Psychosocial Safety Climate: Importance in Higher Degree Research

Australian Council of Graduate Research

Dr Amy Zadow and Daniel Neser

(with ARC Laureate Fellow Professor Maureen Dollard)

PhD Wellbeing

Wellbeing amongst Australian PhD students (523 PhD students)

- I tend to feel stressed on a regular basis (N = 323, 61%)
- I tend to get anxious a lot (N = 320, 61%)
- Low confidence and doubt (N = 328, 63%)

Usher, W., & McCormack, B. A. (2021).
Doctoral capital and well-being amongst Australian PhD students: Exploring capital and habitus of doctoral students. Health Education, 121(3), 322-336.

PhD Success (archival longitudinal data 3579 PhD students across 36 years)

- Density of supervision and a supportive climate fosters shorter and more successful PhDs (Skopek et al., 2020)

Skopek, J., Triventi, M. and Blossfeld, H.P. (2020). How do institutional factors shape PhD completion rates? An analysis of long-term changes in a European doctoral program. Studies in Higher Education. doi: 10.1080/03075079.2020.1744125

"

As a PhD student, I haven't had a proper break other than Christmas holidays in the past 4 years

PhD student

"

Workload issues caused by removal of expert staff in many areas and shift to online systems that are not fit for purpose and require expert knowledge (not just software training) not held by users

Staff member

"

The lack of ongoing (permanent) academic roles for recent PhD graduates is very stressful and, at times, distressing.

Staff member

"

I do not believe the workload model is fit for purpose - which is causing a lot of stress for academics trying to balance teaching, leadership and research expectations. I sense a disillusionment throughout - with some areas worse than others.

Staff member

1.
What is PSC?

Dr Amy Zadow

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PSC and Psychological Safety

PSC is conceptually and empirically *distinct* to psychological safety.

Psychological safety measures whether an individual or work team perceives that it is safe to engage in new interpersonal behaviours required for learning and performance (Edmonson, 1999; Frazier et al., 2017; Newman et al., 2017).

PSC measures the climate or perceived infrastructure to protect psychological health and safety with a strong focus on workplace systems to prevent work stress.

PSC reflects the safety system for psychological health.

What is PSC?

"The organisational climate for worker psychological health and safety"

Organisational values and systems for the protection of worker psychological health

The PSC 12 Measure

Management commitment

1. In my workplace senior management acts quickly to correct problems/issues that affect employees' psychological health

2. Senior management acts decisively when a concern of an employees' psychological status is raised

3. Senior management show support for stress prevention through involvement and commitment

Organisational Communication

7. There is good communication here about psychological safety issues which affect me

8. Information about workplace psychological well-being is always brought to my attention by my manager/supervisor

9. My contributions to resolving occupational health and safety concerns in the organisation are listened to

Management Priority

4. Psychological well-being of staff is a priority for this organisation

5. Senior management clearly considers the psychological health of employees to be of great importance

6. Senior management considers employee psychological health to be as important as productivity

Organisational Participation and Involvement

10. Participation and consultation in psychological health and safety occurs with employees' unions and health and safety representatives in my workplace

11. Employees are encouraged to become involved in psychological safety and health matters

12. In my organisation the prevention of stress involves all levels of the organisation

PSC: The Cause of the Causes

The Psychosocial Safety Climate Model
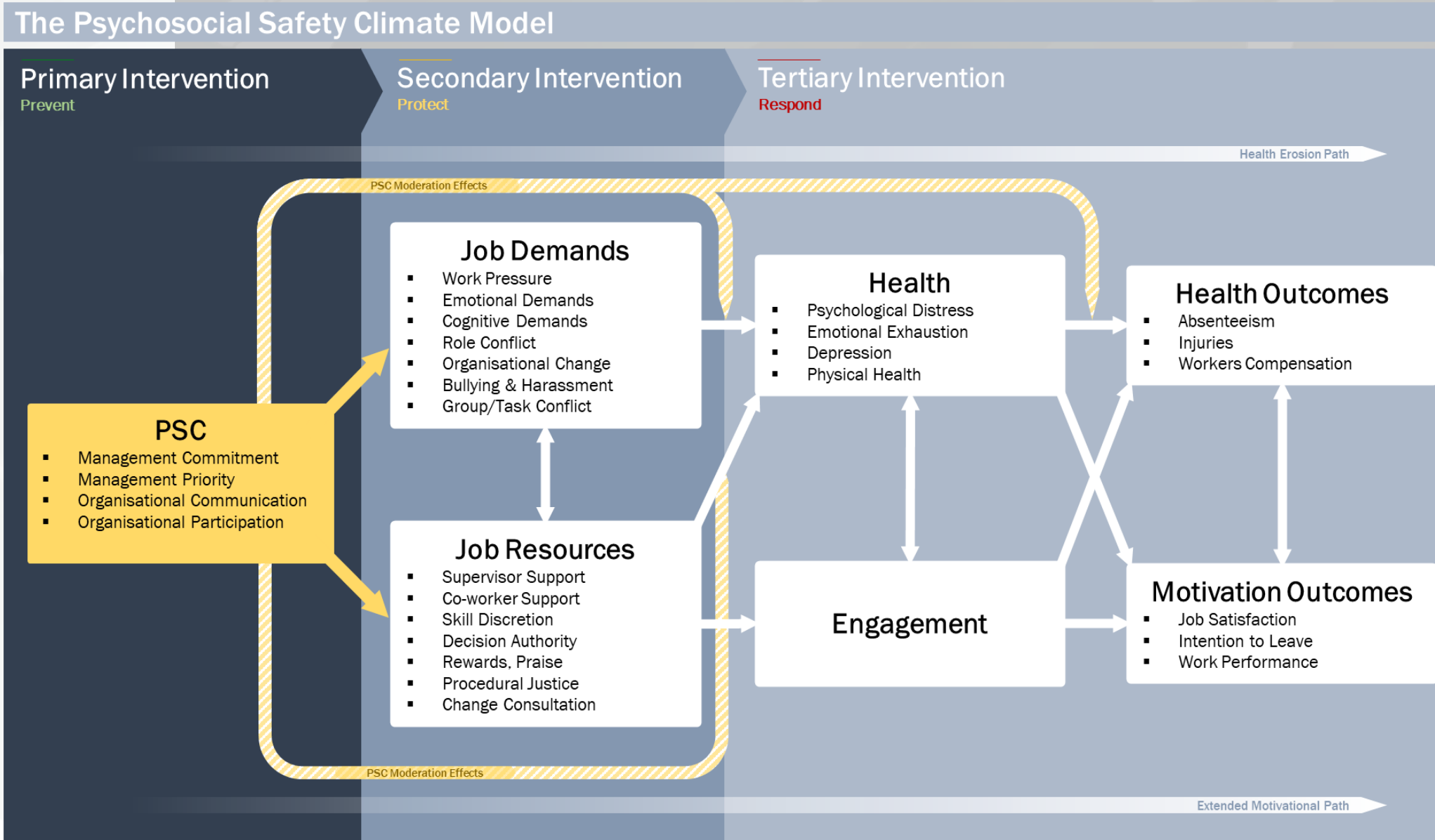
PSC, Harassment and Bullying

- Low PSC provides fertile ground for bullying and harassment (Bond et al., 2010; Tuckey & Neall, 2014)

- Sexual Harassment also linked to low and very low PSC environments (Superfriend data, 2023)

PSC Research

Over 230 studies published on PSC worldwide on an organisation, industry or national basis

