People at Work

An Assessment of Psychosocial Hazards in the Workplace

May, 2016

Final Report to Partner Organisations

report

PEOPLE AT WORK PROJECT

The People at Work Project is a research collaboration among Queensland University of Technology and The Australian National University, with Workplace Health and Safety Queensland, WorkCover NSW, WorkSafe Victoria, Comcare, Safe Work Australia, and *beyondblue* (Partner Organisations). The project is funded by the Australian Research Council and the Partner Organisations.

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The People at Work Project

Established in 2007, the People at Work Project (www.peopleatworkproject.com.au) is a collaboration among Queensland University of Technology, The Australian National University, Workplace Health and Safety Queensland, WorkCover NSW, WorkSafe Victoria, Comcare, Safe Work Australia, and *beyondblue*.

The overall aim of the People at Work Project is to assist employers to install a 5-step psychosocial risk management process at the level of the *workplace or enterprise*. In accord with most process models of risk management in regards to any context, the People at Work Project follows the stages of (1) Preparing, (2) Assessing through Surveying, (3) Consulting on Outcomes, (4) Taking Action, and (5) Reviewing and Improving.

In order for organisations to fulfil their primary duty of care to ensure, so far as it is reasonably practicable, the provision and maintenance of a work environment without risks to workplace health and safety, it is essential to take investigative steps to *identify and assess* the level of risk. In the context of work-related mental health, these steps involve determining areas of the business that have poorer mental health and how that poorer mental health is related to work characteristics. Thus, a major goal of the People at Work Project has been to develop a risk assessment survey tool, based on reliable and valid scales, for measuring 13 specific psychosocial hazards and 3 worker outcomes.

The risk assessment survey tool is based on the Job Demands-Resources Model of occupational stress and assesses 13 Psychosocial Hazards (7 Job Demands & 6 Job Resources) and 3 Worker Outcomes (Psychological Strain, Job Burnout, & Musculoskeletal Symptoms).

Objectives of the Final Report

1. Prevalence rates for 13 Psychosocial Hazards (7 Job Demands & 6 Job Resources) for the Overall Sample.
2. Prevalence rates for 3 Worker Outcomes for the Overall Sample.
3. Trends for the Psychosocial Hazards and Worker Outcomes across Jurisdictions, Sectors, Industries, and Occupations.
4. Risk analyses that determine the extent to which each of the 13 Psychosocial Hazards is associated with the 3 Worker Outcomes for the Overall Sample.
5. Prevalence rates for the Experience and Witnessing of Bullying, along with a detailed analysis of the Types and Sources of Workplace Bullying.
6. Risk analyses that determine the extent to which the Experience of Workplace Bullying is associated with the 3 Worker Outcomes for the Overall Sample.

Sample Profile

This Final Report is based on the survey responses of 11,890 workers recruited across 79 organisations that participated in the People at Work Project from May, 2013 to December, 2015. Response rates across organisations ranged from 13% to 100%, with an average response rate of 56%.

	Sample Profile		
		n	%
4 Jurisdictions	QLD	3,888	32.7%
	NSW	3,345	28.1%
	VIC	1,183	9.9%
	Federal	3,150	26.5%
	Other	221	1.9%
2 Sectors	Public	7,997	67.3%
	Private	3,893	32.7%
10 Industries	Manufacturing	597	5.0%
	Electricity, Gas, Water, & Waste Services	2,065	17.4%
	Transport, Postal, & Warehousing	582	4.9%
	Information & Media	37	0.3%
	Professional, Scientific, & Technical Services	500	4.2%
	Public Administration & Safety	4,465	37.6%
	Education & Training	884	7.4%
	Health Care & Social Assistance	2,059	17.3%
	Arts & Recreation Services	234	2.0%
	Other Services	467	3.9%
16 Occupations	Managers	1,584	13.3%
	Business Professionals	583	4.9%
	Design Engineering Science Transport Professionals	428	3.6%
	Education Professionals	575	4.8%
	Health Professionals	267	2.2%
	Miscellaneous Professionals	1,147	9.6%
	Engineering ICT Science Technicians	401	3.4%
	Electrical & Telecommunications Workers	236	2.0%
	Miscellaneous Technicians & Trades Workers	554	4.7%
	Health & Welfare Support Workers	745	6.3%
	Carers & Aides	402	3.4%
	Miscellaneous Community & Personal Service Workers	89	0.7%
	Clerical & Administrative Workers	2,620	22.0%
	Sales Workers	137	1.2%
	Machinery Operators & Drivers	385	3.2%
	Labourers	201	1.7%

The Overall Picture

- The most prevalent Job Demand was Cognitive Demand, with 80% of the Overall Sample reporting high levels.
- The least prevalent Job Demand was Role Ambiguity, with 81% of the Overall Sample reporting low levels.
- The most prevalent Job Resource was Co-Worker Support, with 77% of the Overall Sample reporting high levels.
- The least prevalent Job Resource was Change Consultation, with 24% of the Overall Sample reporting low levels.
- The majority of workers (57%) reported low levels of Psychological Strain and just 4% of workers were classified as having high levels of Psychological Strain.
- 40% of workers reported low levels of Job Burnout and 17% of workers reported high levels of Job Burnout.
- 16% of the Overall Sample reported high levels of Musculoskeletal Symptoms.
- Males (mean = 3.0) reported lower Musculoskeletal Symptoms than females (mean = 3.5).
- The most prevalent body locations for musculoskeletal pain were Neck (33%) and Shoulders (33%), followed by Lower Back (30%), Upper Back (22%), and the least prevalent was Wrists/Hands (17%).

