



University of  
South Australia

The Asia Pacific Centre for  
**Work Health  
and Safety**

Closing the Loop 2017

# Psychosocial Factors at Work: Worker Health vs Productivity



Matryoshka dolls

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# Fat Cat Wednesday 2017

Welcome back to work. FTSE100 bosses will have already clocked up an average annual UK salary by lunchtime today.

"Over a thousand pounds an hour..."

## Fat Cat Wednesday 2017

- Top bosses will already have made more money by the first Wednesday of 2017 than the typical UK worker will earn all year
- The average pay ratio between FTSE100 CEOs and the average total pay of their employees in 2015 was 129:1
- Making the publication of pay ratios compulsory will help track progress on closing this gap

It's Fat Cat Wednesday (4.1.2017). After just two and a half days Britain's top bosses will have made more money than the average UK worker earns in an entire year, according to High Pay Centre calculations.



## Pay counter

Since 1 January 2017 the average FTSE 100 CEO has earned:

£ 2 3 4 3 2

How does your pay compare?



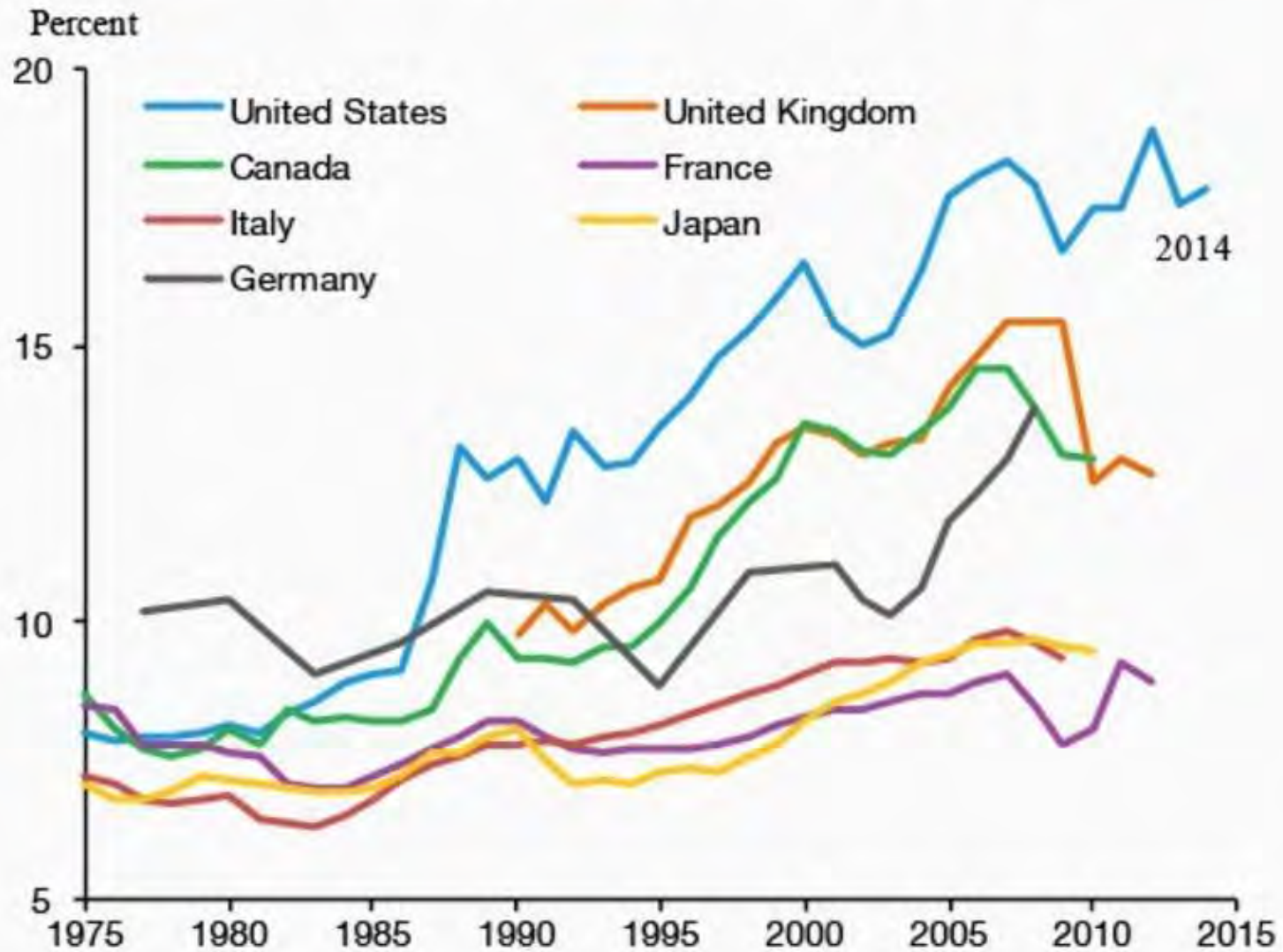
Get the full facts – our partner project

Income inequality in the UK

[HTTP://HIGHPAYCENTRE.ORG](http://highpaycentre.org)

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**Figure 1.** Share of income earned by top 1%, 1975-2014



Note: Data for all countries exclude capital gains.

Source: World Wealth and Income Database (Alvaredo et al. 2015).

# Changes and Challenge

- Maintaining a mentally healthy and productive workforce in a global competitive economy is a big challenge for Australia and other capitalist economies.
- Productivity improvement approaches emphasise reducing inefficiencies, increasing work pressure, reducing job security, and stabilising or reducing wages while bolstering CEO salaries and increasing profits and shareholder value.
- For workers these approaches are likely accompanied by reduced meaningfulness of work, decrements to worker health, increased psychological distress, increased workplace bullying, work-family conflict, and workers compensation costs.
- Yet these developments are at odds with health and safety as a fundamental human right, and the most basic ethic of “do no harm”.

# Outline

1. State of Affairs
2. Causes of Work Stress
3. PSC Theory and Evidence
4. The Value of PSC- The Human and Economic Case
5. Where Does PSC Come From?
6. Solutions-What Can Be Done?



# 1. State of Affairs

- Under the *Work Health and Safety Act 2011* (WHS Act), managers must take reasonable action to identify, assess and control exposure to hazards and risks (both physical and psychological).
- It is therefore important that we monitor and address psychosocial hazards and risks in the workplace.
- This is critical for maintaining the wellbeing of individual employees, and also for ensuring workplaces are as productive and high performing as possible

# The nested nature of reality



- The focus has been largely on the individual-resilience
- My argument need to look at the context, person, nested in a job, in an organisation, in a society (one inside the other)
- Likely to have a more far reaching effect on worker health and productivity if look at sources further upstream than job design and individual factors



# Cost of Work Stress

- Mental stress claims in the Australian Public Service, 88% increased 88% from 2009 to 2014 (Comcare (2015)).
- Stress claims accounted for 13% of claims but 43% of costs
- Average cost of \$291,000 (22% exceeded \$500,000).
- Only increase in the frequency of serious claims since 2000-01 is mental disorders (Safe Work Australia, 2017)
- Mental health conditions cost to Australian businesses is nearly \$11 billion per year due to absenteeism , presenteeism and compensation claims (Pricewaterhouse Cooper, 2014).

# Cost of Work Stress

- Beyondblue, astonishing statistics in *The State of Workplace Mental Health in Australia* (beyondblue, 2014):
- Only 52% of Australian workers consider their workplace to be mentally healthy; 56% believe that their most senior leaders value their mental health.
- Mental and physical health problems, cardiovascular disease, depression, suicide.

## 2. Causes of Work Stress

- An inevitable problem in a growth & competition, economic model



# Frontline Healthcare Workers

“I’ve been nursing for nearly 40 years and I think that the pressure over those years outweighs the rewards, but it is still a rewarding career, and its very collegial. But there’s certainly one day out of ten that I would say; ‘jee, I feel really great today, I’ve had a lovely day, and my patients really loved me, and thanked me,’ and I’ll have nine days out of ten where I’ll say; ‘I felt pressured today, I felt unsafe at times, I felt overworked, and my patients were lashing out at me..’ and I’m the person that takes the brunt of that home at the end of the day..”

• **Full title:** “The dynamic interplay of physical and psychosocial safety in frontline healthcare workplaces in Australia and Malaysia” **Investigators:** Prof Maureen Dollard; Dr Michelle Tuckey; Prof Peter Chen; Prof Bill Runciman; Dr Sharon Morton; Ms Mardi Webber, and; Dr Awang Idris; **Participating Organisations and Groups:** University of South Australia; SafeWork SA; University of Malaya; Southern Adelaide Local Health Network; Flinders Medical Centre, and; Calvary Health Care Group.

# What worker characteristics are required for these 'dispossessed' environments?

- According to a managing director of an Australian call centre there are two types of people who make successful cold callers
  - 1) extroverts because they thrive on interactions with others, and
  - 2) psychopaths because they are not emotionally hurt by constant rejection (Warne-Smith, 2006).
- Should we select for these characteristics?
- How are we to work in such environments?

Warne-Smith, D. (2006). Confessions of a cold caller. *The Weekend Australian Magazine*, April 29-30, 16-20.

# Multi-level model of psychosocial factors at work (Dollard, 2013)

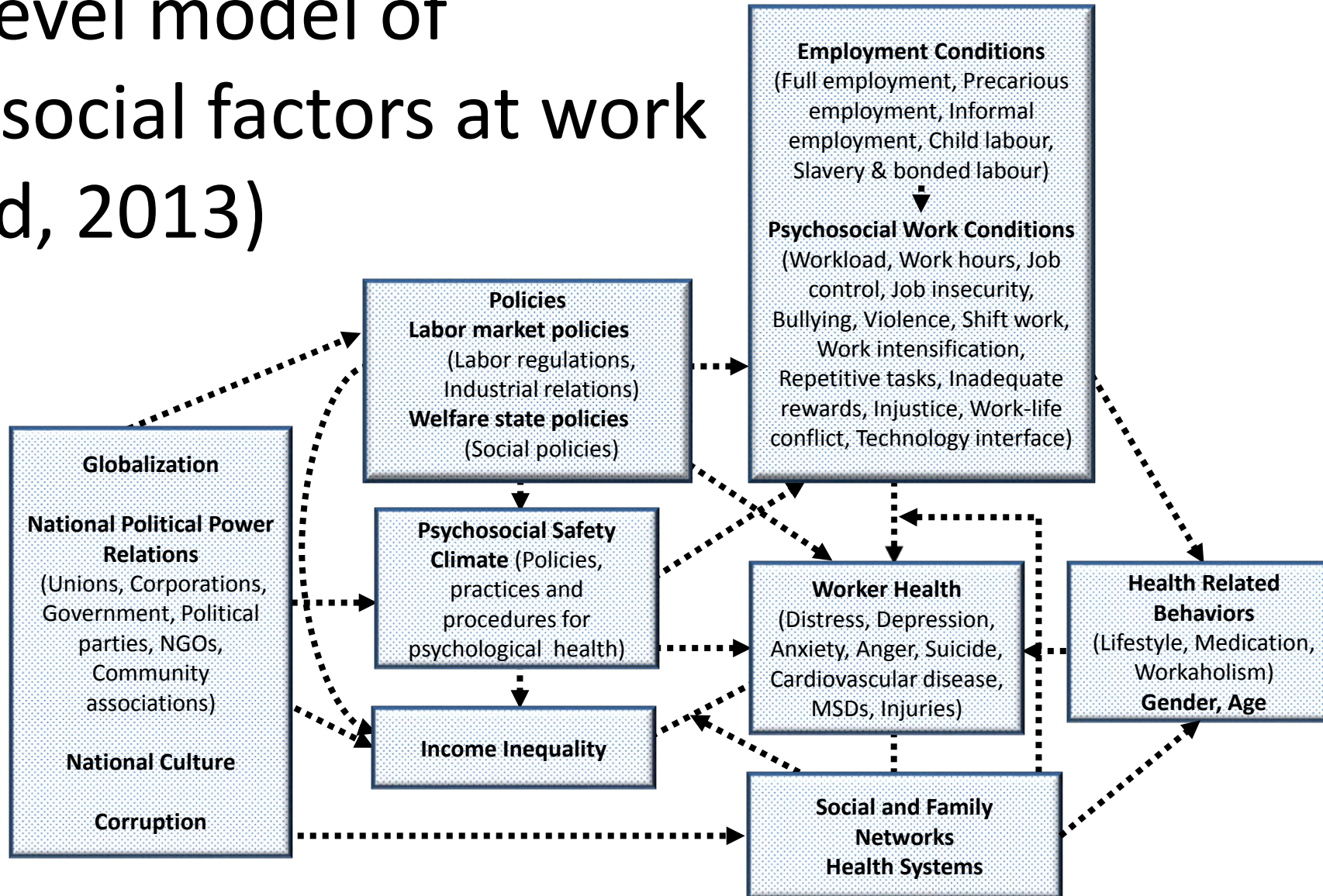
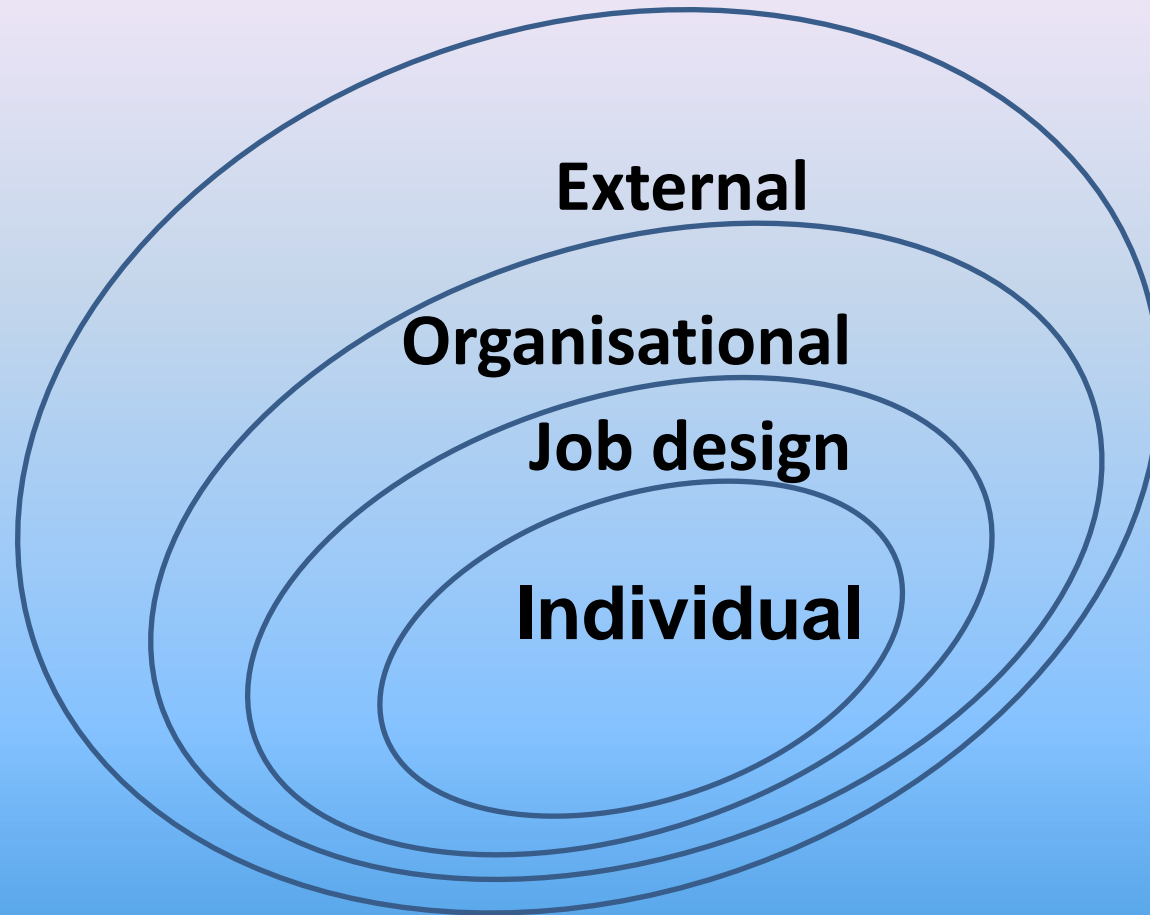


