ISO 45003. A central contribution of this work is its detailed exposition of the PRiSMA framework's operational logic, toolset, and process flow. The PRiSMA guidelines incorporate a proactive and preventative approach, utilizing tools such as the Likelihood of Environmental Occupational Exposure (LEO26) scale, the Employer Practice Checklist (EPC23), and the PRiSMA intervention matrix to link risk screening, control assessment, and evidence-based action. The theoretical foundation is deeply rooted in the Job Demand-Control-Support (JDCS) model and further incorporates elements from the more recent Job Demands-Resources (JD-R) and Psychosocial Safety Climate (PSC) frameworks. It proposes a dual-layered system that addresses both job-specific risks and organizational climate. Critical analysis highlights gaps in the psychometric validation of PRiSMA's assessment tools, suggesting that future research should prioritize rigorous instrument evaluation, large-scale field studies, and transparent publication of reliability and validity data. The paper

further notes practical implementation challenges, citing organizational inertia, siloed management, and the need for interdisciplinary leadership and participatory approaches, and recommends linking psychosocial safety initiatives to ESG strategies for sustainable organizational change. By conjoining legal imperatives, practical guidelines, and rich theoretical perspectives, this research solidifies PRiSMA as a mandatory national standard. It offers a pathway for scientific and organizational advancement toward fostering mentally healthier, more resilient, and productive Malaysian workplaces.

Keywords:

Psychosocial Risk, Psychosocial Risk Assessment, Occupational Safety, PRiSMA 2024, Job Demand-Control-Support, Job Demands-Resources, Psychosocial Safety Climate, Workplace Mental Health

Introduction

The evolving landscape of the modern workplace presents significant challenges beyond traditional physical hazards, with psychological and social factors, collectively known as psychosocial risks, becoming a primary concern for employee health and organizational sustainability (Iavicoli & Tecco, 2020; Tecco et al., 2023). Globally, there is a mounting consensus that these risks stemming from how work is designed, structured, and managed play a major role in various mental and physical health problems, such as work-related stress, anxiety, burnout, and depression (Guillemin, 2021; Schulte et al., 2024). Leading international organizations, the World Health Organization (WHO), the International Labor Organization (ILO), as well as the International Standard Organization (ISO)—have grounded a clear consensus: unhealthy psychosocial environments are a leading driver of work-related stress, anxiety, burnout, presenteeism, absenteeism, depression, and turnover, with substantial negative economic impacts on organizations and societies (Amoadu et al., 2023; Jain et al., 2021; Pignata, 2022; Schulte et al., 2024). These risks originate within the core design, management, and organization of work itself, making their failure to address them constitutes a significant legal, financial, and ethical challenge (Tecco et al., 2023). Moreover, poor management of psychosocial risks directly leads to costly business outcomes, such as reduced productivity, improved absenteeism and presenteeism (working while unwell), higher turnover rates, as well as heightened interpersonal conflict (Saik et al., 2024; Schreibauer et al., 2020; Schulte et al., 2024; Tecco et al., 2023; Ρούσσος, 2023).

Therefore, psychosocial risk assessment plays a vital role in managing health and safety within organizations (Jain et al., 2021; Saik et al., 2024; Tecco et al., 2023). This involves identifying, evaluating, and controlling workplace stressors that may adversely affect employees' mental and physical health (Isha et al., 2020). Despite advancements in policy approaches for psychosocial risk management across various countries, the mental well-being of the workforce continues to be a significant challenge, necessitating further progress in protective and promotional measures (Karlsen et al., 2024). This ongoing evolution of work, spurred by recent global events and technological shifts, has amplified existing psychosocial risks and introduced novel ones, making their prioritization in policy and strategy more critical than ever (Tecco et al., 2023). Consequently, contemporary research underscores the increasing complexity of

managing psychosocial risks, particularly amid rapid changes in work conditions and the global workforce (Dollard & Potter, 2025; Tecco et al., 2023).

The Evolution of Psychosocial Risk Assessment

The constant flux in modern work environments, driven by technological advancements, mandates a continuous adaptation of psychosocial risk assessment methodologies to ensure their completeness and relevance (Pavlista et al., 2024). For instance, the automation of work processes and the expansion of the service industry have fundamentally reshaped challenges in Occupational Health and Safety (OHS), resulting in the rise of novel psychosocial stressors previously unaddressed by conventional risk frameworks (Ρούσσος, 2023). The pervasive nature of psychosocial risks, stemming from the ongoing changes in work organization and job content, profoundly influences individuals, organizations, and broader societal structures (Fernandes & Pereira, 2016). Note that these risks can manifest as various adverse outcomes, including mental and physical health deterioration, musculoskeletal disorders, and organizational detriments such as reduced productivity and increased absenteeism (Jain et al., 2021). However, despite extensive study spanning over five decades, the global management of psychosocial risks remains largely uncontrolled, with recent surveys indicating a worsening situation, particularly exacerbated by the COVID-19 pandemic (Guillemin, 2021; Dollard & Potter, 2025). This necessitates a paradigm shift from solely focusing on physical hazards to comprehensively integrating psychosocial factors into occupational safety as well as health management systems (Taibi et al., 2022). This integrated approach is further supported by international standards such as ISO 45001:2018 and ISO 45003:2021, which provide comprehensive frameworks for addressing psychosocial risks within occupational safety and health management systems, aiming to reduce them to acceptable levels (Saik et al., 2024).

Correspondingly, effective psychosocial risk management necessitates a holistic and proactive strategy that transcends mere compliance, focusing on prevention, early intervention, and continuous improvement to foster sustainable worker well-being and organizational resilience (Iavicoli & Tecco, 2020; Tecco et al., 2023). According to the European Agency for Safety and Health at Work's OSH Pulse survey, 27% of employees report stress, anxiety, or depression linked to psychosocial factors like high work intensity and irregular hours, highlighting the widespread impact of these issues (Dollard & Potter, 2025). This prevalence highlights a critical gap in current occupational safety and health frameworks, particularly in regions like Malaysia, where specific guidelines are still under development or refinement (Dollard & Potter, 2025). The transformation of work due to intensified global competition and digitalized workflows has substantially increased psychosocial work stressors, necessitating efficient occupational safety and health measures to maintain employee mental health and increase productivity (Genrich et al., 2022; Pavlista et al., 2024). The continuous evolution of work environments, driven by factors like automation and changing employment trends, introduces novel psychosocial risks that demand robust management strategies (Pούσσος, 2023).

Moreover, systematic approaches such as Workplace Risk Assessments, particularly Psychosocial Risk Assessments, are crucial for identifying and mitigating these stressors, though their implementation varies significantly across national policies and regulatory frameworks (Pavlista et al., 2021; Dollard & Potter, 2025). For example, while some European Union countries have robust frameworks driven by legal obligations and strong union advocacy, others, including many in Asia, are still developing comprehensive strategies (Karlsen et al., 2024). This disparity points to the need for robust national policies and

regulations to manage psychosocial risks effectively, particularly given their increasing contribution to ill-health and economic costs (Dollard & Potter, 2025; Schulte et al., 2024). The 2021-2027 European Union strategic framework on occupational safety and health highlights the need for member-state collaboration and social partner engagement to anticipate emerging risks, with psychosocial risks identified as a major priority for the future workplace (Leka et al., 2023).

Global Perspectives on Psychosocial Hazards

Effective psychosocial risk management necessitates a comprehensive understanding of both macro-level influences, such as economic downturns and technological advancements, and micro-level factors, including organizational culture and individual vulnerabilities (Iavicoli & Tecco, 2020; Jain et al., 2021). These risks originate from problematic work planning, organization, and management, alongside unsupportive social work contexts, culminating in negative psychological, physical, as well as social outcomes such as burnout, work stress, or depression (Μαλλιαρού & Kotsakis, 2023). This complex interplay underscores the necessity for robust frameworks and guidelines that can effectively address the broad scope of psychosocial hazards in the workplace (Schulte et al., 2024; Vaníčková, 2021). However, despite growing recognition of their impact, the practical management of psychosocial risks remains inconsistent globally, largely because of differences in national protection policies and regulatory systems (Dollard & Potter, 2025).

Psychosocial hazards in the workplace encompass social and psychological factors that negatively affect employees' mental and physical health (Dollard & Potter, 2025; Tecco et al., 2023). Such hazards include unfavorable working conditions like excessive workloads, unclear roles, poor communication, limited Job Control (JC), organizational culture issues like bullying or discrimination, and work-life imbalance. Importantly, the prominence of these risks has grown amid rapid global changes, including digitization, shifting work patterns, economic instability, and lingering impacts of the COVID-19 pandemic, all of which have introduced distinct challenges across regions and sectors (Pavlista et al., 2024; Tecco et al., 2023).

On the other hand, mental health problems resulting from psychosocial risks represent a critical concern globally. According to the WHO, around 15% of working-age adults were affected by a mental health disorder in 2019, leading to an estimated loss of 12 billion workdays annually and costing the global economy nearly \$1 trillion USD in lost productivity (Arias et al., 2022; Malik et al., 2023; Müller et al., 2021). These statistics underscore the need to manage psychosocial hazards as a matter of occupational safety and of sustainable economic development.

Recognizing the global nature of psychosocial hazards, many countries have responded by enacting relevant legislation and policy frameworks (Dollard & Potter, 2025; Potter et al., 2024). For instance, Australia has introduced comprehensive regulations specifically targeting psychosocial risk management and dedicated inspectorates for enforcement (Potter et al., 2024). The European Union's Strategic Framework on Health and Safety at Work (2021-2027) places strong emphasis on addressing psychosocial risks, urging collaboration between member states and stakeholders to anticipate and manage emerging threats (Soukupová et al., 2024; Tecco et al., 2023). This initiative builds on harmonized policies such as the 2004 European Framework Agreement on work-related stress, which established the basis for incorporating psychosocial risk management into occupational safety and health assessment

and intervention strategies (Alústiza & Jordi, 2021). In Latin America, countries like Mexico and Chile have introduced specific mental health and psychosocial risk laws, reflecting the growing international focus on mental health at work (Leka et al., 2023; Schreibauer et al., 2020).

Among the most significant advancements in global psychosocial risk management is the publication of ISO 45003 in 2021 (Dollard & Potter, 2025; Schreibauer et al., 2020). As the first international standard dedicated to psychological health and safety within OSH management systems, ISO 45003 offers organizations practical guidance on recognizing, evaluating, as well as managing psychosocial risks (Saik et al., 2024; Tecco et al., 2023). This standard encourages organizations to go beyond following rules and take active steps to create strong, mentally healthy workplaces, including regular risk assessments, talking to employees, training leaders, and using combined reporting systems (Saik et al., 2024; Ρούσσος, 2023).

Overview of Malaysia's PRiSMA 2024 Guidelines

Malaysia's answer to this important issue is outlined in the Occupational Safety and Health (Amendment) Act 2022 (OSHA, 2022), a major legislative reform that requires employers to include and carefully manage psychosocial hazards as part of their responsibility for worker safety (Dollard & Potter, 2025; Naseri & Esa, 2025). The act—effective June 1, 2024—imposes severe penalties for non-compliance, underscoring the shift from psychosocial risk management as a mere good practice to a binding statutory obligation.