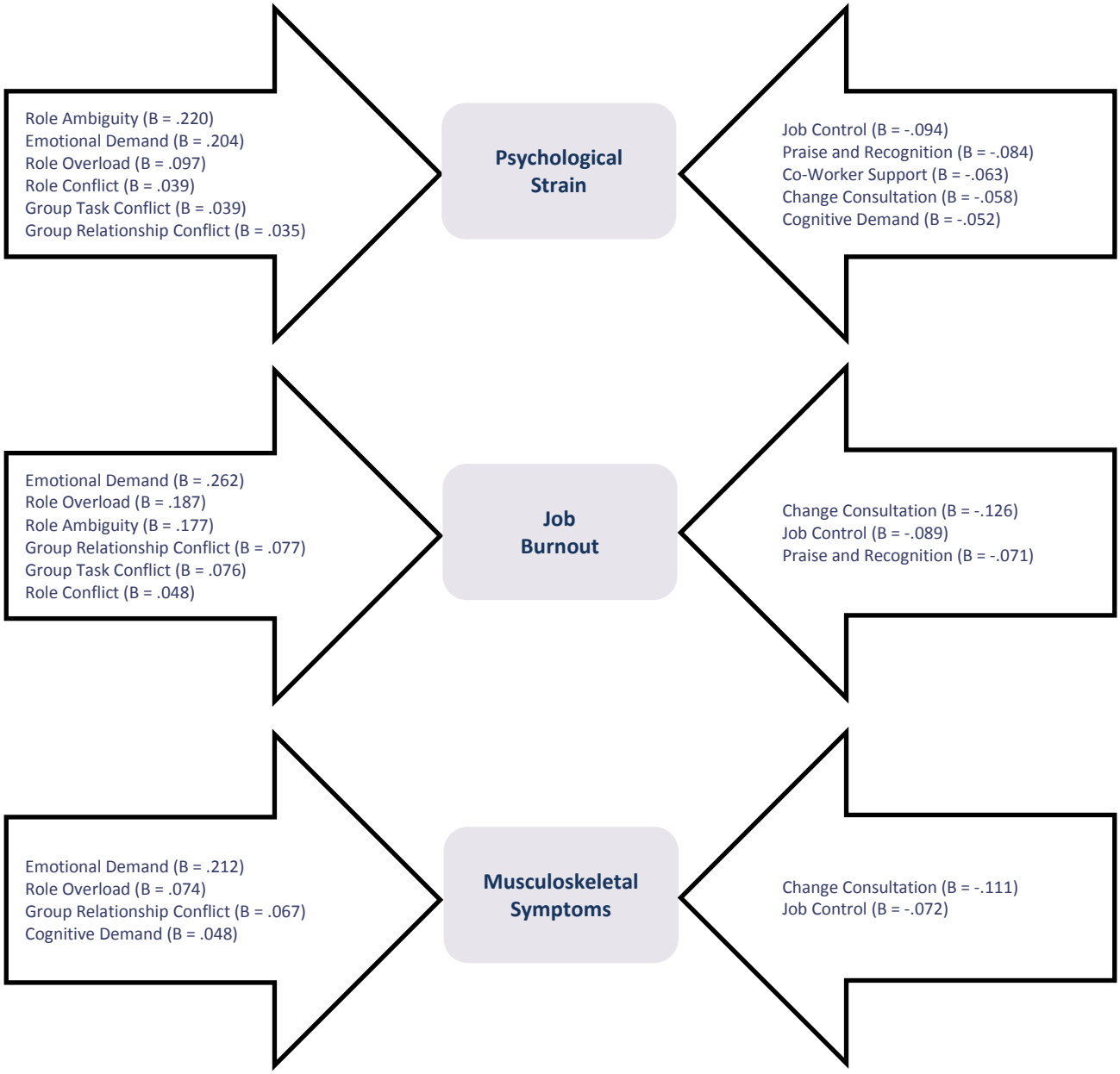
Occupational Trends

There were several statistically significant differences for occupations compared to the Overall Sample for a number of psychosocial hazards and worker outcomes:

Occupation	Compares Favourably to Overall Sample	Compares Unfavourably to Overall Sample
Managers	✓ Higher Job Control	✘ Higher Role Conflict
Education Professionals		✘ Higher Role Overload ✘ Higher Emotional Demand ✘ Higher Job Burnout
Health Professionals		✘ Higher Emotional Demand
Electrical & Telecommunications Workers		✘ Lower Praise & Recognition
Carers & Aides	✓ Lower Role Overload ✓ Lower Role Ambiguity ✓ Lower Role Conflict	
Machinery Operators & Drivers	✓ Lower Role Overload ✓ Lower Role Ambiguity ✓ Lower Role Conflict ✓ Lower Emotional Demand ✓ Lower Job Burnout	
Labourers	✓ Lower Emotional Demand	

Risk Analyses for Psychosocial Hazards

The extent to which each of the 13 Psychosocial Hazards is a risk to workers was determined by examining concurrent associations with Psychological Strain, Job Burnout, and Musculoskeletal Symptoms for the Overall Sample. The Job Demands and Job Resources that were statistically significant are depicted below, presented in order of their strength of relationship with the Worker Outcome.



Risk Analysis Summary for the Overall Sample

- Role Overload emerged as a consistent positive predictor across all 3 Worker Outcomes, as did Emotional Demand.
- Job Control emerged as a consistent negative predictor across all 3 Worker Outcomes, as did Change Consultation.
- Role Ambiguity was the strongest predictor of Psychological Strain, and Emotional Demand was the strongest predictor of Job Burnout and Musculoskeletal Symptoms.
- Cognitive demand was found to have a curvilinear association with Psychological Strain, such that Psychological Strain is at its lowest when Cognitive Demand is kept moderate.
- Such findings underscore the importance of examining both prevalence and impact for a comprehensive understanding of psychosocial risk factors in the workplace.

Workplace Bullying Prevalence

The People at Work Project also examined exposure to workplace bullying and its impact on worker stress reactions. For the purposes of the People at Work Project, workplace bullying was defined as "repeated, unreasonable behaviour directed towards a worker or group of workers that creates a risk to health and safety". Workers responded to the question "In the past 6 months, have you experienced workplace bullying in your workgroup?"

61% of the Overall Sample report never.	32% of the Overall Sample report rarely, once in a while, or some of the time.	7% of the Overall Sample report monthly, weekly, or almost daily.

When using the behavioural experience approach to measuring the prevalence of workplace bullying (in the last 6 months) in reference to 9 specific behaviours, the following rank order emerged:

Highest Prevalence

- Persistent and unjustified criticism (6%)
- Ridicule and being put down (5%)
- Verbal abuse (5%)
- Being subjected to gossip or false, malicious rumours (5%)
- Humiliation through gestures, sarcasm, criticism, or insults (5%)
- Exclusion or isolation from workplace activities (5%)

Lowest Prevalence

- Sabotage of work (3%)
- Threats of punishment for no reason (2%)
- Offensive messages via telephone, written, or electronic means (2%)

Main Source of Workplace Bullying

- 35.1% of those workers indicating that they had been bullied in the past 6 months identified their Co-Workers as the perpetrator, followed by Supervisors (24.5%).

Risk Analyses for Workplace Bullying

- The impact of the Experience of Workplace Bullying on worker stress reactions was found to be statistically significant. The more bullying experienced at work, the greater the likelihood of Psychological Strain, Job Burnout, and Musculoskeletal Symptoms.
- Importantly, the results indicated some non-linearity in these relationships, such that the positive effect of the Experience of Workplace Bullying on the 3 Worker Outcomes was stronger at very low levels of bullying (i.e., moving from never to rarely) but then tapers off at very high levels of bullying (i.e., monthly, weekly, almost daily).
- Overall, these findings have important practical implications, as all levels of exposure to bullying are harmful to employees, including for those employees for whom bullying does not occur often.

Summary of Key Achievements

1. Development and validation of a survey tool for assessing psychosocial hazards.
2. Creation of an automated report generation system, facilitating timely and responsive turn-around of reports to participating organisations, usually within a week.
3. Creation of a set of Australian benchmarks documenting the prevalence of psychosocial hazards across jurisdictions, sectors, industries, and occupations.
4. Design and launch of a project website (58,535 total visits and 53,146 unique visits to the site since it launched in March, 2013, up until December, 2015) and associated branding.
5. Freely available guidance materials to support organisations through the psychosocial risk management process (e.g., project management plan, pre- and post-survey communication plans, tip sheets for conducting focus groups and writing action plans).
6. Written and video case studies, one each for the public and private sector.

Executive Summary

Background

Established in 2007, the People at Work Project (www.peopleatworkproject.com.au) is a collaboration among Queensland University of Technology, The Australian National University, Workplace Health and Safety Queensland, WorkCover NSW, WorkSafe Victoria, Comcare, Safe Work Australia, and *beyondblue*.

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6. Risk analyses that determine the extent to which the Experience of Workplace Bullying is associated with the 3 Worker Outcomes for the Overall Sample.

Main Findings

1. The most prevalent Job Demand was Cognitive Demand, with 80% of the Overall Sample reporting high levels.
2. The least prevalent Job Demand was Role Ambiguity, with 81% of the Overall Sample reporting low levels.
3. The most prevalent Job Resource was Co-Worker Support, with 77% of the Overall Sample reporting high levels.
4. The least prevalent Job Resource was Change Consultation, with 24% of the Overall Sample reporting low levels.

