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Translating Psychosocial Safety Climate (PSC) into real-world practice: Two PSC intervention case studies

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Abstract

Objectives: Translating research into practice is often a goal for evidence-based organisational researchers to help improve workplace conditions and worker wellbeing. Improving worker wellbeing can be achieved by using empirical evidence to inform organisational interventions. However, despite the well-established intervention literature, practitioners appear not to appreciate fully how research findings can inform real-world practice. Using our understanding about workplace safety and health issues, we proposed that employers themselves could undertake interventions that focus on building Psychosocial Safety Climate (PSC), an essential organisational climate that protects and promotes the psychological wellbeing of workers.

Methods: Here we present two case studies to illustrate strategies that improve psychosocial safety and to increase our understanding about how interventions help improve PSC over time. Case Study 1 was conducted in an Australia public organisation and Case Study 2 was in an international private organisation. We collected survey data using the PSC-12 scale, to assess the level of PSC of the organisation before and after the intervention, and details of the intervention and other initiatives for promoting employees' psychological health.

Results: Our evaluation supported the proposition that interventions that combine organisational and individual level (and the interface between the two) approaches with a focus on the core elements of PSC (such as commitment, priority, communication, and participation) improve an organisation's PSC over time.

Conclusion: Not only does the research elucidate important practical implications for organisations trialing new psychosocial safety initiatives, but our study makes an important contribution to theory in work stress intervention on best practice and principles to build a psychologically healthy work context.

Keywords: Psychosocial safety climate, occupational health intervention, psychological health, psychological well-being, case studies, job redesign

Keypoints:

What is already known on this topic – Organisational stress interventions are important to ensure workers' health and safety. Useful guidelines are available to help design, execute, revise, and evaluate workplace interventions, particularly in the globalized era and large multinational companies. However, challenges remain as interventions are often multifactorial, multi-faceted, and involve different parties. Additionally, the gap between theory and practice remains wide. Hence there is a role for academics in expanding literature and understanding the elements required to build knowledge for both practitioners and academia. Detailed guidelines and examples will be provided to assist future development in this topic.

What this study adds – This paper provides examples of two successful integrated in-house interventions, led by the organisation's workplace champions in collaboration with academics. Activities and processes of the interventions illustrate that a social coordination among the employers, employees (i.e., workplace champions), and the academics is useful in protecting and promoting a psychologically healthy workplace.

How this study might affect research, practice or policy – We contribute to the knowledge of a systems approach to work stress intervention and to the development of sustainable and participatory interventions, by applying the PSC principles. A few examples have detailed how organisational internal experts can integrate the elements of PSC into their existing policies and practices, thereby amending and rectifying their risk management system.

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1. Introduction

Work-related stress has significant negative consequences for employee psychological health and wellbeing, with flow on performance and productivity effects, such as increased sickness absence, and employee turnover. Stakeholders such as the policymakers, employers, organisational psychologists, and public health experts, should therefore direct attention towards reducing threats to worker psychological health and promoting decent work¹. Scholars have increasingly focused on improving employee wellbeing through organisational interventions². However, the wide gap between theory and practice for occupational stress interventions has been widely acknowledged³⁻⁵. Without theory, the outcome of the intervention is questionable⁶. The degree to which interventions have created a real and sustainable impact in organisations is also debatable. Nielsen and Brough⁶ identified several important theories underlying the process of participatory interventions, including collaborative job crafting, workers' sense-making, workplace cultures and trust. Psychosocial safety climate (PSC) is likely to influence these concepts (job crafting, trust) so we use the PSC theory to frame the process of the intervention. To integrate these ideas, in the current study, we focus on building a positive workplace culture⁶ through psychosocial safety climate theory⁷.

Psychosocial safety climate (PSC) is the organisational climate for employee psychological health. Under PSC theory, a high PSC organisation is an organisation where employees are confident to voice their problems and have faith that an organisation will take a supportive course of action when faced with risks⁸. PSC is the 'cause of causes' of employee psychological health and safety⁷ because it predicts psychosocial risk factors known to affect employee psychological health. High PSC contexts cultivate job conditions with manageable levels of job demands (i.e., job aspects that require effort) and enriched job resources (i.e., job aspects that help one deal with job demands). Accordingly high PSC correlates to lower levels of emotional exhaustion, psychological distress, and depression and to higher levels of work engagement, job satisfaction, and performance⁷. Moreover, PSC is positively related to team job crafting (Hu et al., 2022), potentially an ingredient for intervention successfulness (Dollard, 2012). As such, PSC is a useful target in the risk management process, particularly in turbulent

times, such as organisational restructuring and global pandemic⁹. It consists of four principles which play important role in the process of intervention, i.e., management priority on psychological health over productivity, management support and commitment, organisational communication, and organisational participation and involvement. Hence focusing on PSC theory to integrate the important elements for an organisational intervention is warranted.

Importantly, espoused policies are not enough to create real change. It is necessary to enact policies and practices to successfully create change in an organisation. Similarly, scholars suggest that researchers should convert or incorporate interventions into existing mainstream policies, by integrating the intervention into regular daily operations and create a routine for promoting and preventing work stress¹⁰.