Fig. 1.3

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



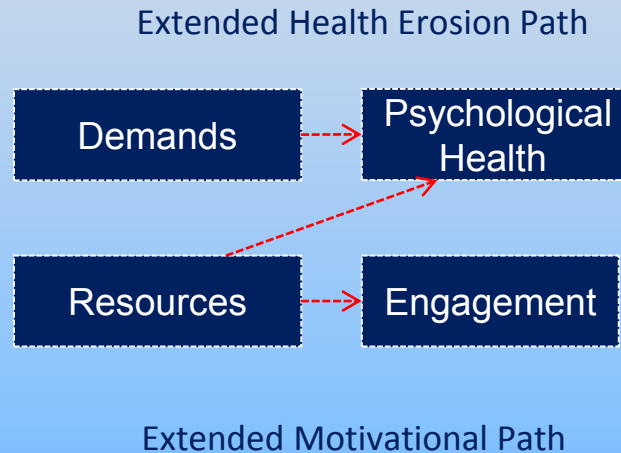


Layers of influence on worker health

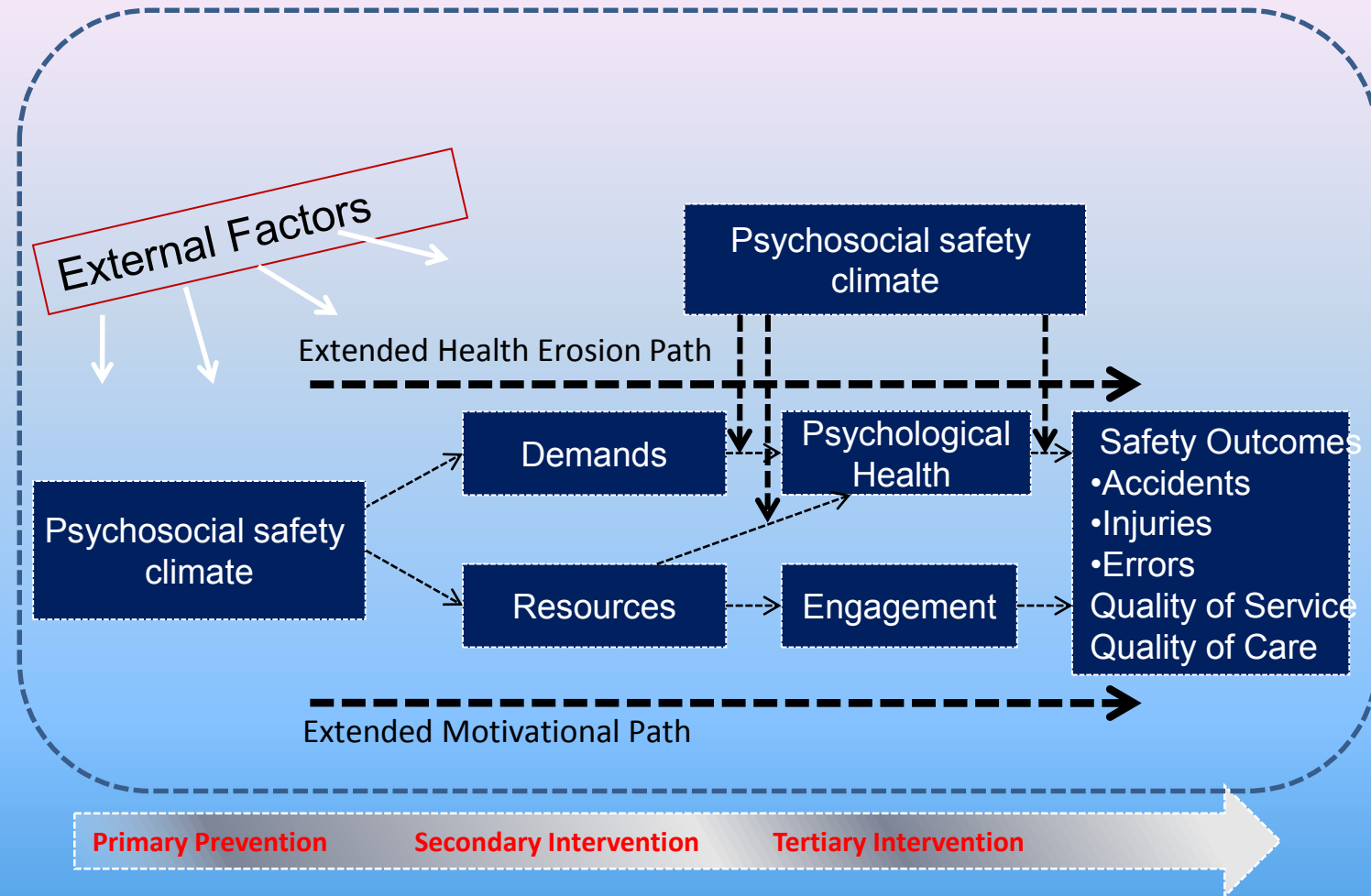
# The Cause of the Causes

?

Where does  
job design come from



Job Demands-Resources Model  
Demerouti, Bakker et al., 2001



# Psychosocial safety climate: a multilevel theory of work stress in the health and community service sector

M. F. Dollard\* and W. McTernan



# 3. PSC Theory and Evidence

# Psychosocial Safety Climate

*Psychosocial safety climate (PSC)* refers to shared perceptions regarding policies, practices, and procedures for the protection of worker psychological health and safety

Competing Values—worker health, a balance of productivity and worker health





# PSC Ingredients

## **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

## **Priority**

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

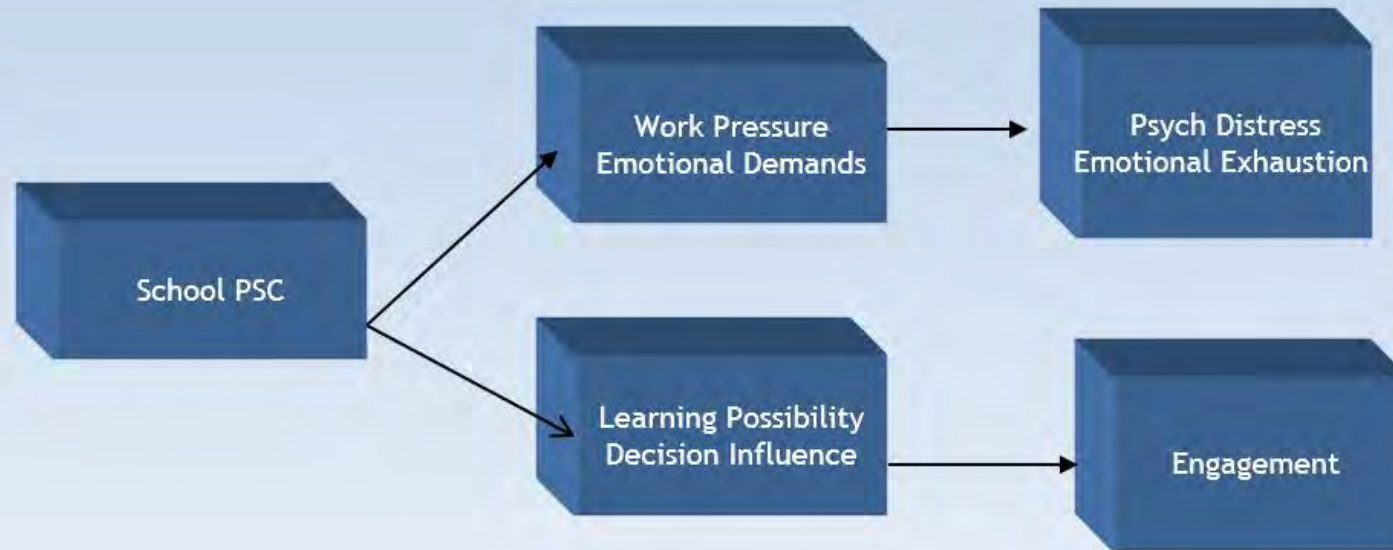
## **Communication**

7. There is good communication here about psychological safety issues which effect 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 organization are listened to

## **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 organization, the prevention of stress involves all levels of the organization

# the Evidence

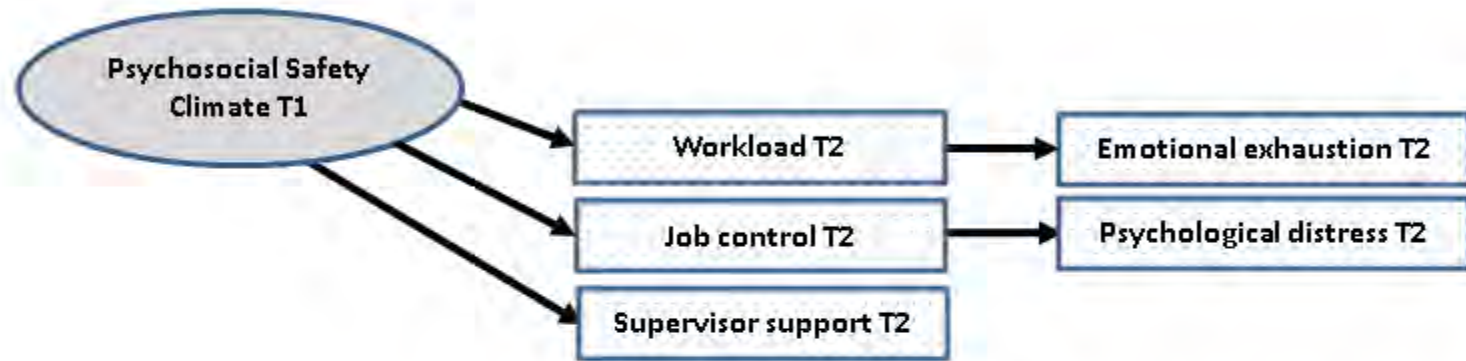


Controls for Time 1 Dependent measures

N = 262 Time1; N = 196, Time 2  
18 schools

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## Psychosocial safety climate as an antecedent of work characteristics and psychological strain: A multilevel model



