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From Risk to Resilience

Managing Psychosocial Hazards for a Healthier, More Productive Workplace

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Research conducted in partnership between Swivel, Impart Advisory and Economic Evaluation Australia

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Executive Summary

Introduction

Psychosocial health is a crucial component of workers' overall health and wellbeing. Some aspects of work design and the work environment can have the potential to cause physical and/or psychological harm and are called psychosocial hazards. Employees face different hazards based on the nature and expectations of their work. Chronic exposure to these hazards is linked to adverse health outcomes like anxiety, depression, fatigue, cardiovascular symptoms, and musculoskeletal symptoms.

Psychosocial Hazards, Health Outcomes, and Worker Productivity

Empirical evidence consistently points to the link between exposure to workplace psychosocial hazards and adverse health outcomes. Examples of these hazards are high job demands, long hours, low social support, and work-life conflict. The negative effects on health also incur economic costs for the organisation, through their impact on worker productivity, performance, attendance, work quality, and turnover rates. However, some factors have been shown to mitigate negative effects, such as providing higher autonomy and engagement for workers, along with social support.

Psychosocial Health for Sedentary Workers

The changing nature of work has led to an increase in sedentary behaviour in workers. Sedentary behaviour increases the risk of cardiovascular disease, musculoskeletal disorders, metabolic disorders, mental health conditions, and cancer. Crucially, it is a distinct risk factor from the lack of physical activity.

Exposure to psychosocial hazards also increases the risk of greater physical inactivity, especially for those who face high job demands. As the workplace environment contributes to the behavior, interventions need to account for workplace policies that may discourage physical activity.

Managing Psychosocial Hazards

Employers should ensure the health and safety of their employees by providing a safe working environment that addresses all potential hazards and risks. A proactive and holistic approach to risk management is necessary, and companies should implement risk management procedures that identify all risks and create action plans that employ control measures that target the sources of hazards.

These initiatives should be evaluated regularly to identify areas for improvement and ensure the continuous support of employee health.

The Use of Technology

Technology is a promising tool for enhancing psychosocial health, as digital health interventions are convenient and accessible ways to provide resources and support. Digital interventions have been empirically shown to positively affect workers' wellbeing and effectiveness.

Health and wellness apps should be tailored to users' needs, can be easily integrated into the workday, and allow users the freedom to control the activities they interact with to maintain user engagement.

Recommendations

Companies can create a healthier work environment that prioritises the physical and psychosocial health of their employees by applying a preventative risk management strategy that addresses exposure to psychosocial hazards and their sources. This strategy should identify and assess all pertinent hazards to minimise the risks of developing workplace injuries and/or illnesses.

Action plans should involve ergonomic interventions that improve work design and wellness initiatives that provide support for workers and empower them to engage in healthy behaviours. These strategies can lead to a healthier and more productive workforce, driving long-term success and sustainability for the organisation.

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Introduction

In today's fast-paced and interconnected world, the significance of psychosocial health and wellbeing in the workplace cannot be overstated. With the rise of hybrid and remote working models, employees face new and unique challenges that can impact their mental and physical health. Globalisation, advances in information and communication technology, automation, and the free movement of capital have accelerated production, service, and communication (Toukas et al., 2015; Portuné, 2012). Knowledge-based work now constitutes a larger proportion of all jobs, and work demands have become more complex.

Global advances in communication have begun to blur work-life boundaries as workers are expected to become more available. Additionally, the increasingly competitive labor market and increased prevalence of short-term employment agreements have intensified job insecurity for many, including educated knowledge workers. Workers are expected to invest resources to regularly improve their skills not only to secure mobility in their organization, but also to maintain their competitiveness and employability (Pujol-Cols & Lazzaro-Salazar, 2021; Pérez-Zapata et al., 2016). The faster pace at which work and society now operate has made it more challenging for the average worker to cope, and this has implications for their health (Portuné, 2012).

Psychosocial health, encompassing mental, emotional, and social wellbeing, is a critical determinant of overall health and productivity in the workplace. Health is defined by the Constitution of the World Health Organization (WHO) as a "*state of complete physical, mental and social well-being and not merely the absence of disease or infirmity*" (WHO, 1946, p.1). Therefore, initiatives that promote worker wellbeing should target the highest standard of health that is reasonably attainable. Moreover, the WHO also proposes that a healthy workplace should be:

> "*one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of all workers and the sustainability of the workplace by considering the following* […] *health and safety concerns in the physical work environment* […] *health, safety and well-being concerns in the psychosocial work environment including organization of work and workplace culture* […] *personal health resources in the workplace* […] *and ways of participating in the community to improve the health of workers, their families and other members of the community*" (Burton, 2010, p.16).

However, some aspects of work design, the work environment, and the organisation and/or management of work can have the potential to cause physical and/or psychological harm; these are referred to as psychosocial hazards (Safe Work Australia, 2022; Metzler et al., 2019; Cox et al., 2000). A commonly used taxonomy for psychosocial hazards is by Cox et al. (2000), which classifies hazards into nine categories, summarized in Table 1.

For example, the category *Control and Decision Latitude* describes the degree of control or autonomy a worker may have over how their job is done or over decisions pertinent to their role (Safe Work Australia, 2022; Cox et al., 2000).

TABLE 1. Categories and examples of psychosocial hazards

Category	Examples
High or Low Job Demands	Long, irregular, or unpredictable work hours, insufficient breaks, few opportunities to use leave entitlements, complex tasks frequently exceeding a worker's capacity, work that requires suppressing emotions or displaying false emotions, highly monotonous or repetitive tasks with little variety
Inadequate Recognition	Receiving insufficient feedback or recognition, biased or inequitable distribution of recognition and rewards, limited opportunities for development
Lack of Role Clarity	Unclear, inconsistent, or frequently changing roles, responsibilities, and work standards, missing or incomplete task information, lack of clarity about work priorities
Low Job Control	Workers have little influence on how they do their work, lack of consultation about changes impacting work, tightly scripted processes not allowing workers to apply skills, limited scope for workers to adapt the way they work to changing conditions
Poor Environmental Conditions	Working in hazardous conditions, performing demanding work while wearing uncomfortable PPE or equipment, workplace conditions that affect concentration or ability to complete tasks (e.g. poor lighting, excessive noise, uncomfortable temperature)
Poor Organisational Change Management	Poorly planned changes, poor communication and insufficient information about planned changes
Poor Organisational Justice	Failure to treat workers' information sensitively, policies or procedures that are unfair or applied inconsistently, failing to accommodate workers' reasonable needs, discriminating against particular groups
Poor Support	Insufficient, clear, or contradictory information, not having resources to do job properly or on time, inadequate training for tasks, unempathetic leadership, workplace cultures that discourage coworkers supporting each other (e.g. competitive, critical, uncooperative)
Remote or Isolated Work	Working in locations that require long commutes to work sites, limited access to resources, recreation, and support networks
Traumatic Events or Material	Witnessing or investigating a fatality, crime, abuse, or serious injuries, exposure to extreme risks like natural disasters, listening to or reading descriptions of painful or traumatic events

Source: Adapted from Safe Work Australia (2022)

While psychosocial hazards may not guarantee harm, significant evidence indicates that chronic exposure to these stressors is linked to adverse physical and mental health outcomes, such as anxiety, depression, fatigue, cardiovascular symptoms, gastrointestinal symptoms, and musculoskeletal pain (Pujol-Cols & Lazzaro Salazar, 2021; Niedhammer et al., 2021; Duchaine et al., 2020; Jood et al., 2017; Fernandes and Pereira, 2016; Pikhart & Pikhartova, 2015; Hassard et al., 2014; Eatough et al., 2012; Nixon et al., 2011; Clougherty et al., 2010). Thus, the exposure to psychosocial hazards not only increases the risk for developing adverse mental health outcomes but also has significant effects on physical health (Macdonald & Oakman, 2024; Oakman et al., 2018).