The OSHA (2022) represents a pivotal shift, expanding its scope to cover all workplaces, spanning both public as well as private sectors, as well as new modalities like remote work (Anwar, 2023; Naseri & Esa, 2025). A central provision of this amended legislation is the explicit inclusion of psychosocial hazards under the employer's legal obligation to ensure a safe and healthy working environment for all employees (Dollard & Potter, 2025; Leka et al., 2023; Tecco et al., 2023). The law now mandates that employers conduct a risk assessment for all health and safety risks, which, by extension, include psychosocial ones. This legal shift transforms the management of these hazards from a voluntary best practice into a legally binding requirement. The consequences of non-compliance are stringent, with potential fines of up to RM500,000 or a term of imprisonment. Directors and other key office bearers can now be held jointly and severally responsible for corporate offenses, imposing a higher duty of care (Anwar, 2023; Naseri & Esa, 2025). This legal and financial gravity elevates the Department of Safety and Health (DOSH) guidelines from a mere supplementary resource into a critical, high-stakes framework that all Malaysian employers must now implement (Naseri & Esa, 2025). The formal release of the Guidelines on Psychosocial Risk Assessment and Management at the Workplace (PRiSMA) 2024 is the official governmental response to this new legal mandate (Anwar, 2023). In this context, PRiSMA 2024 emerges not just as a strategic guideline but as an essential instrument for regulatory compliance and sustained workplace health. Table 1 presents a brief description of PRiSMA 2024.

Table 1: PRiSMA 2024 Component Description

Component	Description	Tool Examples
Legal Basis	Mandate for risk assessment under the Occupational Safety and Health Act 1994 (OSHA), Section 188. Protection from retaliation under Section 28A.	OSHA 1994, Sections 18B & 28A
Psychosocial Risk Definition	Combination of the likelihood of exposure to psychosocial hazards and the severity of potential harm.	Aligned with ISO 45003:2021
Theoretical Model	Primary reliance on the Job Demand-Control-Support (JDCS) model by Karasek & Theorell (1990).	JDCS Model (Karasek & Theorell, 1990)
Primary Tools	LEO26 (Likelihood of Environment & Occupational Exposure Scale) and EPC23 (Employer Practice Checklist).	LEO26 (26 items), EPC23 (23 items)
Key Roles	Appointment of a Psychosocial Trained Person (PTP) to assist in implementation.	PTP (Psychosocial Trained Person)
Risk Status Indicators	Individual risk determined by cut-off values; organizational risk when a threshold of employees scores high.	Risk Indicator Cut-off Values (RICoV)
Refesting Schedule	Annual retest if high risk is identified; biennial retest otherwise. Records retained for seven years.	Reassessment every 12 months (if high risk); otherwise every 2 years.

Development and Rationale of PRiSMA 2024

The PRiSMA 2024 guidelines are a direct and comprehensive tool for fulfilling the statutory obligations outlined in Section 18B of the Occupational Safety and Health Act 1994, which was a primary focus of the 2022 amendments (Masuri et al., 2025). Beyond domestic legislation, the framework is also aligned with the international standard ISO 45003:2021, which offers guidance on managing psychosocial risks as part of OSH management systems (Nebbs et al., 2025). This international alignment positions Malaysia's approach on par with global best practices. It is important for the international academic community to note a potential source of confusion regarding the name of this framework. The guidelines from DOSH Malaysia use the acronym "PRISMA," which stands for "Psychosocial Risk Assessment and Management." This is distinct from the widely recognized academic standard "PRISMA" (Preferred Reporting Items for Systematic Reviews and Meta-Analyses), which is employed in evidence-based research to enhance the transparency of systematic reviews. This paper will use the correct capitalization, PRISMA, to refer specifically to the Malaysian guidelines, thereby providing a valuable clarification for researchers and practitioners alike.

PRiSMA's design and methodological backbone are strongly aligned with ISO 45003:2021, the first global standard specifically designed to address psychosocial risks as part of an OSH management system (Masuri et al., 2025). ISO 45003 positions psychosocial and physical safety as equivalent, providing the best global practices for assessing and mitigating psychological hazards (Nebbs et al., 2025). The dual alignment of PRiSMA—with OSHA 2022 and ISO 45003—places Malaysia at the forefront of integrated, evidence-based occupational health management.

Foundational Principles and Operational Workflow of PRiSMA

Guiding Philosophies and Objectives

The PRiSMA guidelines are built on a philosophy of proactive, preventative risk management (Masuri et al., 2025). This method focuses on anticipating and addressing potential risks before they arise by identifying, evaluating, and reducing them in advance, instead of responding after harm has occurred. The document notes that a proactive stance, such as through employee surveys and policy reviews, is the most efficient strategy for managing workplace risks (Masuri et al., 2025). It contrasts sharply with a reactive approach, which only responds to issues after

they have arisen, often evidenced by high absenteeism, presenteeism, increased employee turnover, or formal complaints.

The core objectives of the guidelines are:

- i. The aim is to provide employers with guidance on screening for psychosocial risks.
- ii. The goal is to recommend actions for employers to control these risks in the workplace.
- iii. The goal is to establish a standardized format for recordkeeping and monitoring psychosocial health.
- iv. This emphasis on prevention, intervention, and documentation forms the backbone of the entire PRiSMA framework.

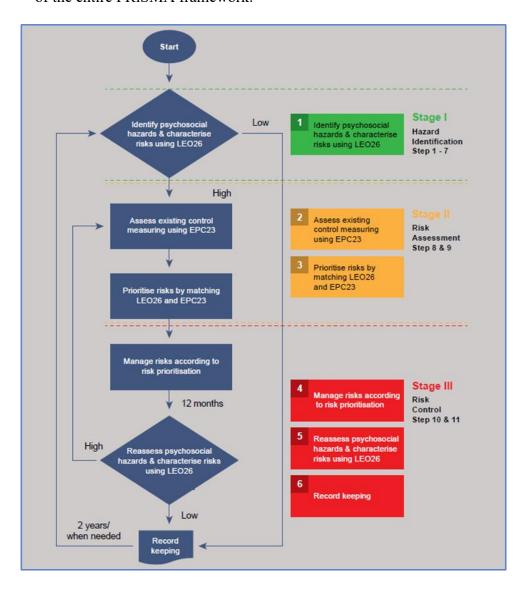


Figure 1: PRiSMA 2024 Flowchart

The Integrated Toolset: LEO26, EPC23, and PRIMA

PRiSMA provides a three-part toolset, as illustrated in Figure 1, to facilitate a comprehensive psychosocial risk assessment and management process. Note that each tool serves a distinct but interconnected purpose:

LEO26 (Likelihood of Environment & Occupational Exposure Scale towards Psychosocial Risk in the Workplace): This is the foundational psychosocial risk screening tool. It assesses how likely workplace tasks and environments are to impact psychosocial health within three key areas: Work Demand (WD), JC, as well as Job Support (JS). Consequently, cut-off scores for high and low risk are established through Receiver Operating Characteristic (ROC) analysis and the Youden index, with demonstrated alignment to Depression, Anxiety, and Stress Scale (DASS-21) as an external clinical reference (Bailey et al., 2021; Dettmers & Stempel, 2021; Diebig & Angerer, 2020; Masuri et al., 2025). The tool has been validated and uses a cut-off score method to classify risk levels as either high or low.

EPC23 (Employer Practice Checklist): EPC23 is a 23-point checklist that guides employers in identifying existing control measures and taking necessary actions. It is used only if the LEO26 assessment indicates high risk, serving as a secondary assessment tool to pinpoint specific areas for intervention (Masuri et al., 2023, 2025). Correspondingly, it is employed in conjunction with the LEO26 to prioritize which risks require immediate attention.

PRIMA Table: This table outlines recommended, evidence-based interventions for addressing identified psychosocial risks (Masuri et al., 2023). It provides an action matrix that offers structured, evidence-based plans grouped under themes directly reflecting the LEO26 domains. The interventions are mapped to specific deficits identified by LEO26 and EPC23. The actions are categorized into seven themes that correspond to the LEO26 components: working environment, social support, training and education, job matching, control, transparency and fairness, as well as workload (Nielsen et al., 2022).

Table 2: The Guide for PRiSMA Analysis

LEO26	Score	Individual	RICOV (Individual	LEO26 Cumulative High Risk Percentage Cut-off	Organizational Psychosocial
Components	Range	Score	Cut-off)	(Organizational)	Risk Status
Job Control (JC)	11-55	Value 1	\geq 15.5	50% and above	High
Work Demand (WD)	5-25	Value 2	≥ 7.5	25% and above	High
Job Support (JS)	10-50	Value 3	≤ 38.5	25% and above	High

Psychometric Evaluation of the LEO26 Screening Tool - Instrument Development and Structure

The LEO26 instrument is an evolution of a previous tool known as the Likelihood of Environmental Occupational Exposure (LEO) or *Skala Kemungkinan Persekitaran & Pekerjaan* (SKiPP) (Masuri et al., 2023). The development of the LEO26 was informed by international labor laws from the ILO (2014) and WHO (2010), as well as expert reviews involving a panel of occupational safety and health professionals in Malaysia. This process indicates a deliberate effort to ensure the tool's questions are relevant to the local context while being grounded in international standards. Consequently, the 26 questions are structured to assess three core domains that are foundational to psychosocial risk theory: WD, JC, as well as

JS (Masuri et al., 2023). These domains align with key theoretical models of occupational stress, providing a coherent framework for the assessment.

The guidelines explicitly state that the LEO26 is a screening tool, not a clinical diagnostic instrument. This distinction is critical, as its purpose is to identify workplace risk factors rather than to diagnose mental health conditions. Its validity has been assessed against a recognized clinical tool, the DASS-21 (Henry et al., 2005).

The Six-Component PRiSMA Process Flow

The guidelines outline a standardized six-component process to conduct the assessment. The process is as follows:

- i. *Identify Psychosocial Hazards using LEO26:* The process begins with the distribution of the LEO26 screening tool to all staff members within the designated work units. The Psychosocial Trained Person (PTP) calculates individual scores, which are then used to determine the organizational risk status for each of the three domains (JC, WD, JS) by comparing them against the established Risk Indicator Cut-off Value (RICoV). The LEO26 assessment is a crucial first step in identifying potential hazards.
- ii. Assess Existing Control Measures using EPC23: If any LEO26 domain shows a highrisk status at the organizational level, the PTP proceeds to assess the workplace's current practices using the EPC23 checklist. This step helps to evaluate the effectiveness of existing control measures.
- iii. **Prioritize Risks by Matching LEO26 and EPC23:** The PTP analyses the data by matching the high-risk LEO26 components with the corresponding "No" answers on the EPC23. This analysis guides the prioritization of which psychosocial risks require immediate attention, ensuring that resources are directed to the most critical areas.
- iv. *Manage Risks According to Risk Prioritization:* Based on the risk prioritization, the PTP proposes appropriate management strategies. The PRIMA table provides a structured list of short-term (1-6 months) and long-term (12 months) interventions to address the identified risks.
- v. *Reassess Risk:* The PTP re-evaluates the workplace's psychosocial risks. If a high-risk score was identified, reassessment is required after 12 months. Meanwhile, if the initial assessment showed no high-risk scores, reassessment is due every two years or as necessary.
- vi. **Recordkeeping:** The employer must retain all records from the PRiSMA process for a minimum of seven years to facilitate audits by DOSH and support continuous improvement. Confidentiality of all employee information is paramount and must be maintained in accordance with the Personal Data Protection Act (PDPA) 2010. The PTP is responsible for maintaining the confidentiality of all information.