Between-groups Effects

Sample T1 (N = 202)	Sample T2 (N = 163)
------------------------	------------------------

- Independent samples matched by work unit (N = 48)
- Time 1 → Time 2 24 months

### Main effects and mediation model

(2012). Maureen F. Dollard, Tessa Opie, Sue Lenthall, John Wakerman, Sabina Knight, Sandra Dunn, Greg Rickard & Martha MacLeod



# Bullying

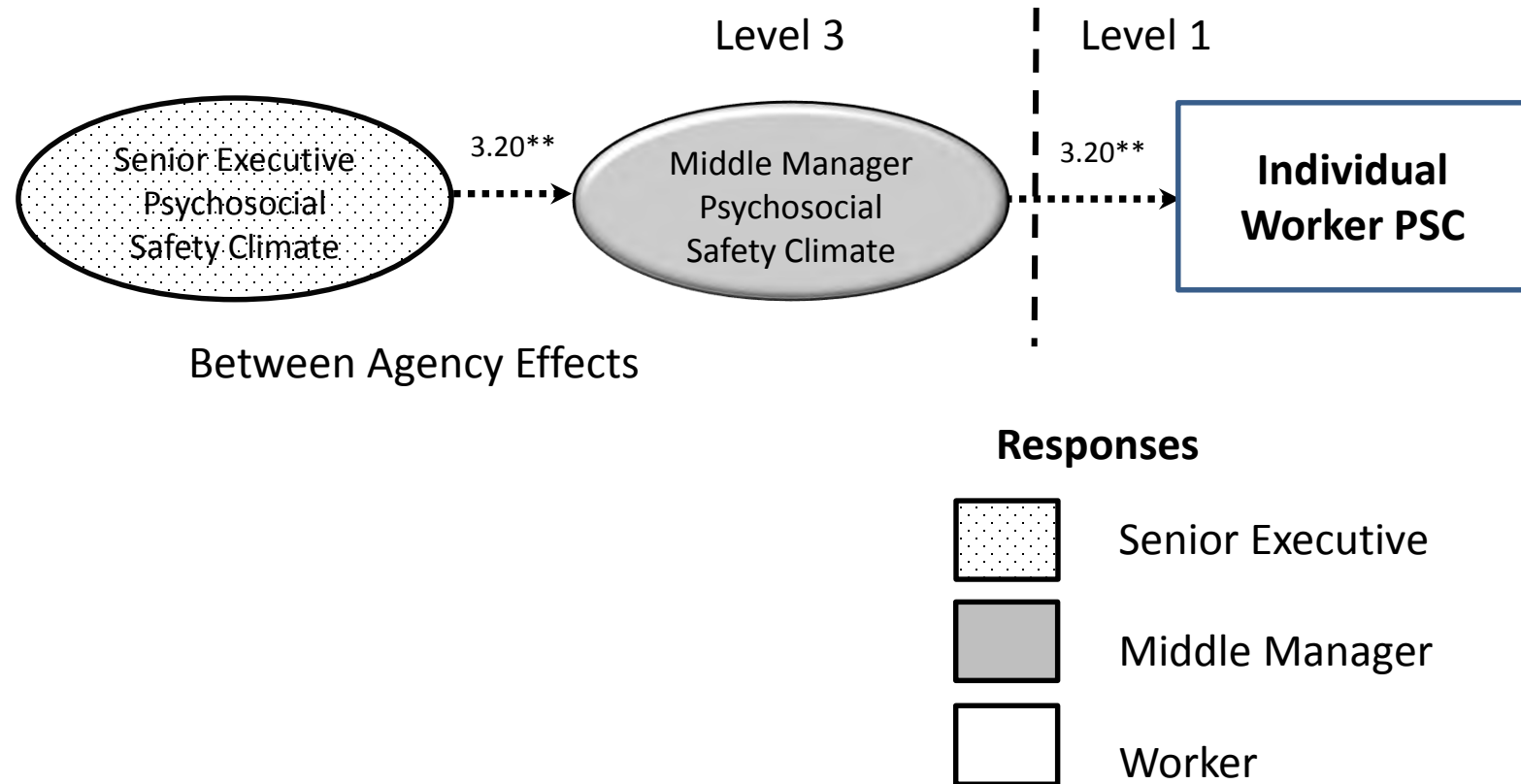
- PSC predicts bullying—mainly perpetrated by managers—productivity hypothesis
- PSC predicts bullying prognosis (e.g., resolution vs leave job)
  
- Potter, R., **Dollard, M. F.**, & Tuckey, M.R. (2015). Bullying & harassment in Australian workplaces: Results from the Australian Workplace Barometer Project 2014/2015, Safe Work Australia, [www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au)



# Psychosocial safety climate, emotional exhaustion, and work injuries in healthcare workplaces

- 214 SA hospital employees (18 teams)
- PSC team level was significantly negatively related to registered team work injury rates.
- And under-reporting
- Only 36% concordance rate between registered and self-reported injuries

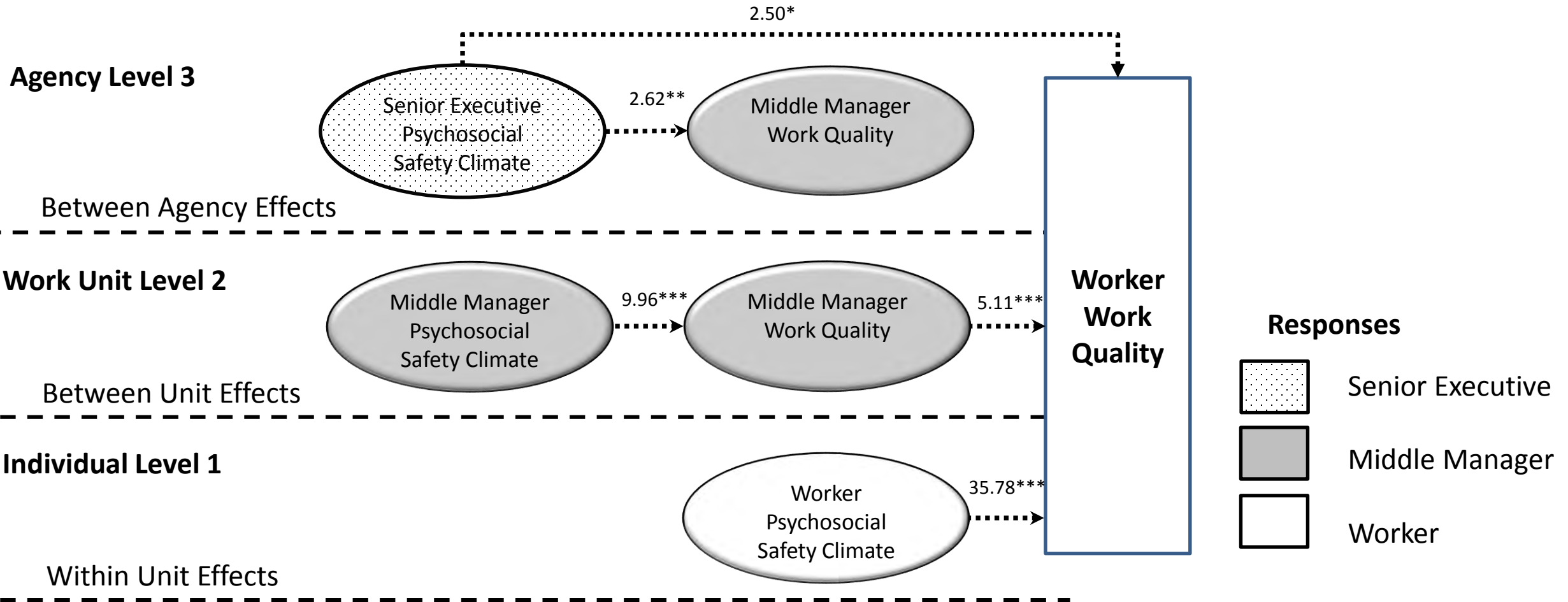
# Psychosocial Safety Climate; Cross-level effects



25 agencies, 394 work units.

268 senior executives, 1895 middle managers, 4815 workers.

# Psychosocial Safety Climate and Work Quality



21 agencies, 394 work units.

268 senior executives, 1895 middle managers, 4815 workers.

# Safety Signal (interactive) Effect of PSC

Contents lists available at SciVerse ScienceDirect

Accident Analysis and Prevention

journal homepage: [www.elsevier.com/locate/aap](http://www.elsevier.com/locate/aap)



Psychosocial safety climate moderates the job demand–resource interaction in predicting workgroup distress

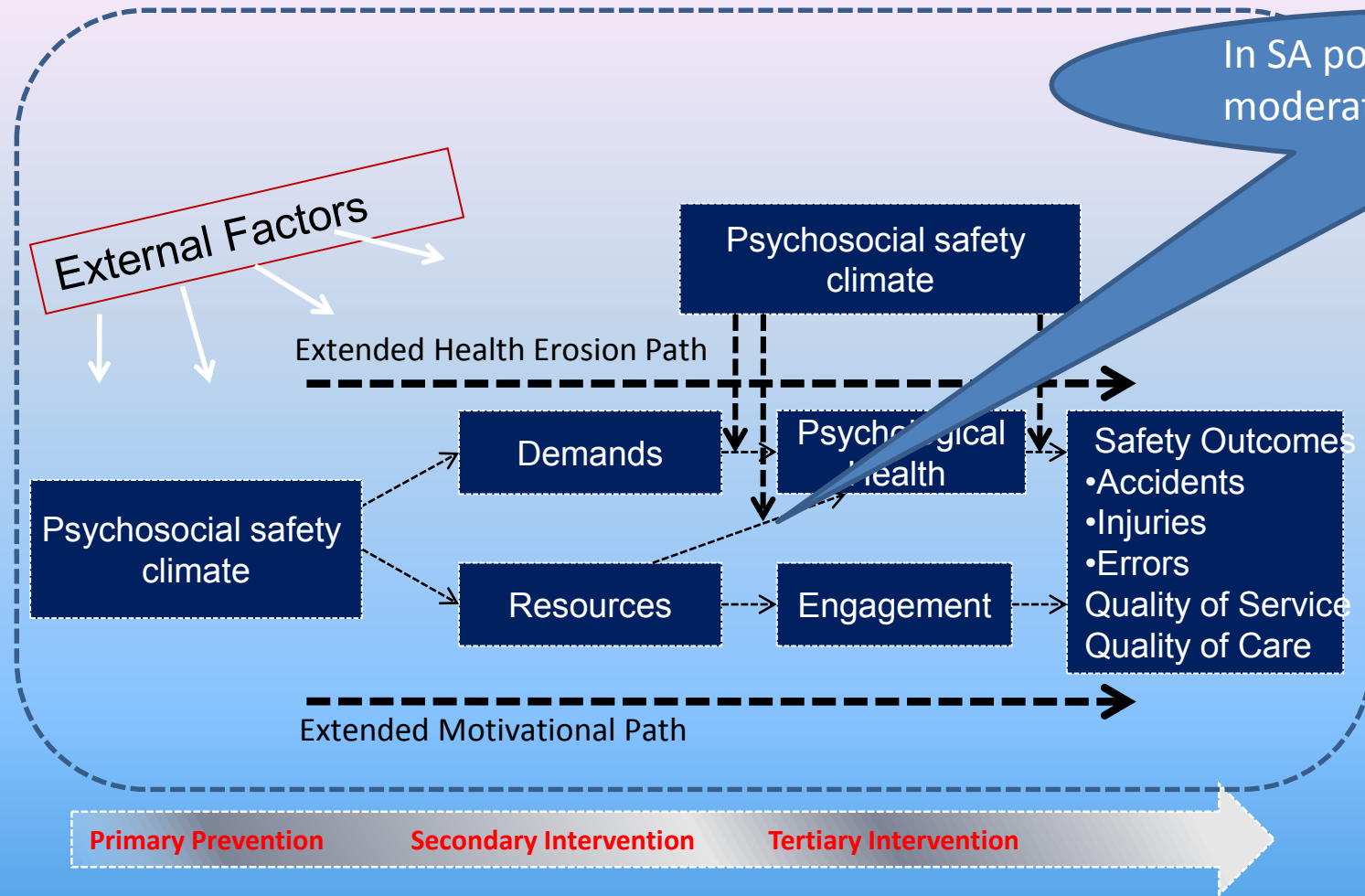
Maureen F. Dollard<sup>a,\*</sup>, Michelle R. Tuckey<sup>a</sup>, Christian Dormann<sup>a,b</sup>