National data of PSC has been collected in many countries including Australia, New Zealand, Sweden and Germany
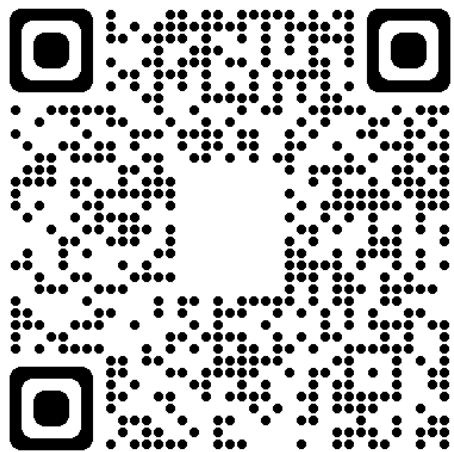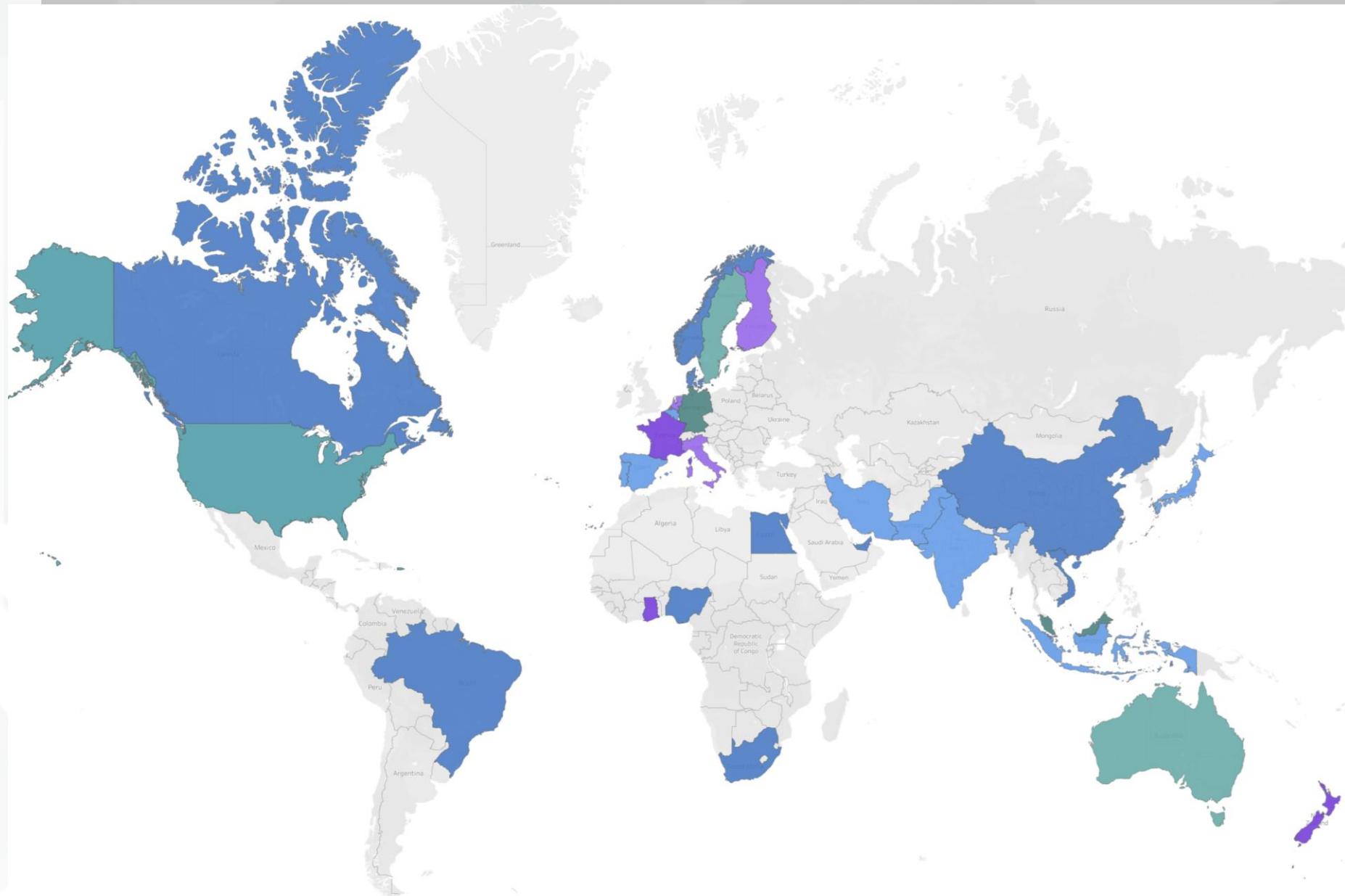
PSC Developments

- PSC is included in the US Quality of Worklife Survey

- Included in Karasek's Job Content Questionnaire 2 Survey

- In the Australian and NZ Workplace Barometers and the Victorian WorkWell Surveys

- Minimum data requirement in the Victorian Public Sector Commission

- Widely used around the world and recognised by leading organisational psychology journals

- Concept behind an Australian Research Council Laureate Fellowship

- Victoria is the leading jurisdiction for attention to PSC

PSC Benchmark Standards

Bailey TS, Dollard MF, & Richards PA.

A national standard for psychosocial safety climate (PSC): PSC 41 as the benchmark for low risk of job strain and depressive symptoms.

J Occup Health Psychol. 2015 Jan;20(1):15-26.

doi: 10.1037/a0038166.

Epub 2014 Oct 27. PMID: 25347684.

| PSC SCORE /60	RISK LEVEL	PROGNOSIS
≥ 41	**Low Risk**	Performing well, but improvements in PSC levels might still be required.
< 41 > 37	**Medium Risk**	Improvements can be made in the implementation of PSC principles.
≤ 37 > 26	**High Risk**	High risk of job strain. Staff health and productivity compromised. Significant action required to improve PSC.
≤ 26	**Very High Risk**	Serious failures in organisational strategy. Urgent action needed to prevent worsening conditions and staff illness or injury.

Meta-analysis: Multilevel PSC

Novel approach to assess the PSC Extended Job Demands-Resources model (Dollard & Bakker 2010).

Data from 16 countries/regions industries and occupational groups from 80 studies.

56 independent samples and 844 effect sizes (N = 348 471 individuals; 1420 groups).

Zadow, Dollard, Tuckey & Idris (2022). Psychosocial Safety Climate Extended JD-R Theory: A Cross-Level Multilevel Meta-Analysis. In review.
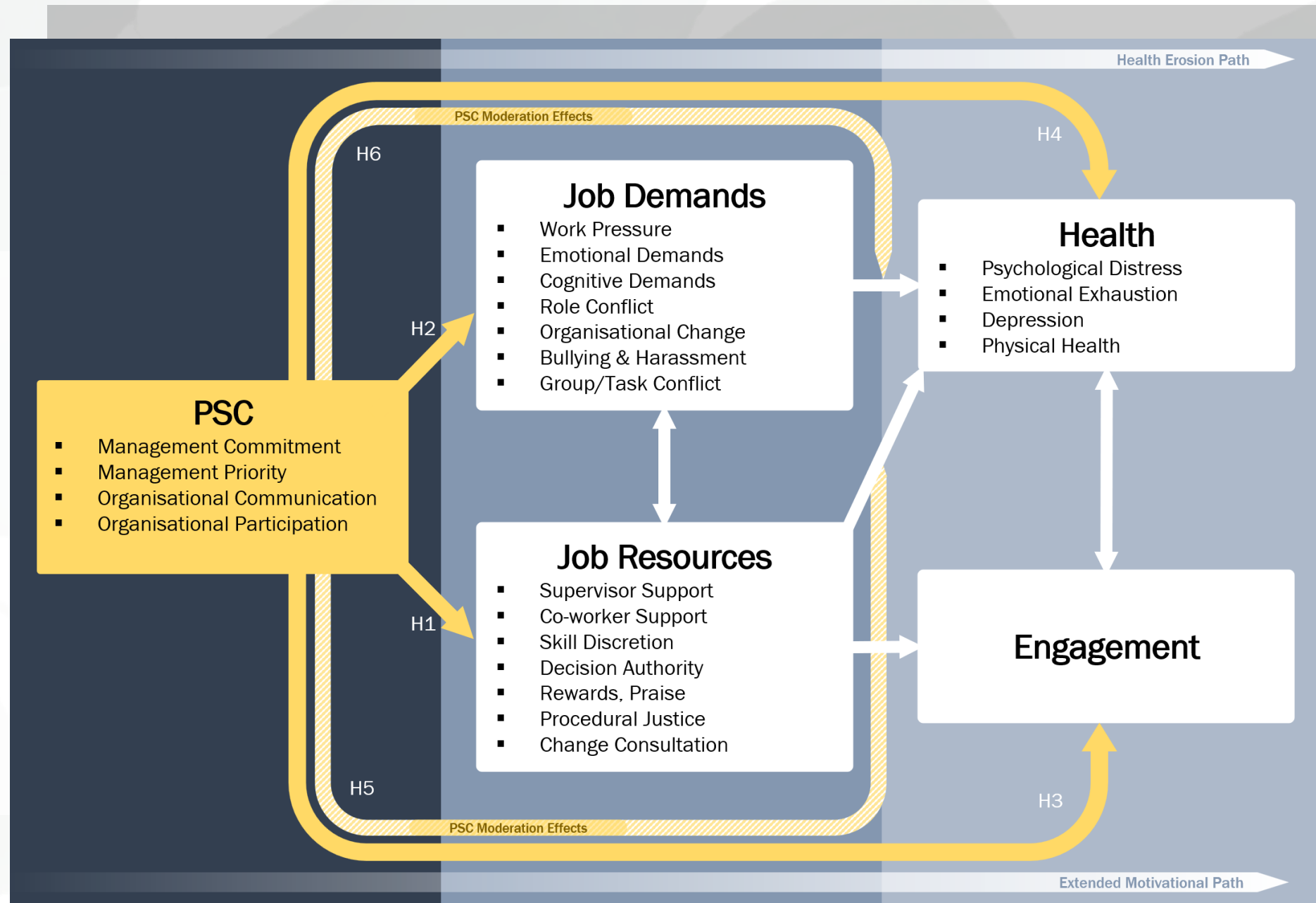
Meta-analysis of PSC Studies

	Level	Studies	Participants	r̂
PSC/Job Resources	Cross Level	6	218 (G)	.47***
	Individual	37	181 684 (I)	.33***
PSC/Job Demands	Cross Level	11	524 (G)	-.32***
	Individual	37	203023 (I)	-.23***
PSC/Motivation	Cross Level	8	383 (G)	.42**
	Individual	25	79915 (I)	.33***
PSC/Poor Psych Health	Cross Level	13	510 (G)	-.44***
	Individual	36	180432 (I)	-.22***

Note: *** p<.0001. ** p<.001.
Zadow et al. in review

PSC and New Major Depression Symptoms

Findings:

Low PSC leads to a 3x increase in risk for new major depression symptoms within a year.