Hence, how to build PSC is an important question, and interventions addressing this are receiving increased attention in the literature. For example, Dollard and Bailey⁹ successfully found an improvement in PSC during the global pandemic through capacity-building training. Bronkhorst and colleagues¹¹ also found that organisational PSC could be improved by having safety-related meetings, discussions and leadership training. However, one widely noted limitation of occupational stress intervention research is that the benefits arising from the intervention are often short-lived, and markedly decline after researchers leave the participatory organisation⁶. Therefore, one way to create sustainable change in an organisation is to involve experts within the organisation (i.e., workplace champion) to co-design and embed the intervention.

In this paper we present two organisational case studies that implemented PSC interventions. We outline a collaboration process between the researchers and occupational health and safety experts employed by the organisation to create an organisation-wide intervention that could embed lasting change in the organisation's policies, practices and procedures. To better understand the intervention process we documented all intervention activities in the two case studies illustrating the social coordination between researchers, organisation, and safety representatives.

1.1 Stress management interventions

The literature of workplace intervention has evolved tremendously in the past 20 years, moving from an individual-level focus to an organisational level and/or multi-level perspective.

The literature supports this movement and suggests that quality work stress interventions should involve all organisational levels^{6,12}; focus on prevention rather than treatment (i.e., proactive rather than reactive)¹³; involve employee participation⁶; increase organisational ownership¹⁴; and be mindful of the context⁶. These best practices should be followed throughout the process of designing, implementing and evaluating an intervention². The major steps to be followed include conducting a risk assessment, action planning, involving stakeholder participation and evaluating action plans.

In relation to the content of intervention, scholars have suggested that interventions could target three foci: primary (i.e., targeting the root cause of stress), secondary (i.e., improving skills to cope with stress) and tertiary (i.e., treatment after exposure of stress) intervention¹³. Intervention researchers have highlighted that of these foci, primary intervention is the most effective. As research suggests, the root cause of stress often lies at the top level of an organisation, which is why primary stress interventions should focus on changing policies, practices and procedures¹⁰. In a practical sense, a risk assessment involving understanding the gaps in existing psychosocial risk management systems is appropriate. These risk assessments should involve participation from all levels of the organisation either directly or indirectly⁶. All workers should be involved in the discussion and action planning process. However, this is difficult to achieve in larger organisations. Hence, indirect participation could be achieved by engaging with representatives of workers, as is illustrated in our study.

In addition, organisations have a hierarchical nature, and organisational health and safety issues that stem from them have different levels of influence^{6,12}. A multilevel intervention is therefore highly recommended. LaMontagne et al.¹² in a review of interventions found that the most effective focus on three levels: an organisation's physical features, the individuals and an organisation's interface with individual workers. They argued that the primary, secondary and tertiary foci of intervention are not mutually exclusive. Therefore, to ensure the greatest influence, researchers should consider a systems approach by combining different types of interventions that target the organisation, the individual and their interface. We propose that to improve PSC in an organisation, practitioners should deliver interventions that focus on a combination of organisational, interface, and individual levels.

In improving PSC, we focus on implementing and practicing the principles of PSC which are, senior management commitment, senior management priority, organisational

communication, and organisational participation. These principles align with the main practices of organisational interventions that are the drivers and enablers of organisational intervention success¹⁵. Therefore, when targeting and assessing PSC we are measuring both a contextual factor and also a process factor³, pertaining to how the intervention is implemented. Intervention success requires management support, good communication and participation, and these are the core elements of PSC. Targeting PSC for improvement and assessing change in PSC gives information about how effective the intervention is in improving PSC. A PSC intervention is a specifically designed intervention which focuses on how to enact and exert the PSC principles throughout the organisations' structures, job aspects, values, and policies.

This process of a system approach PSC intervention involves a positive socially coordinated process with a priority on workers psychological health¹⁶. Social coordination between stakeholders (i.e., employers, employees, and regulators/researchers) is formed to oversee the implementation of an intervention. This involves leveraging external and internal organisational resources to achieve a shared goal or vision, in our case, to form a conducive condition for a stronger and higher PSC. Through regular social dialogue, workers, employers, and other parties, such as researchers or regulators communicate the needs, concerns, and any related demands at workplaces and exchange insights, knowledge, and resources. Social coordination and cooperation and consultation in resolving stress-related issues through diverse changes in organisational policies, procedures, and practices is expected to build PSC. In this paper we outline two examples of how PSC principles have been upheld in the organisation's activities, programs, protocols, and procedures, which are likely to engender long-term PSC performance.

2. Case Studies

In the current paper, two case studies were conducted to understand how PSC could change in an organisation over time. The researchers worked with organisational intervention champions³ in both case studies (Figure 1), who were either the personnel working in the safety and wellbeing department or the head of organisation's wellbeing department who showed initiatives to improve workplace psychological safety and health. The researchers' main tasks included providing suitable measurement tools and reports and sharing information and knowledge with the internal practitioners. The researchers were not involved in any intervention

processes, including the design, implementation and process evaluation of the intervention. Employees were invited to participate with the survey and risk assessment to express their concern and their evaluation of the working environment. However, researchers followed best practice principles⁶ regarding how to intervene by assisting in a risk assessment, identifying the area of focus, and performing a follow-up evaluation regarding how the intervention influenced the organisation's level of PSC. The employee representatives took responsibility for proposing, designing, and organising the activities within the organisations.