<sup>a</sup> Work & Stress Research Group, Centre for Applied Psychological Research, School of Psychology, Social Work and Social Policy, University of South Australia, Magill Campus, Adelaide, South Australia, Australia

<sup>b</sup> Psychologisches Institut der Johannes Gutenberg-University, 55122 Mainz, Germany

- Tests a three-way interaction
- *Demands X resources (in the context of PSC)*





*Epidemiology and Psychiatric Sciences* (2011), 00, 1–7. © Cambridge University Press 2011  
 doi:10.1017/S2045796011000588

EDITORIAL

# Psychosocial safety climate: a multilevel theory of work stress in the health and community service sector

M. F. Dollard\* and W. McTernan

# Climate congruence: How espoused and enacted psychosocial safety climate affects emotional exhaustion

Yulita, Awang Idris, University Malaya, Maureen Dollard, University of South Australia  
Safety Science (In revision)

- 23 schools in Selangor, Malaysia
- 109 secondary school teachers across
- 545 diary data points - five consecutive days from

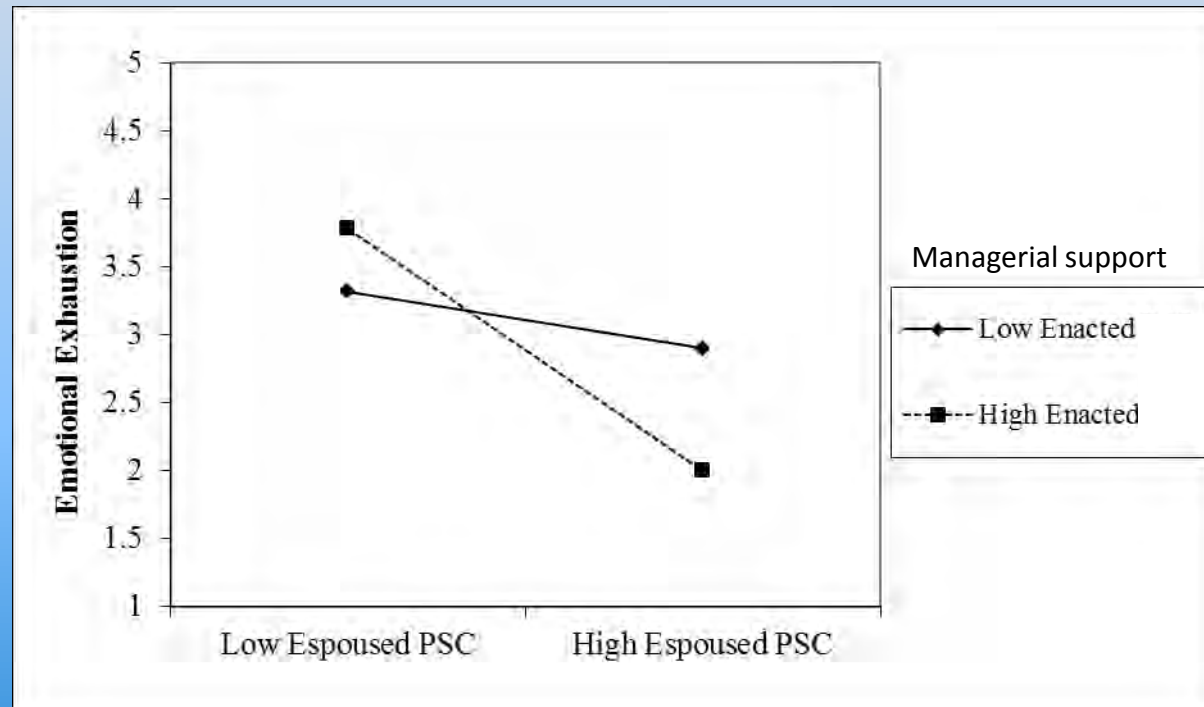


Figure. The interaction of espoused PSC and enacted managerial support predicting emotional exhaustion

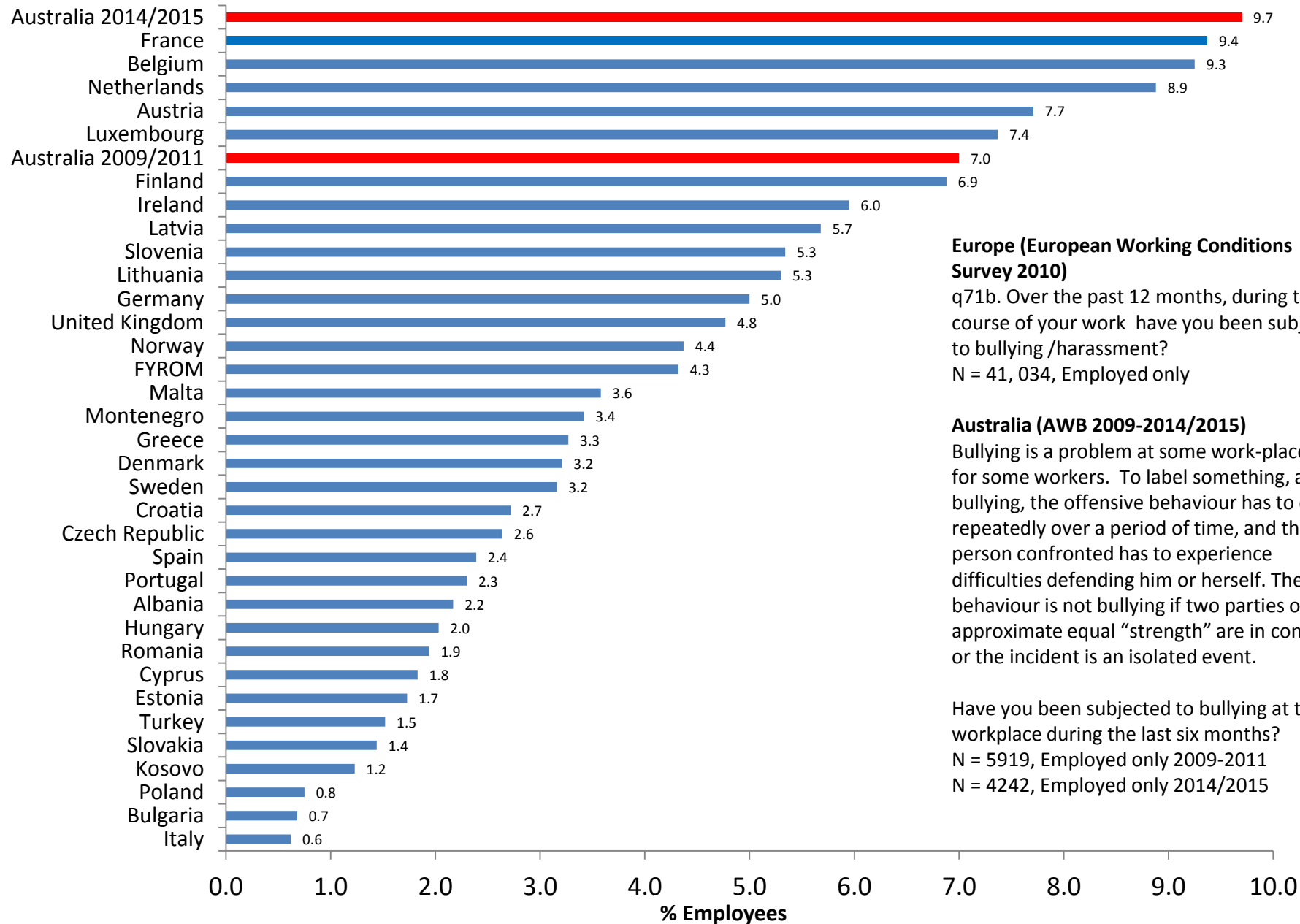
# 4. The Value of PSC- Human and Economic Case

# Australian Workplace Barometer

- National surveillance on working conditions among 7331 Australian workers, 3 waves of data
  - Repeated measures for 3916 participants
  - 2014/2015 data for 4242 Australia wide
- 
- Funded by Safe Work Australia, SafeWork SA, ARC Discovery Grant, ARC Linkage Grant



# Australian and European Bullying Rates



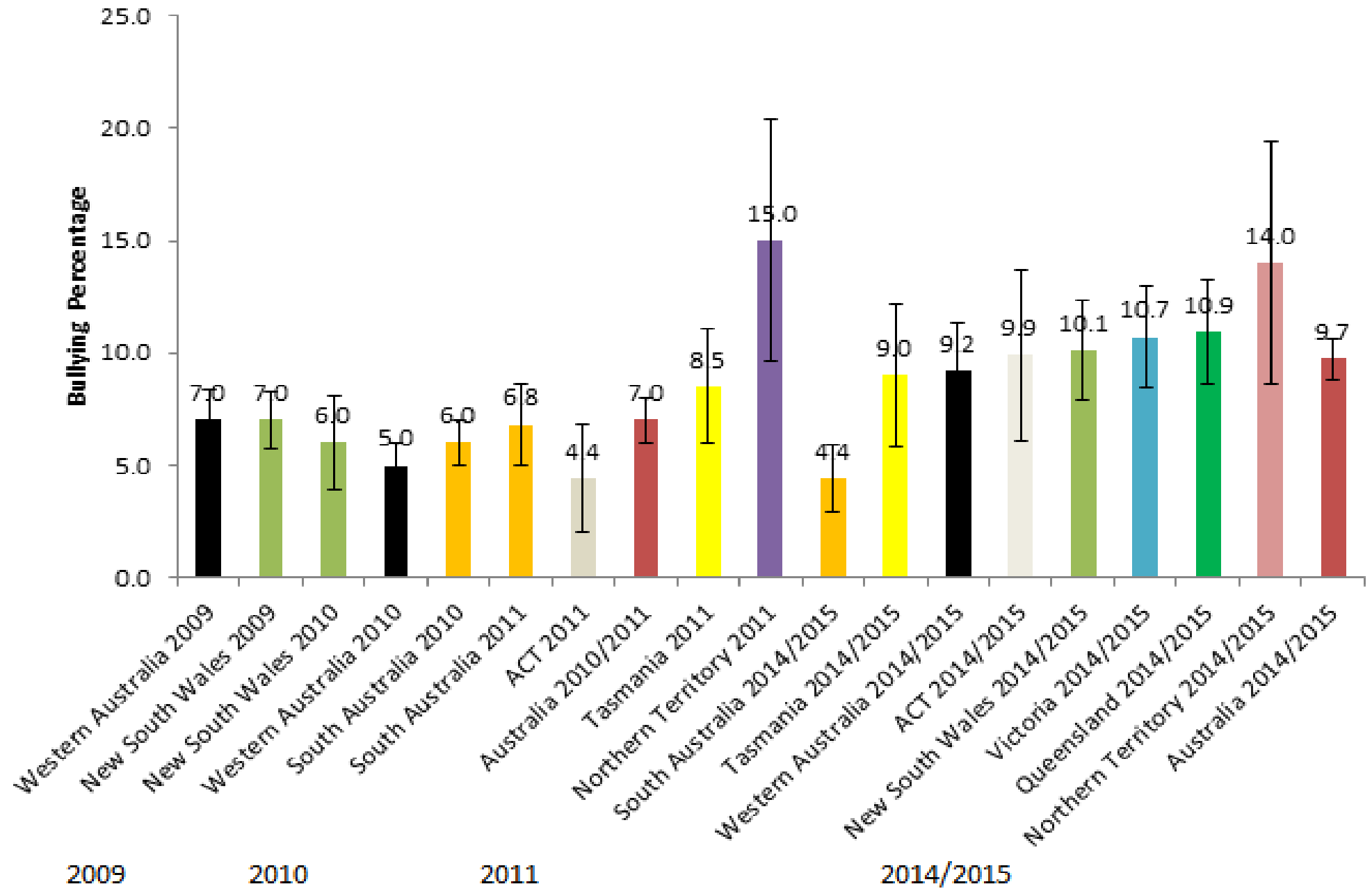
## Europe (European Working Conditions Survey 2010)

q71b. Over the past 12 months, during the course of your work have you been subjected to bullying /harassment?  
N = 41, 034, Employed only

## Australia (AWB 2009-2014/2015)

Bullying is a problem at some work-places and for some workers. To label something, as bullying, the offensive behaviour has to occur repeatedly over a period of time, and the person confronted has to experience difficulties defending him or herself. The behaviour is not bullying if two parties of approximate equal "strength" are in conflict or the incident is an isolated event.