Figure 2: 6 Components of PRiSMA Process

Theoretical Foundations, Guideline Architecture, and Legal Imperatives of PRiSMA 2024

The Traditional Foundation: Job Demand-Control-Support (JDCS)

PRiSMA's operational logic is fundamentally rooted in the Job Demand-Control-Support (JDCS) model, first conceptualized by Karasek and Theorell in 1990, which postulates that low JC, high job demands, as well as low support from "high-strain" work, foster negative health outcomes (Portoghese et al., 2020). This model underpins both survey instrumentation (LEO26) and risk evaluation protocols in the Malaysian context (Isha et al., 2020; Masuri et al., 2022). This model posits that job strain and psychological distress emerge from the interaction between three key dimensions: low JC, high job demands, as well as low social support (Chan et al., 2021; Idris & Dollard, 2011; Nasharudin et al., 2020). High job demands, like high emotional labor or tight deadlines, improve physiological as well as psychological strain (Doef & Maes, 1999; Ibrahim & Ohtsuka, 2012; Portoghese et al., 2020). However, this negative effect can be buffered by high levels of JC-autonomy over how tasks are performed—and strong social support from supervisors and colleagues (Luchman & González-Morales, 2013; Phiwphong & U-on, 2025; Pisanti et al., 2015). Despite the JDCS model's foundational role in industrial-organizational psychology, its validity has faced scrutiny. For instance, a study found limited support for the JDCS model's predictions regarding stressrelated low-grade inflammation, with only two of 18 expected direct effects confirmed and no evidence supporting the buffer hypothesis (Teresi et al., 2024; Zou et al., 2022). Similarly, research examining the model's relationship with physical activity discovered that while some associations were significant, the demand and control scales demonstrated low internal consistency reliability ($\alpha = 0.32$ and $\alpha = 0.55$, respectively), questioning their measurement properties (Larsson et al., 2019). Despite these academic critiques, PRiSMA adopts the JDCS framework as its primary lens, likely due to its intuitive appeal and established presence in the field.

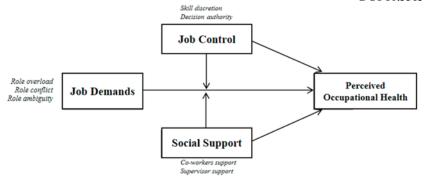


Figure 3: JDCS Model

The Job Demands-Resources (JD-R) Model as an Integrative Framework

A more contemporary and expansive alternative is the Job Demands-Resources (JD-R) model (Bakker & Demerouti, 2007, 2016; Scholze & Hecker, 2023). The JD-R model provides a simpler and more adaptable framework by categorizing all job characteristics into two main groups: job resources and job demand.

- 1. Job demands refer to the aspects of work that require continuous physical or mental effort, which can lead to certain physiological or psychological costs (e.g., workload, emotional demands) (Bakker et al., 2005; Demerouti & Bakker, 2011, 2022).
- 2. Job resources are the elements of a job that help achieve work objectives, mitigate job demands and their related costs, or promote personal growth and development (e.g., autonomy, supervisor support, career development opportunities) (Demerouti & Bakker, 2011, 2022).

The JD-R model's key strength lies in its dual-pathway process (Demerouti & Bakker, 2011, 2022). It posits that job demands initiate a health impairment pathway, whereby persistent demands deplete employees' physical and psychological resources, resulting in burnout as well as health problems (Bakker & Vries, 2020). In parallel, it suggests that job resources activate a motivational process, where they energize workers, enhance work engagement, as well as drive superior performance (Claes et al., 2023; Demerouti & Bakker, 2022). This dual-pathway perspective offers a holistic understanding of the work environment, accounting for both negative outcomes (burnout) and positive ones (engagement) (Claes et al., 2023; Sima et al., 2024).

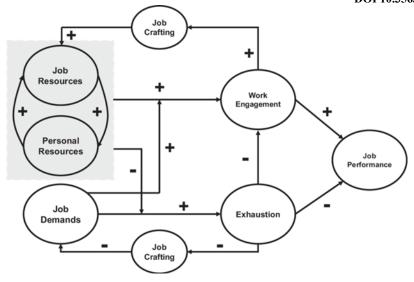


Figure 4: JD-R Model

Justification for the JD-R Model's Integration

Integrating the JD-R model into the PRiSMA framework would be a natural and powerful theoretical augmentation. The three domains of the LEO26 tool, WD, JC, as well as JS, align closely with the key components of the JD-R model (demands and resources), indicating strong conceptual compatibility. The JD-R model's dual-pathway framework makes it a superior fit for the proactive philosophy of the PRiSMA guidelines. It allows for the simultaneous assessment of both negative outcomes (strain and burnout) and positive outcomes (engagement and motivation). This provides a more holistic and forward-thinking view of psychosocial health, moving beyond simply mitigating risks to actively promoting employee well-being, which aligns with the stated purpose of PRiSMA.

By proposing a combined Psychosocial Safety Climate (PSC)-JD-R model for the Malaysian context, we can implement this theoretical augmentation further. Note that PSC expresses the management's commitment, priority, and actions towards protecting workers' psychological health (Amoadu et al., 2025; Idris et al., 2011a, 2011b, 2014; Idris & Dollard, 2011; Mirza et al., 2019). Research on Malaysian workers determined that PSC is a precursor to the JD-R model's core elements: a high level of PSC is associated with lower job demands and greater job resources (Andersen et al., 2025; Idris et al., 2011; Idris & Dollard, 2011). By adopting a PSC-JD-R framework, PRiSMA would provide a multi-level, evidence-based system that:

- 1. The system identifies a **lead indicator** (PSC) for preventative action at the top-management level.
- 2. This article explains the core **mechanisms** (the JD-R dual pathways) that affect employee well-being.
- 3. Existing research in Malaysia directly validates these findings.

This integrated model offers a novel and relevant framework that would strengthen the theoretical underpinnings of PRiSMA, transforming it into a world-class standard for occupational health management. The table below presents a comparative overview of the two

models, emphasizing the strengths of the JD-R model compared to the JDCS model as a foundational theory for PRiSMA.

Feature	Job-Demand-Control-Support (JDCS) Model	Job Demands-Resources (JD-R) Model
Core Concepts	Job Demands, Job Control, Social Support	Job Demands, Job Resources
Primary Focus	Explains job strain and negative health outcomes.	Explains both health impairment (burnout) and motivation (engagement).
Theoretical Pathways	A single pathway: Demands lead to strain, with control/support acting as a buffer.	Dual pathways: A health impairment pathway (demands lead to burnout) and a motivational pathway (resources lead to engagement).
Buffering Effect	Buffering hypothesis (control/support mitigates demands) is a central but often inconsistently supported tenet.	Buffering effect is context-dependent, with specific resources buffering specific demands.
Scope of Application	Primarily a stress model.	A comprehensive model for both stress and motivation, applicable across diverse occupational settings.

Figure 5: JDCS Model vs. JD-R Model

The PRiSMA design was developed to be useful and easy to use, focusing on two main tools created by a group of experts from the DOSH Malaysia. The first tool, known as the LEO26, is a self-report questionnaire for employees assessing psychosocial risks across three components: WD, JC, and JS (Masuri et al., 2023). The second is the EPC23, a complementary tool completed by management to evaluate organizational-level practices against the identified risks (Masuri et al., 2022). These tools are detailed in the guidelines' appendices and serve as the basis for the risk assessment process.

To ensure implementation, the guidelines require employers to appoint a PTP to assist in the PRiSMA process (DOSH, 2024). The framework prescribes a timeline for reassessment: it mandates annual reviews if a high-risk status is identified and biennial reviews in other cases. All documentation must be kept for a minimum of seven years (DOSH, 2024). The overall objectives of PRiSMA are ambitious, aiming to prevent excessive stress, protect mental health, as well as decrease presenteeism and absenteeism. Improve productivity and promote more inclusive work environments (DOSH, 2024). By aligning with the internationally recognized ISO 45003 standard, PRiSMA also aims to position Malaysia within a global framework for management, psychological health, and safety (DOSH, 2024).

Comparative Analysis: Aligning PRiSMA 2024 with Global Standards, Specifically ISO 45003

The alignment of the PRiSMA 2024 guidelines with the international standard ISO 45003:2021 is a cornerstone of its design, intended to harmonize Malaysian practices and align with global best practices in psychological health and safety. Both frameworks share a common goal: to offer organizations a structured method for addressing psychosocial risks and preventing psychological harm and promoting employee well-being within the broader context of an OHS management system. ISO 45003 is founded on the Plan-Do-Check-Act (PDCA) framework established by ISO 45001, emphasizing a proactive and integrated approach rather than a reactive one (Nebbs et al., 2025). It addresses a wide range of psychosocial hazards, including poor leadership, unfair treatment, excessive work hours, bullying, harassment, and issues related to work-life balance (Dollard & Potter, 2025; Saik et al., 2024; Vitrano et al., 2023). Clause 6.1.2.1 of ISO 45003 explicitly states the importance of understanding the underlying sources of psychosocial harm before implementing any controls, providing a principle that

PRiSMA attempts to operationalize through its LEO26 and EPC23 tools. The shared language of hazard identification and risk management creates a powerful synergy (Iavicoli & Tecco, 2020; Leka et al., 2023; Taibi et al., 2022), allowing Malaysian organizations to adopt PRiSMA as a practical application of the more strategic principles outlined in ISO 45003.

However, a deeper analysis reveals critical distinctions in their philosophical underpinnings and scope that warrant careful consideration. While PRiSMA grounds itself primarily in the JDCS model, which emphasizes the interaction between job demands, control, and support, ISO 45003 takes a broader view of organizational factors (Nebbs et al., 2025; Saik et al., 2024). It places significant emphasis on leadership commitment, fairness, compensation equity, and change management as systemic drivers of psychological risk. This difference is profound: the JDCS model treats "support" as a variable within the job itself, whereas ISO 45003 frames it as an expression of the culture as well as leadership behavior of the organization. This distinction suggests that PRiSMA may excel at identifying micro-level job design issues but could potentially overlook macro-level systemic problems that contribute to a toxic work environment. Note that an organization with supportive managers might still have a high psychosocial risk profile if it suffers from inequitable promotion policies or a culture of blame (Brisson et al., 2020; Jain et al., 2021), an issue that PRiSMA's current tools may not capture as effectively as ISO 45003 would.

Furthermore, ISO 45003 promotes a participatory approach (Nebbs et al., 2025; Vitrano et al., 2023), actively involving workers in the risk management process (Saik et al., 2024; Vitrano et al., 2023). This is in line with the collaborative spirit of modern OSH practices, recognizing that those who are most directly involved in the work often have the deepest understanding of the real risks involved (Kunodzia et al., 2024; Kuricová et al., 2025; Ramos et al., 2020; Vitrano et al., 2023). The PRiSMA framework requires the appointment of a trained person and uses both employee and employer checklists, indicating a move towards participation (DOSH, 2024). Nevertheless, the degree of genuine worker empowerment and influence over the final action plan remains an open question. The implementation of ISO 45003 in the organizations highlighted that siloed departments and a focus on short-term financial priorities can act as significant barriers, even when top management is committed (Claro et al., 2025; Hasle et al., 2019; Micheli et al., 2018). It is plausible that similar challenges exist in Malaysia, where the Human Resources (HR), OHS, and other relevant departments may operate in isolation. Without a clear mechanism for cross-departmental integration and genuine worker voice, PRiSMA could become just another compliance checklist rather than a catalyst for deep cultural change. Therefore, while PRiSMA is a valuable local adaptation, its long-term success and impact will depend on its ability to translate the broad principles of ISO 45003 into concrete, culturally resonant actions that address both job-specific demands and the overarching organizational climate.