2.1 Case Study 1

2.1.1 Background and context

An anonymous survey was conducted to assess an Australian government organisation's level of PSC. The safety and wellbeing department informed all employees about the study via email, outlining the study's aims, privacy protection strategies and researchers' contact information. Ethics approval was obtained from a collaborative partner, the University Technology Sydney (Ethics protocol ETH193527). A total of 690, 646 and 2,136* responses from 2018 (Time 1 [T1]), 2019 (T2) and 2021 (T3), respectively, were included in the analysis. Due to the global pandemic, the survey was delayed in year 2020. In year 2018, no demographic or other personal related information were collected. In 2019, 37.5% of the respondents were female, median age was 45 - 55 years old, and 577 respondents were working full-time. In year 2021, 26% of the respondents were female, 94.7% were working full-time, and median age was 45 – 55 years old.

2.1.2 Intervention

The organisation designed and led a series of stress intervention programs. Table 1 outlines the activities performed from October 2018 – October 2021 highlighting different levels (i.e., organisation, organisation-individual interface and individual) of intervention. The researchers led a risk assessment at the organisational level, which demonstrated a need to improve leadership skills and provide better training for leaders to manage psychosocial factors. Management commitment and support in tackling psychological health issues contribute to

* The large cohort at Time 3 was due to the integration of the survey into a larger company survey which was collected annually. Survey at T1 and T2 were sent out separately and have lower response rate.

building an effective climate. Commitment includes making prompt decisions and taking actions to solve issues in a specific area affecting workers' psychological health. For example, when employees approach their supervisor about work overload, a leader should know how to manage the situation by adjusting the workload and/or providing necessary resources to help employees manage the demands. A high level of commitment and support is also reflected through the leaders' willingness to learn about psychosocial risk factors, listen to the employees and take relevant action to handle the issues. The leaders received two types of training at different levels: 1) PSC training, and 2) job design workshops. For the PSC training, leaders were introduced to PSC theory and principles, and they reflected on the PSC of their own teams. A discussion was also conducted with a focus on areas for improvement and appropriate action plans. Throughout the training, the leaders were expected to learn how to identify, target and reduce potential psychosocial risks and work on improving, promoting and strengthening a favourable climate (i.e., PSC). As an example, we have provided a detailed description of how a PSC workshop was conducted in Table 2.

A PSC intervention should also include employees' and other stakeholders' participation and involvement in the decision-making processes⁶ and allow them to hear each other's perspective. Including employees' voice in an intervention process enables actual issues they have experienced to be tackled and the process to be refined to match the needs of employees⁶. Involving employees and other parties also increases the ownership of the intervention, and thus more people engage in facilitating change¹³. Employees can be involved in an intervention via many approaches, such as by having safety representatives in a steering group during action planning or by collecting employees' perspectives through surveys and interviews during risk assessment processes. An example of activities conducted in the organisation was encouraging employees to verbalize their concerns about work stress and psychological health. Opening lines of communication is important to close the gap between employers' perceptions and employees' experiences.

Organisational communication is equally important. When policies and procedures are changed, for example, the implementation of a new workload policy, the message should be communicated to all levels of employees to ensure that they fully understand the change. Without effective communication, discrepancies in perception can occur between the employers and employees. Similarly, employers and employees whose perceptions and experiences are not

aligned represent a significant hurdle and could even cause an intervention to fail. In Case Study 1, information about wellbeing and psychological health and support was constantly communicated to employees. Videos, online courses and events were used to convey the importance of psychological health, the company's services available to protect employees' wellbeing, and examples of how other workers were managing their wellbeing issues.

2.1.3 Measurements and results of PSC

The twelve item PSC-12 scale was used to assess PSC.¹⁷ An example item is 'In my organisation, the prevention of stress involves all levels of the organisation'. The PSC scores ranged from 12 to 60, with higher scores indicating better PSC. Items were scored on a 5-point Likert scale (1 = *Strongly disagree* to 5 = *Strongly agree*). The Cronbach's alpha of this scale was $\alpha = .95$ at T1, $\alpha = .95$ at T2 and $\alpha = .96$ at T3.

From 2018 to 2021, the organisation's PSC improved significantly ($F[2] = 68.42$, $p < .001$, Table 3). In 2018, the organisation scored 39.35 (SD = 10.12) on their PSC, indicating a medium-risk situation (Table 4). In 2019, the organisation achieved a high PSC (low-risk situation) with a PSC level of 40.80 (SD = 9.16) (t -value = 2.74, $df = 1334$, $p < .001$). In 2021, we observed further improvement in their PSC level, recorded at 44.07 (SD = 9.57), indicating a low-risk situation.^{18†} A summary independent t -test suggested that PSC levels significantly improved from 2019 to 2021 (t -value = 7.68, $df = 2780$, $p < .001$).[‡]

2.2 Case Study 2

2.2.1 Background and context

Case Study 2 involved a private international company with nearly 5,000 employees. Online surveys were distributed in February 2021 and February 2022, with safety and health

[†] For the scale of PSC-12, scores range from 12 – 60, which according to Bailey et al., 2015, indicate specific risk levels: $PSC \leq 26$ = very high-risk; $26 < PSC \leq 37$ = high-risk; $37 < PSC < 41$ = medium-risk; and $PSC \geq 41$ = low-risk.

[‡] We applied a Bonferroni Correction for multiple comparisons, in which the p threshold for the test will be $p < .025$. The results are still positive.

personnel collecting the survey data via an online platform. The study information and survey link were emailed directly from the organisation's safety and health personnel to all employees. A password-encrypted de-identified dataset was sent to the researchers. In total, 1,350 responses were collected from the survey in 2021 (T1) and 1,707 responses in 2022 (T2). At T1, 49% of respondents were female, median age was 30 – 39 years old, and 95% were working full time. At T2, 48.4% of respondents were female, median age group was 30 – 39 years old, and 89.9% was full time employees.