Have you been subjected to bullying at the workplace during the last six months?  
N = 5919, Employed only 2009-2011  
N = 4242, Employed only 2014/2015



# A National Standard for Psychosocial Safety Climate (PSC): PSC 41 as the Benchmark for Low Risk of Job Strain and Depressive Symptoms

Tessa S. Bailey, Maureen F. Dollard, and Penny A. M. Richards  
University of South Australia



Journal of Occupational Health Psychology  
2015, Vol. 20, No. 1, 15–26

PSC Standards	Range 12 – 60	
Low risk PSC	41 or above	
Medium risk PSC	<b>38 – 40</b>	
High risk PSC	37 or below	(35% of respondents)

Elimination of low PSC –  
14% reduction in job strain  
16% reduction in depression

# Using PSC to estimate productivity loss

(Becher & Dollard, 2016)



Workers PSC	Annual sickness absence (hours)	Cost via sickness absence	Productivity Loss	Cost via presenteeism
Low	60.3	\$2,109	5.5%	\$3,113
Moderate	59.1	\$2,067	5.4%	\$3,042
High	42.3	\$1,479	3.2%	\$1,856

Becher, H., & **Dollard, M. F.** (2015). Psychosocial and human capital costs on workplace productivity, Safe Work Australia, [www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au)

# Using PSC to estimate productivity loss

(Becher & Dollard, 2016)

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

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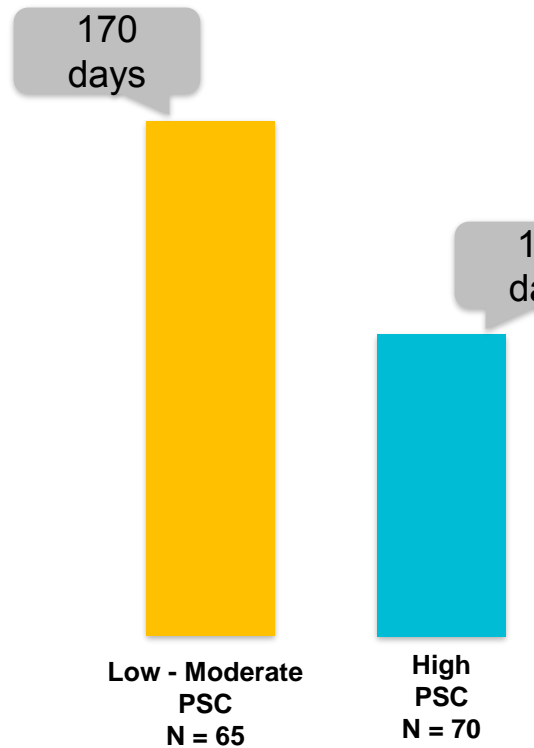
Cost of low PSC via sickness absence:	AUD 2.4 billion p.a.
Cost of low PSC via presenteeism:	AUD 3.6 billion p.a.
<b>Total cost of low PSC to employers:</b>	<b>AUD 6 billion p.a.</b>

Becher, H., & Dollard, M. F. (2015). Psychosocial and human capital costs on workplace productivity, Safe Work Australia, [www.safeworkaustralia.gov.au](http://www.safeworkaustralia.gov.au)



# PSC and workers' compensation in South Australia

Harry Becher and Maureen Dollard



Average days lost per workers compensation claim between SA companies

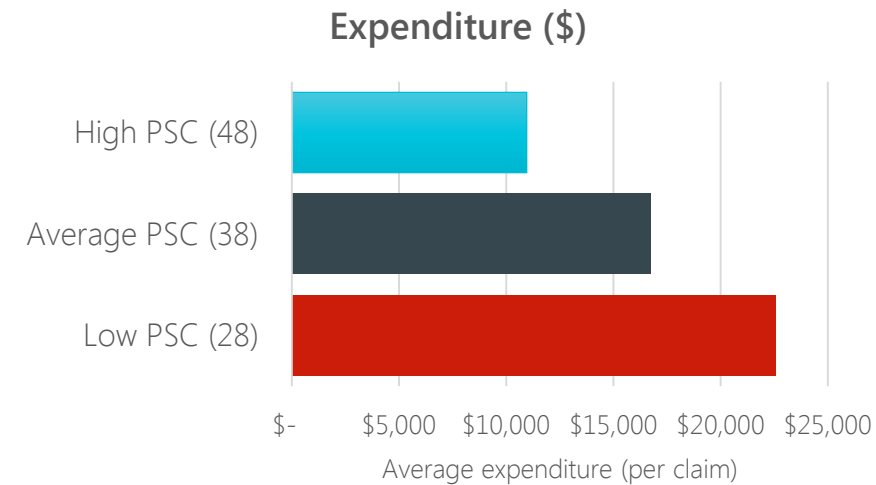
- Australian Workplace Barometer linked to workers' compensation claim data from Safework SA.
- Data were aggregated to the organisational level in both datasets.
- Matched data for 135 organisations.

- PSC has been dichotomized between low to moderate PSC ( $PSC < 41$ ) and high PSC ( $PSC \geq 41$ ).
- PSC was measured in 2010, workers compensation claims include those made between 2010 and 2015.
- Days lost was log transformed to meet the assumption of normality for inferential testing.
- Only includes claims with lost days.
- Organisations with low or moderate PSC significantly more average days lost per workers compensation claim than high PSC  $t(133)$  Cohen's  $d = 0.35$ .

# PSC and Workers' Compensation in South Australia

Harry Becher and Maureen Dollard

39



## PSC and Workers' Compensation Expenditure

PSC levels in organisations (AWB data) is significantly linked to Expenditure in SafeWork SA data.

The average compensation claim in SA is \$16,753.

The average PSC in this sample was 38.

Each PSC point above 38 can save approximately \$580.

In a company with low PSC of 28 we expect average claim cost of \$22,550.

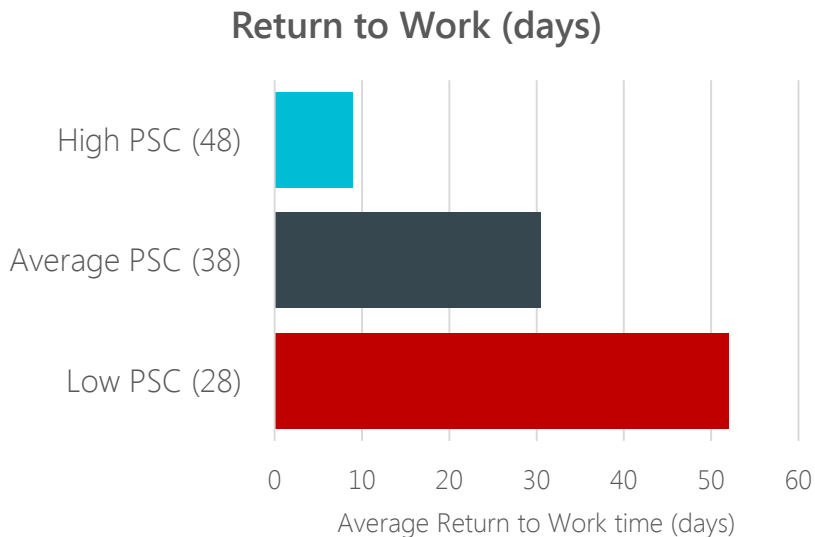
In a company with a high PSC of 48 we expect average claim cost of \$10,955.

The really amazing thing about this research is that we can predict future WC Expenditure by knowing about company PSC

# PSC and workers' compensation in South Australia

Harry Becher and Maureen Dollard

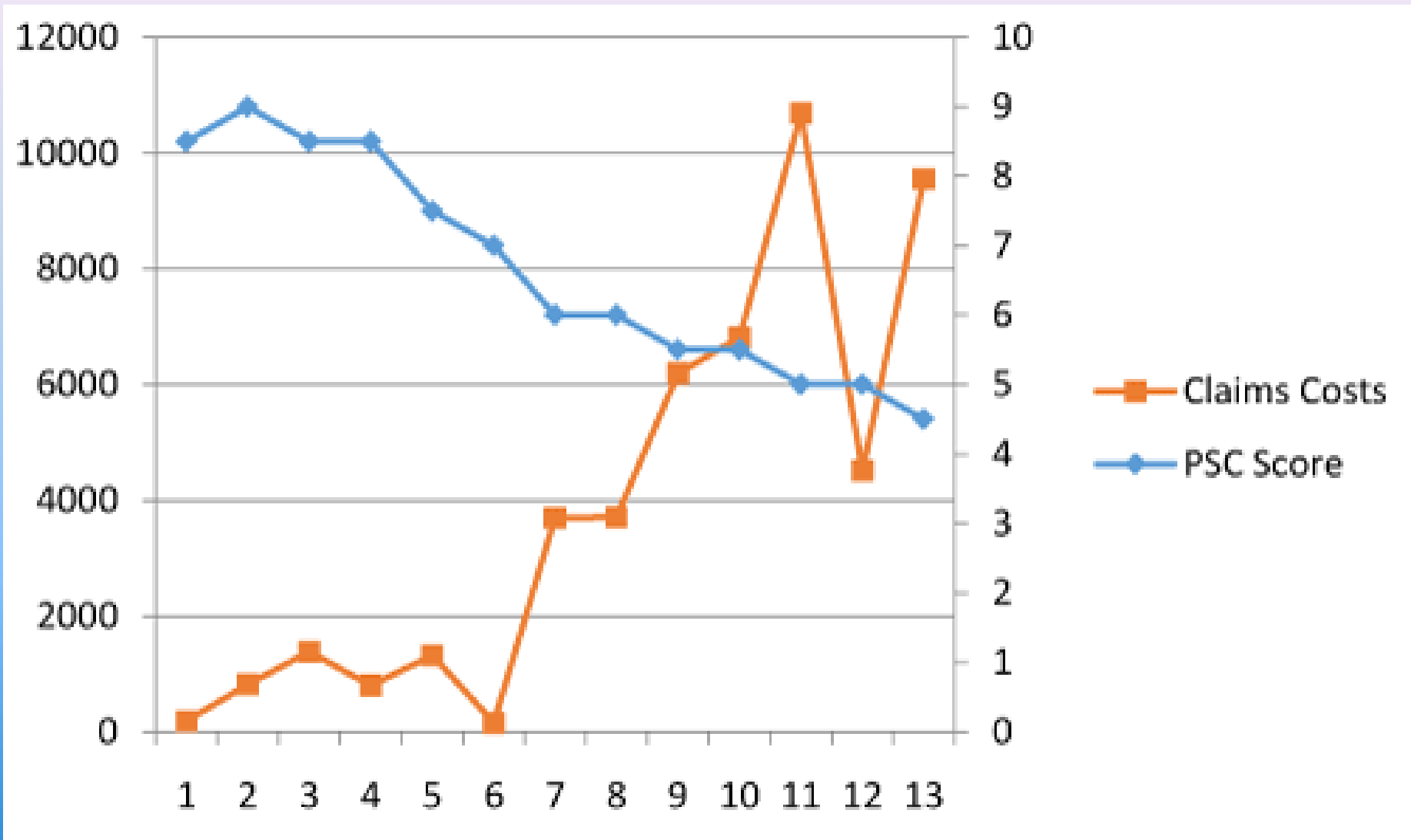
40



## PSC and Return To Work Time

- PSC level in organisations (AWB data) is significantly linked to Return To Work Time (Safework SA data)
- The average Return To Work time in SA is 30.5 days.
- Each PSC point above 38 we expect will save approximately 2.16 RTW days.
- In a company with a low PSC of 28 we expect average RTW 52 days.
- In a company with a high PSC of 48 we expect an average RTW 9 days.