5. The majority of workers (57%) reported low levels of Psychological Strain and just 4% of workers were classified as having high levels of Psychological Strain.
6. 40% of workers reported low levels of Job Burnout and 17% of workers reported high levels of Job Burnout.
7. 16% of the Overall Sample reported high levels of Musculoskeletal Symptoms.
8. Males (mean = 3.0) reported lower Musculoskeletal Symptoms than females (mean = 3.5).
9. The most prevalent body locations for musculoskeletal pain were Neck (33%) and Shoulders (33%), followed by Lower Back (30%), Upper Back (22%), and the least prevalent was Wrists/Hands (17%).
10. Role Overload emerged as a consistent positive predictor across all 3 Worker Outcomes, as did Emotional Demand.
11. Job Control emerged as a consistent negative predictor across all 3 Worker Outcomes, as did Change Consultation.
12. Role Ambiguity was the strongest predictor of Psychological Strain, and Emotional Demand was the strongest predictor of Job Burnout and Musculoskeletal Symptoms.
13. Cognitive demand was found to have a curvilinear association with Psychological Strain, such that Psychological Strain is at its lowest when Cognitive Demand is kept moderate.
14. 61% of workers reported never experiencing bullying in their workplace. This leaves 32% being exposed to some occasional workplace bullying and 7% being exposed to frequent workplace bullying. Prevalence was the lowest in Manufacturing (86% report never) and the highest in Arts & Recreation Services (34% report rarely to almost daily). Occupations with the lowest exposure were Design Engineering Science Transport Professionals (83% report never) and Machinery Operators & Drivers (83% report never). The occupation with the highest exposure was Health & Welfare Support Workers (34% report rarely to almost daily).
15. 49% of workers reported never witnessing bullying in their workplace. This leaves 43% being a witness to some occasional workplace bullying and 8% being a witness to frequent workplace bullying. Prevalence was the lowest in Manufacturing (81% report never) and Professional, Scientific, & Technical Services (81% report never) and highest in Arts & Recreation Services (41% report rarely to almost daily). The occupation with the lowest exposure was Design Engineering Science Transport Professionals (79% report never). The occupation with the highest exposure was Health & Welfare Support Workers (45% report rarely to almost daily).
16. More respondents stated that they had witnessed bullying (51%) than experiencing it themselves (39%), perhaps as a function of workplace bullying occurring in public with multiple witnesses to such events.
17. Of the 9 Bullying Behaviours, 6 were equal in prevalence (criticism, ridicule, verbal abuse, gossip/rumours, humiliation, and exclusion/isolation).
18. Co-Workers (35.1%) were found to be the main perpetrator of workplace bullying, followed by Supervisors (24.5%).
19. The impact of the Experience of Workplace Bullying on worker stress reactions was found to be statistically significant. The more bullying experienced at work, the greater the likelihood of Psychological Strain, Job Burnout, and Musculoskeletal Symptoms.
20. Importantly, the results indicated some non-linearity in these relationships, such that the positive effect of the Experience of Workplace Bullying on the 3 Worker Outcomes was stronger at very low levels of bullying (i.e., moving from never to rarely) but then tapers off at very high levels of bullying (i.e., monthly, weekly, almost daily).

Conclusions

The People at Work Project had an ambitious agenda. It brought together three large state jurisdictions (Queensland, New South Wales, & Victoria), Commonwealth agencies (Comcare & Safe Work Australia), *beyondblue*, and university researchers from QUT and ANU, with the important aim of building and strengthening enterprise-level capabilities of Australian organisations in the ongoing monitoring and management of psychosocial hazards in the workplace. Other deliverables included:

1. Development and validation of a survey tool for assessing psychosocial hazards.
2. Creation of an automated report generation system, facilitating timely and responsive turn-around of reports to participating organisations, usually within a week.
3. Creation of a set of Australian benchmarks documenting the prevalence of psychosocial hazards across jurisdictions, sectors, industries, and occupations.
4. Design and launch of a project website (58,535 total visits and 53,146 unique visits to the site since it launched in March, 2013, up until December, 2015) and associated branding.
5. Freely available guidance materials to support organisations through the psychosocial risk management process (e.g., project management plan, pre- and post-survey communication plans, tip sheets for conducting focus groups and writing action plans).
6. Written and video case studies, one each for the public and private sector.

Educating Australian organisations about psychosocial hazards and their management was a critical aim of the People at Work Project. In this respect, we prepared and delivered 85 overall reports and 197 workgroup reports to participating organisations. Members of the People at Work Project team were on hand to discuss and help managers to interpret the results of their reports in one-one-one telephone debriefings, and discuss options for future remedial actions.

In conclusion, the People at Work Project has provided an assessment of psychosocial hazard prevalence in the Australian workforce for 2013-2015. Using empirical evidence for both (1) prevalence and (2) impact provides direction as to the specific psychosocial hazards to target and which worker groups to direct resources towards when devising psychological health strategies that meet the needs of the Australian workforce.

Copyright

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Australian Government
Australian Research Council

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Workplace Health and Safety Queensland

Queensland Government

WorkCover NSW

NSW GOVERNMENT

WorkSafe Victoria

WorkSafe VICTORIA

Comcare

Australian Government
Comcare

Safe Work Australia

safe work australia

beyondblue

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The authors may, at their absolute discretion and without any obligation to do so, update, amend, or supplement the information in this publication.

Project Management Committee

The Project Management Committee (PMC) governing the People at Work Project met on a monthly basis (2012-2015) and comprised representatives with expertise in Workplace Health and Safety from all Partner Organisations, in addition to the University Researchers. Individuals serving on the PMC for varying terms were:

Queensland University of Technology
Professor Nerina Jimmieson, Chief Investigator
Dr Michelle Tucker, Project Manager

The Australian National University
Professor Prashant Bordia, Chief Investigator

Workplace Health and Safety Queensland
Dr Ki Douglas, Chief Medical Officer / Director Occupational Health Branch
Jennie Hunter, Acting Manager, Leadership and Culture Unit
Megan Keily, Principal Adviser, Leadership and Culture Unit
Dilu McCaffery, Acting Principal Advisor, Leadership and Culture Unit
Teegan Modderman, Principal Adviser, Leadership and Culture Unit
Shane Stockill, Principal Adviser, Leadership and Culture Unit
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Elizabeth Clancy, Senior Project Officer, Hazards Program
Sarah Cortier, Program Officer, Improvement Programs and Specialist Services

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Lynn Gunning, Assistant Director, Program Implementation, Scheme Manager Regulator
Kevin St Mart, WHS Advisor, Regulatory Support Services

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Dr Jenny Job, Director, Policy & Services Branch
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beyondblue
Nick Arvanitis, Workplace & Workforce Project Manager
Naomi Murphy, Workplace & Workforce Project Manager

Section 1 – Overview of the People at Work Project

1.1 Introduction

A psychologically safe workplace is defined as one that is the result of every reasonable effort being made to protect and promote the psychological health of workers.

Psychosocial risk factors in the form of high job demands and low job resources explain undesirable physical and psychological conditions, such as:

- musculoskeletal problems (Nixon, Mazzola, Bauer, Krueger, & Spector, 2011)
- gastrointestinal malfunction (Nixon et al., 2011)
- onset of diabetes (Huth et al., 2014; Smith, Glazier, Lu, & Mustard, 2012)
- hypertension (Smith, Mustard, Lu, & Grazier, 2013)
- high blood pressure (Landsbergis, Dobson, Koutsouras, & Schnall, 2013)
- atrial fibrillation (Toren, Schioler, Soderberg, Giang, & Rosengren, 2015)
- mortality (von Bonsdorff et al., 2012)
- anxiety, depression, and job burnout (see Bonde, 2008; Crawford, LePine, & Rich, 2010; Hausser, Mojzisch, Niesel, & Schulz-Hardt, 2010; Stansfeld & Candy, 2006, for literature reviews and meta-analyses).