2.2.2 Intervention

Several interventions were performed in the organisation from February 2021 to February 2022, which were initiated by the organisation's workplace champion (i.e., the mental health officer). A mental health officer was recruited at the end of 2020 to oversee the psychological health of the organisation's workers (Table 5). A risk assessment was then conducted to gauge the company's PSC. In response to the risk assessment, training was provided to leaders, who were trained about PSC and psychosocial risks, and to teams with comparatively lower PSC, who additionally received an action plan workshop. Employee representatives were also recruited to help initiate wellbeing programs in teams. Some of the changes that were made in the organisation included introducing work-from-home policies and providing additional sick (mental health) leave and rebranding all sick leave to wellbeing leave to reduce stigma (Table 1). This change is directly linked to the organisational priority of psychological health over productivity. The priorities of an organisation are revealed in their daily operations, activities, and processes. Organisational policies they implemented such as encouraging employees to take annual leave and wellbeing leave and developing efficient psychological injury claims processes imply an emphasis on the importance of psychological health.

Similar to Case Study 1, the researchers participated in an ongoing discussion with the organisation's representative to keep track of the planned and performed activities. Following the PSC assessment at T1, the organisation actively focused on mental health and preventing distress and provided support particularly to teams with low PSC to help them improve PSC. We categorised the performed activities into different levels of intervention, and in doing so, observed that intervention occurred at all levels of the organisation. Unlike Case Study 1, even though PSC has also been introduced, no PSC-specific workshops or training were provided to

leaders. Instead, leaders were trained in general psychosocial risk factors at work, such as understanding job demands and job resources.

2.2.3 Measurements and PSC results

Similar measure to Case Study 1 was used. Cronbach's alpha was 0.93 at T1 and 0.94 at T2 (Table 3). Ethics approval was obtained from the authors' university (Ethics protocol: 203691). At T1, the organisational PSC score was 46.38 (SD = 8.01). In 2022, the PSC score was equivalent at 46.15 (SD = 8.45), with an independent *t*-test indicating no significant changes in PSC scores from T1 and T2 (*t*-value = 0.70, *df* = 3038, *p* > .05). At different risk levels, we found there was a reduction in the high-risk category from 76.7% in year 2021 to 73.8% in year 2022, and more employees reported lower levels of PSC, or higher risk categories (Table 6).

3. Discussion

We found that levels of PSC improved with an intervention that involved multiple levels of organisation (organisation, organisation-employee interface, employee) and focused on the four PSC elements, including management priority of psychological health before productivity, management commitment to and support of psychological health, communication on psychological health related issues, and participation and involvement in psychological health matters.

By considering both the mean and dispersion, we found PSC improvements in Case 1, in which the PSC increased significantly from T1 to T2 and then continuously improved from T2 to T3. Moreover, we observed that fewer individuals in the organisation reported a very low level of PSC (reduced from 11.8% to 5.1%). Our findings suggest that to ensure effective interventions, organisations should focus on the issues at each level of influence and perform appropriate training and activities at each level. While organisational PSC did not improve over time in Case 2, the organisation remained at a high PSC level. It should be noted that in Case 2 in 2021, 76.7% of personnel reported high PSC – this is the highest level of PSC we have seen in Australia. Improvements at this high level may be more difficult to attain than in Case 1, which at a lower PSC had greater room for improvement. A sizeable organisational expansion and

restructuring between T1 and T2 in Case 2 should also be noted, as well as a high organisational voluntary turnover (this coincided with the post COVID phenomenon of the great resignation). It is likely that the high PSC level likely created a platform of dynamic stability^{19,20} within which challenges and major disruption could be managed.

In both Case 1 & 2, we observed that the intervention involved all levels of the organisation. At the organisational level, new policies and risk assessment to identify problems with current psychosocial risks were introduced. These new policies were communicated to lower-level employees, which is an integral aspect of PSC. In addition to organisational level interventions, leaders received workshops and training to understand psychosocial risks and possible actions to tackle them. Their practices regarding existing policies and PSC practices should increase individual perceptions of PSC by improving the work context, and also provide a context within which the effects of any tertiary intervention are optimized. Tertiary interventions such as employee assistance programs (EAPs) can help employees manage distress, and activities and events such as awareness events and psychoeducation can help employees better understand the risks of psychosocial factors. Overall, we found that PSC can be significantly improved by integrating efforts at all organisation levels, by first starting with the organisational system and working downwards to individual level factors. Organisational efforts and activities for promoting psychological health, revising system policies and practices and providing training and resources reflect a strong system emphasis on individual psychological health, which was evident in both Case 1 and 2.

Analysis of each activity and program indicated that each PSC element was included. Additionally, both case studies revealed that efforts required to improve or build a psychologically healthy workplace should start with management motivation and priorities,³ which will stimulate initiatives required to prevent work stress. For example, initiatives that introduce new policies should be supported by *management commitment*, be *communicated* to all organisation members and be regularly revised by *consulting and involving all organisation stakeholders*.