Table 3: Comparative Summary of PRISMA 2024 vs. ISO 45003 2021

Dimension	PRiSMA2024 (Malaysia)	ISO 45003:2021 (International)
Scope	PRiSMA (Psychosocial Risk Assessment and Management at	ISO 45 003 is an international management standard developed by
	Workplace) 2024 is a national guideline issued by the Malaysian	the International Organization for Standardization (ISO), forming
	Department of Occupational Safety and Health (DOSH). It applies	part of the ISO 45001 family. It provides global guidance for
	to all workplaces in Malaysia in accordance with the Occupational	managing psychosocial risks as part of an Occupational Health
	Safety and Health Act 1994 and focuses on the assessment and	and Safety Management System (OHSMS), focusing on creating
	management of psychosocial risks specifically related to work	psychologically safe workplaces across industries and cultures.
	design, organisation, and context. It operationalises psychosocial	
	risk control using structured national tools: LEO26, EPC23, and	
	PRiMA tables.	
Theoretical Basis	PRiSMA's foundation is the Job Demand-Control-Support (JDCS)	ISO 45 003 is grounded in systems thinking and implementation
	Model (Karasek & Theorell, 1990), which conceptualises	science, incorporating frameworks such as the Consolidated
	psychosocial risk through the interaction of job control, work	Framework for Implementation Research (C FIR) and Expert
	demand, and job support. It integrates WHO (2021) and ILO (2009)	
	principles of psychosocial health, focusing on the Malaysian socio	
	legal context. The model is validated through a quantitative, risk-	(PDCA)—and integrates Total Worker Health and wicked problem
	indicator approach (RIC oV), aligning stress theory with national	theory to manage complex, interrelated psychosocial hazards.
	enforcement structures.	
Approach	PRiSMA employs a prescriptive, diagnostic, and quantitative	ISO 45003 adopts a management-system-based and facilitative
трргоцоп	approach. It mandates the stepwise PRIS MA Process (six	approach, designed for integration into existing ISO 45001-
	components): identification, assessment, prioritisation,	certified systems. It emphasises contextual adaptation,
	management, reassessment, and recordkeeping. It uses risk	participatory planning, and implementation teams supported by
	screening (LEO26), control verification (EPC23), and action	facilitation and continuous learning. It does not prescribe specific
	planning (PRiMA) to produce measurable psychosocial risk scores	tools but guides organisations to tailor their psychosocial risk
	at the individual and organisation al levels. The approach is	management frameworks to local contexts and OHSMS maturity.
	proactive and standardised for compliance monitoring under	management nameworks to ocat contexts and onor b maturity.
	Malaysian law.	
Tools and	PRISMA provides three validated instruments: (1) LEO26 –	ISO 45 003 is non-instrumental but provides ten clauses (context,
Instruments	Likelihood of Environment and Occupational Exposure Scale,	leadership, planning, support, operation, performance evaluation
msuuments	measuring exposure to psychosocial hazards; (2) EPC23 –	and improvement) to guide systematic psychosocial risk control.
	Employer Practice C hecklist assessing organisational control	encourages use of internal assessments, surveys, and audits
	measures; and (3) PRIMA – Psychosocial Risk Management Plan of	integrated into ISO 45001's risk-based thinking but does not
	Actions linking risk results to control strategies. These tools	standardise a specific measurement tool or threshold system.
	generate quantitative indicators that classify risks as low or high	standardise a specific measurement toot of threshold system.
	and are supported by national cut-off values (RIC oV).	
	and are supported by national cut-on values (Kic ov).	
Worker	PRiSMA requires worker cooperation and involvement through	ISO 45 003 promotes collaborative participation as a fundamental
Participation	reporting psychosocial issues and participation in assessments.	principle of OHSMS. Implementation teams composed of HR, OHS
raracipation	Employers must appoint a Psychosocial Trained Person (PTP)	and wellbeing professionals engage in participatory planning,
	responsible for conducting assessments, interpreting results, and	context mapping, and leadership engagement. The approach
	maintaining confidentiality. The process promotes two-way	fosters co-creation, empowerment, and shared owners hip,
	communication but is mainly expert-led, prioritising compliance	recognising workers as active agents in psychosocial risk
	and technical control over co-design.	management rather than passive subjects.
	and technical control over co-design.	management rather than passive subjects.
Validation	PRISMA tools (LEO26 and EPC23) were empirically validated	ISO45003's validation is qualitative and process based. The 2025
Evidence	through national case studies and field testing, establishing	Safety Science implementation study by Nebbs et al. reported
Evidence		
	internal consistency and reliability thresholds (cut-off values) for	evidence of practical effectiveness through a multi-case
	Malaysian workplaces. Validation emphasises statistical accuracy	qualitative design involving six organisations. Data from 29 semi-
	and regulatory accountability, enabling standardised reporting to	structured interviews showed that implementation teams
	DOSH. C ase studies demonstrate reproducibility of results across	enhanced ownership, contextual adaptation, and leadership
	sectors.	engagement—confirming the model's implementation feasibility
		and translational validity.

Critical Evaluation of PRiSMA Assessment Tools: Methodological Validity and Reliability

The efficacy of the PRiSMA 2024 framework hinges critically on the quality of its assessment tools, the LEO26 and the EPC23. A rigorous methodological evaluation reveals significant gaps in the publicly available information regarding their psychometric properties, which poses a substantial challenge to their credibility and utility in scientific and regulatory contexts (Barbaranelli et al., 2018; Formazin et al., 2014; Hulshof et al., 2020; Ronchetti et al., 2015; Taibi et al., 2022). According to established psychometric standards, an instrument must demonstrate both validity—the extent to which it accurately measures what it is intended to

measure and reliability, meaning it produces consistent results over time and across different samples (Cook & Beckman, 2006; Kaewkungwal, 2023; Scholtes et al., 2010; Swan et al., 2023). The documentation provided offers no evidence that these tools have undergone such validation processes.

The LEO26, a 26-item self-report questionnaire, is central to the PRiSMA process. Its structure breaks down into three subscales: WD with 5 items, JC with 11 items, and JS with 10 items. The guidelines provide specific RICoV for determining individual risk status: a score of ≥15.5 on JC indicates high risk, as does a score of \geq 7.5 on WD, while a score of \leq 38.5 on JS indicates high risk. While these cut-offs provide a clear operationalization, they raise several questions. First, there is no information on how these cut-off points were derived. Were they based on normative data from a representative Malaysian workforce? Or are they arbitrary thresholds? Second, and more critically, the provided sources lack any data on the internal consistency and reliability of these subscales. Note that reliability is typically measured using Cronbach's alpha. A value greater than 0.7 is typically regarded as acceptable for research purposes (Izah et al., 2023; Sijtsma, 2008). The absence of these statistics for the LEO26 subscales means their reliability cannot be verified. A starkly contrasting example is a study validating the Malay version of the Decisional Balance scale, where the perceived benefits subscale had a Cronbach's alpha of .857 and the perceived barriers subscale had an alpha of .859, demonstrating strong reliability (Izah et al., 2023; Liu et al., 2020). The failure to provide comparable reliability data for the LEO26 is a major omission.

Although the LEO26 instrument was described as a validated tool and was said to follow the DOSH PRiSMA 2024 guidelines, the paper did not present any psychometric validation results—such as Composite Reliability (CR), Cronbach's alpha coefficients, Confirmatory Factor Analysis (CFA), Average Variance Extracted (AVE), or Exploratory Factor Analysis (EFA)—that would normally demonstrate the internal consistency or construct validity of these domains.

In the previous study, which is close to the establishment and application of PRiSMA, Masuri et al. (2025) applied validated tools (DASS-21 and LEO26) under DOSH's PRiSMA 2024 framework. The paper itself did not report new reliability or validity testing for the constructs of WD, JC, or Job Stress. Thus, its contribution lies in the application and empirical testing of relationships, rather than in the validation of the measurement instruments. This research presented the descriptive and inferential analyses (i.e., frequency distributions and chi-square tests) of relationships between psychosocial risk factors (WD, JC, and JS) alongside the DASS-21 outcomes (stress, anxiety, and depression). However, no psychometric testing results were provided for reliability or validity, focusing solely on risk categorization and significance testing, confirming that the study's purpose was to identify and relate risk factors rather than validate measurement constructs. From an academic perspective, this indicates that the constructs of JC and WD were measured but not psychometrically established within this specific publication. The Job Stress construct was assessed indirectly through DASS-21 rather than being validated as a latent construct in the model. Consequently, the evidence for the reliability and validity of these constructs was drawn from prior instrument development studies (e.g., the 2021 and 2022 LEO26 development papers), not newly tested in this 2025 study.

In a previous study, Masuri et al. (2023) presented the re-evaluation and redevelopment of the LEO/SKiPP instrument, which measures psychosocial risk at work. However, this study also did not report the new psychometric testing. Instead, this study reconfirmed content validity and structural refinements through expert panel reviews (occupational safety and health experts, psychologists, and industry representatives), online feedback sessions during the Knowledge Transfer Program (KTP), and face validity via participant evaluation (mean agreement scores > 4.0 for content, suitability, and understanding across 15 items of the PRiSMA framework). Thus, while content validity was strengthened through expert review and participant consensus, statistical construct validation (e.g., factor loading, reliability coefficients) was not included in this 2023 publication. The paper explicitly states that it aimed to present "changes, suggestions, and improvement data gathered during the trial and sharing sessions with industry stakeholders" rather than conducting psychometric validation.

In a previous study, Masuri et al. (2022) described the structure of the tool—which includes the domains JC, WD, and Job Stress—and its intended purpose for workplace psychosocial screening. Still, empirical evidence of reliability or validity (such as Cronbach's alpha, EFA, or CFA) was reported in the publication. The article positioned the LEO/SKiPP as an adopted, contextually adapted instrument, citing its initial development under DOSH and UiTM collaborations, but the statistical testing phase was not documented in this iteration either. Collectively, these two papers form part of a progressive developmental trajectory of the LEO/SKiPP and PRiSMA frameworks. The 2022 paper conceptualized and applied the model, while the 2023 paper refined and validated its content and structure through expert and field feedback. However, statistical reliability and validity testing (i.e., psychometric analysis for constructs like JC, WD, and Job Stress) were not reported in either.