There are substantial social and economic implications that flow from psychological distress in the workplace. In Australia, according to the 2013/14 Australian Workers' Compensation Statistics (Safe Work Australia, 2016), there were 106,565 serious claims (i.e., resulting in an absence from work of one working week or more) across all injury/disorder and disease categories, and 5.8% were due to 'mental disorders' (covering conditions such as anxiety, depression, and breakdowns). In comparison to other workplace injuries/disorders and diseases in 2012/13, claims for mental disorders were the most expensive to manage in terms of median time lost and median compensation paid (Safe Work Australia, 2016).

Thus, it is an imperative that Australian employers demonstrate a tangible commitment to the provision and maintenance of a psychologically safe workplace for their workers. Indeed, Australian employers have a legislative requirement to do so, as far as reasonably practicable, under the general duty provisions of state and territory Workplace Health and Safety (WHS) laws.

1.2 The Australian Context

In light of this compelling evidence, it is clear that stress at work is a significant WHS challenge for Australian employers. As such, there is a growing need to provide guidance and assistance to Australian employers to meet their legal WHS obligations in regards to safe working environments and psychological health.

Australia has been moving towards nationally harmonised WHS laws that aim to provide all workers with the same level of protection for safety, irrespective of state or territory. Model WHS laws, developed federally through a consultative process lead by Safe Work Australia, provide the legislative framework for most of the country. The legislative framework includes the model *Work Health and Safety Act 2011*, supported by Work Health and Safety Regulations and Codes of Practice.

This legislative framework has been adopted by most Australian states and territories, requiring persons conducting a business or undertaking, so far as is reasonably practicable, to provide and maintain a working environment that is safe and without risks to the health of workers, including psychological health. Victoria and Western Australia are yet to adopt the model act. Nevertheless, Victoria's *Occupational Health and Safety Act 2004* imposes a similar duty on employers to maintain a workplace that is safe and without risk to the health of workers, including psychological health. In regards to Western Australia, the Minister for Commerce has tabled the Bill in parliament and announced the opening of a public comment period of this legislation, which ended on the 30th January, 2015.

1.3 ARC Linkage Projects

In response to the vast body of literature on employee psychological health and legislative requirements in the Australian context, the People at Work Project (www.peopleatworkproject.com.au) was launched in 2007 as a collaboration between researchers with expertise in occupational stress and employee health from two Australian universities (Dr Nerina Jimmieson at The University of Queensland and Dr Prashant Bordia at University of South Australia) and the WHS Regulator in Queensland, Workplace Health and Safety Queensland (WHSQ).

The People at Work Project was supported with funds from an Australian Research Council (ARC) *Linkage Project* for 2007-2009 (Project Number: LP0775049), which extended into 2010.

As noted by Lippel and Quinlan (2011), such a model – in which labour inspectorates partner with researchers to design psychosocial risk management strategies, assessment and intervention tools, and standards for practice – has been quite common in other countries and helps to create an important nexus between research and practice.

For this first phase of the People at Work Project, 7,192 workers across 48 Queensland organisations participated, leading to the establishment of a national normative database upon which to undertake benchmarking for organisations that participate in the future.

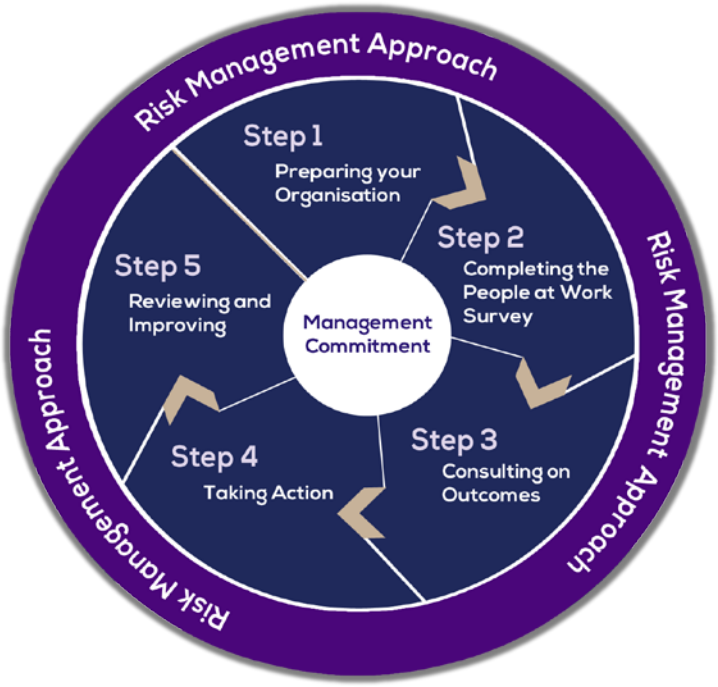
The success of the People at Work Project in Queensland gained national recognition and was extended to other WHS jurisdictions, including New South Wales (WorkCover NSW), Victoria (WorkSafe Victoria), and the federal jurisdiction overseen by Comcare. The People at Work Project also resonated strongly with the strategic priorities of Safe Work Australia (the statutory agency responsible for overseeing national legislation and policy on WHS) which is leading the 10-year *Australian Work Health and Safety Strategy 2012-2022* for which mental disorders were identified as a national priority for the first five years of the strategy. In addition, *beyondblue* offered its support to the People at Work Project in recognition of its potential to develop expertise and capabilities in workplaces in regards to good mental health.

The People at Work Project received a second round of ARC Linkage Project funding for 2012-2014 (Project Number: LP120100575), in conjunction with Dr Nerina Jimmieson at Queensland University of Technology and Dr Prashant Bordia at The Australian National University and these 6 Partner Organisations, which extended into 2015.

1.4 Aims of the People at Work Project

1.4.1 The Risk Management Framework

The overall aim of the People at Work Project is to assist employers to install a 5-step psychosocial risk management process at the level of the *workplace or enterprise* (Guidotti, 2014). In accord with most process models of risk management in regards to any context, the People at Work Project follows the stages of (1) Preparing, (2) Assessing through Surveying, (3) Consulting on Outcomes, (4) Taking Action, and (5) Reviewing and Improving.



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Please note that this risk management framework is specific to employers participating in the People at Work Project (i.e., those intending to distribute the People at Work survey to their employees for completion) and differs from the usual framework that WorkSafe Victoria promotes to employers, as set out below:
WorkSafe Victoria Risk Management Approach
Step 1 - Identify hazards
Step 2 - Assess risks
Step 3 - Control hazards and risks
Step 4 - Check controls
(with consultation to occur at each step)

1.4.2 Guidance Material for Participating Organisations

Several resources to help guide participating organisations through the 5-step risk management framework have been written and are freely available to organisations via the People at Work Project website, including:

- Management PowerPoint Presentation providing an overview of the People at Work Project.
- Glossary of Job demands and Job Resources for those needing more technical information about the psychosocial hazards included in the survey.
- Survey Overview summarising the scales and items in the survey.
- Frequently Asked Questions that addresses questions about how the survey is implemented.
- Project Management Plan outlining who is responsible for what in the process and an indication of timeframes.
- Pre-Survey Communication Plan outlining a range of communication options that organisations can use to inform and engage workers in the survey process.
- Interactive Poster that can be used by organisations to advertise the survey to their workers
- Post-Survey Communication Plan outlining a range of communication options that organisations can use to inform and engage workers in the results of the survey.
- Example Reports for both the overall organisation and workgroups so that organisations are fully briefed on what to expect in terms of reporting and conclusions.
- Report PowerPoint Presentation Templates so that organisations can easily transfer their results into presentations to management and workers.
- Focus Group Guide to help organisations to design, organise, and facilitate feedback sessions.
- Action Planning Guide to assist organisations in addressing psychosocial hazards and underlying causes.