High WE may increase long working hours and subsequent major depression symptoms.

BMJ Open

Public health
Original research

Predicting new major depression symptoms from long working hours, psychosocial safety climate and work engagement: a population-based cohort study

Amy Jane Zadow [1], Maureen F Dollard [1,2], Christian Dormann [3], Paul Landsbergis [4]
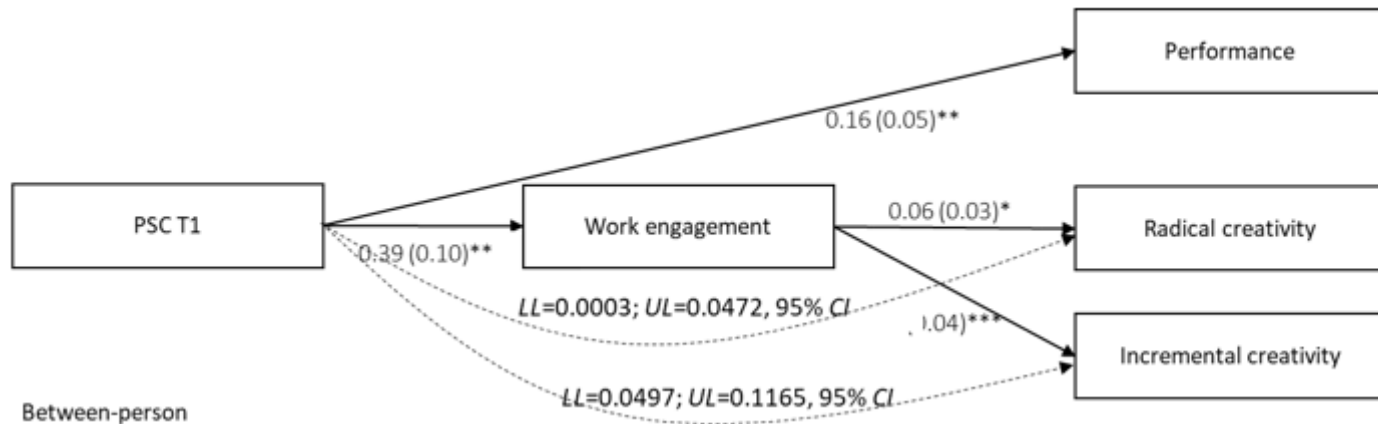
Correspondence to Dr Amy Jane Zadow; amy.zadow@unisa.edu.au

Abstract

Objectives This study sought to assess the association between long working hours, psychosocial safety climate (PSC), work engagement (WE) and new major depression symptoms emerging over the next 12 months. PSC is the work climate supporting workplace psychological health.

Industry 4.0

At the between-person level PSC was positively related to average future weekly individual fluctuations of creativity (radical and incremental), work engagement, and job performance. Additionally weekly work engagement was related to future creativity (radical and incremental).

frontiers | Frontiers in Psychology

Psychosocial safety climate as a predictor of work engagement, creativity, innovation, and work performance: A case study of software engineers

Amy Zadow[1,2]*, May Young Loh[1], Maureen Frances Dollard[1], Gro Ellen Mathisen[3] and Bella Yantcheva[1]

[1]Psychosocial Safety Climate Global Observatory, Centre for Workplace Excellence, Justice and Society, University of South Australia, Adelaide, SA, Australia, [2]School of Psychology, Faculty of Health and Medical Sciences, University of Adelaide, Adelaide, SA, Australia, [3]Faculty of Social Sciences, University of Stavanger, Stavanger, Norway

Introduction: Creativity is vital for competitive advantage within technological environments facing the fourth industrial revolution. However, existing research on creativity has rarely addressed how a climate beneficial for worker psychological health, a psychosocial safety climate (PSC), could additionally stimulate the growth of workplace creativity, innovation, and performance in digital environments.

Discussion: This study contributes to the theory on PSC, creativity, and work performance by elucidating the individual perceived PSC-creativity relationship and suggesting PSC systems as meaningful antecedents to digital work performance.

Keywords: creativity; engagement; innovation; psychosocial safety climate; software engineers; work performance.

E-stress Project - Work Digitalisation

Emerging Psychosocial Risks

Workplace Digital Demands and Resources (WDDR) scale (12-item) comprises:

- workplace digital demands (pressure and complexity)

- workplace digital resources (autonomy and support)

Scored 1 (strongly disagree) to 5 (strongly agree).

Item wording	M	SD	Alpha	Factor 1	2	3	4	5
Workplace Digital Demands (Complexity)			.75					
1 I feel pressure to keep up to date with digital communication technology.*	4.02	.89		.52				
2 There are too many digital communication platforms.*	4.00	.95		.63				
3 There is insufficient training provided for digital communication technology platforms.	3.57	1.11		.65				
4 There is not enough work time available to learn new digital communication platforms/practices.*	4.02	.96		.74				
5 There is inadequate information technology support provided when digital communication technology malfunctions.	3.42	1.13		.52				
Workplace Digital Demands (Pressure)			.90					
6 The quantity of digital communication messaging I receive is difficult to manage.*	3.50	1.07			.82			
7 The amount of digital communication messages and platforms I have at work makes it difficult to find information.	3.58	1.07			.77			
8 I have the time to easily deal with the information I receive across digital communication platforms.*†	3.55	1.01			.66			
9 The quantity of digital communication messaging I receive means I sometimes miss information or important messages.	3.52	.99			.75			
10 I have the time to reply quickly to the messages I need to across digital communication platforms.†	3.28	.99			.64			
11 Dealing with digital communication messaging/platforms disrupts my ongoing work.	3.69	.95			.62			
12 There is too much digital communication at work which can be overwhelming.*	3.71	1.01			.68			
Workplace Digital Resources (Autonomy)			.60					
13 Within my workplace I have increased flexibility about when and where to work using digital communication platforms.*	3.62	1.01					.77	
14 Digital communication platforms allow me to schedule tasks to perform at times that are convenient to me.*	3.34	1.02					.86	
15 I used digital communication platforms to coordinate my work (e.g. keeping track of tasks).*	3.18	1.13					.39	
Workplace Digital Resources (Support)			.83					
16 My workplace has good technology infrastructure to support my communication/work activities.*	3.36	1.03						.71
17 My organisation provides good digital communication technology support when I need to work from home.*	3.48	1.07						.71
18 My organisation has a good digital technology culture (e-culture).*	3.16	.99						.74

Zadow Potter Dollard Bakker Afsharian Parkin & Lushington. (2022). Development and Validation of the Workplace Digital Demands and Resources (WDDR) Scale. In review. (DP190100853)

2.
How Regulation and Policy Relate to PSC

New Opportunities to Reshape our Sector

"

PhD scholarships are now well below the poverty line. As an academic I find it distressing to see that we pay PhD scholars so poorly. Transitioning from a postdoc position to a tenured appointment is very hard for ECRs

Staff member

"