Cases 1 and 2 aimed to identify the gaps in the organisations' current policies and procedures regarding psychological health-related issues by using risk assessment. Conducting a risk assessment also reflects the organisation's readiness to learn about its weaknesses, its capacity to make adjustments and improvements in how it manages psychosocial risk factors,

and its ability to demonstrate that it prioritises the psychological health of its employees. Similarly, in Case 2, the organisation appointed a new role of mental health officer (Table 2). Having a specialist to focus on workers' psychological health reflects the organisation's willingness to improve it. It also reflects the organisation's readiness to enter a new beginning by incorporating the psychological aspect of wellbeing into its strategic plans. Taking action and making changes to psychosocial risk policies at the organisational level provides the primary ingredient for building PSC. The change in policies can be further enacted into daily practices and operations by the middle-level management and communicated to employees.

Both cases conducted training for their leaders (even though in Case 2, leaders were only trained on job demands and resources but not specifically about PSC) illustrating a commitment to management and support for tackling psychosocial risk issues. Leaders were trained to understand psychosocial risks, especially PSC. In a workshop, leaders were trained to comprehend the four PSC principles, generating discussion on potential actions to improve these categories. A PSC capacity building workshop prepares the leaders on the fundamental ideals of PSC and its principles. The leaders' PSC training had at least two functions: to improve PSC over time and to sustain PSC function despite external challenges, such as the global pandemic.⁴ In our case 1, the assessment of PSC had been delayed during the pandemic in 2020. While previous evidence has shown that the external major event would initiate conversations related to mental health⁹ and hence improve PSC, however not all events are expected to have the similar effects, for example economic recession and world conflicts. These elements were expected to affect the organisation's PSC negatively. Therefore, we suggest that the intervention may have demonstrated a protective effect in terms of sustaining and protecting workers from internal and external challenges. While PSC training sometimes did not occur, instead a basic psychosocial risks workshop was conducted (i.e., in Case 2). This type of intervention focuses on job redesign, which requires an enactment of the principles of PSC.

In Case 1, the organisation communicated with employees through the internal staff website, highlighting changes made to existing organisational policies, procedures and systems. The staff portal was also used to provide ample resources to help leaders manage their team members. Another way of enhancing better communication was by using positive language. In Case 2, 'sick leave' was rephrased to 'wellbeing leave' to convey that employees were free to take leave for mental health concerns and extra leave allowed. In addition to that they introduced

lifestyle leave. Additionally, timely updates from leaders were likely helpful in keeping employees informed about the organisation's strategies and goals. Blogs were uploaded in Case 2 to communicate the organisation's recent activities and information about psychological health services, such as counselling. Through effective communication, organisations could send a strong message about their priorities for psychological health protection for workers, which helps build high-level PSC.

In both cases, employee participation and involvement was encouraged in the intervention decision-making processes. During the risk assessment process, employee perceptions were collected through the PSC survey to understand how they viewed their organisational climate. Further, safety representatives were also recruited to speak for the employees, to help organise and implement a psychosocial risk promotion program and to communicate with leaders about their needs. Critically, their involvement created a social dialogue between the employers and employees. Social dialogue is recognised as an important pillar to build a decent workplace. It allows the employees to democratically participate and influence psychosocial issues. Social dialogue in the organisational structure is necessary for developing, implementing and sustaining a work stress intervention. Social dialogue ultimately provides opportunities for employees, especially those at the lowest level and those with the least power to voice their concerns.

3.1 Other factors that could influence the results

Acknowledging that workplace interventions are multifactorial, different factors could interfere with the results for the cases. Considering the time gap, some studies have shown that PSC can improve within a year and there is a need to consistently work to keep the PSC level high. In a recent study Berglund and colleagues found that the level of PSC improved within six months and was sustained during a twelve-month follow-up period. We used a one-year time gap in the current paper as a recurring annual check time for PSC assessment and to provide adequate time for an organisational level change. Different from an intervention that is often designed and carried out in teams^{9,21}, our case study captured the phenomenon at a broader scope with a whole of organisation approach capturing the complexity of organisational dynamics.

Organisation size arguably is a factor influencing the transmission of organisational values and priorities from the top echelon to the lower level of entities. Sizeable organisations require more time and systematic strategies in ensuring employees at all levels are informed,

involved, and participated in the intervention process, at the same time their voice to be heard and transmitted up to the top entities. In this current study, effective communication was used to transfer messages about the process of assessment, activities, and introducing new policies, this evident in an improvement in the PSC communication subscale (mean=9.52, SD=2.72, at T1; mean=10.40, SD=2.30, at T2; mean=11.08, SD=2.39, at T3).

3.2 Theoretical and practical implications

From a theoretical perspective, the current study provides an extended understanding of intervention theories and advances the PSC literature. While the work stress intervention literature often focuses on the task-level job design, such as reducing demands and improving resources as implied in the Job Demands-Resources theory, or individual-level interventions such as mindfulness, and stress management interventions, our study combined the contemporary work stress intervention literature and the PSC elements (which is the leading indicator of job design and occupational health and safety outcomes), with results implying that by incorporating the four elements of PSC and conducting activities at all levels (organisation, organisation-person, person) PSC can be built within the workplace.

The construct of PSC consists of the four important elements or principles that capture the fundamental ideas of a successful process for managing psychosocial risks and with a priority on psychological health and wellbeing. PSC in its theoretical framework embodies the best principles or enablers of an organisation intervention that might focus on a range of levels of intervention. We suggest that practicing the principles of PSC is exercising the system, which can build the PSC while targeting working conditions and individual behaviours. It is by regularly exercising these principles⁹, that organisations can get better at managing, regulating policies and designing programs that are pro-worker, which is evident in the current paper. We also have seen the importance of organisational commitment from the top management team in investing and initiating change within organisations.