Workers face different challenges depending on the nature and expectations of their work. For example, those employed in the healthcare industry bear the additional expectation of emotional labor alongside the heavy workload, fast pace, and long hours of their profession (Sullivan & Germain, 2020; Freimann & Merisalu, 2015). Nurses are expected to present a good bedside manner for their patients, which may lead to compassion fatigue.

Aside from healthcare, construction is another industry known for stressful workplace conditions and long working hours (Frimpong et al., 2022). Kortum and Leka (2013) also state that the workers of developing nations may experience additional psychosocial hazards due to poor working conditions and fewer resources. This is also true for workers in the informal economy (Gimeno Ruiz de Porras et al., 2017) due to the lack of social protection benefits.

For hybrid, office, and remote workers, a sedentary lifestyle is a common hazard, due to its adverse effects on health (Hannah et al., 2019; Carr et al., 2016). Di Tecco et al. (2023) also employs the term *technostress* to describe the consequences of pervasive technology, such as the demand for constant availability and social isolation. Other factors they may experience include high work demands, time pressure, and work-family conflict (Bérastégui, 2021; Pérez-Zapata et al., 2016).

White-collar workers are also prone to developing symptoms of work-related musculoskeletal disorders (WMSDs), which refer to conditions that affect the muscles, tendons, joints, and related tissues, and are a significant source of medical conditions and disability for the Australian workforce (Metzler et al., 2019). WMSD risks vary with the occupation and specific work conditions (Liu et al., 2018), and computer workers tend to experience WMSD symptoms in the neck, shoulders, upper limbs, wrists, and hands (Greggi et al., 2024; Eliasson et al., 2023).

These symptoms arise not only because of physical factors, such as repetitive motions and adverse postures related to the use of a mouse and keyboard, but also because of psychosocial factors. For example, Eliasson et al. (2023) noted in their study that hand and wrist pain are linked to hand-intensive tasks such as typing that involves high levels of force, and that neck and upper limb pain are linked to psychosocial factors. This may be due to the effects of stress on muscle tension, leading to cumulative muscle fatigue even under low biomechanical loads (Demissie et al., 2024).

External shocks such as the COVID-19 pandemic are also sources of psychosocial hazards due to its effects on the market, work structure and dynamics, and organisational restructuring. Many office workers had to suddenly work from home, which presented a barrier for lower-income workers who lacked the resources for an appropriate workstation and had to balance work demands with childcare and homeschooling. Unsurprisingly, Koren et al. (2023) noted that the pandemic increased the prevalence of anxiety and depression among workers in their study by 25%.

This whitepaper will examine the current literature on psychosocial health, emphasising its empirical connections to physical health. Consequently, it aims to highlight the critical importance of integrating psychosocial health into management practices to ensure the wellbeing of staff. Employers should prioritise a holistic risk management strategy that identifies and addresses all relevant physical and psychosocial hazards in the workplace to minimise the risks of developing poor health outcomes.

The paper will discuss the specific challenges faced by hybrid, office, and remote workers, offering insights into effective management strategies, and will explore the promising uses of technology and digital tools as convenient, accessible ways to promote psychosocial health. As organisations navigate the complexities of modern work environments, it becomes imperative to address these interconnected issues comprehensively. By prioritising psychosocial health, companies can foster a more engaged, productive, and healthier workforce, ultimately leading to sustainable success and a positive organisational culture.

Literature Review

How Psychosocial Hazards Translate into Health Outcomes

Empirical studies that investigate the effects of psychosocial hazards on health outcomes often utilise occupational stress balance[1] models as a theoretical framework for the study: the demand-control model (DCM) or job strain model by Karasek (1979), the effort-reward imbalance model (ERI) by Siegrist (1996), the organisational justice model by Moorman (1991), and the job demands-resources model (JD-R) by Bakker & Demerouti (2007).

The DCM proposes that job strain is caused by a combination of high job demands and low job control, or the degree of decision-making freedom available to the worker to address work demands (Karasek, 1979). It suggests that the highest satisfaction is from active jobs, where workers are challenged by high demands, but have the freedom and resources to address these demands to their discretion. Low demands, combined with low control, lead to passive jobs that are also unsatisfying.

Various studies have found that job strain is associated with stress-related conditions and mental health conditions (Nieuwenheuijsen & Bruinvels, 2010; Butterworth et al., 2011), musculoskeletal symptoms (Eatough et al., 2012), and cardiovascular risk (Jood et al., 2017). Interestingly, Jood et al. (2017) found that the link between job strain and increased risk of stroke was independent of work conflict, implying that these psychosocial hazards capture different aspects of the work environment that affect stroke risk.

The ERI model focuses on the role of reciprocity: a lack of reciprocity between costs/efforts and gains/rewards lead to a state of emotional distress and associated strain reactions (Siegrist, 1996). Siegrist (1996) however differentiates the ERI from the DCM vis-à-vis the concept of status control, or the worker's sense of mastery and esteem regarding their work.

1 They are named as such to describe a balance of factors needed for optimal psychosocial health.

For instance, a high-achieving worker unable to secure a promotion faces a threat to their status control because of their low status and mobility despite their efforts. This combination has been shown to lead to burnout and poorer cardiovascular health (Portuné, 2012; Bakker & Demerouti, 2007). Jood et al. (2017) found a high ratio of effort-to-rewards was linked to an increased risk of stroke, even after controlling for education, marital status, and pre-existing vascular risk factors.

Moorman's (1991) organisational justice model proposes that adverse health effects are affected by perceptions of fairness in the organisation. Harvey et al. (2017) finds support for this model, where low perceptions of fairness in the workplace contribute to mental health conditions. Bakker and Demerouti (2007) build upon the DCM, stating that while the combination leading to job strain does predict poorer mental health outcomes, a greater degree of control alone is insufficient to moderate the negative effects.

Furthermore, they considered the DCM and ERI models to be too simple and static. Instead, they proposed the more flexible JD-R model: every occupation has its share of job demands (aspects of the job that require sustained effort or skills and are associated with certain costs) and job resources (aspects of the job that help achieve work goals, reduce job demands, or stimulate personal growth). Job demands incur a physical or psychological cost on the employee, and if depleted, can lead to health problems. Job resources can help the worker complete tasks and to recover these costs. Unlike the DCM, job resources are not limited to control or autonomy (Ibid, 2007).

Other models focus on describing a physiological mechanism by which psychosocial hazards affect health outcomes. Meurs and Perrewé's (2010) cognitive activation theory of stress (CATS) model posit that our previous experiences and future expectations lead us to develop stimulus responses that we learn over time. For example, one's prior negative experience with a stressor may predispose them to a stronger reaction to the same stimulus in the future compared to another person. Santana et al. (2020) adds that these biological reactions to stress can also affect cognitive functions (e.g., lower concentration and creativity) and physical health (e.g., musculoskeletal conditions).

Ganster and Rosen (2013) propose the allostatic[2] load (AL) model, which describes a pathway for chronic work stressors to lead to disease. In the first phase of the process, the stressors stimulate primary mediators such as stress hormones and anti-inflammatory proteins that help the organism respond to the threat. However, when these mediators are frequently induced due to chronic work stress, the process leads to a set of secondary mediators that adjust the body's normal set points. If the secondary mediators are consistently out of normal range, they become risk factors for disease and poor mental health outcomes such as anxiety (Ibid, 2013).

The work of Bezzina et al. (2023) and Berlin & Adams (2017) support this theory, stating that chronic stressors have a cumulative effect on the body, and can lead to outcomes such as anxiety, fatigue, cardiovascular symptoms, and musculoskeletal symptoms. For instance, workers may be more prone to developing infections after a prolonged period of work stress (Rozanov, 2023). The consequences of long-term stress can even become visible in neuroimaging. Blix et al. (2013) observed that stressed subjects had significant reductions in the gray matter of the anterior cingulate cortex and dorsolateral prefrontal cortices of the brain, with volume lost inversely correlated to the degree of perceived stress.