Due to the lack of security I always do much more work than I am paid for, and I don't complain in order to get a 'gig' next semester. This has affected my mental wellbeing significantly on a day to day energetic level, but also in terms of my sense of self worth, my outlook for the future and the potential of having a fulfilling professional life.
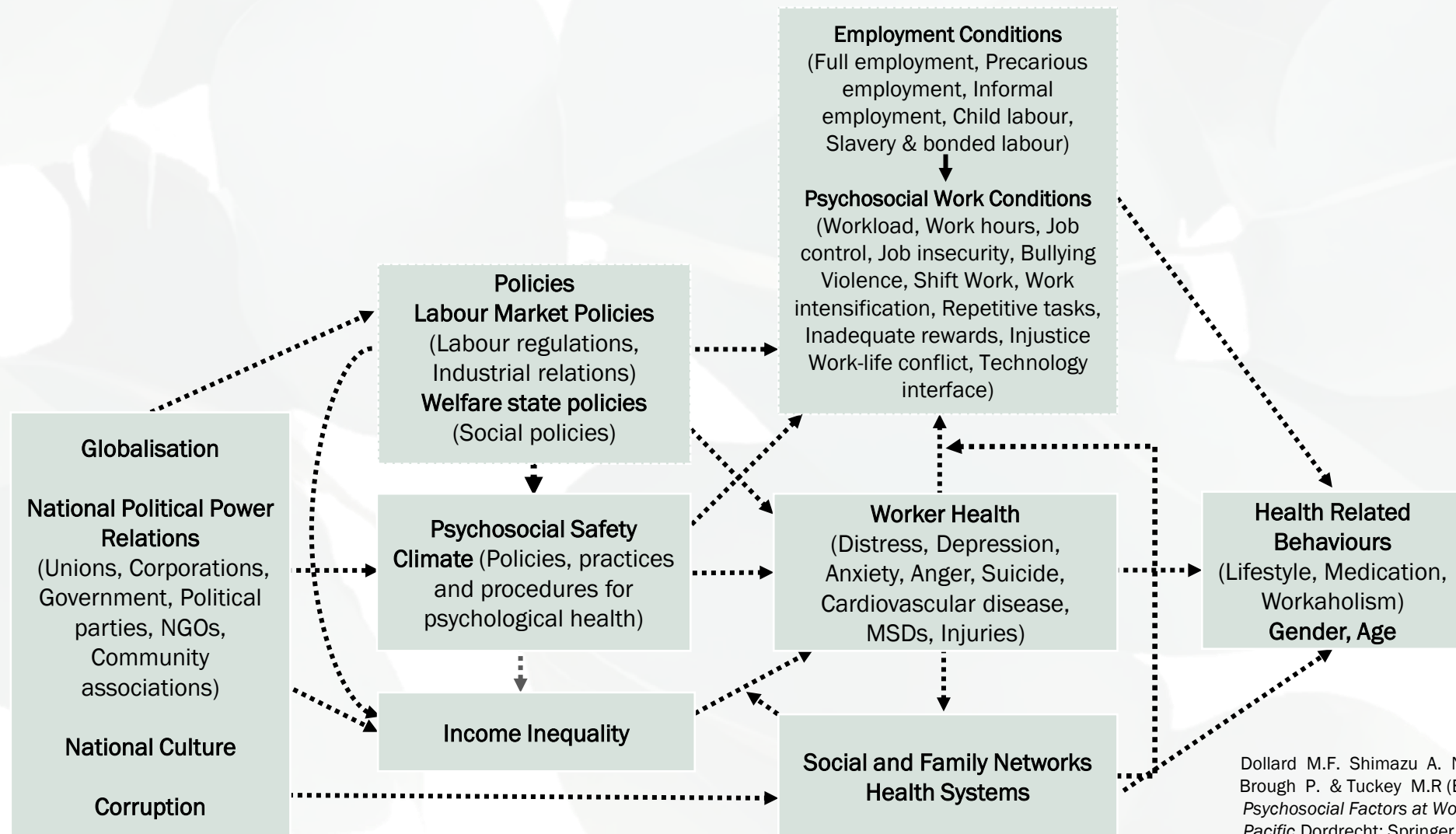
Staff member

"

Lack of administrative and professional support to both teaching and research academics; lack of appreciation to achievements and professional staff development; increasing bureaucracy; management strict control over academic practices and lack of academic freedom; mismanagement and the big gap between senior management and other academics

Staff member

Multi-Level Framework of Worker Health

Employment Conditions
(Full employment, Precarious employment, Informal employment, Child labour, Slavery & bonded labour)

Psychosocial Work Conditions
(Workload, Work hours, Job control, Job insecurity, Bullying Violence, Shift Work, Work intensification, Repetitive tasks, Inadequate rewards, Injustice Work-life conflict, Technology interface)

Policies
Labour Market Policies
(Labour regulations, Industrial relations)
Welfare state policies
(Social policies)

Globalisation

National Political Power Relations
(Unions, Corporations, Government, Political parties, NGOs, Community associations)

National Culture

Corruption

Psychosocial Safety Climate (Policies, practices and procedures for psychological health)

Income Inequality

Worker Health
(Distress, Depression, Anxiety, Anger, Suicide, Cardiovascular disease, MSDs, Injuries)

Social and Family Networks Health Systems

Health Related Behaviours
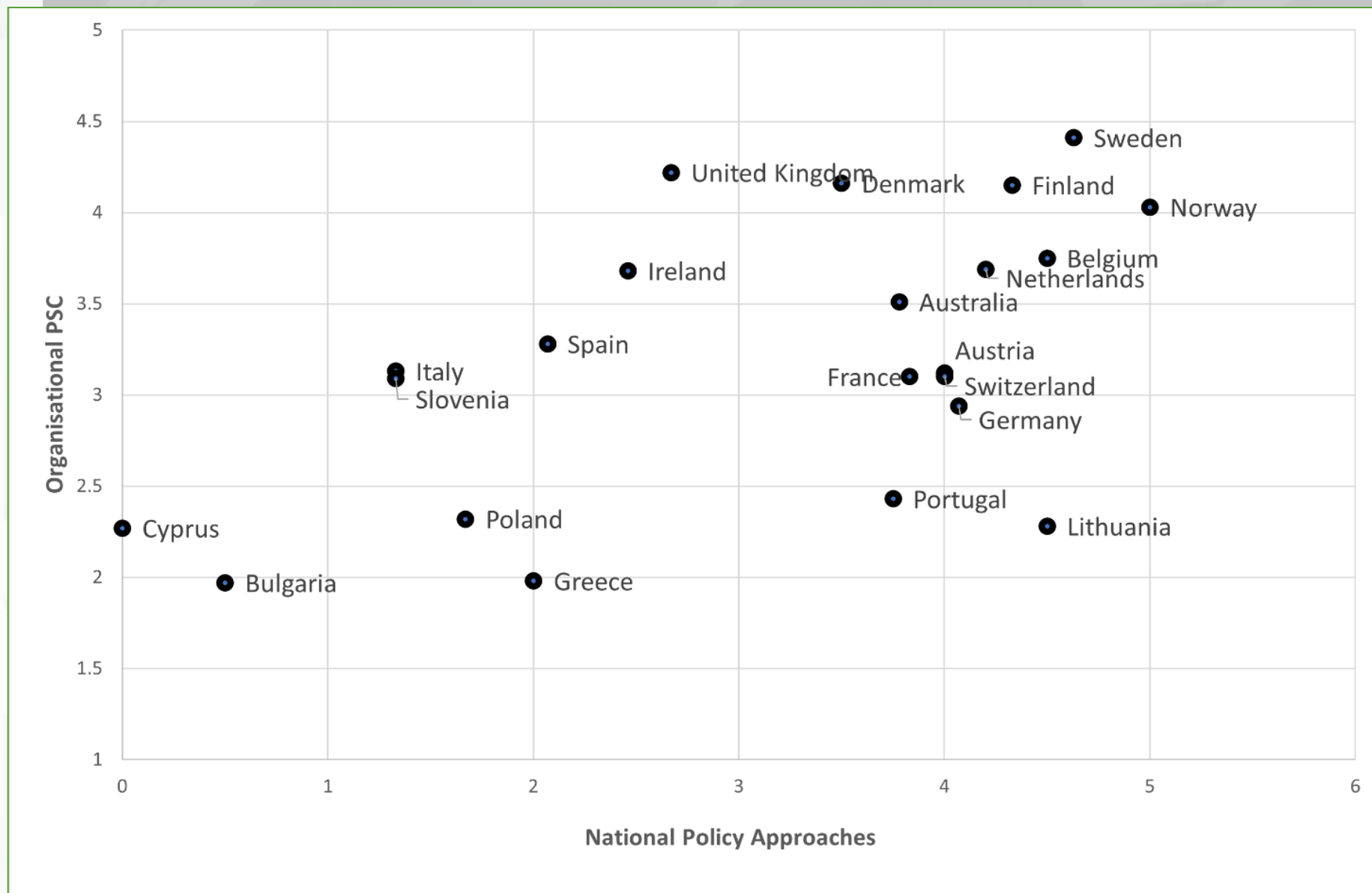(Lifestyle, Medication, Workaholism)
Gender, Age

Dollard M.F. Shimazu A. Nordin R. Bin Brough P. & Tuckey M.R (Eds.) (2014). *Psychosocial Factors at Work in the Asia Pacific* Dordrecht; Springer International Publishing. 978-94-017-8974-5
Erratum pg 9.

National Policies

Relationship between National Policy Approaches and Workplace PSC.