Table 4: Gap Assessment of PRiSMA 2024

Assessment Tool/Concept	Information Provided in Sources	Critical Information Not Available
		No details on derivation of RICoV
LEO26 (Likelihood of Environment	Contains 26 items (WD:5, JC:11, JS:10).	No Cronbach's Alpha or other reliability coefficients reported
,	Provides Risk Indicator Cut-off Values	No Confirmatory Factor Analysis (CFA) results confirming factor
& Occupational Exposure Scale)	(RICoV).	structure
		No evidence of convergent or discriminant validity testing
EPC23 (Employer Practice	Described as a 23-item checklist guiding risk	No information on development, reliability, or validity.
Checklist)	management actions.	No information on development, reliability, or validity.
Psychometric Validation Principles	General definitions of validity and reliability. Description of CFA as a robust method.	No specific validation data for either LEO26 or EPC23.
Comparative Validated	Malay version of the Decisional Balance scale	DB-M validation metrics serve as a benchmark for what is missing
Instrument	(DB-M) validated via CFA.	for LEO26.

CFA, a method within Structural Equation Modeling (SEM) (Cheung et al., 2023), is the most powerful method for evaluating the construct validity of a multi-item scale like the LEO26. This technique enables researchers to examine how well the observed data align with a proposed factor structure and provides indices of model fit, convergent validity (how strongly items load onto their intended factor), discriminant validity (whether factors are distinct from one another), and construct reliability (Shia et al., 2022; Stalikas et al., 2018). Note that the provided materials do not cite any published studies that used CFA to validate LEO26's factor structure. The absence of such validation is problematic because it leaves unanswered questions about the tool's dimensionality. Are the three proposed factors (demand, control, and support) truly distinct constructs? Or do they overlap to a degree that compromises their unique

contribution to the risk assessment? A study highlighted this very issue, finding low internal consistency for the demand and control scales in a JDCS-based questionnaire, which calls into question their use in empirical research (Kraus et al., 2023; Larsson et al., 2019; Portoghese et al., 2020). Without robust psychometric validation, the LEO26 risks being used as a black box, producing scores whose meaning and accuracy are unknown. This lack of transparency and scientific rigor undermines the entire PRiSMA framework and raises serious concerns about the defensibility of any conclusions drawn from its use.

Nonetheless, this review primarily focused on the established legal documents from DOSH Malaysia that are ready for implementation, while the requirements for reliability and validity pertain only to research and academic interests. Even the reliability and validity of the primary constructs of JC, WD, and Job Stress have not yet been explored; they might be addressed in future research, but this is not a gap. Masuri et al. (2025) concluded that PRiSMA was suitable for use in the practical field by industry players and was already recognized as a binding legal document in Malaysia.

The Evolving Paradigm of Psychosocial Risk: Integrating the Psychosocial Safety Climate Model

While the PRiSMA 2024 guidelines anchor themselves firmly in the JDCS model, the field of occupational health psychology has evolved significantly, introducing more sophisticated frameworks that offer richer explanatory power. The most prominent of these is the PSC model, which has shown remarkable relevance and validity in a Malaysian context (Afsharian et al., 2017; Bakar et al., 2025; Idris et al., 2011; Idris & Dollard, 2011; Mirza et al., 2019). The PSC model posits that an organization's psychological health and safety is not primarily driven by the immediate characteristics of a job but by the prevailing climate of management's commitment to addressing psychosocial risks (Fattori et al., 2022; Idris et al., 2011, 2014; Mirza et al., 2019). This perspective reframes the problem from individual jobs to the broader organizational level, proposing that job demands and resources arise as downstream effects of organizational policies and practices (Dalgaard et al., 2025; Dollard & Potter, 2025; Fattori et al., 2022).

This theoretical shift is supported by compelling empirical evidence from Malaysia. A seminal study tested a structural equation model integrating PSC with the JD-R model among 291 employees in Selangor, Malaysia (Idris et al., 2011). The results were clear: PSC serves as a strong predictor of both job demands and job resources. More precisely, PSC demonstrated a positive association with job resources ($\beta = 0.67$, p < 0.001) and a negative association with job demands ($\beta = -0.14$, p < 0.05). This finding (Idris et al., 2011) is particularly significant, indicating that when employees perceive their organization as valuing psychological well-being, it helps reduce job demands while enhancing access to valuable resources such as autonomy and social support. Unlike the JDCS model, which views job demands, control, and support as relatively stable job characteristics. The PSC model demonstrates that these outcomes are malleable and influenced by management's actions.

The study further demonstrated the powerful indirect effects of PSC on employee outcomes. Moreover, bootstrapping analyses revealed significant pathways through which PSC influences performance: PSC \rightarrow lesser job demands \rightarrow reduce burnout, and PSC \rightarrow higher job resources \rightarrow increased engagement \rightarrow enhanced performance (Hu et al., 2021; Idris et al., 2011a, 2011b). This model provides a much clearer blueprint for intervention. Rather than focusing solely on

modifying individual jobs—which can be complex and costly—an organization can first improve its PSC. This involves enhancing management commitment, setting a clear priority for psychological health, ensuring transparent communication about mental health initiatives, and fostering employee participation in OH&S matters. The PSC-12 scale, validated in this study, showed excellent reliability (e.g., management commitment subscale $\alpha = 0.86$), providing a scientifically sound instrument for assessing this construct (Afsharian et al., 2022; Bakar et al., 2025; Fattori et al., 2022). The successful validation of the PSC model in a developing economy like Malaysia suggests its principles are broadly applicable and highly relevant to the context in which PRiSMA operates (Bakar et al., 2025; Idris & Dollard, 2011). Therefore, a critical augmentation of the PRiSMA framework would be to integrate the concept of PSC. This would involve adding a new layer of assessment focused on management's commitment and the organization's formal policies, alongside the existing job-focused JDCS assessment. This would create a more holistic, two-tiered system that addresses both the symptoms (job conditions) and the root causes (organizational climate) of psychosocial risk.

Practical Implementation Challenges and Strategic Recommendations for Success

The introduction of PRiSMA 2024 presents a transformative opportunity for Malaysian workplaces. Nevertheless, its successful large-scale implementation is fraught with significant practical challenges. Drawing lessons from the global rollout of standards like ISO 45003, it is evident that mere publication of guidelines is insufficient to drive meaningful change. One of the most pervasive barriers is the tendency for organizations to adopt a narrow, individual-focused approach to psychosocial risk, focusing on employee resilience and self-care while ignoring the more complex, politically sensitive organizational factors that cause harm. In the Malaysian context, this could manifest as companies encouraging mindfulness programs or offering Employee Assistance Programs (EAPs) without ever addressing systemic issues such as unreasonable workloads, poor leadership, or a lack of career progression opportunities. This misdirection diverts attention from the core responsibility of employers to eliminate or control organizational-level hazards.

Another significant hurdle is organizational inertia and departmental silos. Effective psychosocial risk management requires a cross-functional effort involving senior management, OHS, HR, and sometimes even external consultants. However, in many organizations, these departments operate in isolation, each with their own budget, priorities, and reporting lines. This fragmentation can lead to disjointed efforts and conflicting messages, undermining the coherence of the PRiSMA initiative. An implementation strategy that fails to foster collaboration and secure buy-in from top leadership is unlikely to succeed. Research on implementing ISO 45003 highlighted the value of interdisciplinary team collaboration as well as strong facilitation in navigating these complexities (Claro et al., 2025; Nebbs et al., 2025; Ramos et al., 2020). The initial overwhelm experienced by participants in that study underscores the need for a structured, staged implementation approach, breaking the process into manageable steps with clear guidance and support.

To overcome these challenges, a set of strategic recommendations is essential. First, there must be a concerted effort to shift the organizational mindset from individual blame to collective responsibility. This requires strong leadership commitment, where senior management visibly champions the importance of psychological health and safety and incorporates it into the core business strategy. Hence, linking mental health initiatives to Environmental, Social, and Governance (ESG) strategies can be a powerful lever, as it frames the investment in

psychosocial safety as a critical component of long-term sustainability and corporate reputation. Second, the implementation of PRiSMA should be guided by established frameworks from implementation science. The SELECT-IT meta-framework, for example, provides a systematic process for selecting and applying appropriate theories and models, ensuring that interventions are evidence-based and tailored to the specific context. Likewise, the Consolidated Framework for Implementation Research (CFIR) offers a comprehensive set of domains to consider, including the inner and outer setting, the attributes of the innovation, the people involved, as well as the overall implementation process. Using such tools can help organizations anticipate barriers and develop targeted solutions.

Correspondingly, the PRiSMA 2024 guidelines represent a pioneering and significant national initiative to formalize psychosocial risk management. Its greatest strength lies in its legal mandate under OSHA 2022, which provides a clear and enforceable framework for employers to meet their statutory obligations. The framework's comprehensive, multi-step process, grounded in international standards like ISO 45003:2021, ensures a systematic approach to risk management. The methodological shift to using ROC analysis and the Youden index for establishing cut-off values demonstrates a commitment to psychometric rigor, a significant improvement over the previous approach.

A key limitation, however, is the reliance on the JDCS model as its primary theoretical foundation. As discussed, this model's limitations in explaining complex psychosocial outcomes beyond mere strain could restrict the framework's full potential. A further limitation is the absence of publicly available psychometric data, such as internal consistency coefficients, which are standard for instruments of this nature and would enhance LEO26's credibility.

Continuous monitoring and feedback loops are crucial. Organizations should not treat PRiSMA as a one-off project but as an ongoing process of improvement. Regular reassessments, coupled with mechanisms for anonymous employee feedback, can help track progress, identify emerging risks, and ensure that the implemented actions remain relevant and effective over time. By adopting these strategic approaches, Malaysian organizations can transform PRiSMA from a static guideline into a dynamic engine for creating healthier, stronger, and more efficient workplaces.

Implications for Practice and Policy

The PRiSMA guidelines provide a clear, standardized, and enforceable framework for employers in Malaysia to meet their legal obligations. The designated role of the PTP ensures that the assessment and management process is conducted by individuals with appropriate training, increasing the likelihood of effective implementation. By providing a structured plan of action (PRIMA) linked to specific assessment outcomes (LEO26 and EPC23), the guidelines offer practical, actionable guidance that can be integrated into existing occupational safety and health programs. This systematic approach moves the nation closer to its stated goal of creating safe, healthy, and inclusive workplaces that benefit both employees and the organization.

To solidify PRiSMA's status as a world-class standard, several areas require further research and validation:

Conduct Large-Scale Validation Studies: While preliminary studies exist, large-scale, nationwide validation of the LEO26 tool is essential to confirm its psychometric properties across various industries and demographics in Malaysia.

Publish Comprehensive Psychometric Data: Future research and official publications should make full psychometric properties, including Cronbach's alpha, test-retest reliability, and detailed ROC curves, publicly available. This transparency will build confidence in the instrument's scientific foundation.

Explore the Proposed Theoretical Augmentation: Researchers should investigate how the proposed PSC-JD-R model can be directly applied within the Malaysian context, evaluating its potential to offer a comprehensive view of workplace well-being. This would involve using the LEO26 to measure the core JD-R components and assessing their connections with both positive outcomes, such as engagement, and negative outcomes, like burnout.

Investigate Organizational Outcomes: Future studies should investigate the relationship between the implementation of the PRiSMA framework and objective organizational outcomes, including lower absenteeism and turnover rates, as well as higher productivity. This type of study would provide empirical evidence of the framework's effectiveness and its return on investment for employers.