1.4.3 Overview of the Surveying Process

Once organisations contact the People at Work Project Team to express an interest in participating, several steps are followed to support them through the surveying process, including:

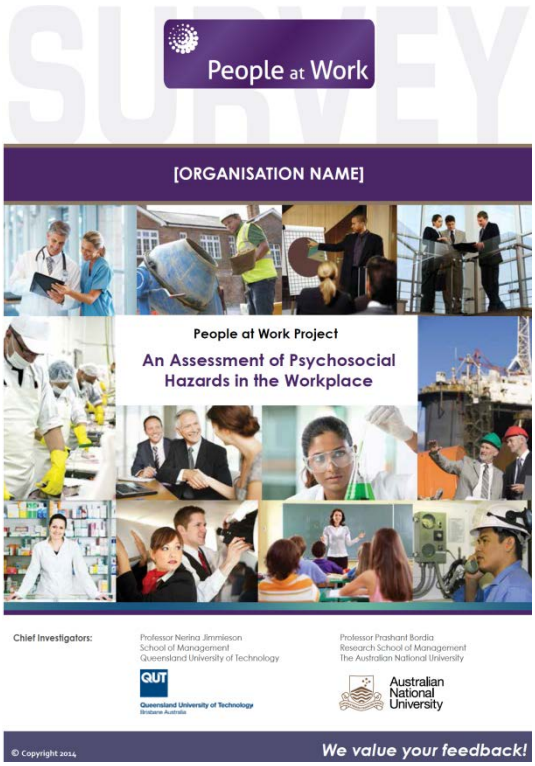
- Organisations are asked to complete a survey tailoring form (in regards to bullying sources, workgroup breakdowns, and EAP information).
- PAW Project Team creates a draft survey in Qualtrics.
- Online link to survey is tested and organisation checks with their IT department to ensure compatibility with their IT systems.
- Organisations are advised to use the website and associated documents as resources to help in preparing their workplace for surveying.
- Survey goes live.
- PAW Project Team provides weekly updates on response rates to organisations so that under-represented areas of the organisation can be targeted.
- Survey closes (data collection takes anywhere between 4 and 10 weeks).
- PAW Project Team downloads data from the Qualtrics server, cleans the data file for double-ups and other problems, and assigns an ANZSIC code for the organisation and an ANZSCO code for the occupation of each respondent.
- PAW Project Team prepares the reports and sends to the organisation via electronic mail. The organisation is given the opportunity to make a time to discuss the results with the PAW Project Manager.
- Organisation is responsible for communicating the results of the survey to internal stakeholders, and any follow-up actions. Many resources are available on the website to assist organisations through this process.
- PAW Project Team contacts the organisation approximately 8 months later to gauge interest in participating in a follow-up survey.

1.4.4 Overview of the Reporting Process

Organisations that participate in the People at Work Project receive their own tailored risk assessment profile at no direct cost to inform future risk mitigation activities. Participating organisations receive 1 overall organisational report and up to 10 workgroup reports that document:

- Level of Psychological Well-Being in the organisation/workgroup.
- Percentage of employees experiencing High Job Demands and Low Job Resources in the organisation/workgroup.
- Comparisons of Psychosocial Risk Factors for the organisation/workgroup with Australian Benchmarks for the People at Work Project (*N* = 7,192).
- Comparisons of Psychosocial Risk Factors across workgroups.
- Comparisons of Psychosocial Risk Factors for workgroups with the organisation average.
- Identification of Psychosocial Risk Factors that should be targeted for intervention.
- Prevalence of Bullying (both experienced and witnessed), as well as the most common behaviours and sources.

In order to deliver these reports in a timely fashion to participating organisations, an extensive process of programming was undertaken in order to generate these reports automatically. Participating organisations received their reports within 1-2 weeks of data collection closing.



1.5 Objectives of the Final Report

A major goal of the People at Work Project is to assist each of the jurisdictions in the conduct of their own WHS surveillance activities, leading to the establishment of a national normative database documenting prevalence of psychosocial hazards and worker outcomes across jurisdictions, sectors, industries, and occupations to inform psychosocial education initiatives. This Final Report documents the empirical work undertaken from May, 2013 to December, 2016, and includes the following sections:

- Survey Design – to review the relevant literature that informed the choice of psychosocial hazards (i.e., high demands and low resources) to be included in the survey tool (**Section 2**).

- Method – to document recruitment strategies, data collection methods, sample size, and measurement scale properties for each of the 13 Psychosocial Hazards (**Sections 3 and 4**).

- Prevalence Analyses for Psychosocial Hazards – to provide prevalence statistics (using means and percentages) for each of the 13 Psychosocial Hazards for the Overall Sample (**Section 5**), along with breakdown analyses to detect trends across 4 Jurisdictions (**Section 6**), 2 Sectors (**Section 7**), 9 Industries (**Section 8**), and 14 Occupations (**Section 9**).

- Prevalence Analyses for Worker Outcomes – to provide prevalence statistics (using means and percentages) for 3 Worker Outcomes (i.e., Psychological Strain, Job Burnout, & Musculoskeletal Symptoms) for the Overall Sample. Breakdown analyses to detect trends across 4 Jurisdictions, 2 Sectors, 9 Industries, and 14 Occupations also are presented (**Section 10**).

- Risk Analyses – to provide results of 3 multi-level linear regressions modelling the extent to which each of the 13 Psychosocial Hazards is a risk to workers through examination of concurrent associations with Psychological Strain, Job Burnout, and Musculoskeletal Symptoms for the Overall Sample (**Section 11**).

- Workplace Bullying – to provide prevalence statistics for the experience and witnessing of workplace bullying for the Overall Sample, Industries, and Occupations, along with a breakdown analysis of the most prevalent types of bullying behaviours and bullying sources for the Overall Sample (**Section 12**). This section also provides results of 3 multi-level polynomial regressions modelling the extent to which the experience of workplace bullying predicts Psychological Strain, Job Burnout, and Musculoskeletal Symptoms for the Overall Sample. Last, a multi-level linear regression testing the prediction that the 13 Psychosocial Hazards are associated with the Experience of Workplace Bullying is presented.

Section 2 – Selection of Psychosocial Hazards and Scales

2.1 Theoretical Background

Drawing on a number of theoretical perspectives, including the stressor-strain approach (Beehr, 1995; Hurrell, Nelson, & Simmons, 1998), person-environment fit theory (French, Caplan, & Harrison, 1982), and cognitive-relational theory (Lazarus, 1990; Lazarus & Folkman, 1984), stress can be conceptualised as the state that occurs when external demands exceed an individual's internal resources to manage and respond (Lazarus, 1990; Maslach, 1986).

Lazarus (1990) defined occupational stress as a complex process involving the interaction between the person and the environment. Specifically, occupational stress occurs when negative physical and/or psychological working conditions and/or experiences in the work environment (i.e., stressors) take a toll on, or exceeds, the individual's personal resources to cope. Such circumstances bring about a change in either the physical or psychological condition of the individual (i.e., strains), such that they are forced to deviate from normal functioning (Beehr & Newman, 1978).