Our research informs the question about what works best in improving PSC. Applying the principles of PSC builds the PSC. In this study after providing training, advice, and consultations we gave complete autonomy to organisational members to implement any strategy that they thought would improve PSC, using the PSC principles. In this way members had complete autonomy over, the “what”, “where”, “when” and “who” aspects of the intervention (of course there may have been organisational constraints). A useful analogy is surfing. You can

train a surfer skills and techniques, but on the water with all the dynamics that water waves bring, a surfer must read the situation and adjust strategy. Practice makes perfect. In theorising what works in PSC interventions we can say that multilevel interventions, with autonomy over content can lead to improvement in organisational PSC.

Practically, this study presents several possible ways of planning and conducting programs, activities, and events to improve organisational PSC. We contribute to the knowledge of applying the systems approach of work stress intervention and PSC principles for the development of sustainable and participatory interventions. Both cases have detailed how organisational internal experts can integrate the elements of PSC into their existing policies and practices, therein amending and rectifying their risk management system. An example is the training of leaders in how to enact PSC in their day-to-day practices. Workshops conducted by experts and/or regular meetings among leaders or with safety representatives could help leaders to explore and develop their capacity in dealing with different psychosocial risks. The case studies also showed that to protect the organisation from external turbulent and economic challenges, implementing PSC-based interventions can help protect workers from these situations.

3.3 Limitations and future research recommendations

Neither case study was designed with the suggested gold standard of randomized controlled trials (RCTs). However, RCTs require highly controlled conditions that are not likely viable in real-world settings and raise the ethical concern of allocating workers to a no intervention support condition (i.e., control) resulting in an unequal distribution of the research benefits. RCTs also assume that the context of the intervention will be constant, which is not always the case in real-life scenarios (e.g., COVID turbulence), thus threatening ecological validity.

Second, no overall evaluation of the effectiveness of specific intervention components was conducted. The intervention conducted in the selected period was vast, and it was difficult to tailor the best program or specific intervention that most effectively boosts PSC over time. Although the PSC evaluation was on an organisational level, some individuals might experience more benefits from the intervention by attending the training or by having a leader who attended the training. In contrast to most of the existing literature on intervention, our intervention was not

limited to a specific workshop, content, or structure. The interventions illustrated here capture all levels of activities, programs, and actions in tackling and managing psychosocial risks at work.

Evaluating PSC is evaluating the intervention process. As argued previously, PSC itself is comprised of process elements, and evaluating change in PSC provides intelligence about how well the system functions and how well the coordinate system of interventions guided by PSC principles is working. The before and after evaluations of PSC are of great interest to the organisation in terms of organisational learning. Whereas work stress interventions are usually evaluated in terms of process, to answer the main questions, such as “were best practice principles used?” and “was the intervention implemented?”. Our research focused on were best practice principles implemented (i.e., assessed by PSC) but we gave great latitude in how to get there (which makes precise pinpointing of what specific aspect worked is difficult to specifically answer).

Future studies could consider measuring other elements of the intervention process, such as the readiness of organisations and the effectiveness and whether interventions claimed to be implemented, were in fact implemented. Early planning would be required to ensure a well-designed evaluation process and an effective post-hoc evaluation of the intervention that promotes understanding the fidelity of the implemented activities and program.

In addition, we would recommend a real-time monitoring (RTM) system to capture the day-to-day PSC enactment at workplaces. A real-time monitoring system would provide timely and instant feedback to the managers or supervisors on the status of their workplace psychosocial safety and enact prompt action to correct the issues and problems without delay. Research by McLinton et al.²² showed daily changes in a PSC pulse survey and highlights the applicability and effectiveness of RTM in capturing day-to-day PSC enactment. Although the concept of PSC is arguably relatively stable, it could fluctuate around the mean level or general state of PSC due to daily happenings and events, which can provide information to a more specifically on how supervisors or leaders manage the occurrence of psychosocial risk events.

3.4 Conclusion

We reviewed two intervention case studies to provide insights about how an organisation can improve PSC by engaging in various types of system changes and programs. The case studies suggested that an integrated approach for intervention involving the social coordination

of organisational-, organisation-employee interface and employee-level interventions effectively promotes a psychosocially safe climate. We also offer insights into how to bridge research and practice. By collaborating with academics and practitioners, organisations can implement empirical, evidence-based practice to improve PSC. Efforts must focus on building a strong and positive climate through a collective social coordination process.

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We have no conflicts of interest to disclose.

Author contribution

ML: conceptualise the paper, responsible for data curation and analysis, and writing the first draft; MD: conceptualise the paper, review and edit the draft, supervision, and acquire fundings; SM: review and edit the draft, supervision; PB: review and edit the draft

Data availability statement

The data underlying this article were provided by third party (i.e., the participatory organisations) under mutual research agreement. Data cannot be shared.