2 Allostasis is the adjustment process of bodily systems to cope with challenges to homeostasis (**Ganster & Rosen, 2013**). Allostatic load pertains to the cumulative effects of stress and overactivation on multiple systems in the body (**Rozanov, 2023; Erskine & Fauquet-Alekhine, 2023**).

While the CATS and AL models focus on stress physiology, they are nonetheless complementary to the balance models. Ganster and Rosen (2013) indicate strong evidence that job strain (high demand and low control) is linked with the outcomes predicted by the AL model. Bezzina et al. (2023) also found support for both the AL and DCM models in their study.

The Empirical Nexus Between Psychosocial Hazards, Health Outcomes, and Worker Productivity

Psychosocial Health and Health Outcomes

Numerous studies have highlighted the significant impact of psychosocial hazards on both mental and physical health outcomes, thereby marking psychosocial hazards as a public health concern (WHO, 2010). These effects may be direct or indirect through psychological stress responses (Cox et al., 2000). A selection of these studies and their findings are summarised in Table 2.

TABLE 2. The effects of psychosocial factors (PF) on health outcomes

Authors	Analysis	Psychosocial Factors	Key Findings
Aldasoro & Cantonnet (2021)	Survey, statistical analysis (*N = 28193)*	Time pressure, poor comms., job insec., status ineq., work hours, workplace conflict, disc.,	The most frequent PF in the EU-28 is time pressure. Health, education, and service sectors have higher prevalence of hazards.
Bérastégui (2021)	Systematic review, Exploratory research *(N = 98)*	Physical and social isolation, digital surveillance, work-life conflict	Gig economy workers face different PF from full-time workers due to labour structure, short-lived tasks, and lack of formal contract.
Burr et al. (2017)	Log-binomial regression *(N = 5281)*	Influence in org., work pace, career dev., social support	High work pace among men, low influence, career dev., and social support among women, and low supervisor support for both sexes decrease self-reported health after 5-years
Dollard & Neser (2013)	Correlational analysis, Regression *(N = 31)*	Job control, PSC, org. restructuring	The most important factors explaining worker self-reported health and GDP were union density and PSC
Eatough et al. (2012)	Survey, Statistical analysis *(N = 277)*	Job demands, leadership, job control, role conflict	Low safety leadership, low job control, and high role conflict were linked to increased strain and MSD symptoms.
Fernandes and Pereira (2016)	Systematic review, *(N = 22)*	Work demands, work org., work content, social support, leadership, org. justice, work-life conflict	A poor psychosocial environment is linked to health outcomes such as hypertension, stress, and burnout

TABLE 2. The effects of psychosocial factors (PF) on health outcomes, continued

Authors	Analysis	Psychosocial Factors	Key Findings
Innstrand et al. (2023)	Structural equation modeling *(N = 11533)*	Work engagement, job control, social community, task clarity, work recognition, work meaning, trust in management	Work engagement and social community are the strongest predictors of both positive and negative health outcomes.
Jain et al. (2012)	Survey, Statistical analysis (*N = 185*)	Tasks, work org., work relations, cooperation, leadership	High work demands, low career dev. opportunities and comms., and high work-family conflict were linked with higher rates of burnout.
Jood et al. (2017)	Survey, Regression *(N =198)*	Job strain, work conflict, time pressure, ERI	Job strain and work conflict are independent risk factors of stroke.
Lapointe et al. (2009)	Survey, Logistic regression (*N = 2431*)	Job strain	Job strain interacts with postural risk factors and increases incidence of WMSD symptoms
Liu et al. (2018)	Survey, Logistic regression (*N = 8937* male; *N = 7052* female)	Work hours, work shift, job demands, job control, org. justice, job insec.	WMSDs have unique causal pathways and risk factors shaped by work conditions.
McGann et al. (2016)	Semi-structured interviews (*N = 72*)	Job control, job insec., status ineq.	Non-standard workers experience poor psychosocial conditions.
Niedhammer et al. (2021)	Meta-review, Pooled estimates (*N = 72*)	Job strain, low control, high demands, social support, working hours, job insec.	There are significant links between psychosocial hazards and CV diseases, MHC, diabetes, and physical inactivity
Nieuwenhuijsen et al. (2010)	Systematic review, Meta-analysis (*N = 7*)	Job demands, job control, social support, org. justice, ERI	There is strong evidence that the hazards studied predict the incidence of stress-related disorders.
Nixon et al. (2011)	Meta-analysis (*N = 79*)	Work conflict, job control, org. constraints, role ambiguity, role conflict, workload, work hours	Psychosocial hazards are linked to physical symptoms cross-sectionally and over time. Stronger effect on GI problems and sleep.
Rosário et al. (2016)	Systematic review (*N =10*)	Org. culture, role in org., job control, career dev., workplace conflict, pace, workload, schedule, work env., task design	Most studies observe adverse effects of hazards on sickness absence, CV health, and sleep.

TABLE 2. The effects of psychosocial factors (PF) on health outcomes, continued

Authors	Analysis	Psychosocial Factors	Key Findings
Watanabe et al. (2018)	Systematic review, Meta-analysis (*N = 8*)	Job strain, shift work, ERI, org. justice, work hours	There is a strong positive association between hazards and an elevated risk of metabolic syndrome onset.
Widanarko et al. (2015)	Survey, Logistic regression (*N = 1294*)	ERI, job control, job demands, social support, job satisfaction, work stress, over commitment	Workers exposed to both physical and psychosocial hazards had highest odds of neck and shoulder pain.
Zhang et al. (2024)	Survey, Regression (*N = 598*)	Job demands, job control	High job control and high job demands were linked to higher wellbeing and passive jobs to lower wellbeing.

Note: comms. = communications; insec. = insecurity; ineq. = inequality; disc. = discrimination; org. = organisation/organisational; PSC = psychosocial safety climate; dev. = development; env. = environment; ERI = effort-reward imbalance; CV = cardiovascular; MSD = musculoskeletal disorders; MHC = mental health conditions

Table 2 employs the term psychosocial factors as opposed to psychosocial hazards. This is because not all psychosocial factors as operationalised in these papers are harmful per se; instead, they are ideally present in an optimal range, where too little or too much of this variable can lead to harm (Macdonald & Oakman, 2024). Some of the notable findings and insights from the literature are as follows:

- Many psychosocial hazards play an important role in increasing the risk of mental health conditions (Niedhammer et al., 2021; Duchaine et al., 2020; Hassard et al., 2014; Butterworth et al., 2011), cardiovascular disease (CVD) and CVD risk factors such as high blood pressure (Martínez et al., 2022; Jood et al., 2017; Rosário et al., 2016; Schnall et al., 2016; Pikhart & Pikhartova, 2015; Clougherty et al., 2010), musculoskeletal disorders (MSD) (Fernandes & Pereira, 2016; Eatough et al., 2012; WHO, 2010), and gastrointestinal (GI) symptoms (Nixon et al., 2011).

- Psychosocial hazards that are key predictors for stress and poor health outcomes include job strain (high job demands and low job control), low social support, long work hours, low organisational/procedural justice, work-life conflict, and effort-reward imbalance (Niedhammer et al., 2021; Jood et al., 2017; Burr et al., 2017; Hämmig & Bauer, 2013; Nieuwenhuijsen et al. 2010; Niedhammer et al., 2008).

- Physical and psychosocial hazards can display interaction or synergistic effects that increase the risk of developing WMSDs (Widanarko et al., 2015; Lapointe et al., 2009)

- The effects on health (physical, emotional, and cognitive) negatively impact worker productivity, and these are observed as absenteeism (time away from work), presenteeism (impaired performance while at work), or a decline in work performance, work quality, work ability (Arends et al., 2017; Rosário et al., 2016; Toukas et al., 2015; Ford et al., 2011; Parker et al., 2009; Niedhammer et al., 2008; Allen & Hubbard, 2005), or even early retirement (Hassard et al., 2014).