Most theoretical models of occupational stress conceptualise the stress process as a causal flow from environmental conditions to employee outcomes, or in other words, from stressors to strains (Lazarus, 1990; Lazarus & Folkman, 1984). Conceptualising the stressor-strain relationship as a causal flow of events has allowed researchers to study and analyse this phenomenon by modelling it as a process with observable and measurable antecedents (stressors) and outcomes (strains).

2.2 Job Demands-Resources Model

The People at Work Project risk assessment survey tool has its theoretical foundations in the Job Demands-Resources Model (JD-R; Demerouti, Bakker, Nachreiner, & Schaufeli, 2001; see also Bakker, Demerouti, & Sanz-Vergel, 2014, for a review). The JD-R Model is a comprehensive conceptualisation of occupational stress that makes a distinction between job demands and job resources.

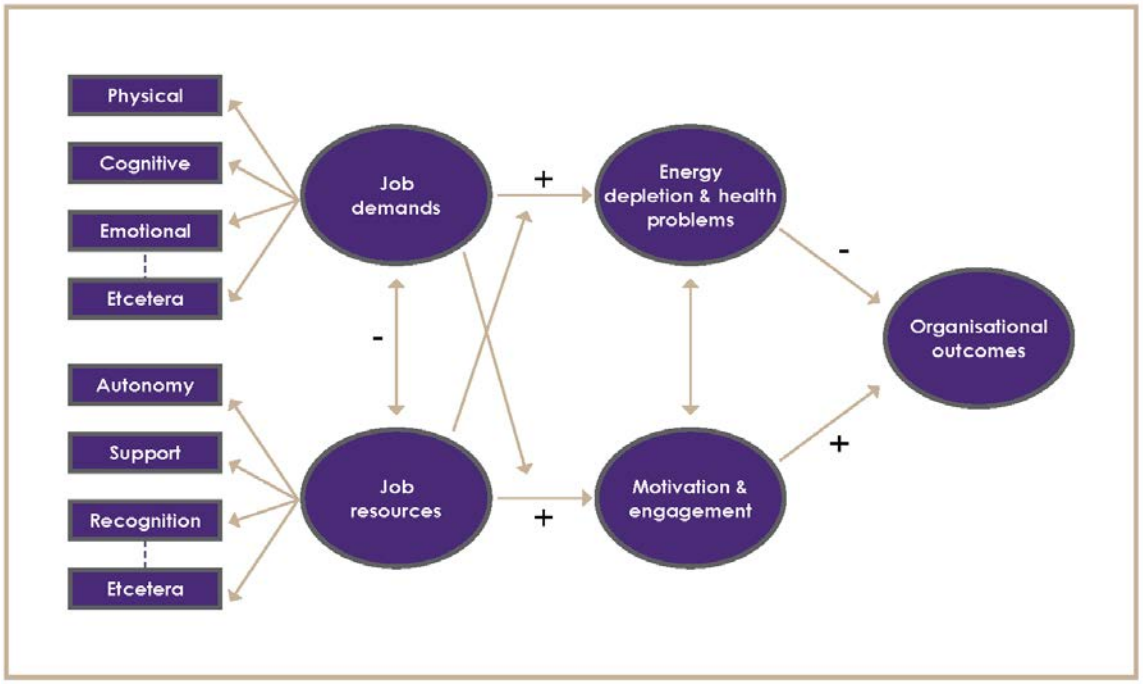


Figure of the Job Demands-Resources Model adapted from Demerouti, E., & Bakker, A.B. (2011). The Job Demands-Resources Model: Challenges for future research. SA Journal of Industrial Psychology/SA Tydskrif vir Bedryfsielkunde, 37(2), Art. #974, 9 pages. doi:10.4102/ sajip.v37i2.974

2.3 Job Demands

Job demands refer to those events precipitated by the organisation's characteristics (e.g., culture, managerial practices, communication styles, and specific task and role properties) that create tension and are bothersome to employees. Organisational structure also contributes to the stressor-strain process by applying both vertical pressures (e.g., job assignments, disciplinary actions, and promotional opportunities) and horizontal pressures (e.g., interpersonal conflict and other pressures among colleagues and peers). Job demands such as these are referred to as psychosocial risk factors, in order to distinguish them from more objective job conditions such as environmental hazards typically found in blue-collar work (e.g., exposure to chemical hazards) and various work arrangements required by the nature of the job (e.g., shift work, machine-pacing). According to the health impairment process, high job demands require sustained effort and exhaust employees' coping abilities, leading to energy depletion and long-term health problems.

2.4 Job Resources

Job resources are aspects of the work environment (stemming from the work context, the nature of the task, or social and interpersonal relations) that, through their motivational potential, help employees to achieve their goals, as well as stimulating learning and personal growth and development (Bakker & Demerouti, 2007). Job resources feature prominently in a range of different occupational stress models. For instance, Karasek and Theorell (1990) proposed that job control and social support are both critical for employee well-being in the Job Demand-Control-Support (JDCS) Model, and Siegrist (1996) focused on the importance of reward and recognition in his Effort-Reward Imbalance (ERI) Model. Other job resources studied by researchers include task variety and significance, skill utilisation, performance feedback, career opportunities, and interpersonal justice (see Brauchli, Schaufeli, Jenny, Fullemann, & Bauer, 2013, for a review). Variables such as these are considered to be contextual characteristics of the work environment that foster a supportive climate. Many studies have shown that job resources relate positively to engagement (e.g., Salanova, Agut, & Peiro, 2005) and negatively to burnout (Hakanen, Bakker, & Schaufeli, 2006).

2.2 Review of Existing Tools

The identification and selection of variables to be included in the People at Work Project risk assessment survey tool involved a thorough review of the national and international literature to identify established questionnaire-based methodologies for the measurement of various psychosocial hazards, occupational/job stressors, and job characteristics/conditions.

The search focused on peer-reviewed journal articles and other scholarly sources. As a starting point, of particular assistance was the critical review of psychosocial hazard measures conducted by Rick, Briner, Daniels, Perryman, and Guppy (2001), a report commissioned by the UK government's Health and Safety Executive (HSE). In this report, Rick et al. provided an in-depth review of seven non-proprietary survey tools (i.e., Job Diagnostic Survey; Job Stress Survey; Job Content Questionnaire; Occupational Stress Indicator; Whitehall II Scales; Jackson, Wall, Martin, & David's demand and control scales; Rizzo & House role ambiguity and role conflict scales) against recognised standards for reliability, and face, content, construct, and predictive validities. In addition, 11 survey tools (i.e., Effort-Reward Imbalance Scale; NHS Measures; NIOSH Generic Job Stress Questionnaire; Occupational Stress Inventory; Pressure Management Indicator; Role Hassles Index, Stress Audits; Stress Diagnostic Survey; Stress Incident Record; The Stress Profile; Work Environment Scale) for which there was less psychometric information available were given a briefer review.

In addition to independently reviewing these 18 survey tools, the utility of 3 other tools was reviewed for the purposes of the People at Work Project. These included (1) the Demand-Induced Strain Compensation (DISC) Questionnaire (English Version 2.1, 2009) based on the DISC model (de Jonge & Dormann, 2003, 2006), (2) the Workstyle Scale (Feuerstein et al., 2005), and (3) the Copenhagen Psychosocial Questionnaire (Kristensen, Hannerz, Høgh, & Borg, 2005).