Potter, Dollard et al. 2024, Safety Science.
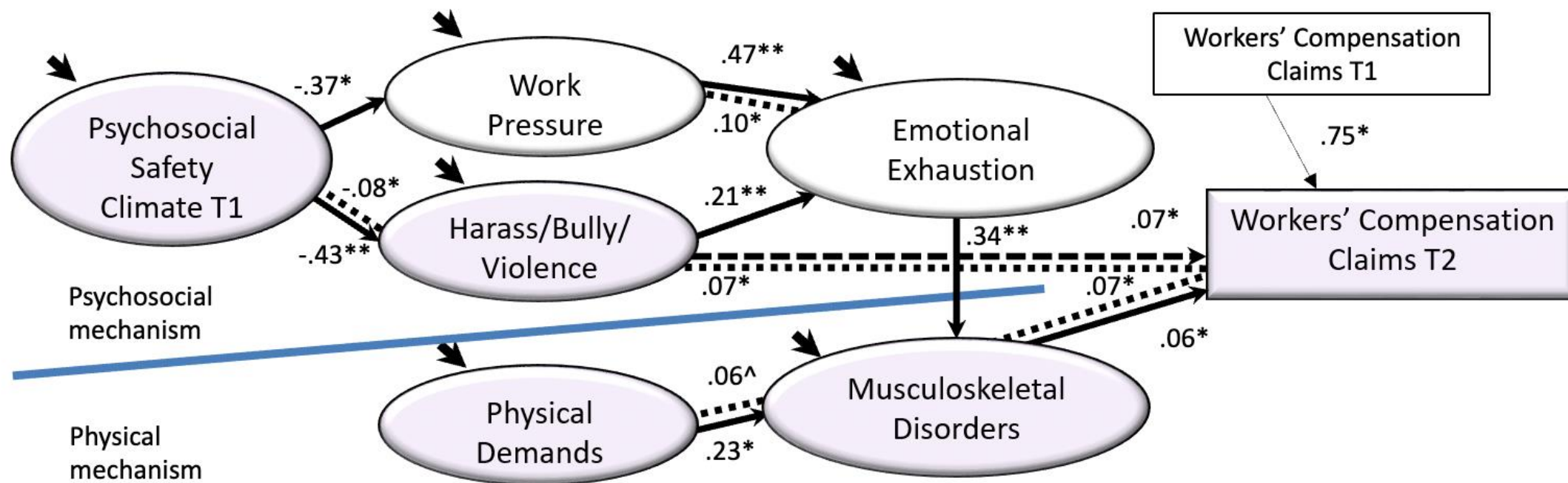
3.
Why Measuring and Building PSC is Important

"

The PhD process seems unnecessarily isolating and therefore stressful at times

PhD student

PSC Links to Workers Compensation Claims

Bailey T. S. Dollard M. F. McLinton S. S. & Richards P. A. M. (2015). Psychosocial safety climate and physical factors in the etiology of MSDs and workplace physical injury compensation claims. Work & Stress.

Using PSC to Estimate Productivity Loss

A Pro-Social Approach to Productivity using the Australian Workplace Barometer

	Sickness Absence	Presenteeism
Cost Breakdown of Low PSC	$2.4bn	$3.6bn
	Total Cost to Employers	
Total Cost of Low PSC Annually	$6bn	

Worker PSC	Annual Sickness Absence (Hours)	Cost via Sickness Absence	Productivity Loss	Cost via Presenteeism
Low	60.3	$2 109	5.5%	$3 113
Medium	59.1	$2 067	5.4%	$3 042
High	42.3	$1 479	3.2%	$1 856

PSC and Sickness Absence Cost – Case Study

An Australian international company of around 5000 that's doing very well can save nearly $1m by moving employees from low to high PSC (not including presenteeism and turnover costs.

Loh & Dollard 2022.

PSC Benchmark	Percentage of Employees per PSC Risk Level	Average Sick Leave Taken (Days)	Estimated Cost of Absenteeism Per Person Per Annum	Total Estimated Cost of Absenteeism Per Annum in the Organisation
≥ 41	73.8	4.68	$2 313.00	$7 573 920.59
41 < and > 37	10.8	5.56	$2 747.92	$1 316 791.70
37 ≤ and ≥ 27	13.2	6.58	$3 252.03	$1 904 663.93
≤ 26	2.2	7.39	$3 652.36	$356 521.44

|	
Total cost of absenteeism	$11 151 897.66
Total of cost for lower than 41	$3 577 977.07
Cost per person over 41	$2 313.00
Number of people < 41	1 162
Cost of moving people to 41	$2 688 835.19
Saved cost	**$889 141.88**

PSC and Turnover Cost – Case Study

The same company can still save $4m by reducing turnover rate due to low PSC.

Loh & Dollard 2022.

PSC Benchmark	Percentage (a)	Attrition Rate (b)	Estimated Number of Employee Turnover Per Year (c = a/100*b*4437)	Total Estimated Cost of Absenteeism per Annum (c*$42 405)
≥ 41	77.2	0.14	479.55	$20 335 358.46
41 < and > 37	10.7	0.26	123.44	$5 234 360.40
37 ≤ and ≥ 27	10.4	0.19	87.68	$3 717 863.46
≤ 26	1.8	0.39	31.15	$1 320 819.91

Total Cost for Lower than 41	$10 273 043.78
Number of Person over 41	1011.636
Turnover Total < 41	141.63
Cost of Attrition (with 0.14 attrition)	$6 005 779.44
Saved Cost	**$4 267 264.34**

PSC Linked to Supervisor Rating of Performance

CDP 2020-21 Overall Review Rating - Descriptor

Loh & Dollard 2022
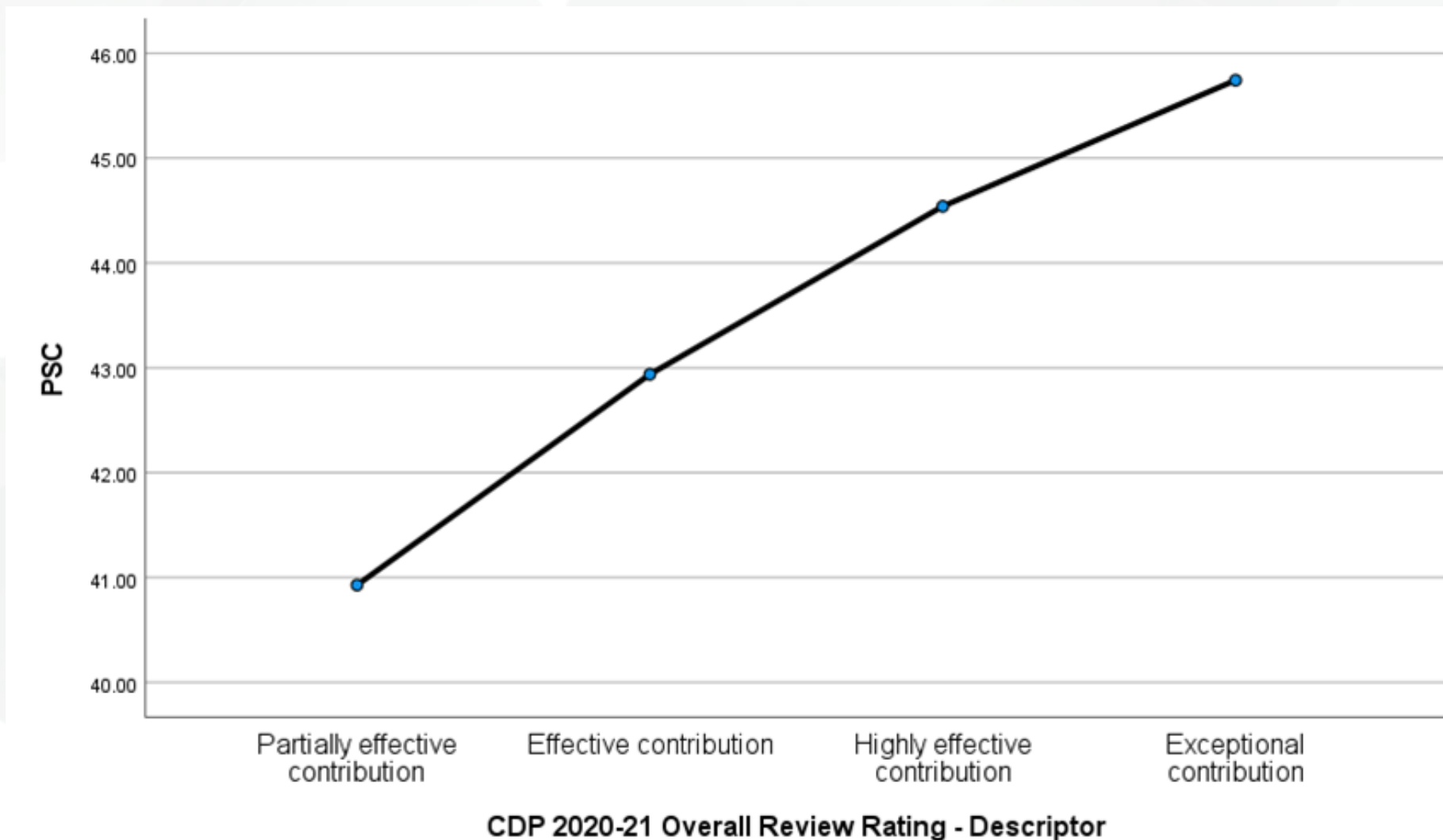
4.
How PSC Works
(In Universities)

"

From my experience the business model undervalues teaching generally and the contribution of sessional staff. I work significant unpaid hours to be able to teach my students well (something I value) which is tiring.

Staff member

"

There is insufficient consideration for the impact that disability/mental health problems can have on the ability to compete a PhD program in the standard time.

PhD student

"

HDR Candidates are often left to resolve any administrative and technical issues themselves as a result of a lack of communication/mutual understanding between departments; from my personal experience

Staff member

E-Stress Project ARC Discovery Project

Study 1. 2019-2021

- Interview Human Resources Directors to investigate university protocols relating to digital communication.