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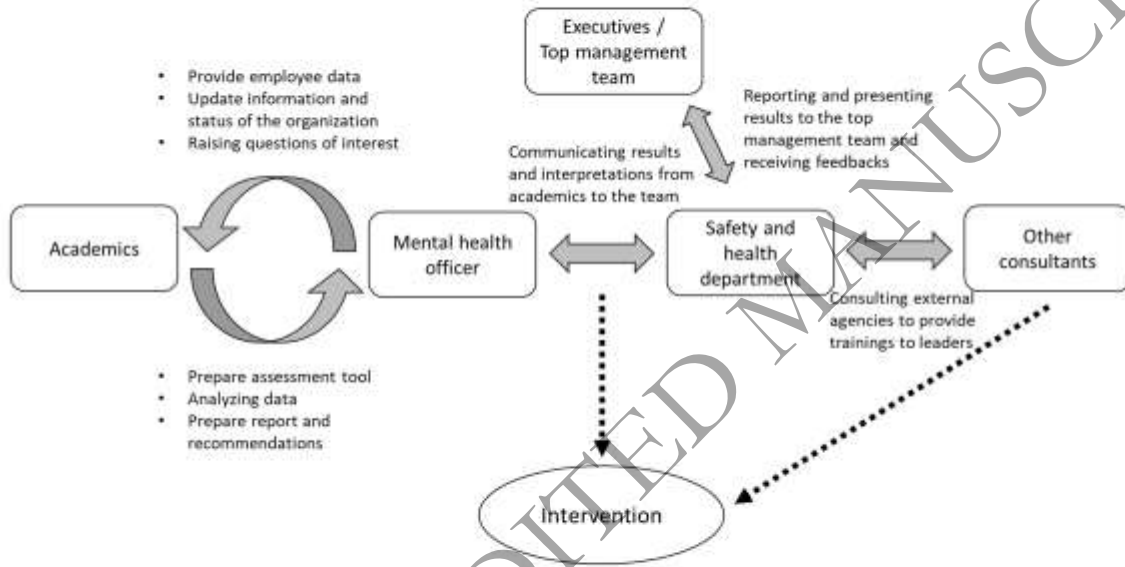
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Figure legends

Figure 1 The social coordination process



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Table legends**Table 1***Activities and programs conducted in Case 1 & 2*

| PSC domain | Initiatives of Case 1 | Initiatives of Case 2 | Level of intervention |
|-------------------------------|--|---|------------------------------|
| Priority | 1. An external work safety consultant conducted a risk assessment for the organization to identify any gaps in their systems, policies and procedures | | Organizational |
| Participation and involvement | 2. A survey was conducted to collect employees' perspectives regarding their existing policies, practices and procedures | 1. A flexible working policy was communicated, and additional days of wellbeing leave were provided to all staff during the pandemic | Organizational |
| Commitment and support | 3. Executive training (one session) was provided for 83% of Level 2 and Level 3 managers in June 2018. This training addressed: <ul style="list-style-type: none"> • PSC, while also suggesting actions | 2. A specific intervention was conducted with seven teams who reported low PSC in 2021. The JD-R model was introduced and action plans were | Organizational |

| | | | |
|------------------------|--|---|---------------------------------------|
| | <p>regarding specific areas on which each group should focus based on their results throughout the 12 questions and four focus areas</p> <ul style="list-style-type: none"> • psychosocial risk factors and discussion on how to minimise these factors within their work groups | <p>created with a focus on psychosocial factors in each team. The intervention was conducted in partnership with other external, non-university consultants. Action plans were discussed and were in the progress of being implemented at the writing of this paper</p> | |
| Commitment and support | <p>4. Manager training (one session) was provided for 44% of Level 4 and Level 5 managers in October 2018 (50 leaders), focusing on:</p> <ul style="list-style-type: none"> • how managers can recognise, respond, refer and reconnect to mental wellbeing issues in the workplace • how managers can address a critical capability gap in the | <p>3. Training was provided to 750 leaders in face-to-face sessions on the topics of PSC and psychosocial risks at work</p> | <p>Organizational/ Individual</p> |

| | | | |
|------------------------|--|--|-------------------------------|
| | population | | |
| | | 4. Fully remote roles were introduced in response to the pandemic, and after the pandemic started to recede, returning to the office was made optional | Organizational/ Individual |
| Communication | 5. An engagement campaign was created, in which staff could support their wellbeing across the wellbeing spectrum | | Organizational/ Individual |
| Communication | 6. The psychological health program was rebranded to reduce stigma | 5. Sick leave was rebranded to wellbeing leave to encourage proactive leave taking and to reduce the stigma of mental health | Organizational/ Individual |
| Commitment and support | 7. The scope of the Employee Assistance Program (EAP) was increased to offer support across the wellbeing spectrum. The scope includes | | Individual |

| | | | |
|----------------------------------|---|--|------------|
| | exercise physiologists, dieticians, legal professionals, financial professionals, psychologists and counsellors | | |
| Communication | 8. The engagement program was conducted to introduce the new EAP coaching and support system | | Individual |
| Participation and involvement | 9. A safety representative program and coaching training and approach were provided | 6. Eighty safety representatives were recruited, and they had manager approval to spend 1- 2 hours weekly on wellbeing-related projects. Their role is to drive local wellbeing projects in each region and office. They have the autonomy and budget to operate within the wellbeing strategy strategic framework—the integrated model of | Individual |

| | | | |
|----------------------------------|--|--|------------|
| | | workplace wellbeing | |
| Participation and involvement | 10. Lived experience videos for mental health and wellbeing goals were created | | Individual |
| Priority/communication | 11. A mental health awareness event was launched | 7. Events and programs were conducted to increase employees' awareness of psychological health and safety | Individual |
| Priority/Communication | 12. An online course on mental wellbeing was developed | 8. An eLearn platform about mental health was released to promote mental health literacy, knowledge of psychosocial factors at work and skills for supportive conversations in the workplace | Individual |
| Priority | 13. Physical health services were provided, (i.e., health checks, flu vaccinations and health promotion campaigns) | 9. Physical health services were provided, such as health checks, flu vaccinations and health promotion campaigns | |