- Some psychosocial hazards tend to occur with other hazards. For example, high job demand and complexity tend to occur with long hours and high skill expectations, while low job control tends to occur with low wages and low job security (Butterworth et al., 2011). The causal pathways for WMSDs are influenced by specific work or social conditions (Liu et al., 2018).

These findings underscore the necessity for organisations to prioritise psychosocial health to prevent the onset of serious physical health conditions. Aside from the harmful consequences of psychosocial hazards, the evidence also points to what are termed *protective factors*, or factors that help mitigate negative effects (García-Iglesias et al., 2021). Many studies indicate social support from peers and supervisors and social community as protective factors for stress (Koren et al., 2023; Innstrand et al., 2023; Lulli et al., 2021; Portuné, 2012).

Two more significant protective factors are esteem (Portuné, 2012; Mościcka-Teske et al., 2019) and autonomy (Ibrahim et al., 2019). Esteem represents the meaning, satisfaction, and status derived by a worker from their work (Clougherty et al., 2010). Thus, workers who face high work demands may still find satisfaction in the position if they derive esteem from the role (Barros et al., 2022). For example, Zhang et al. (2024) observed that active jobs (high job control, high job demand) were associated with higher wellbeing especially among the male workers, while passive jobs were linked with lower wellbeing.

With a high level of autonomy, the worker can adjust their pace and workload (Alavinia et al., 2009). Jain et al. (2012) found that while the professional staff in their study reported high work demand and work-family conflicts, they did not report greater stress levels. They surmise that the greater level of control and influence of the professional staff in the organisation mitigated the potential negative effects.

A related protective factor is engagement, or a positive mental state related to work where energy levels are high and the worker is challenged and enthusiastic about their work (Innstrand et al., 2023; García-Iglesias et al., 2021). Shantz et al. (2013) indicate a positive link between employee engagement and good performance, and a negative link between engagement and deviance. They found that employees were engaged when they were given high autonomy, task variety, and good feedback, and they perceived their work to be meaningful or significant (Ibid, 2013).

Other protective factors include adequate rest and communication (Koren et al., 2023). Leisure may also be a protective factor but can contribute to lower wellbeing if the worker is unengaged by a passive job (Zhang et al., 2024). Dollard & Neser (2013) also found union density to be another protective factor for worker health in their study of 31 European countries, possibly due to the greater resources for workers.

Psychosocial Health and Worker Productivity

Psychosocial hazards also incur economic impacts, due to their effects on worker productivity. As noted in our key findings, the adverse effects on health are observed in productivity measures such as absenteeism, presenteeism, as well as a decline in work performance, work quality, or ability.

A meta-analysis by Duchaine et al. (2020) found that exposure to job strain led to a 47 increased risk of absenteeism due to a mental health condition, and exposure to effort-reward imbalance led to a 66% increased risk, even after controlling for a history of mental health conditions. A longitudinal study by Leijten et al. (2014) reported that mental health issues affected work ability (an 18.7% decrease) and work productivity (a 5.8% decrease) after a 1-year follow up.

Absenteeism and presenteeism are significant challenges that affect organisational productivity and employee wellbeing. Absenteeism refers to employees being absent from work due to illness, injury, or other personal reasons, while presenteeism occurs when employees are physically present at work but are not fully functioning due to health issues, stress, or lack of engagement (Allen & Hubbard, 2005).

Mental health issues such as depression, anxiety, burnout, and stress are common reasons for employees taking time off work. Chronic stress has been linked to various physical health problems, including cardiovascular diseases and musculoskeletal disorders, which can further contribute to absenteeism and high staff turnover rates (Erskine & Fauquet-Alekhine, 2023a). Organisations with high levels of absenteeism often face reduced productivity, increased workloads for other employees, and higher healthcare costs (Johns, 2009).

Presenteeism can be even more costly than absenteeism because it is less visible and harder to measure. Employees who come to work despite being unwell or mentally distressed often experience reduced productivity, make more mistakes, and may take longer to complete tasks. This not only affects their own performance but can also impact team dynamics and overall organisational efficiency.

Presenteeism is particularly prevalent in environments where there is a stigma attached to taking time off for mental health reasons or where employees fear job insecurity (Hemp, 2004). For both presenteeism and absenteeism, there thus exists a spillover effect from the affected worker to their coworkers and the organisation (Petit & Dugué, 2012).

Workplaces with poor psychosocial health climates cost employers around AU$6 billion per annum and improving the wellbeing of the 25% least healthy workers could save AU$17 billion (Williden et al., 2012). Safe Work Australia (2024) reports that mental health conditions are linked to productivity loss, with the median time lost at 34.2 working weeks per serious claim versus 8.0 working weeks per serious claim for all injuries and diseases.

Most claims for mental health conditions were rooted in mental stress (92%). The highest proportion of mental stress claims in 2021-2022 were due to workplace bullying (27.5%), work pressure (25.2%), and workplace violence (16.4%). Firms and organisations therefore have a moral and economic incentive to improve working conditions and minimise these consequences.

Psychosocial Health in Sedentary Hybrid, Office, and Remote Work Environments

The changing nature of the workplace has also resulted in a rise in sedentary behaviour, due to the shift towards occupations with low physical activity (Parry & Straker, 2012). For many office, hybrid, and remote workers, sedentary behaviour is observed in the workplace, at home, and while in transit if they own a vehicle (Garcia et al., 2014). A widely accepted definition for sedentary behaviour is from Tremblay et al. (2017, p. 9), who define it as "*any waking behavior characterized by an energy expenditure ≤ 1.5 metabolic equivalents (METs), while in a sitting, reclining or lying posture*", with MET corresponding to the resting metabolic rate of the population.

Evidence consistently points to a link between a sedentary lifestyle and risk factors associated with cardiovascular disease such as hypertension and high cholesterol (Foley et al., 2016; Garcia et al., 2014; Thorp et al., 2012), metabolic dysfunction (Park et al., 2020; Kazi et al., 2019), lower insulin sensitivity (Park et al., 2020), musculoskeletal symptoms (Magnon et al., 2018; Foley et al., 2016), higher risks of cancer (Kazi et al., 2019; Magnon et al., 2018), mental health conditions like depression and anxiety (Koh, 2018; Tobin et al., 2016; Teychenne et al., 2010) and increased mortality (Lusa et al., 2020). A seminal paper by Morris et al. (1953) was one of the first to recognise the link between a physically inactive job and heart disease, finding that men in jobs with regular physical activity had a lower incidence of coronary heart disease, and when disease was present, was of a milder severity than workers with lighter activity.

According to Lurati (2018), prolonged sitting promotes deconditioning, or a form of exercise intolerance. The deconditioning process affects blood flow, which contributes to early muscle fatigue. Thus, sedentary behaviour may lead to a decrease in muscle mass and elasticity over time, leading to muscle stiffness. Deconditioning may also lead to sugar intolerance, elevate insulin levels, and affect fat metabolism, contributing to the increased risk for cardiovascular disease and diabetes (Lurati, 2018; Falck et al., 2016). On the other hand, regular exercise improves sugar metabolism, improves oxygen flow to the lower extremities, and helps with cell aging and muscle repair (Ibid, 2016).

A systematic review by Falck et al. (2016) also indicates a link between regular physical activity (≥3.0 METs, at least 150 minutes per week) and healthy cognitive functioning, reducing the risk of dementia by 28%. On the other hand, sedentary behaviour is linked to reduced cognitive function, measured as memory, executive functioning, and overall cognition (Ibid, 2016). They therefore suggest that while sedentary behaviour is a distinct risk factor from the lack of physical activity (Kazi et al., 2019), it may be involved in similar neurophysiological pathways as physical activity. Koh (2018) also suggests that the inactivity of skeletal muscle may play some role in the mechanism.