In a similar vein to Rick et al. (2001) who concluded that it was not possible to recommend any of the survey tools included in their evaluation due to a range of psychometric inadequacies and the fact that no one tool captured the full range of potential psychosocial hazards, we also came to our own conclusion that it was not possible to identify a suitable stand-alone survey tool. Nevertheless, many of the dimensions and items included in these survey tools were collated to inform our choice of measures for the People at Work Project risk assessment survey tool.

2.3 Review of the HSE MSIT

Next, we turned our attention to the extensive work led by the UK government's HSE which, commencing in 2000, developed a non-regulated 4-strand approach for good management practice in regards to psychosocial risk management in organisations (see Mackay, Cousins, Kelly, Lee, & McCaig, 2004, for an overview of the policies and processes surrounding this initiative), a key feature of which was the development of the Management Standards Indicator Tool (MSIT).

The MSIT assesses seven workplace conditions, including Demands (operationalised as time pressure, albeit confounded by 1 of the 8 items tapping role conflict in the long version of the tool), Control, Managerial Support, Peer Support, Relationships (a mix of general conflict and bullying and harassment), Role (operationalised as role ambiguity), and Change (opportunities for input during organisational change). There are 35-item, 25-item, and 8-item (used as a 'first pass' indicator of stress for organisations) versions of the tool.

Cousins et al. (2004) reported on the original pilot work and subsequent revisions undertaken in the development of the 35-item and 8-item versions, demonstrating through two exploratory factor analyses (using a sample of 3,147 employees from a single organisation randomly split into two) that the seven scales were empirically distinct (good scale reliabilities also were obtained).

Edwards, Webster, Van Laar, and Easton (2008) followed up with a confirmatory factor analysis of the 35-item MSIT using data collected from 26,382 employees across 39 UK organisations. Results supported the 7-factor structure but also suggested that the 35 items tap aspects of the same underlying concept of work-related stress.

Edwards and Webster (2012) have since shown that, using a sample of 67,347 employees from 137 UK organisations, both the 35-item and 25-item versions of the MSIT are invariant across public and private organisations, as well as small, medium, and large organisations.

Most recently, Marcatto, Colautti, Filon, Luis, and Ferrante (2014) provided a partial test of construct validation by examining correlations with the corresponding demand and control (combined decision latitude and skill discretion) scales in the JCQ (Karasek et al., 1998) in a sample of 760 Italian municipality employees. Results were as expected, although the correlation for the two control scales was moderate, suggesting that the MSIT control scale overlaps with decision latitude but not the skill discretion component of the JCQ control scale.

2.4 Final Selection of Psychosocial Hazards

The psychosocial hazards used in the People at Work Project risk assessment survey tool built on the 7-factor MSIT in several ways, including:

1. Disentangling role overload from role conflict.

2. Expanding the number of job demands (to include both cognitive demand and emotion demand).

3. Separating out the notions of task versus relationship conflict among colleagues.

4. Keeping both conflict scales conceptually free of items measuring bullying and harassment.

5. Adding two additional job resources to the profile (i.e., praise and recognition and procedural justice), given the extensive bodies of empirical evidence in support of praise and recognition (Van Vegchel, de Jonge, Bakker, & Schaufeli, 2002) and procedural justice (e.g., Robbins, Ford, & Tetrick, 2012) in determining employee health.

These alterations and additions are in line with a qualitative review of 25 international and 10 Australian studies conducted in the health and community services sector (Dollard, LaMontagne, Caulfield, Blewitt, & Shaw, 2007), showing that the key workplace stressors reported in the literature typically relate to role overload, role ambiguity, role conflict, emotion demand, control, support, rewards, effort-reward imbalance, interpersonal conflict, and organisational justice (see also Finne, Christensen, & Knardahl, 2014, who concluded that a broader set of psychosocial risk factors beyond those prescribed by the JDSC and ERI models should be considered).

Thus, the People at Work Project risk assessment survey tool comprised a total of 13 Psychosocial Hazards, differentiated as either high job demands or low job resources, as listed and defined in the following tables. Each psychosocial risk factor was considered to be within the influence of the workplace, considered to have broad applicability, regardless of type or size of organisation, and was selected to reflect both task-related and interpersonal issues.

2.5 Definitions for Job Demands

Job Demands	Definition and Reference
1. Role Overload	Role Overload occurs when an individual feels pressured by excessive workloads, difficult deadlines, and a general inability to fulfil organisational expectations in the time available (Gilboa, Shirom, Fried, & Cooper, 2008; Peterson et al. 1995).
2. Role Ambiguity	Role Ambiguity is defined as the lack of clarity or uncertainty with respect to job responsibilities, or the perceived lack of important job-related information. Unclear or constantly changing specifications regarding expectations and duties defining an individual's job also constitutes role ambiguity (Rubino, Luksyte, Perry, & Volpone, 2009).
3. Role Conflict	Role Conflict reflects the degree to which employees are expected to perform two or more mutually exclusive tasks simultaneously and has been described as incompatible demands and expectations placed on an employee, by different groups or persons with whom an individual must interact (Cousins et al., 2004; Kahn, Wolfe, Quinn, Snoek, & Rosenthal, 1964).
4. Cognitive Demand	Cognitive Demand is defined as the degree to which an individual must engage in cognitive monitoring and attentiveness in order to meet the demands of the role (Jackson, Wall, Martin, & Davids, 1993).
5. Emotional Demand	Emotional demand occurs when employees are confronted with emotionally taxing, upsetting, or disturbing situations inherent in the job that impact on them personally, and is particularly prominent in jobs that involve interactions with customers or clients (de Jonge & Dormann, 2003).
6. Group Task Conflict	Group Task Conflict refers to disagreements with one's colleagues regarding the work to be undertaken (Giebels & Jannssen, 2005). Such conflict may involve differences in views about policies and procedures, disputes regarding allocation and distribution of resources, or disagreements in judgements and interpretation of facts (De Dreu & Van de Vliert, 1997; De Dreu & Weingart, 2003).
7. Group Relationship Conflict	Group Relationship Conflict refers to interpersonal disagreements and frictions with one's colleagues arising from differences in personal style, values, and norms (Pinkley, 1990).

2.6 Definitions for Job Resources

Job Resources	Definition and References
1. Job Control	Job Control is the degree to which an employee has the discretion to approach their work in a manner of their choosing. It reflects an employee's capacity to manage his or her activities at work, including choice of work tasks, methods of work, work pacing, work scheduling, control over resources, and control over the physical environment (Breaugh, 1985; Caza, 2012; Ganster, 1988).
2. Supervisor Support	Supervisor Support consists of both 'instrumental' support and 'emotional' support. Instrumental support refers to offering practical help to solve problems or providing tangible assistance or aid in the form of knowledge or advice needed to resolve the issue, whereas emotional support involves offering care or listening sympathetically to another person (Fenlason & Beehr, 1994; Swanson & Power, 2001).
3. Co-Worker Support	Co-Worker Support can be instrumental or emotional in nature. Instrumental support refers to practical help to solve problems or tangible assistance or aid in the form of knowledge or advice needed to resolve the issue, whereas emotional support involves care or listening sympathetically to another person (Fenlason & Beehr, 1994; Swanson & Power, 2001).
4. Praise and Recognition	Praise and Recognition refers to an employee's feelings of self-worth that grow from the perception that the organisation and the people they work for value them and what they have to offer (Chen, Ford, & Farris, 1999). Praise and recognition from supervisors can be in the form of encouragement, compliments, and other gestures of appreciation.
5. Procedural Justice	One type of organisational justice is Procedural Justice and refers to employees' perceptions of the fairness of the formal policies, procedures, and processes used to arrive at decisions and achieve end-goals and other outcomes (Colquitt, 2001).
6. Change Consultation	Change Consultation refers to the degree to which employees are provided with information about organisational changes and provided the opportunity to participate in decisions that may affect their work (Cousins et al., 2004).