Table 2*Training example***Psychosocial Safety Climate workshop**

PSC is a corporate climate that benefits employees' psychological health and wellbeing. Beyond this, high PSC was related to productivity, sick leave and workers' compensation claims. To improve PSC in an organization, the leaders could be trained to address PSC (Dollard & Bailey, 2021). Below is an example of the workshop content:

- 1) What is PSC—Introduction to psychosocial risks factors at work and PSC, including
 - psychosocial risks factor at work
 - definitions of PSC
 - the four elements of PSC
 - the theoretical framework of PSC.
- 2) Why PSC is important—Evidence of PSC, including
 - the functions of PSC as a leading indicator
 - The functions of PSC as a moderator
 - The link between PSC and health, motivation and productivity.
- 3) How to measure PSC—PSC scale and the benchmarks (Bailey et al., 2015; Hall et al., 2010), including
 - the PSC-12
 - a PSC risk level and prognosis.
- 4) How to build PSC—Introduction of the intervention principle, involving the
 - PSC hierarchical of control (PSC-HOC) framework (Bailey et al., 2016).
- 5) Action planning and follow-up, which involved
 - identifying problems in teams
 - discussing and brainstorming actions
 - focusing on achievable actions
 - performing follow-up meetings, if possible
 - adjusting and updating action plans.

Table 3 The mean and standard deviation of PSC across the years

| Case study 1 | | | | | | |
|---------------------|--------------------------|-----------|--------------------------|-----------|---------------------------|-----------|
| | Time 1 (<i>n</i> = 690) | | Time 2 (<i>n</i> = 646) | | Time 3 (<i>n</i> = 2136) | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| PSC | 39.35 | 10.12 | 40.80 | 9.16 | 44.07 | 9.57 |

| Case study 2 | | | | |
|---------------------|---------------------------|-----------|---------------------------|-----------|
| | Time 1 (<i>n</i> = 1333) | | Time 2 (<i>n</i> = 1707) | |
| | <i>M</i> | <i>SD</i> | <i>M</i> | <i>SD</i> |
| PSC | 46.36 | 8.01 | 46.15 | 8.45 |

Note: *n* = number of respondents; *M* = mean; *SD* = standard deviation; PSC = psychosocial safety climate.

Table 4 The distribution of respondents at different risk levels for Case study 1

| PSC | Range 12 — 60 | 2018 | 2019 | 2021 |
|--------------|------------------|-------------|-------------|--------------|
| High PSC | ≥ 41 | 347 (46.9%) | 337 (52.2%) | 1440 (67.4%) |
| Medium PSC | 41 < and > 37 | 89 (12%) | 78 (12.1%) | 200 (9.4%) |
| Low PSC | 37 ≤ and > 26 | 217 (29.3%) | 189 (29.3%) | 388 (18.2%) |
| Very low PSC | ≤ 26 | 87 (11.8%) | 42 (6.5%) | 108 (5.1%) |

Note. Adapted from Bailey et al. (2015)

Table 5*Example of wellbeing initiatives***Appointing a mental health officer**

Over these years, many corporates have recruited a specialist in health and wellbeing and given them the corporate title of ‘mental health officer’. Unlike traditional safety and health personnel, who focus solely on physical safety, the mental health officer encompasses a duty of care concerning workers’ psychological wellbeing. Organization X in Case Study 2 followed this trend. In 2020, Organization X introduced a new corporate role for workers’ wellbeing with a ‘global head of wellbeing’ job title. The global head of wellbeing is responsible for designing, planning and implementing strategies for building a psychologically healthier workplace.

The roles of a mental health officer are broad but highly specific. They are broad because a mental health officer has many tasks, which share a specific goal—protecting and promoting workers’ wellbeing. To be a mental health officer is challenging. They must maintain high performance, productivity and business growth while also supporting and protecting workers from overworking, stress and exhaustion. It was necessary to learn how to manage the role more effectively. An initial step taken by the global head of wellbeing in Organization X was to engage with scholars to measure PSC in their organization. Mental health officers received adequate support through collaboration, knowledge sharing, empirical evidence, expert recommendations and idea exchanges. A collaboration between academics and practitioners also generates new ideas and future research opportunities.

Although it is a legal obligation to take care of workers’ psychological health, appointing a specific wellbeing role is a step beyond legal obligations.

Table 6. The distribution of respondents at different risk levels for Case study 2

| PSC | Range 12 — 60 | 2021 | 2022 |
|--------------|---------------------------|--------------|--------------|
| High PSC | ≥ 41 | 1022 (76.7%) | 1260 (73.8%) |
| Medium PSC | $41 < \text{and} > 37$ | 143 (10.7%) | 185 (10.8%) |
| Low PSC | $37 \leq \text{and} > 26$ | 145 (10.9%) | 225 (13.2%) |
| Very low PSC | ≤ 26 | 23 (1.7%) | 37 (2.2%) |

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