The office environment itself contributes, as Parry & Straker (2012) found office workers to be more sedentary on workdays (81.7% of work hours) compared to non-workdays (68.5% of what would be work hours), with longer bouts of sedentary behaviour and less physical activity. Higher levels of sedentary behaviour were observed in call center workers, which may be because of policies that discourage them from leaving their desks (Smith et al., 2016). Thorp et al. (2012) adds that in their pooled sample of Australian employees, call center workers averaged 6.6 hours of sedentary behaviour, compared to 4.1 hours for white-collar occupations.

Van den Berge et al. (2021) have noted that the workers in their study who were exposed to more psychosocial hazards (specifically, low control, high demand, and low skill discretion[3]) were 55% more likely to be physically inactive during their leisure time compared to those who were not exposed to psychosocial hazards.

A longitudinal study by Griep et al. (2015) observed that the participants who experienced job strain (high demand, low control) and engaged in passive work were more likely to be physically inactive. It is worth noting that what these groups have in common is the low level of control. For the female participants especially, high levels of job strain had a stronger negative effect on physical activity if they had to balance work demands with family responsibilities (Ibid, 2015). Another study by Kouvonen et al. (2012) found a link between chronic exposure to job strain and lower levels of physical activity, and a study by Ishii et al. (2018) found that sedentary behaviour was linked to feelings of low work engagement for middle-aged workers.

The association of a low level of control with physical inactivity in these studies seems to be consistent with a commonly stated barrier to physical activity interventions in the workplace, which is the conflict of interest between minimising unhealthy behaviors such as being sedentary and the goal of sustaining a high level of uninterrupted productivity and concentration (Schwartz et al, 2017; Cole et al., 2015). Kouvonen et al. (2012) suggest that the low control may lead to less time to plan opportunities for leisure or rest and make participation in physical activity overall more challenging.

Smith et al. (2016) therefore assert that an individualist approach to interventions would be less effective than an intervention that accounts for the office culture, environment, and policies. Indeed, a review of 29 intervention studies regarding work ability and sedentary time by Lusa et al. (2020) reported that interventions were more likely to be successful if they were also group-based and considered the work environment.

To minimise the effects of sedentary behaviour, employees are recommended to exercise daily with an initial warm-up period to promote blood flow to the muscles (Lurati, 2018). This exercise may include light intensity aerobic and anaerobic activities with flexibility training such as walking and yoga (Ibid, 2018). Aside from physical activity, workers are encouraged to take active breaks with light physical activity throughout the workday, ideally once for every 30 minutes of uninterrupted sitting (Falck et al., 2016). Sitthipornvorakul et al. (2014) found in their 1-year prospective study that increasing daily walking steps by 1000 reduced the risk of neck pain for workers in the study by 14%. Teixeira et al. (2019) also suggest consolidating the habit of regular physical activity in young adulthood to sustain it in older adulthood and grant higher protection against risk factors.

Several intervention studies on reducing sedentary behaviour in the workplace have been conducted. A 7-week intervention study by Pronk et al. (2012) employing a sit-stand device reduced time spent sitting by about 66 minutes per day, which reduced upper back and neck pain and found statistically significant improvements for reports of fatigue, tension, depression, confusion, and total mood disturbances. However, mood states returned to baseline levels after the devices were removed. Callaghan et al. (2015) also employed a sit-stand workstation and found a reduction in total sedentary behaviour by 50%.

3 Derived from the Working Capacity Monitor (MoDI) questionnaire (**Hooftman et al., 2014**), skill discretion was measured by the required creativity, variety, and skills and abilities in their work tasks (**van den Berge et al., 2021**).

For their intervention study, Gilson et al. (2015) used a software package that displayed real-time prompts on the worker's computer screen to take breaks from sitting. Alongside other intervention strategies such as encouraging the workers to deliver messages in person than via email, they found a significant reduction in sedentary behaviour in one worksite group. Gao et al. (2015) recommend that alongside the implementation of sit-stand workstations, that workers be provided tailored counseling and instruction to reduce sedentary time. A study by Priebe & Spink (2015) also found that a social approach was effective: workers who received emails about their coworkers engaging in more physical activity also began to reduce their own sedentary behaviour. This supports the idea that workplace culture is a crucial factor for an effective intervention.

The Role of the Company

Employers have moral, legal, and economic obligations to ensure the health and wellbeing of their employees. Occupational safety and health (OSH) regulations mandate that employers provide a safe working environment, which includes addressing psychosocial risks. This responsibility extends beyond compliance with OSH regulations to fostering a work environment where employees feel valued, respected, and cared for.

Leaders have the power to reduce work stress for their employees by providing guidance, encouragement, growth, and clarity. In their work on leadership styles, Erskine & Georgiou (2023b) note that positive leadership that values ethical awareness, autonomy, engagement, and empowerment have led to improvements in employee performance and wellbeing. However, positive leadership needs to be supported by a positive work culture and ethos; thus, organisations need to instill systemic changes for positive leadership to be most effective (Ibid, 2023b).

The empirical evidence clearly demonstrates the interconnectedness of psychosocial and physical health. By prioritising psychosocial health and providing peer and organisational support, organisations can enhance overall employee wellbeing (Koren et al., 2023; Lulli et al., 2021). This approach also presents many practical benefits for the organisation, as evidence points to lower turnover rates, lower rates of absenteeism and presenteeism, improved worker productivity, work quality, and worker commitment (Jain et al., 2021; Langenhan et al., 2013). A proactive management strategy that integrates the risk management of both physical and psychosocial hazards is crucial to achieve the goal of a supportive and healthy workplace.

Implementing Ergonomic Solutions

Ergonomics plays a key role in preventing and mitigating the negative impacts of psychosocial hazards and sedentary work. Defined by the International Ergonomics Association (IEA, 2021) as, "*the scientific discipline concerned with the understanding of interactions among humans and other elements of a system, and the profession that applies theory, principles, data, and methods to design in order to optimize human well-being and overall system performance*", the field comprises multiple domains. The physical domain examines physiological, anatomical, and biomechanical factors that relate to physical activities, the cognitive domain involves mental processes such as decision-making and mental workload as they relate to the interactions between humans and a system, and the organisational domain is concerned with the optimisation, processes, and structures of sociotechnical systems (HFESA, 2022).

When evaluating and designing work systems, ergonomists also consider the complex ways in which people interact with others in the workplace, with their environment and tools, and with the organisational structure and dynamics (Ibid, 2022). By evaluating and improving the design of work systems, ergonomic programs can therefore promote positive change for employee wellbeing and performance.

The Risk Management Process

Despite the empirical research that demonstrates that many psychosocial hazards are a product of organisational factors such as work design and work demands, current risk control strategies and interventions tend to focus on personal behaviours (Eliasson et al., 2023) and individual-based solutions such as counseling, training, and health promotion programs (Schulte et al., 2024; Oakman et al., 2019). These approaches push the problem towards the employees rather than addressing the source and tend to have more short-lived benefits as a result (Schulte et al., 2024; Erskine & Georgiou, 2023b; Way, 2020).

This may be due to the lack of awareness from management regarding the significance of psychosocial hazards or the perception that such factors are beyond their control (Oakman et al., 2019; Oakman & Chan, 2015). Oakman et al. (2018) interviewed representatives from 19 organisations in high-risk industries in Australia and observed that very few mentioned assessing psychosocial hazards; furthermore, the organisations lacked procedures to control these risks.

To effectively address these hazards and their sources, a holistic and preventative approach to risk management is necessary. Companies need to implement risk management procedures that assess all relevant risks related to the job and work environment, prioritise action plans that target the sources of these hazards in the workplace, and evaluate the actions implemented (Macdonald & Oakman, 2024; Cox et al., 2003). The hazards with the greatest effects on risk should be prioritised, and risk control should be implemented based on the risk control hierarchy[4] (Macdonald & Oakman, 2022).