Synthesis and Future Directions for Advancing Psychosocial Health and Safety in Malaysia

In conclusion, the PRiSMA 2024 guidelines represent a commendable and necessary step forward for psychosocial risk management in Malaysia. They establish a clear legal and procedural framework for employers to follow, grounding their actions in the widely recognized JDCS model and aligning with the international standard ISO 45003. However, a critical review of the framework reveals significant areas for theoretical augmentation and methodological strengthening to elevate its scientific rigor and practical effectiveness. The primary limitation lies in its heavy reliance on the JDCS model, which, while foundational, has faced empirical challenges and is being superseded in academic literature by more nuanced models like the PSC. The PSC model, with its proven validity in the Malaysian context, offers a more powerful explanation of how organizational-level commitments shape employee experiences and outcomes. Therefore, integrating the PSC concept into PRiSMA would provide a more robust theoretical foundation, redirecting attention from changing individual positions to implementing broad organizational reforms.

Furthermore, the most pressing deficiency identified is the lack of published, peer-reviewed evidence on the psychometric properties of the core assessment tools, LEO26 and EPC23. Without documented validation studies detailing convergent validity, reliability, as well as discriminant validity, these instruments cannot be considered scientifically sound. Adopting best practices from psychometrics, such as using CFA, is non-negotiable for ensuring that the data gathered via PRiSMA is both reliable and valid. The successful validation of other instruments in Malaysia serves as a benchmark for what is required. Future research must prioritize this validation work, transforming the LEO26 and EPC23 from generic checklists into trusted, evidence-based assessment tools.

The present analysis is limited by the lack of publicly available psychometric validation data and potential differences in organizational maturity across Malaysian industries, which may affect PRISMA implementation fidelity.

Looking ahead, the successful trajectory of PRiSMA depends on moving beyond simple compliance. The real value will be realized when organizations embrace the principles of implementation science to combat the inherent difficulties associated with cultural change. This involves securing unwavering leadership commitment, fostering cross-departmental collaboration, and empowering employees as active participants in creating a safer psychological environment. By strategically linking psychosocial initiatives to broader business goals like ESG, organizations can build a compelling case for sustained investment. Ultimately, PRiSMA 2024 is not the endpoint but a critical starting line. Its continued evolution, enriched by stronger theoretical foundations and validated tools, and supported by robust implementation strategies, will be instrumental in building a future where psychological health and safety are given the same level of importance as physical safety in Malaysian workplaces.

Conclusion

The introduction of the PRiSMA 2024 guidelines represents a major turning point in Malaysia's commitment to advancing occupational safety and health. Supported by the legal force of OSHA 2022, the framework provides a structured, multi-step process for identifying and managing psychosocial risks. Although the foundational JDCS model serves as a solid starting point, the framework could be theoretically enhanced by incorporating the more extensive JD-R model. Thus, integrating the PSC concept would create a multi-level framework that is both proactive and uniquely suited to the Malaysian context. Continued research and transparency in the publication of psychometric data will be crucial for solidifying PRiSMA's status as a robust, evidence-based tool for safeguarding the mental and physical well-being of the Malaysian workforce.

Ultimately, PRiSMA 2024 should not be viewed merely as regulatory compliance, but as the foundation for a cultural transformation positioning psychological health and safety as a cornerstone of Malaysia's sustainable development agenda.

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References

- Afsharian, A., Dollard, M. F., Dormann, C., Ziaian, T., & Winefield, A. H. (2022). PSC through the lens of a dispersion-composition model: the beneficial effects of PSC ideal as a high and strong PSC signal. *Work & Stress*, *37*(2), 171. https://doi.org/10.1080/02678373.2022.2120561
- Afsharian, A., Zadow, A., Dollard, M. F., Dormann, C., & Ziaian, T. (2017). Should psychosocial safety climate theory be extended to include climate strength? *Journal of Occupational Health Psychology*, 23(4), 496. https://doi.org/10.1037/ocp0000101
- Alústiza, J. C. A., & Jordi, M. L. C. (2021). The management of the new and emerging musculoskeletal and psychosocial risks by EU-28 enterprises. *Journal of Safety Research*, 77, 277. https://doi.org/10.1016/j.jsr.2021.03.011

- Amoadu, M., Agyare, D. F., Doe, P. F., & Abraham, S. A. (2025). Examining the impact of psychosocial safety climate on working conditions, well-being and safety of healthcare providers: a scoping review [Review of *Examining the impact of psychosocial safety climate on working conditions, well-being and safety of healthcare providers: a scoping review*]. *BMC Health Services Research*, 25(1). BioMed Central. https://doi.org/10.1186/s12913-025-12254-2
- Amoadu, M., Ansah, E. W., & Sarfo, J. O. (2023). Influence of psychosocial safety climate on occupational health and safety: a scoping review [Review of *Influence of psychosocial safety climate on occupational health and safety: a scoping review*]. *BMC Public Health*, 23(1). BioMed Central. https://doi.org/10.1186/s12889-023-16246-x
- Andersen, L. P., Andersen, D. R., & Pihl-Thingvad, J. (2025). Psychosocial Climate as Antecedent for Resources to Manage Emotional Demands at Work. *International Journal of Environmental Research and Public Health*, 22(1), 64. https://doi.org/10.3390/ijerph22010064
- Anwar, M. S. K. (2023). Amendment to Occupational Safety and Health Act (OSHA): Relevant changes. SSRN Electronic Journal. https://doi.org/10.2139/ssrn.4497209
- Arias, D., Saxena, S., & Verguet, S. (2022). Quantifying the global burden of mental disorders and their economic value. *EClinicalMedicine*, 54, 101675. https://doi.org/10.1016/j.eclinm.2022.101675
- Bailey, T., Dollard, M. F., & Owen, M. (2021). A Minute in Time to Save Minds: Psychosocial Safety Climate (PSC-4) Cut-Points for Early Detection of Mental Distress. *SSRN Electronic Journal*. https://doi.org/10.2139/ssrn.3919695
- Bakar, N. A., Bulgiba, A., & Isahak, M. (2025). Validity and reliability of the Malay version of the PSC-12 scale among healthcare workers in Malaysia. *PLoS ONE*, 20(2). https://doi.org/10.1371/journal.pone.0317744
- Bakker, A. B., & Demerouti, E. (2007). The Job Demands-Resources model: state of the art. *Journal of Managerial Psychology*, 22(3), 309. https://doi.org/10.1108/02683940710733115
- Bakker, A. B., & Demerouti, E. (2016). Job demands—resources theory: Taking stock and looking forward. [Review of *Job demands—resources theory: Taking stock and looking forward.*]. *Journal of Occupational Health Psychology*, 22(3), 273. American Psychological Association. https://doi.org/10.1037/ocp0000056
- Bakker, A. B., Demerouti, E., & Euwema, M. (2005). Job Resources Buffer the Impact of Job Demands on Burnout. *Journal of Occupational Health Psychology*, 10(2), 170. https://doi.org/10.1037/1076-8998.10.2.170
- Bakker, A. B., & Vries, J. D. de. (2020). Job Demands–Resources theory and self-regulation: new explanations and remedies for job burnout [Review of *Job Demands–Resources theory and self-regulation: new explanations and remedies for job burnout*]. *Anxiety Stress* & Coping, 34(1), 1. Taylor & Francis. https://doi.org/10.1080/10615806.2020.1797695
- Barbaranelli, C., Ghezzi, V., Tecco, C. D., Ronchetti, M., Fida, R., Ghelli, M., Persechino, B., & Iavicoli, S. (2018). Assessing Objective and Verifiable Indicators Associated with Work-Related Stress: Validation of a Structured Checklist for the Assessment and Management of Work-Related Stress. *Frontiers in Psychology*, 9. https://doi.org/10.3389/fpsyg.2018.02424
- Brisson, C., Aubé, K., Gilbert-Ouimet, M., Duchaine, C., Trudel, X., & Vézina, M. (2020). Organizational-Level Interventions and Occupational Health. In *Handbook series in*

- occupational health sciences (p. 505). Springer International Publishing. https://doi.org/10.1007/978-3-030-31438-5_22
- Chan, C. M. H., Ng, S. L., In, S., Wee, L. H., & Siau, C. S. (2021). Predictors of Psychological Distress and Mental Health Resource Utilization among Employees in Malaysia. *International Journal of Environmental Research and Public Health*, 18(1), 314. https://doi.org/10.3390/ijerph18010314
- Cheung, G. W., Cooper-Thomas, H. D., Lau, R. S., & Wang, L. C. (2023). Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations [Review of *Reporting reliability, convergent and discriminant validity with structural equation modeling: A review and best-practice recommendations*]. *Asia Pacific Journal of Management, 41*(2), 745. Springer Science+Business Media. https://doi.org/10.1007/s10490-023-09871-y
- Claes, S., Vandepitte, S., Clays, E., & Annemans, L. (2023). How job demands and job resources contribute to our overall subjective well-being. *Frontiers in Psychology*, *14*. https://doi.org/10.3389/fpsyg.2023.1220263
- Claro, G. T. N., Soto, J. A. B., & Ascanio, J. G. A. (2025). Impact of the occupational health and safety management system (OHSMS) on human talent management and organizational performance in the construction sector. *Frontiers in Built Environment*, 11. https://doi.org/10.3389/fbuil.2025.1618356
- Cook, D. A., & Beckman, T. J. (2006). Current Concepts in Validity and Reliability for Psychometric Instruments: Theory and Application [Review of Current Concepts in Validity and Reliability for Psychometric Instruments: Theory and Application]. The American Journal of Medicine, 119(2). Elsevier BV. https://doi.org/10.1016/j.amjmed.2005.10.036
- Dalgaard, V. L., Kirkegaard, T., Wåhlin-Jacobsen, C. D., Aust, B., Jaspers, S. Ø., Jønsson, T., & Winding, T. N. (2025). Can an organizationally anchored, multi-level intervention improves perceived stress and psychosocial factors in the workplace? A pre-post study assessing effectiveness and implementation. *BMC Public Health*, 25(1). https://doi.org/10.1186/s12889-024-20801-5
- Demerouti, E., & Bakker, A. B. (2011). The Job Demands–Resources model: Challenges for future research. *SA Journal of Industrial Psychology*, *37*(2). https://doi.org/10.4102/sajip.v37i2.974
- Demerouti, E., & Bakker, A. B. (2022). Job demands-resources theory in times of crises: New propositions. *Organizational Psychology Review*, 13(3), 209. https://doi.org/10.1177/20413866221135022
- Dettmers, J., & Stempel, C. R. (2021). How to Use Questionnaire Results in Psychosocial Risk Assessment: Calculating Risks for Health Impairment in Psychosocial Work Risk Assessment. *International Journal of Environmental Research and Public Health*, 18(13), 7107. https://doi.org/10.3390/ijerph18137107
- Diebig, M., & Angerer, P. (2020). Description and application of a method to quantify criterion-related cut-off values for questionnaire-based psychosocial risk assessment. *International Archives of Occupational and Environmental Health*, 94(3), 475. https://doi.org/10.1007/s00420-020-01597-4
- Doef, M. van der, & Maes, S. (1999). The Job Demand-Control (-Support) Model and psychological well-being: A review of 20 years of empirical research [Review of *The Job Demand-Control (-Support) Model and psychological well-being: A review of 20 years of empirical research*]. Work & Stress, 13(2), 87. Taylor & Francis. https://doi.org/10.1080/026783799296084