The really amazing thing about this research is that we can predict future RTW and expenditure by knowing about company PSC



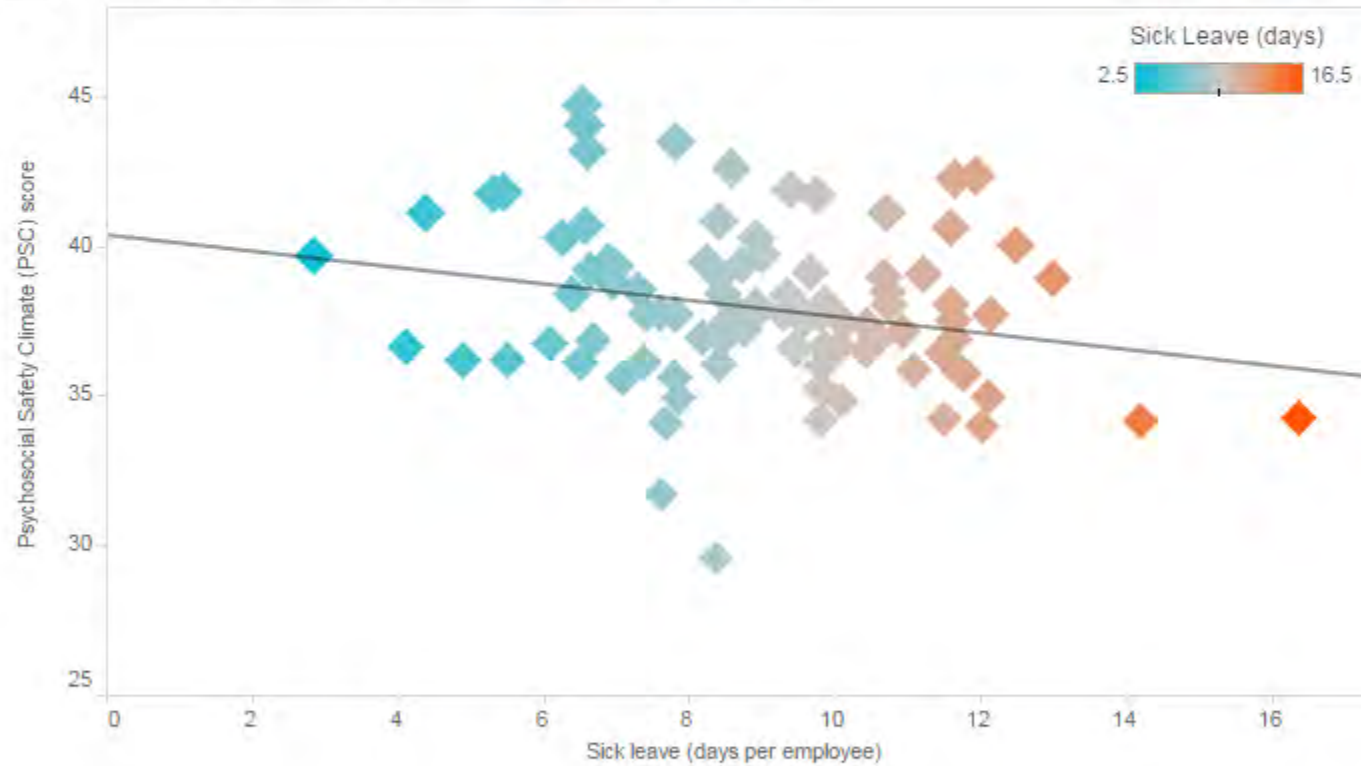
**Citation:** Winwood PC, Bowden R, Stevens F (2013) Psychosocial Safety Climate: Role and Significance in Aged Care. *Occup Med Health Aff* 1:135. doi: 10.4172/2329-  
maureen.dollard@unisa.edu.au

workgroups about what constitutes appropriate leave behaviour, and timely support for managers from corporate areas on managing attendance in the workplace are also important factors.

## Interactive Chart: Sick leave and Psychosocial Safety Climate score



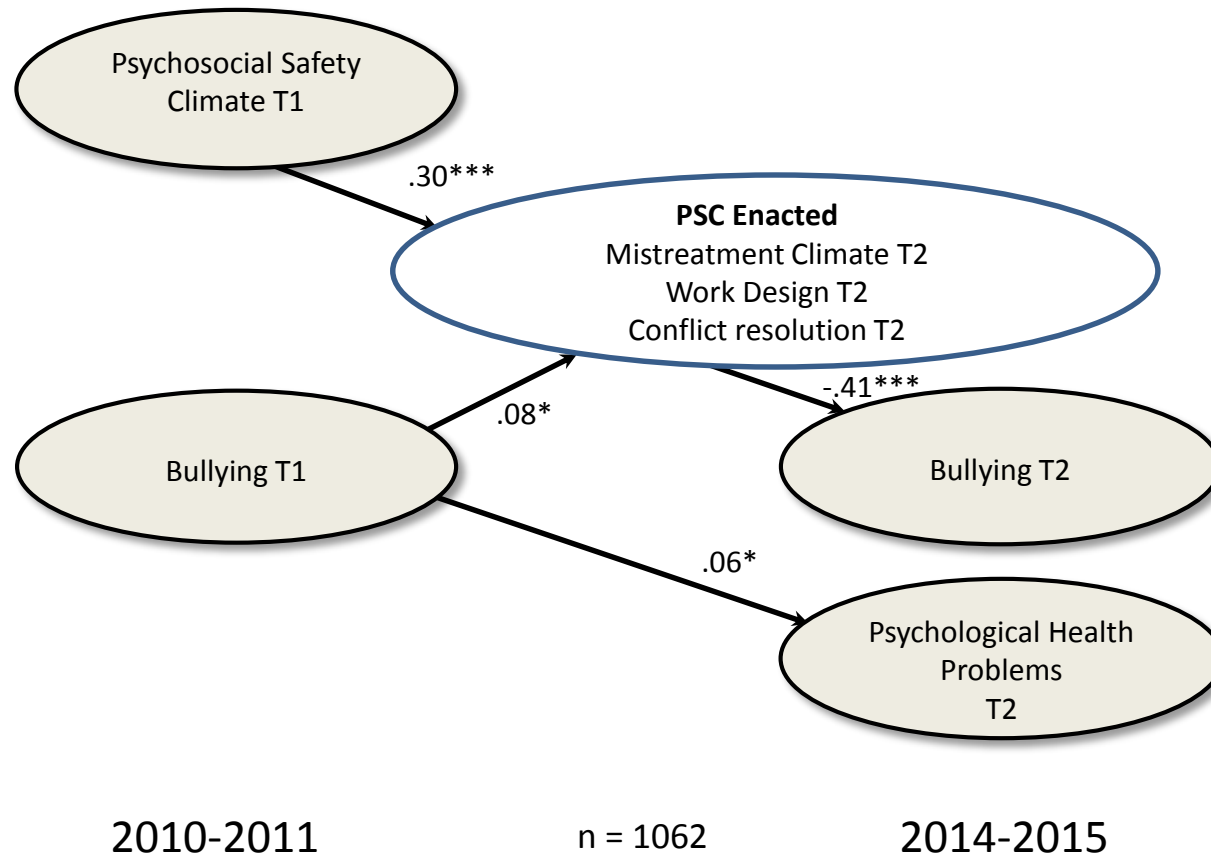
Learn more about this chart: [view data for Figure 4.](#)



This is an interactive chart: hover over the coloured diamonds to view data.

A correlation exists between the PSC score for an agency and the number of sick leave days taken by their





# Predicting Happiness in Australian Workers Over 5 years, 2014-2015 (National Sample)

2009-2010	B	SE	Beta	t	p
(Constant)	5.99	0.36		16.61	.000
Age	0.00	0.00	0.00	0.06	.949
Gender	0.09	0.08	0.03	1.11	.268
Psychosocial Safety Climate	0.02	0.00	0.15	4.78***	.000
Bullying	-0.06	0.02	-0.10	-3.51***	.000
Skill Discretion (Control)	0.02	0.01	0.07	2.28*	.023

Gender, 1 = Males, 2 = Females

N = 1139

## Starting PSC Levels affects Interventions

	Psychosocial safety climate T2
Sessions attended T2	.63**
Workshop quality T2	.21
Intervention quality T3	.68**
Intervention progress T3	.60**

Outstanding is the question...  
6. Where does PSC come from?

The cause of the cause of the cause

The context

# Psychosocial Safety Climate-Across Countries

Using the ESENER data 28 000 establishments > 10 employees—most senior OSH managers. Questions were:

“Does your establishment have a procedure to deal with,

1. work-related stress;
2. bullying or harassment;
3. work-related violence?”;
4. “What about the role of employees: Have they been consulted regarding measures to deal with psychosocial risks?” and
5. “Are employees encouraged to participate actively in the implementation and evaluation of the measures?”

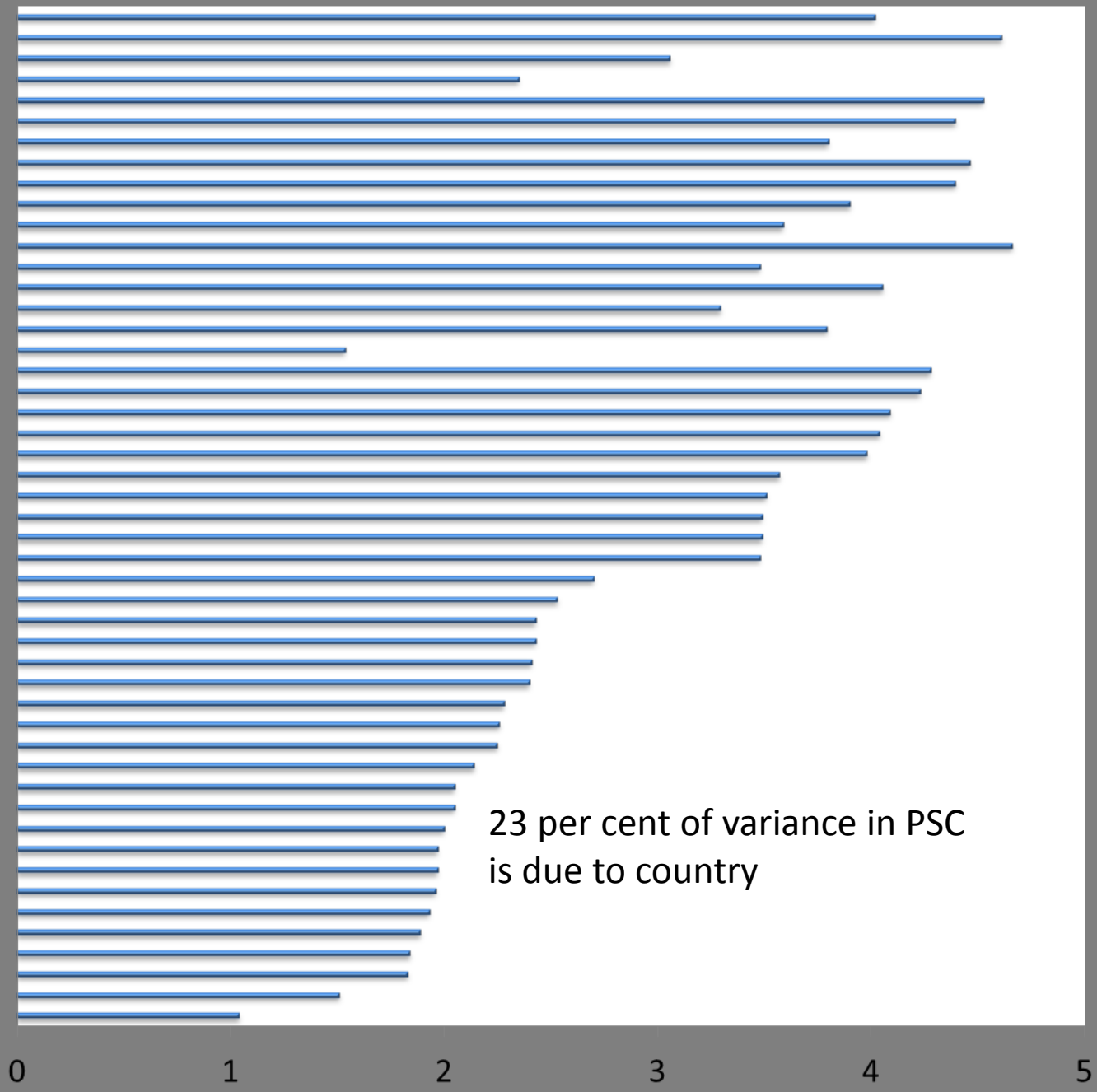
Alpha was .87.

**South Australian Industry**

- Wholesale trade
- Transport and storage
- Retail trade
- Property and business services
- Personal and other services
- Mining
- Manufacturing
- Health and community services
- Government administration and defense
- Finance and insurance
- Electricity, gas and water supply
- Education
- Cultural and recreational services
- Construction
- Communications services
- Agriculture, forestry and fishing
- Accommodation, cafes and restaurants