Broadly, interventions should first aim to eliminate risk, prevent exposure in the first place, and consider systemic or organisational-level interventions that alter the work environment or work design as far as is reasonably practicable (Schulte et al., 2024). Moreover, interventions should be adapted to the specific needs and realities of the organisation (Way, 2020). The top-down approach allows for a wider coverage that benefits all workers and is more efficient and sustainable in the long run (Ibid, 2020). The support and active involvement of senior management is also critical to provide resources for interventions and ensure their success (Ibid, 2020).

4 The hierarchy of control is a framework of guidelines in how risk control actions should be prioritised, and it ranks controls by level of protection and reliability (**Schulte et al., 2024**). The highest level of control involves the elimination of the hazard. If elimination cannot be done, the following risk control actions should proceed down the hierarchy: reduce the risk through substitution or isolation, reduce the risk via physical or mechanical changes to work systems, use administrative actions to reduce harm levels, or use personal protective equipment (PPE) to limit exposure (**WorkSafe Victoria, 2022**).

These actions should be conducted based on what is 'reasonably practicable', or what can be achieved considering factors such as the likelihood of risk, the information and avenues available to the person concerned to minimise the risk, and the cost of doing so (**Safe Work Australia, n.d.**).

The first stage of risk management involves the identification and assessment of all reasonably foreseeable hazards and risks that may arise from work. The psychosocial hazards that workers are exposed to depend on myriad factors, such as organisational structure and systems, workplace policies, and the demands specific to a role. Hence, even workers within the same organisation can face varying hazards depending on their roles and how exposure to these hazards interact with personal factors (Way, 2020).

For example, some workers may have fewer personal resources to cope with work demands and face greater difficulties than others. The overall job design and work environment should also be considered, and not just risks related to specific tasks (Macdonald & Oakman, 2022). This is because a task studied in isolation may seem benign or incur minimal risk, but combined with all other aspects of the role may lead to cumulative, long-term effects (Macdonald & Oakman, 2024).

Risk identification therefore benefits from actively involving the workers in the process; risk action proposals that integrate employee input can more effectively target areas that need work and be directed to where the intervention can have the greatest impact (Way, 2020; Burgess-Limerick, 2018; Oakman & Chan, 2015). This can be done through interviews or focus group discussions (Cox et al., 2003). Interventions are planned to target the relevant identified hazards, which are then translated into action plans (Ibid, 2003).

Way (2020) describes three levels of interventions for addressing workplace risk: the preventative level, the ameliorative level, and the reactive level. The preventative level reduces the nature of the hazards before stress-related symptoms manifest, and target work structure, work conditions, and work organisation. The ameliorative level helps employees to be equipped with the resources to cope with unavoidable stressors. This includes cognitive behavioural therapy (CBT), or behavioural classes to help target responses to hazard exposure. Finally, the reactive level rehabilitates employees with existing symptoms, and includes therapy, employee assistance programs (EAPs), and return-to-work programs.

Additionally, interventions can also be categorised by focus, such as whether it focuses on the individual (e.g. resilience training, CBT), on the individual-organisation interface (e.g. improving interpersonal skills, job demand monitoring), or on the organisation (e.g. work redesign, work content) (Erskine & Fauquet-Alekhine, 2023b; Way, 2020). After the interventions are conducted, they are evaluated through interviews or by measuring changes in key outcome variables (Cox et al., 2003).

A meta-review of 957 studies by Aust et al. (2023) found evidence that organisational-level interventions are effective, especially those that target changes in work-time arrangements, improvements in the psychosocial work environment, and those that promoted greater worker influence on their work tasks or work organisation. In addition, they found strong evidence that these changes decreased burnout.

An important factor to consider in organisational-level interventions is the role of organisational culture. Organisational culture refers to the norms, values, and rules of a company: what can and cannot be done, how things are done, and how problems are solved (Schabracq, 2003). This culture is reflected in the policies, approaches, and solutions used by the company, as well as how power is divided and resources are distributed (Ibid, 2003). Thus, ethical leadership can be a boon but can also be stifled by an organisational culture that does not value the wellbeing of its employees or resists structural change.

Organisations may hesitate to adopt certain measures due to cost, and prefer more straightforward solutions (Whysall et al., 2004). Systemic change will likely have short-term adjustment periods due to possible conflicts between the need for profitability versus change, but these changes will benefit the team in the long run (Erskine & Georgiou, 2023b). A supportive work environment and culture can significantly mitigate the adverse effects of stress and enhance employee engagement and productivity.

Managing Psychosocial Hazards to Create a Healthy Work Environment

Preventative strategies should be prioritised to minimise the risks of developing workplace injuries and illnesses. Proper ergonomic design can reduce physical discomfort and prevent musculoskeletal disorders, thereby improving overall wellbeing. Studies have shown that ergonomic interventions, such as adjustable desks and supportive seating, can significantly enhance both physical and mental health outcomes (Robertson et al., 2013). Companies should ensure that workstations are ergonomically designed, with adjustable desks, supportive chairs, and proper monitor heights to reduce strain. Additionally, training should be provided so workers can properly adjust their equipment to their needs. For remote workers, companies can offer guidelines and support for creating ergonomic home office setups.

These strategies must be complemented by organisational policies that promote regular movement and mental health support. Providing employees with ergonomic assessments and adjustments can significantly improve their physical health and productivity. Encouraging regular physical activity is an effective, complementary strategy for improving both physical and mental health. Companies can promote physical activity by providing on-site fitness facilities, organising group exercise sessions, and offering incentives for active commuting. For remote workers, virtual fitness challenges and online exercise classes can help maintain engagement in physical activity. Additionally, incorporating movement into the workday, such as walking meetings and standing desks, can reduce the negative impacts of prolonged sitting.

Ergonomic interventions should also employ control measures to address sources of psychosocial hazards, based on the results of their risk identification and assessment. Table 3 contains examples of control measures for select psychosocial hazards as indicated by the Safe Work Australia Code of Practice (2022). These control measures illustrate the importance of work design in creating a healthy environment for employees.

A key factor in cultivating a supportive work environment involves a healthy work-life balance. Maintaining work-life boundaries is important for psychosocial health, particularly for hybrid and remote work models. Companies should implement policies that encourage employees to set clear boundaries between work and personal life, which can include flexible working hours, mandatory breaks, and policies that discourage after-hours work communications. Encouraging employees to take regular breaks and vacations can also help reduce stress and prevent burnout, which are major contributors to both absenteeism and presenteeism.

Recognition and rewards are essential for maintaining a motivated and engaged workforce. Employers should regularly acknowledge the contributions of their employees through both formal and informal recognition programs. Celebrating achievements, providing constructive feedback, and offering incentives for exceptional performance can boost morale and reinforce a culture of appreciation.

Encouraging personal and professional development is another way employers can fulfill their moral obligations. Providing opportunities for learning, growth, and career advancement helps employees feel valued and motivated. Development programs should address both professional skills and personal growth, contributing to overall well-being and job satisfaction.