- Dollard, M. F., & Potter, R. (2025). Managing Psychosocial Risks at Work Through National Policy and Regulation. *Occupational Health Science*. https://doi.org/10.1007/s41542-025-00236-z
- DOSH (2024) Guidelines on Psychosocial Risk Assessment and Management at the Workplace 2024. https://www.dosh.gov.my/index.php/competent-person-form/occupational-health/regulation-2-1/guidelines/occupational-health-1/4850-guidelines-on-psychosocial-risk-assessment-and-management-at-the-workplace-2024
- Fattori, A., Comotti, A., Bordini, L., Dollard, M. F., & Bonzini, M. (2022). Psychosocial safety climate (PSC) at middle management level in the healthcare sector: A contribution to the Italian validation of psychosocial safety climate-4. *Frontiers in Psychology*, *13*. https://doi.org/10.3389/fpsyg.2022.1046286
- Fernandes, C., & Pereira, A. (2016). Exposure to psychosocial risk factors in the context of work: a systematic review [Review of *Exposure to psychosocial risk factors in the context of work: a systematic review*]. *Revista de Saúde Pública*, 50. University of São Paulo. https://doi.org/10.1590/s1518-8787.2016050006129
- Formazin, M., Burr, H., Aagestad, C., Tynes, T., Thorsen, S. V., Perkiö-Mäkelä, M., Aramburu, C. I. D., García, F. J. P., Blanco, L. G., Vermeylen, G., Parent-Thirion, A., Hooftman, W., & Houtman, I. L. D. (2014). Dimensional comparability of psychosocial working conditions as covered in European monitoring questionnaires. *BMC Public Health*, 14(1). https://doi.org/10.1186/1471-2458-14-1251
- Genrich, M., Angerer, P., Worringer, B., Gündel, H., Kröner, F., & Müller, A. (2022). Managers' Action-Guiding Mental Models towards Mental Health-Related Organizational Interventions—A Systematic Review of Qualitative Studies [Review of Managers' Action-Guiding Mental Models towards Mental Health-Related Organizational Interventions—A Systematic Review of Qualitative Studies]. International Journal of Environmental Research and Public Health, 19(19), 12610. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/ijerph191912610
- Guillemin, M. (2021). New Avenues for Prevention of Work-Related Diseases Linked to Psychosocial Risks. *International Journal of Environmental Research and Public Health*, 18(21), 11354. https://doi.org/10.3390/ijerph182111354
- Hasle, P., Madsen, C. U., Hansen, D., & Maalouf, M. M. (2019). Occupational health and safety management and operations management: shall the twain never meet? *Research Portal Denmark*.
- Henry, J. D., & Crawford, J. R. (2005). The short-form version of the Depression Anxiety Stress Scales (DASS-21): Construct validity and normative data in a large non-clinical sample. *British journal of clinical psychology*, 44(2), 227-239. https://doi.org/10.1348/014466505X29657
- Hu, Q., Dollard, M. F., & Taris, T. W. (2021). Organizational context matters: Psychosocial safety climate as a precursor to team and individual motivational functioning. *Safety Science*, *145*, 105524. https://doi.org/10.1016/j.ssci.2021.105524
- Hulshof, C., Pega, F., Neupane, S., Molen, H. F. van der, Colosio, C., Daams, J. G., Descatha, A., Prakash, K. C., Kuijer, P., Mandić-Rajčević, S., Masci, F., Morgan, R. L., Nygård, C., Oakman, J., Proper, K. I., Solovieva, S., & Frings-Dresen, M. H. W. (2020). The prevalence of occupational exposure to ergonomic risk factors: A systematic review and meta-analysis from the WHO/ILO Joint Estimates of the Work-related Burden of Disease and Injury [Review of the prevalence of occupational exposure to ergonomic risk factors: A systematic review and meta-analysis from the WHO/ILO Joint Estimates

- of the Work-related Burden of Disease and Injury]. Environment International, 146, 106157. Elsevier BV. https://doi.org/10.1016/j.envint.2020.106157
- Iavicoli, S., & Tecco, C. D. (2020). The management of psychosocial risks at work: state of the art and future perspectives [Review of the management of psychosocial risks at work: state of the art and future perspectives]. La Medicina Del Lavoro, 111(5), 335. Italian Society of Occupational Medicine. https://doi.org/10.23749/mdl.v111i5.10679
- Ibrahim, R. Z. A. R., & Ohtsuka, K. (2012). Review of the Job Demand-Control and Job Demand-Control-Support models: Elusive moderating predictor effects and cultural implications. https://vuir.vu.edu.au/22217/
- Idris, M. A., & Dollard, M. F. (2011). Psychosocial safety climate, work conditions, and emotions in the workplace: A Malaysian population-based work stress study. *International Journal of Stress Management*, 18(4), 324. https://doi.org/10.1037/a0024849
- Idris, M. A., Dollard, M. F., & Winefield, A. H. (2011a). Integrating psychosocial safety climate in the JD-R model: a study amongst Malaysian workers: original research. *SA Journal of Industrial Psychology*, 37(2), 1. https://journals.co.za/content/psyc/37/2/EJC89256
- Idris, M. A., Dollard, M. F., & Winefield, A. H. (2011b). Integrating psychosocial safety climate in the JD-R model: A study amongst Malaysian workers. *SA Journal of Industrial Psychology*, *37*(2). https://doi.org/10.4102/sajip.v37i2.851
- Idris, M. A., Dollard, M. F., & Yulita, Y. (2014). Psychosocial safety climate, emotional demands, burnout, and depression: A longitudinal multi-level study in the Malaysian private sector. *Journal of Occupational Health Psychology*, 19(3), 291. https://doi.org/10.1037/a0036599
- International Labour Organization (ILO) (2014). Unpublished working document; International Labour Inspection (Tool/Guide/Handbook) to deal with psychosocial risks at work. Geneva: International Labour Office
- Isha, A. S. N., Javaid, M. U., Abbasi, A. Z., Bano, S., Zahid, M., Memon, M. A., Rehman, U., Nübling, M., Sabir, A. A., Rehman, S. U., & Imtiaz, N. (2020). Malay Validation of Copenhagen Psychosocial Work Environment Questionnaire in Context of Second-Generation Statistical Techniques. *BioMed Research International*, 2020, 1. https://doi.org/10.1155/2020/7680960
- Izah, S. C., Sylva, L., & Hait, M. (2023). Cronbach's Alpha: A Cornerstone in Ensuring Reliability and Validity in Environmental Health Assessment. *ES Energy & Environments*. https://doi.org/10.30919/esee1057
- Jain, A., Hassard, J., Leka, S., Tecco, C. D., & Iavicoli, S. (2021). The Role of Occupational Health Services in Psychosocial Risk Management and the Promotion of Mental Health and Well-Being at Work [Review of *The Role of Occupational Health Services in Psychosocial Risk Management and the Promotion of Mental Health and Well-Being at Work*]. *International Journal of Environmental Research and Public Health*, *18*(7), 3632. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/ijerph18073632
- Kaewkungwal, J. (2023). The Grammar of Science: How "Good" is Your Instrument? Outbreak Surveillance Investigation & Response (OSIR) Journal, 16(1), 40. https://doi.org/10.59096/osir.v16i1.262097
- Karlsen, I., Abildgaard, J. S., Frost, F. J., Teoh, K., St-Hilaire, F., Denman, A. R., Leduc, C., Muñoz, M. Á., & Ripa, D. M. (2024). Why Use Apps in Occupational Health, Safety, and Well-being? Exploring Logics Among Occupational Health Professionals. *In 16th*

- Conference of the European Academy of Occupational Health Psychology. EAOHP 2024 (p. S131). European Academy of Occupational Health Psychology.
- Kraus, T., Dixe, M. dos A., Pais, R., Theorell, T., Gaspar, P., & Lopes, M. da S. (2023). Validation of the Demand Control Support Questionnaire for European Portuguese. *Portuguese Journal of Public Health*, 41(3), 188. https://doi.org/10.1159/000534474
- Kunodzia, R., Bikitsha, L., & Haldenwang, R. (2024). Perceived Factors Affecting the Implementation of Occupational Health and Safety Management Systems in the South African Construction Industry. *Safety*, 10(1), 5. https://doi.org/10.3390/safety10010005
- Kuricová, A., Hudáková, M., Kočkár, S., & Hollá, K. (2025). An Innovative Approach to Occupational Risk Assessment in OHS: A Case Study on the Verification of the Allrisk Model in Manufacturing Enterprises in Slovakia. *International Journal of Environmental Research and Public Health*, 22(5), 757. https://doi.org/10.3390/ijerph22050757
- Larsson, K., Ekblom, Ö., Kallings, L., Ekblom, M., & Blom, V. (2019). Job Demand-Control-Support Model as Related to Objectively Measured Physical Activity and Sedentary Time in Working Women and Men. *International Journal of Environmental Research and Public Health*, *16*(18), 3370. https://doi.org/10.3390/ijerph16183370
- Leka, S., Torres, L., Jain, A., Tecco, C. D., Russo, S., & Iavicoli, S. (2023). Relationship Between Occupational Safety and Health Policy Principles, Organizational Action on Work-related Stress and the Psychosocial Work Environment in Italy. *Safety and Health at Work*, 14(4), 425. https://doi.org/10.1016/j.shaw.2023.10.001
- Liu, K. T., Kueh, Y. C., Arifin, W. N., Ibrahim, M. I., Shafei, M. N., & Kuan, G. (2020). Psychometric Properties of the Decisional Balance Scale: A Confirmatory Study on Malaysian University Students. *International Journal of Environmental Research and Public Health*, 17(8), 2748. https://doi.org/10.3390/ijerph17082748
- Luchman, J. N., & González-Morales, M. G. (2013). Demands, control, and support: A meta-analytic review of work characteristics interrelationships. [Review of *Demands, control, and support: A meta-analytic review of work characteristics interrelationships.*]. *Journal of Occupational Health Psychology*, 18(1), 37. American Psychological Association. https://doi.org/10.1037/a0030541
- Malik, A., Ayuso-Mateos, J. L., Baranyi, G., Barbui, C., Thornicroft, G., Ommeren, M. van, & Akhtar, A. (2023, May 9). Mental health at work: WHO guidelines. In *World Psychiatry* (Vol. 22, Issue 2, p. 331). Wiley. https://doi.org/10.1002/wps.21094
- Masuri, M. G., Basri, N. I. N. M., Sahid, M. H., Isa, K. A. M., Aris, M. S. M., & Ismail, I. (2025). PRisMA 2024: Psychosocial Status among Manufacturing Industry Workers in Perak. *Environment-Behaviour Proceedings Journal*, 10(31), 413. https://doi.org/10.21834/e-bpj.v10i31.6437
- Masuri, M. G., Isa, K. A. M., Mustafa, R., & Paulraj, S. J. P. V. (2023). Revised Development of LEO/SKiPP on Worker's Mental Health Status. *Environment-Behaviour Proceedings Journal*, 8(24), 331. https://doi.org/10.21834/ebpj.v8i24.4631
- Masuri, M. G., Isa, K. A. M., Paulraj, S. J. P. V., Aris, M. S. M., & Ismail, I. (2022). Employers Practice towards Managing Psychosocial Risk in the Workplace: IMAGE star rating system. *Environment-Behaviour Proceedings Journal*, 7(20), 415. https://doi.org/10.21834/ebpj.v7i20.3511
- Mαλλιαρού, M., & Kotsakis, A. (2023). Editorial: Psychosocial work environment during the COVID-19 pandemic. *Frontiers in Public Health*, 11. https://doi.org/10.3389/fpubh.2023.1272290