Study 2. 2020-2022

- Survey university staff (including casual staff) 3-wave multi-level online survey of emotional exhaustion, sleep, occupational fatigue, recovery, and work engagement; and identify factors that reduce the impact of work stress (e.g., PSC, job crafting).

Study 3. 2021-2022

- Employ diary studies via smartphones to incorporate a real time measure of email load, email volume, and reports of spill-over impact in the non-work domain by significant others in the home domain.
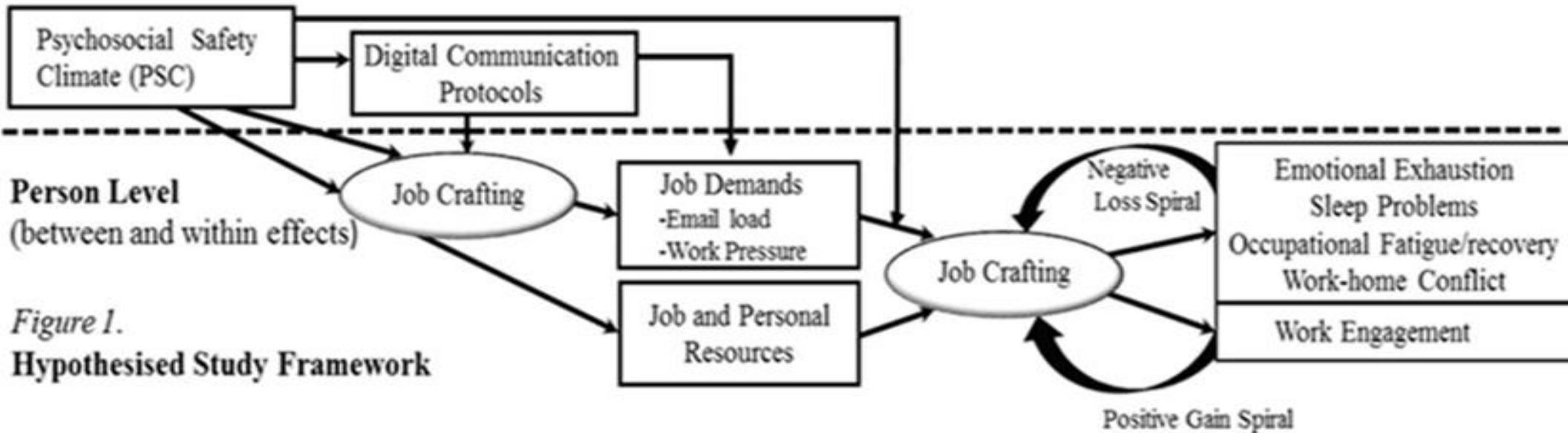
Study 4. 2022

- Assess PSC levels in universities against national AWB benchmarks.

PSC and Digital Stress Model

University Level

Psychosocial Safety Climate (PSC)

Digital Communication Protocols

Person Level (between and within effects)

Job Crafting

Job Demands
-Email load
-Work Pressure

Job and Personal Resources

Job Crafting

Negative Loss Spiral

Positive Gain Spiral

Emotional Exhaustion
Sleep Problems
Occupational Fatigue/recovery
Work-home Conflict

Work Engagement

Figure 1.
Hypothesised Study Framework

PSC Benchmarks and University Results

PSC benchmarking is further explored here, using the following datasets:

AWB: The Australian Workplace Barometer is a long-running project and has been measuring PSC since 2009. These benchmarks are taken from 2021's sample of 1 599 Australian workers.

SuperFriend: SuperFriend's survey of 10 012 Australian workers measured PSC in 2023, representing the latest large PSC sample for Australia.

Victorian Public Sector: The VPS survey of 45 956 staff provides a very large sample of public sector workers.

University PSC Risk Proportions for All Participants

PSC Risk Level ● Low Risk PSC ● Medium Risk PSC ● High Risk PSC ● Very High Risk PSC

Year	Low Risk PSC	Medium Risk PSC	High Risk PSC	Very High Risk PSC
2020	27.50%	10.66%	35.28%	26.56%
2021	24.00%	8.10%	35.70%	32.21%
2022	20.75%	9.13%	37.62%	32.51%
2023	18.40%	8.72%	33.72%	39.15%

Dataset	Low Risk PSC	Medium Risk PSC	High Risk PSC	Very High Risk PSC
AWB National Sample 2021	61.79%	6.82%	20.58%	10.82%
SuperFriend National Data 2023	53.60%	8.90%	26.60%	10.90%
Victorian Public Sector 2020	59.00%	7.30%	22.00%	11.70%
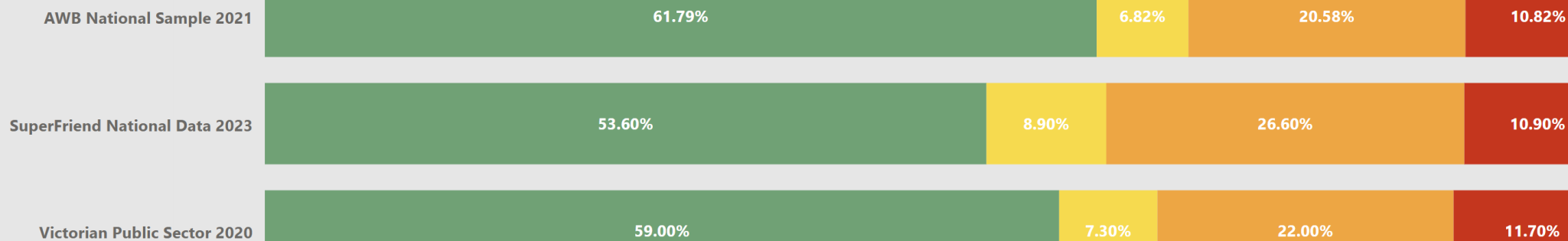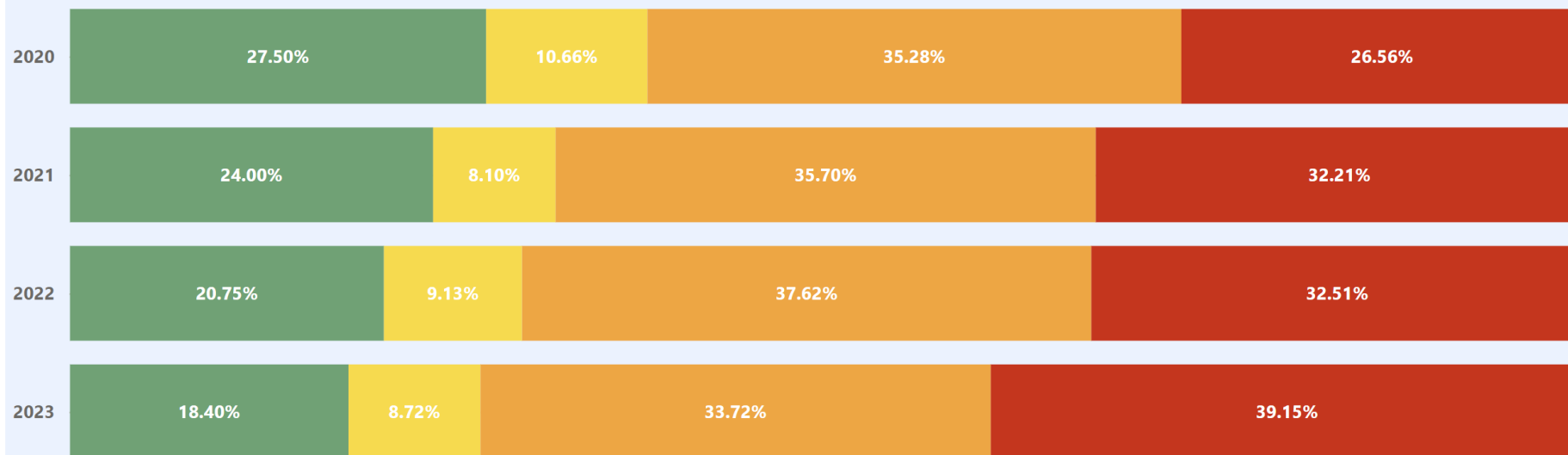
5.
How Can We Build PSC?

"

Instead of properly addressing issues of academic workloads and the stress they cause we are subjected to twee wellbeing initiatives.

Staff member

How Can We Build PSC?