TABLE 2. Examples of control measures for common psychosocial hazards

Psychosocial Hazard	Control Measures
High or Low Job Demands	• Schedule tasks to avoid intense or sustained low/high job demands • Plan shifts to allow adequate rest and recovery • Plan your workforce so you have an adequate number of appropriately skilled staff to do the work • Have regular conversations about work expectations, workloads, deadlines, and instructions to ensure job demands are manageable • Set achievable performance targets, considering the worker's experience and skills
Low Job Control	• Match workers' level of autonomy to their skills and experience • Design processes and systems so workers control their workflow • Involve workers in organisational decision-making processes • Plan deadlines, performance targets, work allocations, and work plans in consultation with workers
Poor Organisational Support	• Design work so supervisors have manageable workloads, sufficient resources, and their span of control allows effective supervision • Provide clear management structures and reporting lines • Establish open communication and encourage workers to share concerns early • Hold regular team meetings, and discuss any challenges, issues, and support needs
Lack of Role Clarity	• Provide position descriptions that clearly outline all key tasks, responsibilities, and expectations • Provide systems, tools, and equipment compatible with workers' responsibilities • Encourage feedback on changes that affect workers' job tasks
Inadequate Recognition and Reward	• Use fair, transparent, and meaningful ways to provide recognition to reflect workers' efforts • Train supervisors on how to have difficult conversations and manage underperformance that prioritises improvement over blame
Poor Organisational Justice	• Design unbiased, transparent work processes and policies in consultation with workers (e.g. decision-making, promotion, recruitment, task allocation) • Consult workers when setting work standards or expectations • Ensure the workplace accommodates reasonable needs of workers • Provide mechanisms to report issues or raise concerns

Source: Adapted from Safe Work Australia (2022)

A healthy work environment should also feature a culture of care and respect, where employees are recognised as whole individuals with diverse needs, aspirations, and challenges. Employers should actively listen to their employees, solicit feedback, and respond to their concerns with empathy and action. By demonstrating genuine concern for employee wellbeing, companies can build trust and loyalty, which are crucial for a positive workplace culture. Moreover, the workplace should be psychologically safe, where employees feel secure in expressing their thoughts, ideas, and concerns without fear of negative consequences. This involves fostering an inclusive and respectful work culture, which is important for innovation as it encourages employees to express feedback and promotes creative problem-solving (Tappura et al., 2014).

Providing comprehensive health benefits and wellness programs that include coverage for mental health services is also helpful, especially if risks cannot be eliminated. These programs can include regular physical activity sessions, mental health workshops, and stress management training. Research also indicates that wellness programs are a good investment (Grossmeier et al., 2015); workers' improved health benefits productivity in the long run, as the effect is cumulative over time. Thus, wellness programs can have intermittent interventions to support long-term healthy habits.

The organisation should also extend this support to its managers: managers should be provided the right tools and support for risk management to be effective, as many managers face additional pressures such as the need to improve productivity and minimise costs (Tappura et al., 2014). Managers may want to provide support but are hindered by these corporate pressures or a lack of resources from senior management, especially if the organisation is facing instability (Ibid, 2014). Finally, regular assessments and evaluations of wellbeing initiatives through surveys, feedback sessions, or health metrics can identify areas for improvement and provide valuable insights to ensure the effectiveness of interventions. By continuously assessing and refining these initiatives, organisations can ensure they are effectively supporting their employees' health and wellbeing.

The Use of Technology and Nudges to Support Better Outcomes

In the modern workplace, technology can be a powerful tool for enhancing psychosocial health and overall wellbeing. Digital solutions can provide employees with convenient access to resources and support, making it easier to integrate health-promoting behaviors into their daily routines. From wellness apps to virtual therapy sessions, technology offers innovative ways to support employee health and resilience. Wellness apps and wearable devices can encourage healthier lifestyles by tracking physical activity, sleep patterns, and stress levels. These tools provide real-time feedback and personalised recommendations, helping employees make informed decisions about their health. Companies can partner with wellness app providers to offer subscriptions or discounts and encourage employees to set and achieve health goals.

Access to mental health services has been revolutionised by digital platforms. Teletherapy and virtual counseling sessions provide employees with flexible and confidential support options. Companies can promote these services and ensure that employees are aware of the available resources. Technology can also support work-life balance by setting boundaries around work hours and encouraging employees to disconnect after work. Automated email responses during non-work hours, reminders to log off at the end of the day, and policies that discourage afterhours communications can help employees maintain a healthy balance between work and personal life.

Online health portals can serve as centralised hubs for employee health and wellbeing resources. These platforms can offer educational content, self-assessment tools, and access to health services. Employees can use these portals to find information on physical and mental health topics, participate in wellness challenges, and track their progress. Customisable health portals allow companies to tailor resources to meet the specific needs of their workforce.

In their meta-analysis on digital mental health interventions, Carolan et al. (2017) studied 21 papers that utilized RCTs on companies in the knowledge sector. Most were based on CBT interventions and found a statistically significant positive effect on psychological wellbeing and work effectiveness. The interventions with greater rates of engagement and adherence lasted about 6 to 7 weeks, employed email and text as additional modalities, and used persuasive technology like tailoring (providing information to specific individuals) and self-monitoring (allowing people to monitor their progress).

Erskine & Fauquet-Alekhine (2023) indicate multiple recommendations for digital interventions. They suggest that mental health apps engage participants through multiple modalities, assess participant needs at the outset and be tailored to these needs, increase engagement with higher frequency contact, allow the users to control the content and timing of the app, allow the user to experiment with content and the effort required for each activity, and use incentives. They also recommend that the sessions should be short and have good variety, be easily integrated into the usual workday, and be easily accessible and allow follow-ups.

Conversely, they reported issues with user engagement when the users felt the programs were not tailored to their needs, did not address issues they felt important, did not respect their privacy, or were not helpful in emergency situations. Thus, digital health interventions show much promise, especially when combined with therapist support and additional modalities like text or email (Ibid, 2023).

Nudges for Healthier Behaviours

Nudges are subtle prompts or incentives that encourage individuals to make healthier choices without restricting their freedom to choose. In the workplace, nudges can be integrated into various aspects of daily routines to promote better health outcomes. Simple nudges can encourage employees to incorporate more movement into their workday. For example, companies can set up reminders for employees to take short breaks and stretch or walk. Providing incentives for using stairs instead of elevators, or creating walking routes within the office, can also promote physical activity. Digital platforms can send notifications or alerts to remind employees to move regularly.

Nudges can also be used to promote healthier eating habits. Companies can provide healthy snacks in break rooms, highlight nutritious options in cafeterias, and arrange for healthy catering during meetings. Digital menus that display calorie counts and nutritional information can help employees make more informed food choices. Additionally, offering discounts or rewards for choosing healthier options can reinforce positive behaviors.

To help employees manage stress, companies can incorporate relaxation and mindfulness activities into the workday. This can include scheduled meditation sessions, access to relaxation apps, or designated quiet spaces for breaks. Digital reminders to practice mindfulness or take a few deep breaths can serve as effective nudges to reduce stress levels.

An experiment by Zeuge et al. (2022) found that the use of nudges to reduce stress was more effective than to simply enforce a policy. For example, in the interest of nudging workers to stop overworking, they would highlight the computer shutdown button with a particular color or shape, set up a reminder of the working hours performed for the day so far, or show family pictures on a screen. These nudges act as gentle reminders for the workers to prevent overwork, while still giving them the freedom to choose (Ibid, 2022).

Nudges and gamification have also been used to stimulate productivity, such as the use of soft-control systems (Bérastégui, 2021). For instance, one may be presented information on additional income opportunities when they behave well, such as through their performance with personal bests, or through working time. By achieving milestones, the worker is rewarded in a similar way to a video game.

The integration of technology and nudges into workplace health initiatives can significantly enhance psychosocial and physical wellbeing. By leveraging digital tools and subtle prompts, companies can create an environment that supports healthier behaviors and fosters a culture of wellbeing. These strategies not only benefit individual employees but also contribute to the overall success and productivity of the organization.

Conclusion

Research underscores the significant connection between psychosocial health and physical health. Chronic stress due to a long-term exposure to psychosocial hazards can lead to serious physical and mental health issues, which can significantly impact worker productivity and morale. As work design and the work environment are crucial factors for employee wellbeing, firms and organisations therefore have a moral and economic incentive to comprehensively improve working conditions.