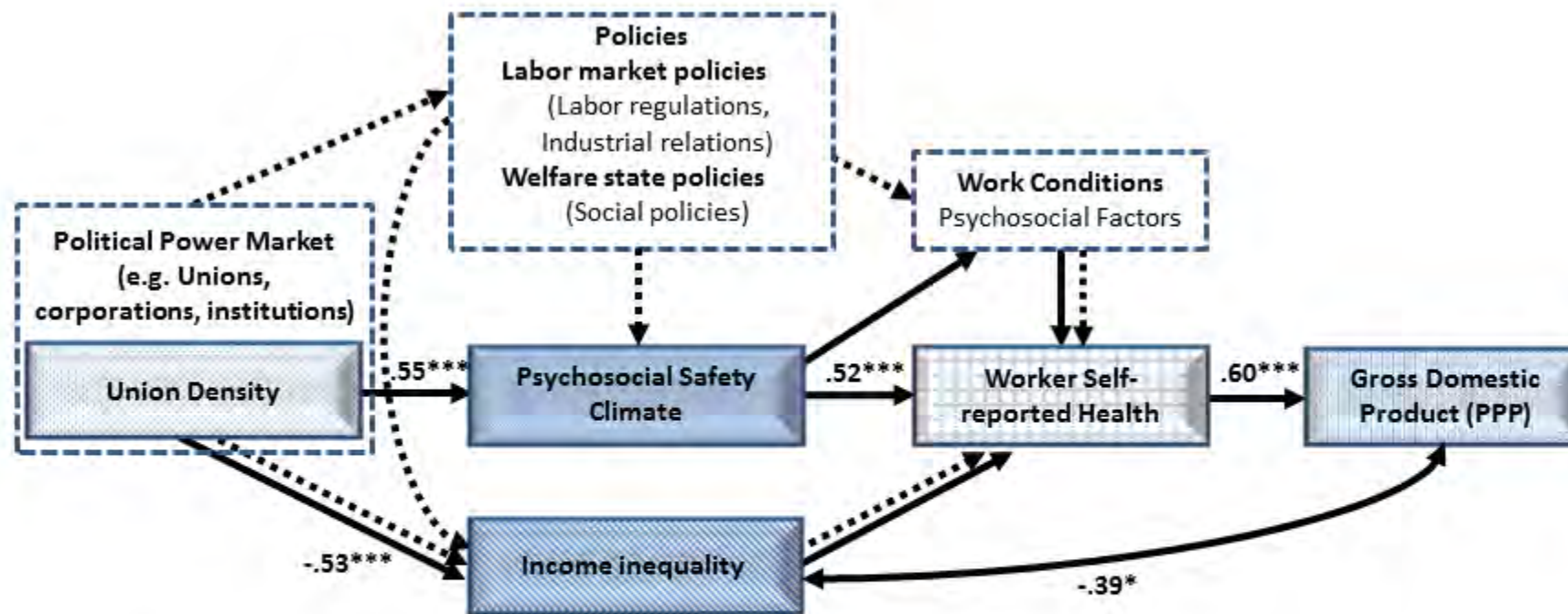
**Country**

- Sweden
- Ireland
- South Australia
- Finland
- United Kingdom
- Denmark
- Norway
- Belgium
- Croatia
- Netherlands
- Romania
- Switzerland
- Malta
- Luxembourg
- Bulgaria
- Spain
- Turkey
- Austria
- Slovakia
- Slovenia
- Germany
- Greece
- France
- Latvia
- Portugal
- Lithuania
- Cyprus
- Italy
- Poland
- Czech Republic
- Hungary
- Estonia



23 per cent of variance in PSC is due to country





-----> proposed by Benach et al., 2007

————> tested empirically

Solid boxes reflect the final model, different shades reflect different data sources

\*/\*\*\* Beta values significant in final model, P < .05; P < .001

Social Science & Medicine 92 (2013) 114–123



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Social Science & Medicine

journal homepage: [www.elsevier.com/locate/socscimed](http://www.elsevier.com/locate/socscimed)



Worker health is good for the economy: Union density and psychosocial safety climate as determinants of country differences in worker health and productivity in 31 European countries

Maureen F. Dollard\*, Daniel Y. Nesar

Centre for Applied Psychological Research, School of Psychology, Social Work and Social Policy, University of South Australia, Magill Campus, Adelaide, Australia



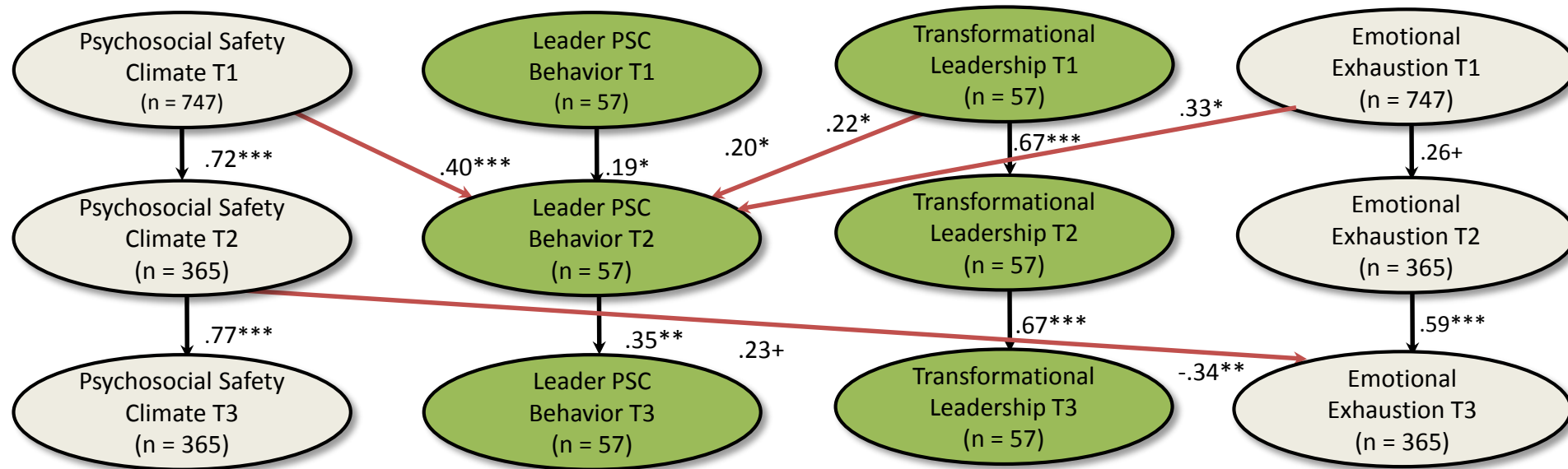
# Findings

- Main reasons for dealing with OHS risks were Legal Requirements (63%), requests from employees or representatives (45%), and absence rates (18%)
- Type of society, social and economic factors (e.g., welfare regimes, work related policies) explain in part national differences in workplace protection (PSC)

# 7. Solutions-What can be done?

# Solutions—Ethical leadership

- Ethical leadership training-refers to leading in a manner that respects human rights and dignity (Ciulla, 2004), and
- Concerns how leaders use their social power in the decisions they make and the actions they implement (Resick, et al, 2006).
- Ethical Utilitarian consequentialism greatest good for the majority means balance of worker health and productivity



SA Hospitals 2015-2016, with a 5-month lag between measurement points.

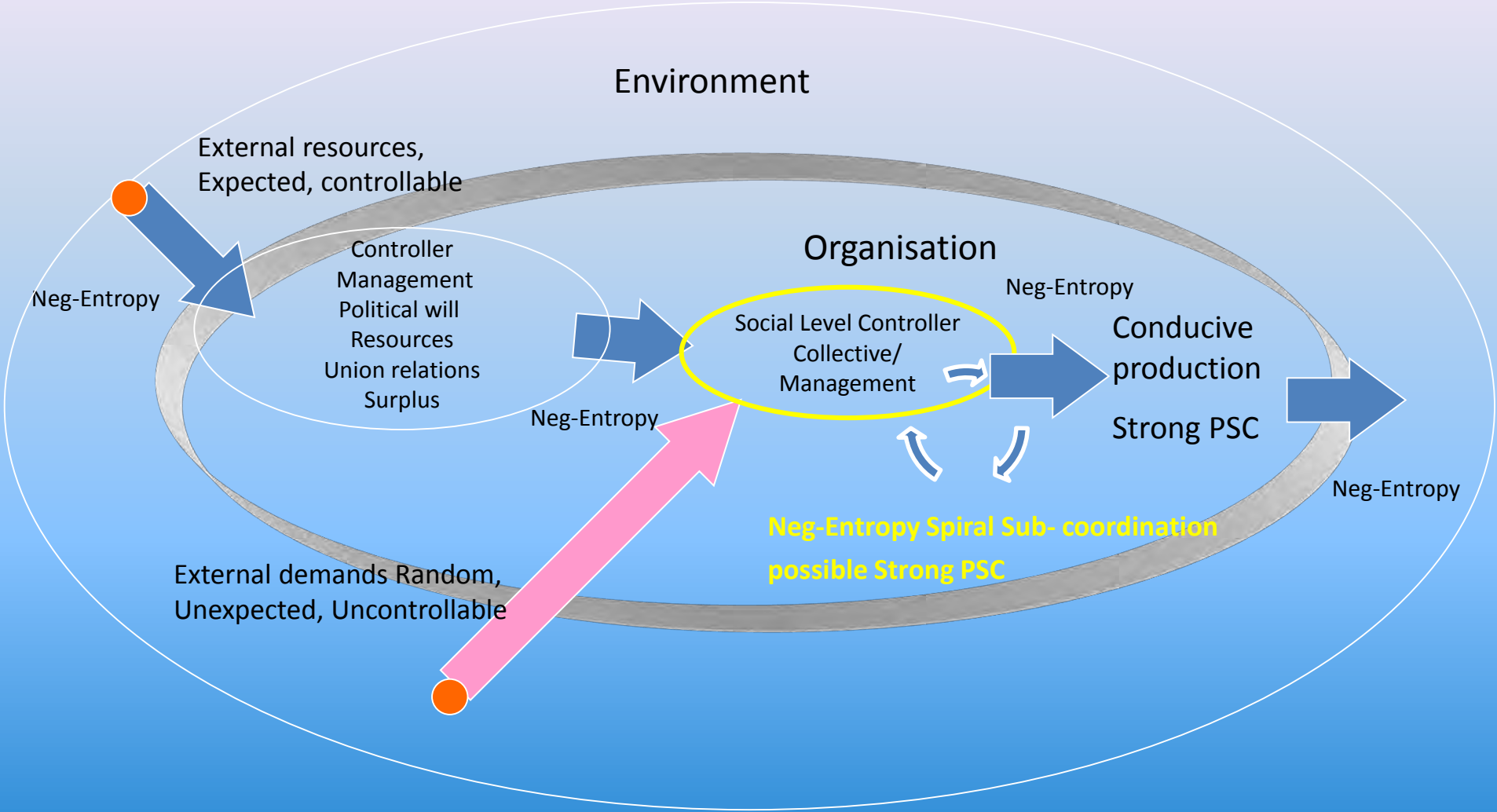
57 teams, 57 leaders, 365 health care workers, at least 3 employees per ward at 3 time points  
 Dollard, McLinton et al

# Organisational Resilience

- Organisational resilience reflects the capacity of the organisation to cope with challenge, through flexible, adaptable and interactive systems, with psychosocial care.
- Organisational resilience will be evident as better PSC, improved job design elements, improved employee health and resilience and improved work outcomes



# Healthy Conducive Production Model



# Solutions; Sustainable workplace change focuses on improving PSC

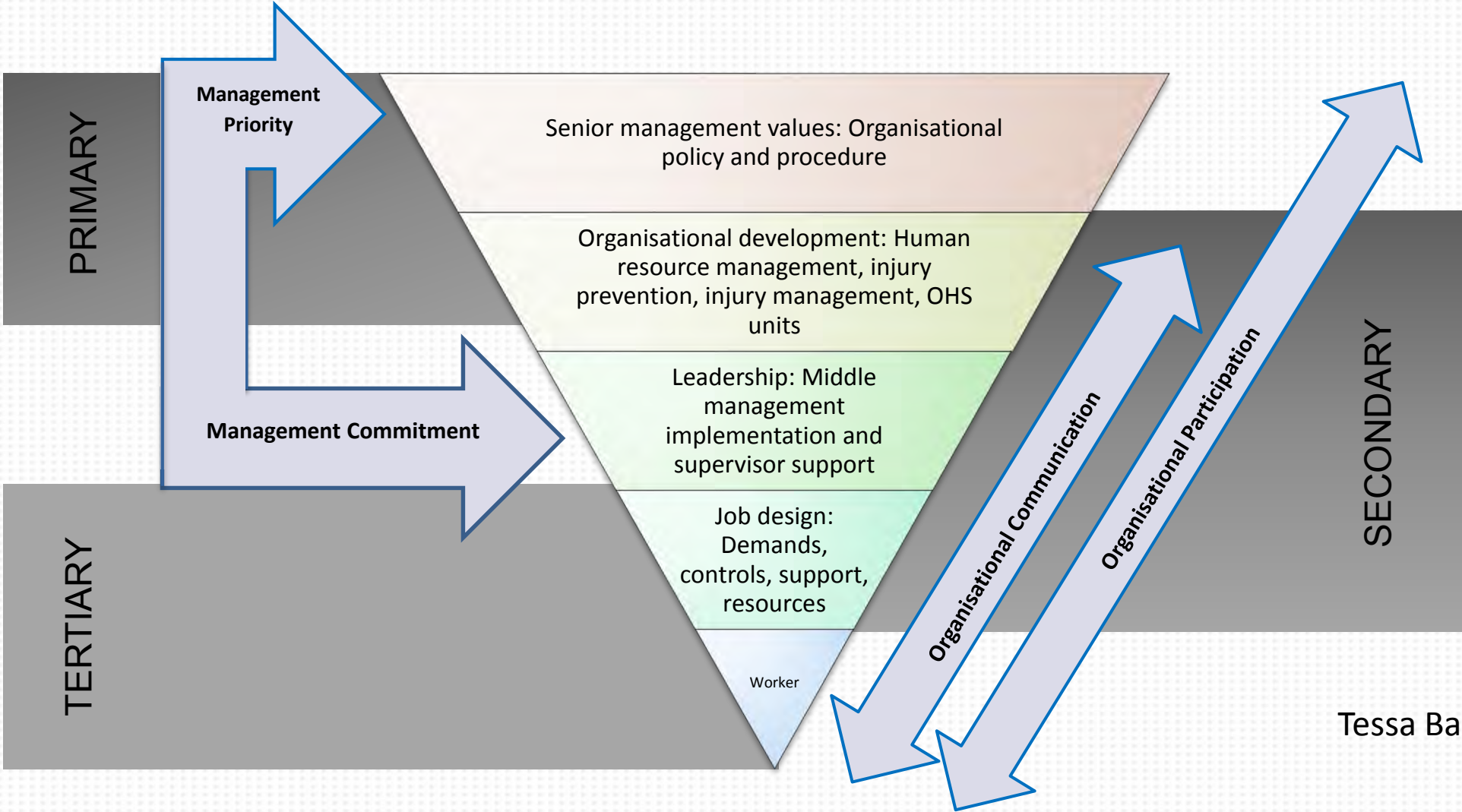
- Top management support
- Build on current systems
- Involve all levels
- Participation and Participatory



approaches

- Social dialogue with all stakeholders
- Communication up and down
- Risk assessment
- Change culture, leadership competency (ILO report)

# PSC Hierarchy of Control



# Take home points

- Work stressors are preventable
- Psychosocial safety climate is a leading risk factor, best target for intervention, a KPI for strategic management
- A form of ethical values based leadership—needs to be checked
- Build organisational resilience



# Future UniSA Course

- A specialisation consisting of 12 WHS courses (which will include the psychology placement and work and organisational psychology courses and, as well, psychophysiology of sleep and health psychology courses).
- Combines the best of engineering and psychology to train accredited WHS professionals. It will be an undergraduate degree (there are only four others in the country), with an online/intensive option and compared to existing programs will have a stronger focus on the 'psychology' rather than 'hazards' edge of WHS.