Radical Organisational Change

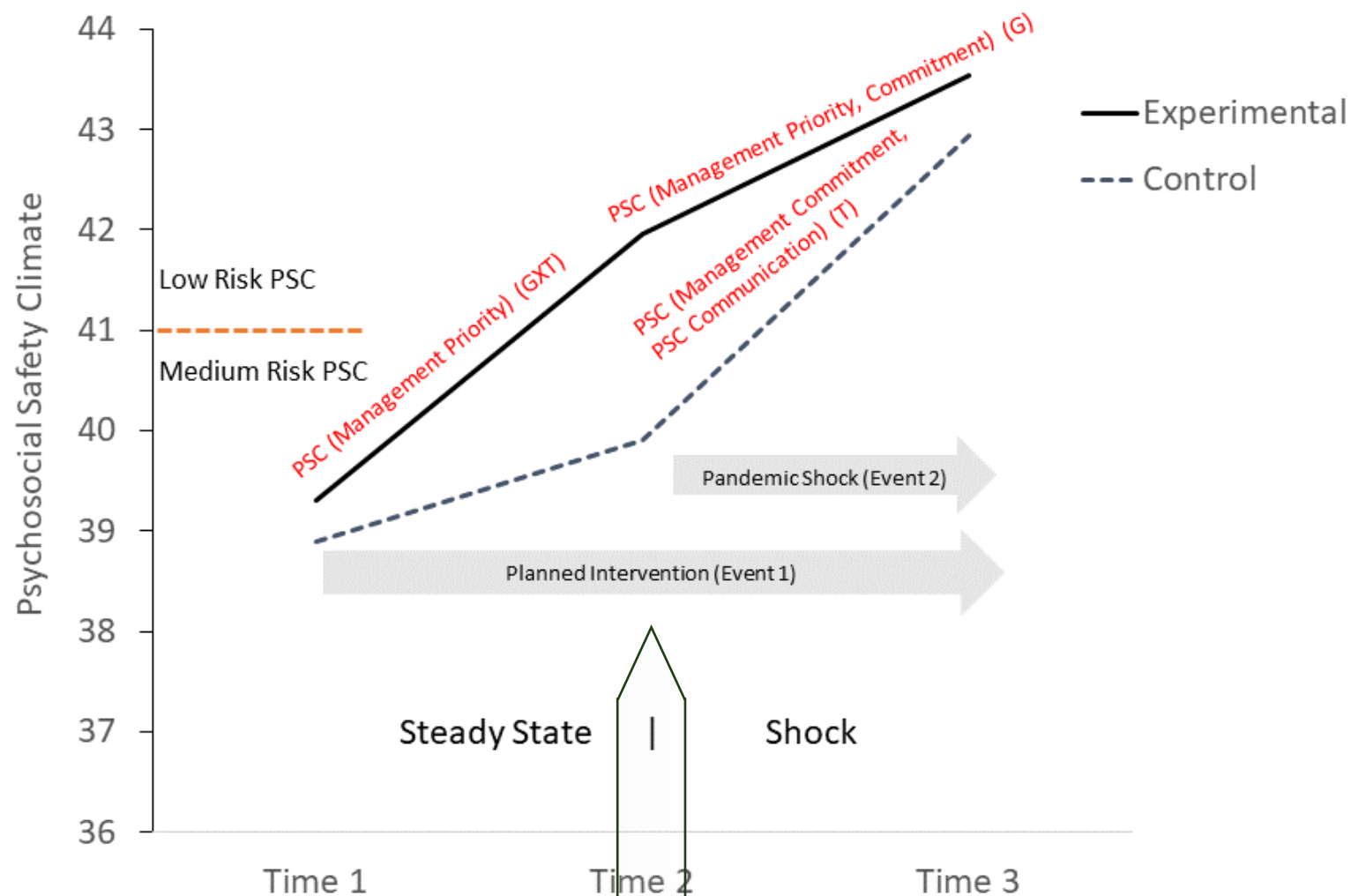- 4-day working week (paid 5) NZ study (Haar) → PSC increased

Key Processes + PSC

- Capacity Building
- Assessment + Benchmarking
- Action Plans
- Mentoring and Coaching
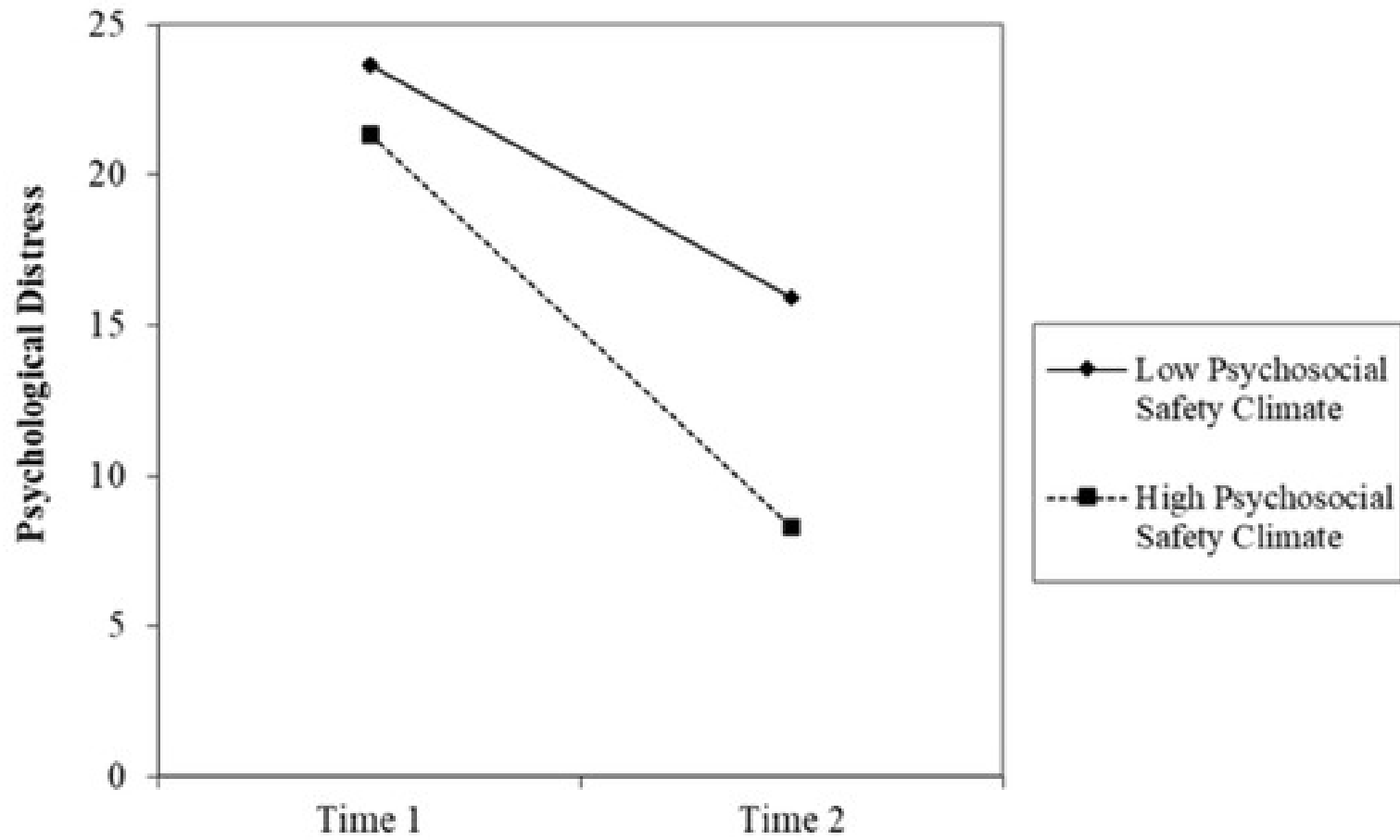- Shared experience - Community of Practice

Building PSC through intervention

PSC can change through intervention

Efficacy of EAP Interventions

Multilevel analysis:

- A significant reduction in psychological distress due to the EAP (individual effect) → particularly at high levels of PSC (organisational effect).

Bouzikos, S., Afsharian, A., Dollard, M., & Brecht, O. (2022). Contextualising the Effectiveness of an Employee Assistance Program Intervention on Psychological Health: The Role of Corporate Climate. International Journal of Environmental Research and Public Health, 19(9), 5067.

6.
Feedback Systems

"

Leadership increasing does more talking than listening. Consultations have become a farcical exercise. There is a detachment (increasing rapidly) from operational feasibility, international academic and research situation and competition, and local bureaucracy and processes.