Employers have a pivotal role in fostering a supportive and psychologically safe work environment. Ethical leadership, inclusive practices, and the recognition of employee contributions are fundamental to fulfilling this responsibility. Flexible work policies and the promotion of work-life balance can also help reduce issues of absenteeism and presenteeism and enhance overall workplace efficiency.

Leveraging technology and behavioural nudges can effectively promote healthier lifestyles and mental health. Wellness apps, virtual mental health services, and ergonomic tools can provide employees with the resources they need to maintain their health, while nudges can encourage positive behaviour changes.

Organisations that prioritise psychosocial health are not only meeting their legal obligations but also demonstrating a commitment to their employees' overall wellbeing. This commitment can lead to a more engaged, productive, and loyal workforce, driving long-term success and sustainability. By integrating the strategies outlined in this whitepaper, companies can create a healthier, more supportive work environment that benefits both employees and the organisation.

As we move forward, it is essential for companies to continually assess and refine their approaches to employee health, staying informed about emerging research and best practices. The holistic risk management approach to health and wellbeing described in this whitepaper provides a framework for organisations to build upon, ensuring that they remain competitive and responsible employers in an ever-evolving work landscape.

While legal obligations set the baseline for employee health and safety, moral obligations extend to fostering a holistic and supportive work environment. Ethical leadership, promoting work-life balance, equity, inclusion, comprehensive health benefits, personal and professional development, and recognition of contributions are all integral to supporting psychosocial health and wellbeing. Fulfilling these responsibilities allows employers to not only enhance the lives of their employees but also contribute to the long-term success and sustainability of their organisations.

Prioritising psychosocial health and implementing comprehensive strategies to minimise the exposure to workplace hazards help create a work environment that supports the overall wellbeing of a company's employees and reduces the incidence of absenteeism and presenteeism. Ergonomic solutions, work-life balance policies, wellness programs, and a psychologically safe workplace culture are essential components in achieving this goal. These efforts not only enhance employee health and productivity but also contribute to a positive organisational culture and long-term success.

The integration of psychosocial health and wellbeing into management practices is no longer a luxury but a necessity for modern organisations. With the rise of hybrid, office, and remote work models, addressing the interconnected issues of mental and physical health has become increasingly critical. This whitepaper has highlighted the empirical links between psychosocial health and physical wellbeing, demonstrating the profound impact that mental health has on overall health and productivity.

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About the Authors

Byron Kwong

Byron Kwong is a respected professional in health, safety, and wellbeing. He is the most recent member of the team joining Impart in June 2024, but he brings with him a comprehensive background in occupational therapy and ergonomics. Byron has consistently demonstrated his expertise in the development and maintenance of health and safety systems, earning him recognition in his field.

Byron's career is marked by significant achievements, including leading roles in establishing health and safety frameworks at EnergyAustralia and his instrumental involvement in the development of Swivel's ergonomic assessment platform. His work has not only improved operational health and safety standards but has also introduced innovative digital solutions to address ergonomic risks in the workplace.

His professional accolades, such as the Employee of the Year and the Managing Director's Safety Merit Award, underscore his commitment to excellence in workplace health and safety management. Byron's educational qualifications, including a Bachelor's degree in Ergonomics Safety and Health and in Occupational Therapy from La Trobe University, further cement his authority in the field.

Byron's strategic leadership and deep industry knowledge continue to drive the advancement of health and safety practices, positioning the organisation as a leader in workplace wellbeing solutions. His approach is characterised by a methodical and evidence-based methodology, ensuring that health and safety protocols not only comply with current standards but also anticipate future workplace needs.

Mary Catherine Mercado

Mary Catherine A. Mercado is a seasoned research analyst and writer with a strong background in econometrics, statistical analysis, and economic research. With expertise in both life sciences and economics, she is well-versed in using econometric tools and methods for data analysis and modelling.

Her recent work as a Lead Researcher with Impart Advisory focuses on projects in wellbeing and digital innovation. In addition, she has contributed to numerous projects as an economic analyst with EEA, where her work spans various topics at the intersection of policy, sustainability, and technology.

She holds an MS in Economics from De La Salle University-Manila, where she developed robust skills in econometrics and macroeconomic analysis.

Her academic work includes a master's thesis exploring the impact of political freedom on economic growth, using sophisticated statistical methods to assess regional and resource-related variables.

Her previous experience also includes roles in science education, notably with the Bonifacio Art Foundation, where she led educational programmes and collaborated on international science exhibitions. These roles have demonstrated her ability to communicate complex information to a wide audience and manage large-scale projects with diverse stakeholders.

About the Authors

Dr. Michael D'Rosario

Michael D'Rosario serves as a Principal at Impart, where his expertise in evidence-based policy, AI/data science, and econometrics is integral to the organization's strategic initiatives. His professional journey encompasses significant roles in policy analysis, research, and education, underscoring his deep-rooted knowledge and experience in these domains.

In his role at Impart, Michael's focus on econometric analysis and model design plays a crucial role in advancing the company's research and policy evaluation efforts. His work is characterised by a methodical approach to data and policy analysis, contributing to the development of informed and actionable strategies for the organisation and its clients.

Michael's distinguished career has seen him lead research and educational programs at renowned institutions, where he has been responsible for the development of courses in Artificial Intelligence, ModelOps, and Algorithm design, among others. This experience has honed his skills in both theoretical and applied aspects of his field, making him a valuable asset to Impart.

With a strong academic background, including a PhD in Econometrics, and multiple graduate degrees, Michael's credentials are a testament to his expertise and commitment to his field of work. His scholarly and professional achievements reflect a career dedicated to the advancement of economic and policy research.

Michael has consulted to a number of business and NFPs. His business advisory work has involved consulting to Linfox, Ron Finemore Transport, Lincraft, Becton, and ERG, amongst others. His NFP work, an area of genuine passion has involved consulting work with BCCM, Per Capita, Deaf Connect, NDS, AMBA, Twins Trust, the University of Oxford and the Australian Hygiene Poverty Project.

Michael has lectured and chaired courses at the University of Melbourne, CQUniversity, and the University of Adelaide. At Impart, Michael's contributions are pivotal to the organisation's research and policy initiatives. He leads the economic modelling program and Economic Evaluation Australia, a dedicated evaluation team. His analytical skills and comprehensive understanding of economic and data science principles guide Impart's approach to research, ensuring that projects are both innovative and grounded in solid empirical analysis. Michael's presence at Impart significantly enhances the company's capacity to deliver research and policy insights that are both relevant and impactful.

IMPART

About Impart Advisory

Impart is a purpose-driven management consulting group that specializes in delivering comprehensive, high-impact solutions through its distinct divisions: Economics, Research Services, AI Strategy, and Data Science. Each division is dedicated to offering strategic insights and innovative approaches tailored to meet the unique needs of their clients, with a focus on driving sustainable business outcomes. Impart's multifaceted approach allows them to provide expert guidance across sectors, integrating economic analysis with cutting-edge technologies such as artificial intelligence and data-driven solutions to solve complex challenges.

At the heart of Impart's commitment to rigorous analysis and effective decision-making is Economic Evaluation Australia (EEA), the group's specialized evaluation practice. EEA is dedicated to conducting thorough evaluations of programmes and policies, using sophisticated econometric and analytical methods. EEA's work is pivotal in helping organisations understand the social, economic, and environmental impacts of their initiatives, providing clients with robust evaluations that support evidence-based decision-making and policy development.

About Swivel Research

Swivel Research, a division of Swivel, is dedicated to research focused on ergonomics and wellbeing, particularly for sedentary workers. Swivel is an innovative solution provider in digital ergonomics, offering state-of-the-art comfort and health solutions to leading Australian businesses.

Swivel's research arm is committed to enhancing workplace environments by focusing on the physical and mental health of employees, ensuring that ergonomic solutions are backed by rigorous scientific research. By leveraging digital technology, Swivel helps businesses improve the productivity and wellbeing of their workforce through optimised, data-informed ergonomic practices.