Thank You for Listening!

Please contact:

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## Published Papers on PSC

### Books/ Book Chapters

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

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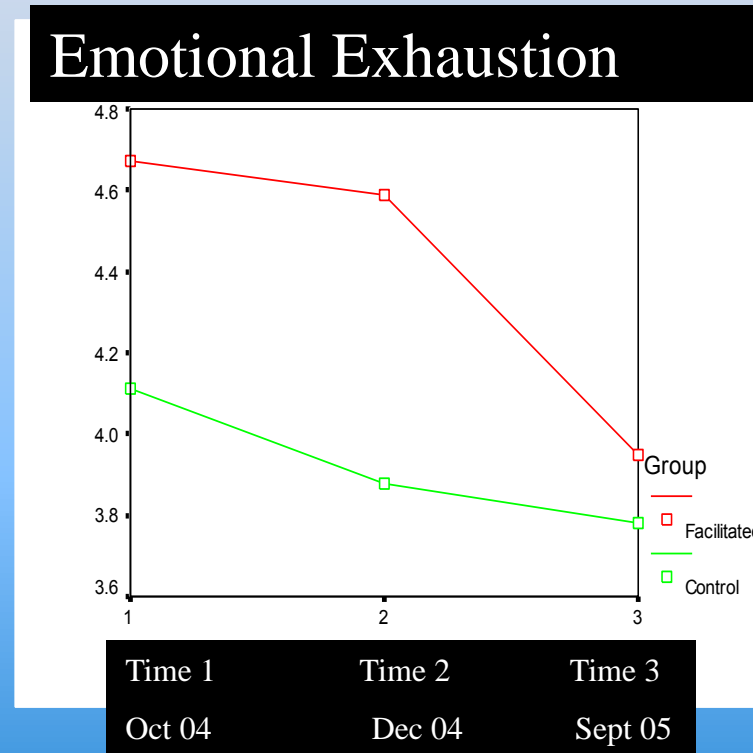
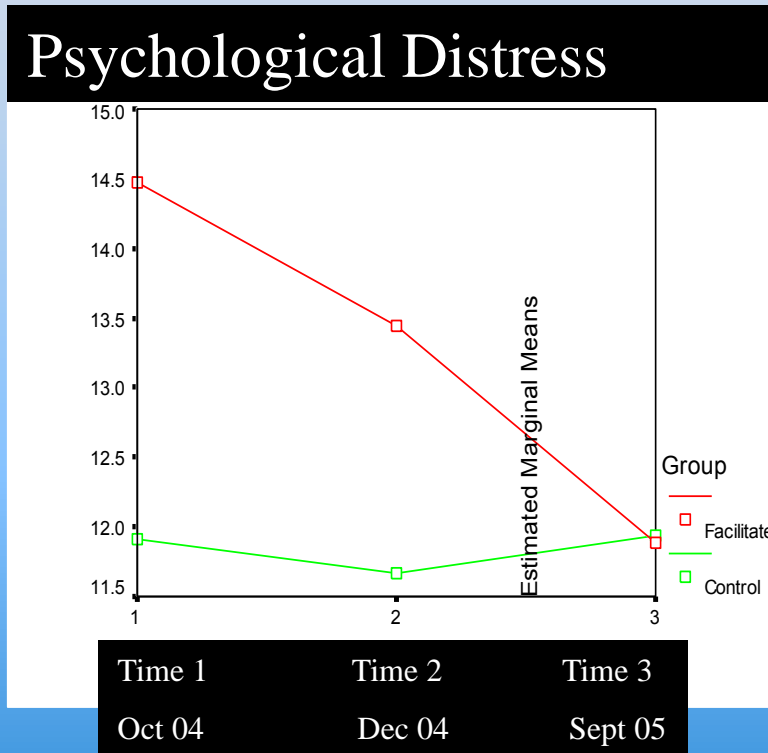
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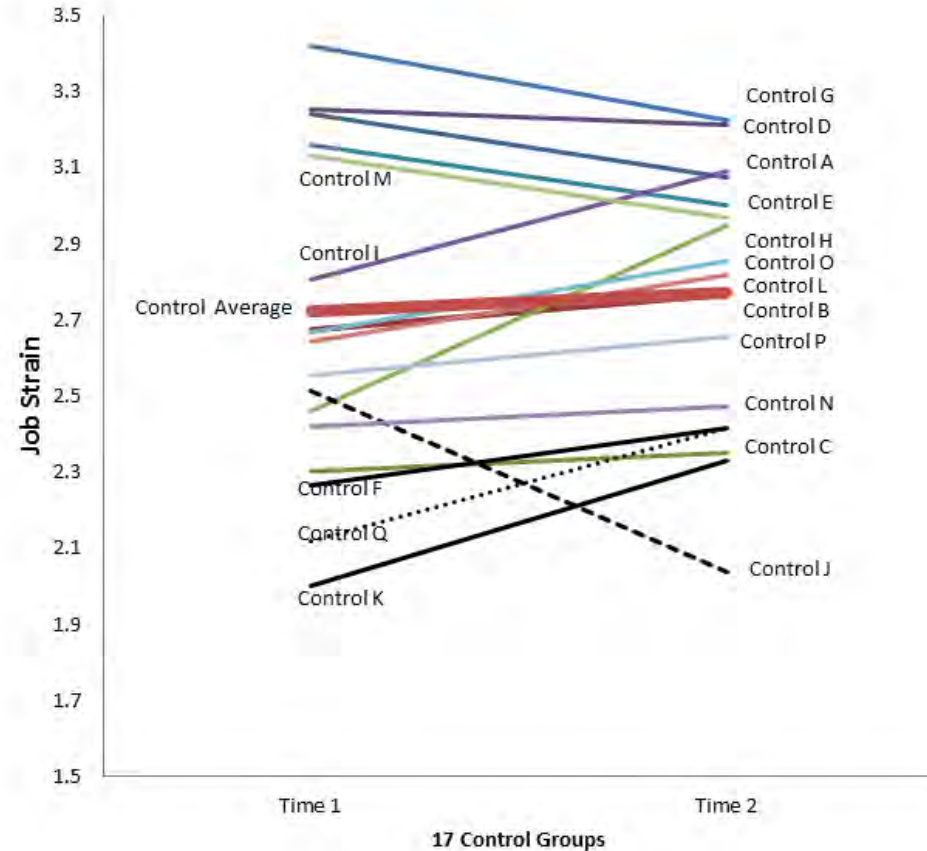
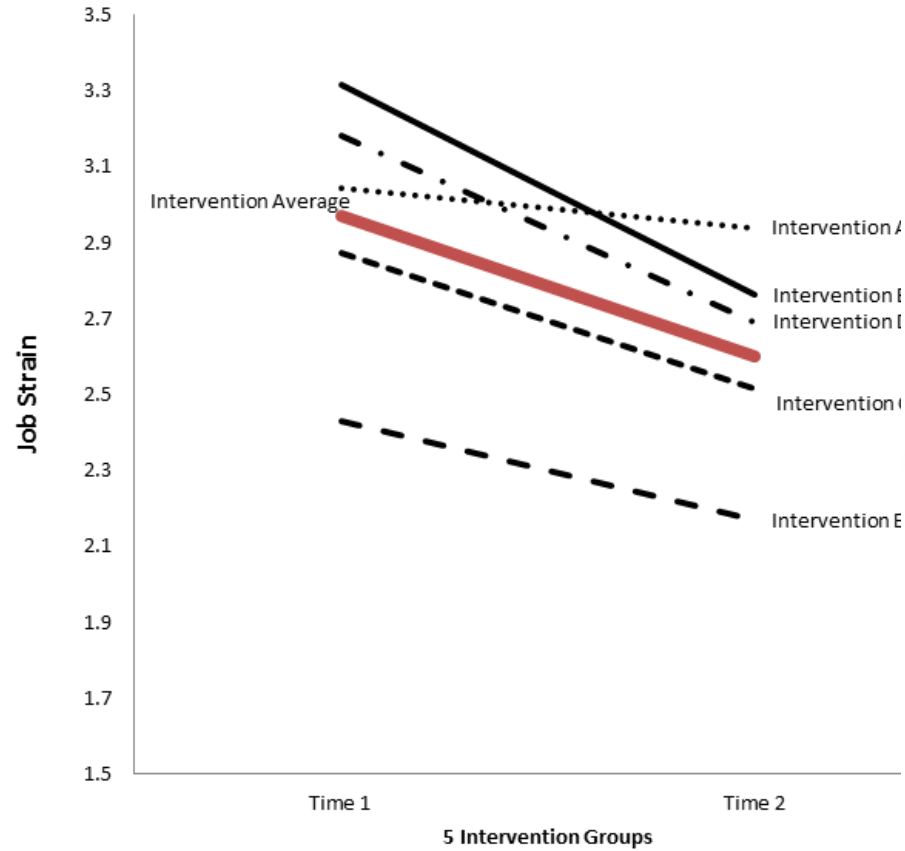
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# GHQ-12 and Emotional Exhaustion

Estimated Marginal Means





**Dollard, M. F.,** Gordon, J. A., (2014). [Evaluation of a participatory risk management work stress intervention.](#) *International Journal of Stress Management*, 21, 27-42.

# Building PSC-APSC 2016

- Having senior leaders actively promote mental health and wellbeing in the workplace.
- Incorporating messages in agency-wide communications from the senior leadership that reinforce the importance of employee health and wellbeing, particularly mental health
- Ensuring a regular and routine flow of information from management to employees about psychological safety risks in the workplace
- Actively promoting stress prevention at all levels, particularly through middle management/executive level staff

# Work Stress Prevention: Risk Assessment

Supported by legislative frameworks

1. Evidence based-problem solving process (PAR)
2. Problem identification and risk-assessment (e.g., Australian Workplace Barometer risk assessment tool/ HSE Management Standards (Kelly et al)
3. Choice of measures and planning of intervention (controls)
4. Implementation of interventions & evaluation (Nielsen et al)
5. Review of information needs and training needs of employees exposed to hazards (Cox & Griffiths).
6. Change culture, leadership competency (ILO report)



# 37 Organisational Stress Interventions Meta-Analytic Results Using PSC Template

Amy Zadow et al (forthcoming)



Although current evidence suggests that organisational interventions are not as effective as individual level interventions in reducing psychosocial risks and psychological health of workers this runs counter to substantial theory.

Organizational Factors	Groups	High PSC Intervention			Low PSC Intervention		
		<i>k</i>	<i>N</i>	<i>d</i>	<i>k</i>	<i>N</i>	<i>d</i>
Job Demands	Intervention	6	1498	<b>-.19*</b>	12	7338	<b>-.19</b>
	Control	6	1872	-.08	11	11282	-.01
Job Resources	Intervention	17	4870	<b>.11*</b>	11	3483	<b>-.27</b>
	Control	17	9697	-.11	9	6677	.06
Psychological Ill-Health	Intervention	21	4602	<b>-.47*</b>	21	3357	<b>-.04</b>
	Control	19	5883	.20	21	8682	-.01

Note. \* Significant difference between intervention and control groups <.05.

Revolutionary! The research suggests a paradigm shift in the evaluation of work stress interventions away from traditional models, (JDC, JDR, ERI) to the PSC framework/ template