Staff member
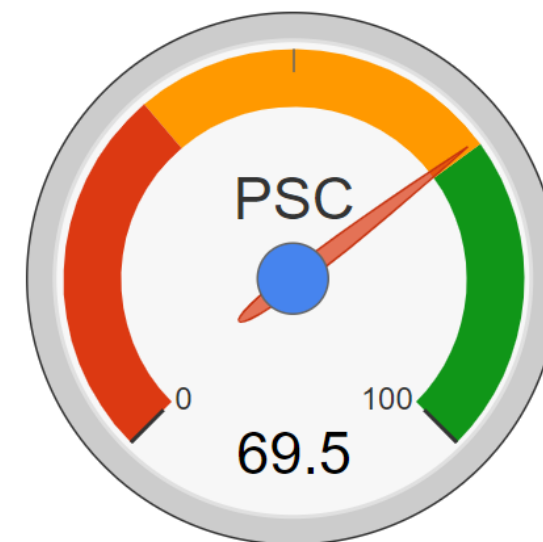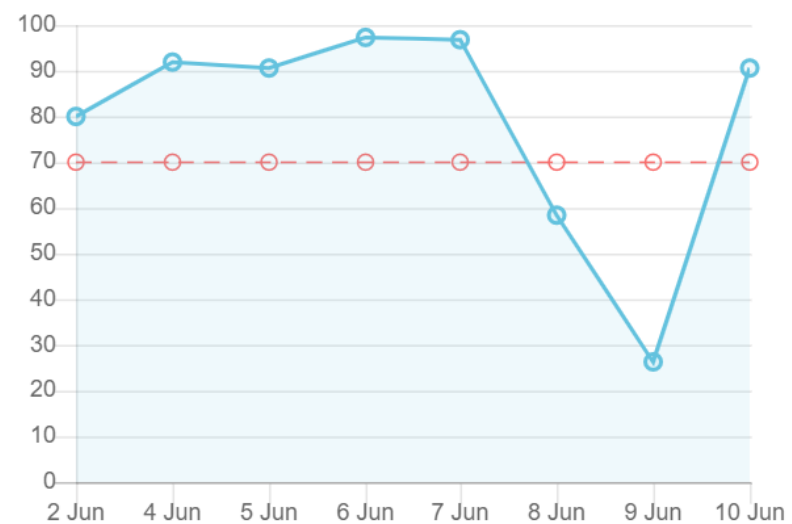
How Leaders and Workers see PSC Differently
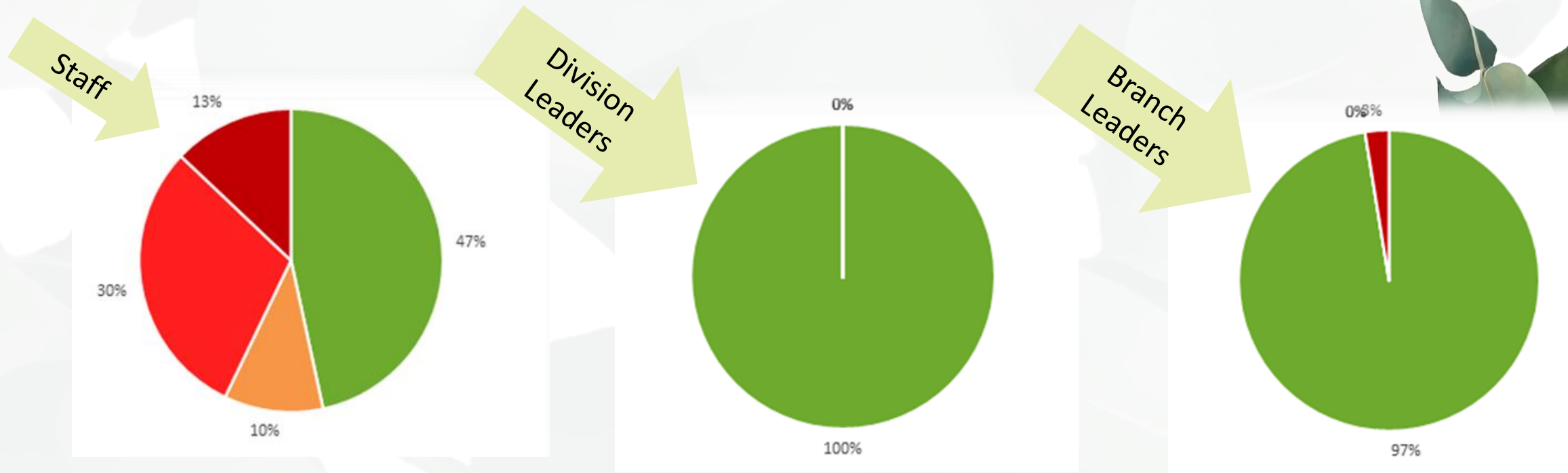
Staff

Division Leaders

Branch Leaders

David et al., 2022

PSC Smiley Face Tool

8.
Future Work Recommendations

Future Work Recommendations

- PSC assesses organisations systems for managing psychosocial risks.

- PSC could be regulated since it is an evidenced-based risk, predictive of future hazards and health effects

- PSC could be used as a KPI for universities (one Victorian university looks set to implement this)

- PSC could be built into enterprise bargaining

- PSC can be used to evaluate implementation of new psychosocial regulations

- Build evidence to link PSC to physiological pathways

- Workers compensation—occupational physicians and GPs assess PSC for any presenting worker

- More research with EAPs to expand their repertoire

- Research on feedback mechanisms to improve PSC (Real-time PSC Smiley Face)

- Data Linkage—survey to WC data, Health date, PBS data

- Expanded tool to assess the hazards for risk assessment

A sector wide response is needed given the data we have

Thank you!

Contact Us

PSC Global Observatory

Australian Government
Australian Research Council

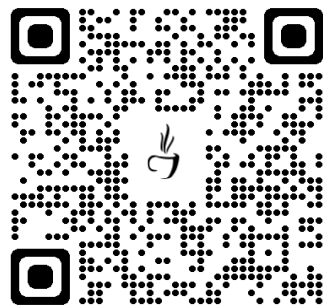University of South Australia | Centre for Workplace Excellence

in Psychosocial Safety Climate Global Observatory

stresscafe.net

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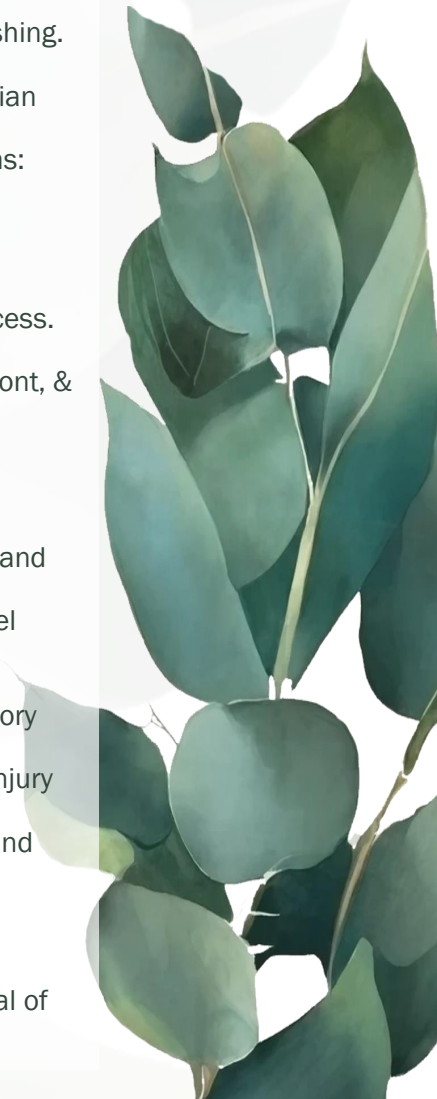
PSC Publications

Books/Book Chapters

Dollard, M.F., Dormann, C., & Idris, A. (2019). Psychosocial Safety Climate; A new work stress theory, Dordrecht; Springer International Publishing

Dollard, M. F. (2019). The PSC-4; A Short PSC Tool. In Dollard, M. F., Dormann, C., & Idris, M. A. (Eds.), Psychosocial safety climate: A new work stress theory (pp. 385-409). Cham, Switzerland: Springer Nature Switzerland AG

Dollard, M.F., Shimazu, A., Nordin, R. Bin, Brough, P., Tuckey, M.R (Eds.), (2014). Psychosocial Factors at Work in the Asia Pacific. Dordrecht; Springer International Publishing. 978-94-017-8974-5

Dollard, M.F. & Bailey, T. S. (Eds)., (2014). Australian Workplace Barometer: Psychosocial Safety Climate and working conditions in Australia, Samford Valley QLD; Australian Academic Press

Bailey, T., Pignata, S., & Dollard, M.F. (2014). 'Psychosocial interventions and worker wellbeing'. In Ronald J. Burke and Astrid M. Richardsen, Corporate wellness programs: Linking individual and organizational health

Edward Elgar Publishing Ltd

Pignata, S., Biron, C., Dollard, M.F. (2014). Managing psychosocial risks in the workplace prevention and intervention, In Peeters, M. et al (Eds). An introduction to contemporary work psychology, 393-413.

Dollard, M.F. (2011). Psychosocial safety climate: A lead indicator of work conditions, workplace psychological health and engagement and precursor to intervention success. In Managing psychosocial risks in the workplace: The role of process issues. In Eds C. Biron, M. Karanika-Murray, & C. L. Cooper, Publisher: Routledge/Psychology Press.

Dollard, M.F., & Karasek, R. (2010). Building psychosocial safety climate: Evaluation of a socially coordinated PAR risk management stress prevention study. In J. Houdmont, & S. Leka (Eds). Contemporary occupational health psychology: Global perspectives on research and practice, (pp. 208-234). Chichester: Wiley Blackwell.

Refereed Journal Articles

Dollard, M.F., & Bailey, T. (2021, in press). Building Psychosocial Safety Climate in Turbulent Times; The Case of COVID-19, Journal of Applied Psychology.

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