- Micheli, G. J. L., Gnoni, M. G., Merich, D. de, Sala, G., Rosso, A., Tornese, F., Piga, G., & Malorgio, B. (2018). Barriers, Drivers and Impact of a Simplified Occupational Safety and Health Management System in Micro and Small Enterprises. In *Advances in intelligent systems and computing* (p. 81). Springer Nature. https://doi.org/10.1007/978-3-319-94589-7 8
- Mirza, M. Z., Isha, A. S. N., Memon, M. A., Azeem, S., & Zahid, M. (2019). Psychosocial safety climate, safety compliance and safety participation: The mediating role of psychological distress. *Journal of Management & Organization*, 28(2), 363. https://doi.org/10.1017/jmo.2019.35
- Müller, G., Bombana, M., Heinzel-Gutenbrenner, M., Kleindienst, N., Bohus, M., Lyssenko, L., & Vonderlin, R. (2021). Socio-economic consequences of mental distress: quantifying the impact of self-reported mental distress on the days of incapacity to work and medical costs in a two-year period: a longitudinal study in Germany. *BMC Public Health*, 21(1). https://doi.org/10.1186/s12889-021-10637-8
- Naseri, R. N. N., & Esa, M. M. (2025). A Review on Occupational Safety and Health in Malaysia [Review of *A Review on Occupational Safety and Health in Malaysia*]. *International Journal of Research and Innovation in Social Science*, 4289. https://doi.org/10.47772/ijriss.2025.90300342
- Nasharudin, N. A. M., Idris, M. A., & Loh, M. Y. (2020). The effect of job demands on health and work outcomes: A longitudinal study among Malaysian employees. *PsyCh Journal*, 9(5), 691. https://doi.org/10.1002/pchj.378
- Nebbs, A., Martin, A. K., Neil, A. L., Broughton, K., Dawkins, S., & Roydhouse, J. (2025). Implementing the ISO 45003 standard: An approach combining implementation teams and a facilitated planning process. *Safety Science*, 191, 106961. https://doi.org/10.1016/j.ssci.2025.106961
- Nielsen, K., Angelis, M. D., Innstrand, S. T., & Mazzetti, G. (2022). Quantitative process measures in interventions to improve employees' mental health: A systematic literature review and the IPEF framework. *Work & Stress*, *37*(1), 1. https://doi.org/10.1080/02678373.2022.2080775
- Pavlista, V., Angerer, P., & Diebig, M. (2021). Barriers and drivers of psychosocial risk assessments in German micro and small-sized enterprises: a qualitative study with owners and managers. *BMC Public Health*, *21*(1). https://doi.org/10.1186/s12889-021-11416-1
- Pavlista, V., Angerer, P., & Diebig, M. (2024). Challenges of modern work environments and means of overcoming them in the context of psychosocial risk assessments. *BMC Public Health*, 24(1). https://doi.org/10.1186/s12889-024-20818-w
- Phiwphong, K., & U-on, V. (2025). Examining the effects of job demand, organizational support, and psychological capital on work-life balance and employee performance: A conceptual framework. *Edelweiss Applied Science and Technology*, 9(9), 533. https://doi.org/10.55214/2576-8484.v9i9.9837
- Pignata, S. (2022). Psychosocial Factors That Influence the Health of Workers in Contemporary Workplaces. *International Journal of Environmental Research and Public Health*, 19(21), 14016. https://doi.org/10.3390/ijerph192114016
- Pisanti, R., Doef, M. van der, Maes, S., Lombardo, C., Lazzari, D., & Violani, C. (2015). Occupational coping self-efficacy explains distress and well-being in nurses beyond psychosocial job characteristics. *Frontiers in Psychology*, 6. https://doi.org/10.3389/fpsyg.2015.01143

- Pούσσος, Π. (2023). The Psychosocial Risks and Impacts in the Workplace Assessment Tool: Construction and Psychometric Evaluation. *Behavioral Sciences*, 13(2), 104. https://doi.org/10.3390/bs13020104
- Portoghese, I., Galletta, M., Leiter, M. P., Finco, G., d'Aloja, E., & Campagna, M. (2020). Job Demand-Control-Support Latent Profiles and Their Relationships with Interpersonal Stressors, Job Burnout, and Intrinsic Work Motivation. *International Journal of Environmental Research and Public Health*, 17(24), 9430. https://doi.org/10.3390/ijerph17249430
- Potter, R., Dollard, M. F., Lerouge, L., Jain, A., Leka, S., & Cefaliello, A. (2024). National Policy Index (NPI) for worker mental health and its relationship with enterprise psychosocial safety climate. *Safety Science*, 172, 106428. https://doi.org/10.1016/j.ssci.2024.106428
- Ramos, G., Afonso, P., & Rodrigues, M. A. (2020). Integrated management systems as a key facilitator of occupational health and safety risk management: A case study in a medium sized waste management firm. *Journal of Cleaner Production*, 262, 121346. https://doi.org/10.1016/j.jclepro.2020.121346
- Ronchetti, M., Tecco, C. D., Russo, S., Castaldi, T., Vitali, S., Autieri, S., Valenti, A., Persechino, B., & Iavicoli, S. (2015). An integrated approach to the assessment of work-related stress risk: Comparison of findings from two tools in an Italian methodology. *Safety Science*, 80, 310. https://doi.org/10.1016/j.ssci.2015.08.005
- Saik, P., Tsopa, V., Cheberyachko, S., Deryugin, O., Sokurenko, S., Suima, I., & Lozynskyi, V. (2024). Improving the Process of Managing Psychosocial Risks in Organizations. *Risk Management and Healthcare Policy*, 2997. https://doi.org/10.2147/rmhp.s488263
- Scholtes, V. A., Terwee, C. B., & Poolman, R. W. (2010). What makes a measurement instrument valid and reliable? *Injury*, 42(3), 236. https://doi.org/10.1016/j.injury.2010.11.042
- Scholze, A., & Hecker, A. (2023). Digital Job Demands and Resources: Digitization in the Context of the Job Demands-Resources Model [Review of *Digital Job Demands and Resources: Digitization in the Context of the Job Demands-Resources Model*]. *International Journal of Environmental Research and Public Health*, 20(16), 6581. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/ijerph20166581
- Schreibauer, E. C., Hippler, M., Burgess, S., Rieger, M. A., & Rind, E. (2020). Work-Related Psychosocial Stress in Small and Medium-Sized Enterprises: An Integrative Review [Review of Work-Related Psychosocial Stress in Small and Medium-Sized Enterprises: An Integrative Review]. International Journal of Environmental Research and Public Health, 17(20), 7446. Multidisciplinary Digital Publishing Institute. https://doi.org/10.3390/ijerph17207446
- Schulte, P. A., Sauter, S. L., Pandalai, S. P., Tiesman, H. M., Chosewood, L. C., Cunningham, T. R., Wurzelbacher, S. J., Pana-Cryan, R., Swanson, N. G., Chang, C., Nigam, J. A. S., Reissman, D. B., Ray, T., & Howard, J. (2024). An urgent call to address work-related psychosocial hazards and improve worker well-being [Review of an urgent call to address work-related psychosocial hazards and improve worker well-being]. American Journal of Industrial Medicine, 67(6), 499. Wiley. https://doi.org/10.1002/ajim.23583
- Shia, T. H., Mansor, R., & Majid, N. A. (2022). Confirmatory Factors Analysis of Learning Environment Instrument among Secondary School Students. *International Journal of Academic Research in Progressive Education and Development*, 11(4). https://doi.org/10.6007/ijarped/v11-i4/16089

- Sijtsma, K. (2008). On the Use, the Misuse, and the Very Limited Usefulness of Cronbach's Alpha. *Psychometrika*, 74(1), 107. https://doi.org/10.1007/s11336-008-9101-0
- Sima, M. N., Desrumaux, P., & Tchagnéno, C. L. (2024). Exploration of the Interrelationships Between Personal Resources, Work Motivation, and Work Adaptation. *Deleted Journal*, 6(4), 1053. https://doi.org/10.3390/psycholint6040066
- Soukupová, N., Adamová, M., & Drahotová, K. (2024). Current Approaches of Stress Management in the Czech Business Environment. *Central European Business Review*. https://doi.org/10.18267/j.cebr.373
- Stalikas, A., Kyriazos, T., Yotsidi, V., & Prassa, K. (2018). Using Bifactor EFA, Bifactor CFA and Exploratory Structural Equation Modeling to Validate Factor Structure of the Meaning in Life Questionnaire, Greek Version. *Psychology*, *9*(3), 348. https://doi.org/10.4236/psych.2018.93022
- Swan, K., Speyer, R., Scharitzer, M., Farneti, D., Brown, T., Woisard, V., & Cordier, R. (2023). Measuring what matters in healthcare: a practical guide to psychometric principles and instrument development [Review of *Measuring what matters in healthcare: a practical guide to psychometric principles and instrument development*]. Frontiers in Psychology, 14. Frontiers Media. https://doi.org/10.3389/fpsyg.2023.1225850
- Taibi, Y., Metzler, Y. A., Bellingrath, S., Neuhaus, C. A., & Müller, A. (2022). Applying risk matrices for assessing the risk of psychosocial hazards at work. *Frontiers in Public Health*, 10. https://doi.org/10.3389/fpubh.2022.965262
- Tecco, C. D., Persechino, B., & Iavicoli, S. (2023). Psychosocial Risks in the Changing World of Work: Moving from the Risk Assessment Culture to the Management of Opportunities [Review of *Psychosocial Risks in the Changing World of Work: Moving from the Risk Assessment Culture to the Management of Opportunities*]. La Medicina Del Lavoro, 114(2). Italian Society of Occupational Medicine. https://doi.org/10.23749/mdl.v114i2.14362
- Teresi, M., Barattucci, M., Telesca, G., Andrighetto, L., Baldissarri, C., & Pagliaro, S. (2024). Organizational identification and workers' well-being: The mediating role of trust, meaning of work and self-objectification. *Journal of Community & Applied Social Psychology*, 34(5). https://doi.org/10.1002/casp.2865
- Vaníčková, R. (2021). Psychology of health and mental hygiene: Psychosocial risks, consequences, and possibilities of work stress prevention. *Problems and Perspectives in Management*, 19(1), 68. https://doi.org/10.21511/ppm.19(1).2021.06
- Vitrano, G., Micheli, G. J. L., Guglielmi, A., Merich, D. de, Pellicci, M., Urso, D., & Ipsen, C. (2023). Sustainable occupational safety and health interventions: A study on the factors for an effective design. *Safety Science*, *166*, 106249. https://doi.org/10.1016/j.ssci.2023.106249
- World Health Organization. (2010). Health Impact of Psychosocial Hazards at Work: An Overview. Geneva: WHO.
- Zou, M., Zhou, Y., & Williams, M. (2022). In search of the 'buffering' effect in the job demands—control model: The role of teamwork HRM practices and occupations. *Economic and Industrial Democracy*, 45(1), 6. https://doi.org/10.1177/0143831x221128345