2.7 Measurement Scales

- All scales for the 13 Psychosocial Hazards are from the academic literature, the psychometric properties of which were found to be good when analysed for a subset of the data collected for the first round of the People at Work Project (2008-2010) comprising 6,513 Queensland workers (Jimmieson, Bordia, Hobman, & Tucker, 2010). In this respect, all 1-factor congeneric models had a good fit and demonstrated good levels of composite reliability (ranging from .78 to .96) and average variance extracted (ranging from .54 to .86).

- Example items, response options, number of items, and references for each of the scales used to measure job demands and job resources are presented in the tables below.

- For the current data collection round, scale reliability has been assessed with Cronbach's (1951) alpha coefficient for internal consistency. All scales have acceptable internal consistency (ranging from .73 to .96).

2.8 Scales and Example Items for Job Demands

Job Demands	Example Item and Scale Reference	Response Option	Number of Items	Scale Reliability
1. Role Overload	I have unachievable deadlines. Cousins et al. (2004)	1 to 7 Never to Always	4	.884
2. Role Ambiguity	I am clear what is expected of me at work. Cousins et al. (2004)	1 to 7 Never to Always	4	.880
3. Role Conflict	I do things, which are accepted by one person, but not by another. Haynes, Wall, Bolden, Stride, and Rick (1999)	1 to 7 Never to Always	4	.903
4. Cognitive Demand	Does your work need your undivided attention? Jackson et al. (1993)	1 to 7 Never to Always	3	.726
5. Emotional Demand	Does your work put you in emotionally disturbing situations? Kristensen et al. (2005)	1 to 7 Never to Always	3	.862
6. Group Task Conflict	Do you and members of your workgroup disagree about the work being done? Jehn, Greer, Levine, and Szulanski (2008)	1 to 7 Never to Always	4	.906
7. Group Relationship Conflict	Are there bad feelings among members in your workgroup? Jehn et al. (2008)	1 to 7 Never to Always	4	.963

Notes: Scale reliability assessed with Cronbach's (1951) alpha coefficient; All items for Role Ambiguity reverse-scored to reflect high levels of this job demand.

2.9 Scales and Example Items for Job Resources

Job Resources	Example Item and Scale Reference	Response Option	Number of Items	Scale Reliability
1. Job Control	I have a choice in deciding what I do at work. Cousins et al. (2004)	1 to 7 Strongly Disagree to Strongly Agree	3	.841
2. Supervisor Support	I can rely on my supervisor to help me out with a work problem. Cousins et al. (2004)	1 to 7 Strongly Disagree to Strongly Agree	4	.956
3. Co-Worker Support	I can rely on my co-workers to help me out with a work problem. Cousins et al. (2004)	1 to 7 Strongly Disagree to Strongly Agree	4	.952
4. Praise and Recognition	I feel that my supervisor values my contributions to this organisation. Siegrist et al. (2004)	1 to 7 Strongly Disagree to Strongly Agree	3	.950
5. Procedural Justice	Processes are applied consistently in your workgroup. Colquitt (2001)	1 to 7 Strongly Disagree to Strongly Agree	4	.902
6. Change Consultation	When changes are made at work, I am clear about how they will work out in practice. Cousins et al. (2004); Jimmieson, Peach, and White (2008)	1 to 7 Strongly Disagree to Strongly Agree	4	.916

Notes: Scale reliability assessed with Cronbach's (1951) alpha coefficient.

Section 3 – Data Collection Procedures

3.1 Sampling Strategy

- The People at Work Project adhered to a workplace-based approach to data collection. Thus, workers who responded to the survey were employed within organisations rather than being individually drawn from the working population.

- This approach was undertaken so that each participating organisation could receive its own tailored risk assessment profile as part of the feedback process, considered to be a critical component in achieving the psychosocial education goals of the People at Work Project.

- Because it is an ethical imperative that feedback to organisations was done in such a way as to ensure individuals cannot be identified, only organisations with 20 workers or more were eligible to participate in the research.

- Thus, the very nature of the People at Work Project rendered random sampling impractical. The analytic techniques we make use of and the conclusions we draw from them generally rest on the assumption of a random sample. While we do not pretend that this is the case, our sample is sufficiently broad and representative of different jurisdictions, sectors, industries, occupations, and the workplaces within, that we have reasonable confidence the conclusions drawn from the data obtained are broadly generalisable to the populations of interest.

3.2 Recruitment of Organisations

- Multiple methods of recruitment were utilised. The Partner Organisations undertook a range of different promotional activities for bringing the People at Work Project to the attention of organisations in their jurisdictions. Such activities included:

- Presentations and information sessions during the annual safety events hosted by the WHS Regulators, such as Safe Work Month (Queensland), National Safe Work Australia Week (New South Wales), Work Safe Week (Victoria), and Comcare's Annual National Conference.

- Promotions as part of the psychosocial education activities regularly conducted by the WHS Regulators, such as face-to-face workshops and webinars for Managers and HR Professionals on managing psychosocial risk factors in the workplace, as well as formal presentations at various industry-specific conferences and seminars.

- In-house training of WHS Inspectors in psychosocial risk assessments so that the Inspectorate was equipped to promote the People at Work Project when liaising with organisations in the field.

- Direct approaches to organisations to participate (via letters of invitation), based on previous WHS performance or membership in certain high-risk industries.

- Advertising in regular newsletters of the Partner Organisations.

- The People at Work Project website was linked to the website homepages of the Partner Organisations.

Section 4 – Sample

4.1 Sample Size

- 79 organisations (38 from QLD, 9 from NSW, 12 from VIC, 14 from the federal jurisdiction, 4 organisations from other states/jurisdictions, and 2 organisations with workers across multiple jurisdictions) have participated in the People at Work Project to date (May, 2013 to December, 2015).

- Response rates range from 13% to 100%, with a mean response rate of 55.8% (*SD* = 23.6). This organisation-level response rate is comparable to Baruch and Holtom's (2008) review of organisational survey studies showing the average response rate to be 52.7% (*SD* = 20.4). 46 of the 79 organisations achieved a response rate of 50% or much higher.

- At the individual-level, 33,835 surveys have been administered to employees across these organisations and 11,890 surveys were returned, equating to an overall response rate of 35.1%.

4.2 Response Rates

Organisation	Surveys Distributed	Surveys Received	Response Rate
1	302	164	54.30%
2	141	77	54.61%
3	51	43	84.31%
4	51	51	100.00%
5	158	125	79.11%
6	440	139	31.59%
7	270	96	35.56%
8	54	41	75.93%
9	131	80	61.07%
10	1,503	705	46.91%
11	1,047	534	51.00%
12	85	75	88.24%
13	396	145	36.62%
14	1,319	249	18.88%
15	77	27	35.06%
16	32	20	62.50%
17	512	186	36.33%
18	1,894	609	32.15%
19	103	74	71.84%
20	48	38	79.17%
21	259	114	44.02%
22	90	79	87.78%
23	60	53	88.33%
24	40	21	52.50%
25	89	65	73.03%
26	21	19	90.48%
27	60	37	61.67%
28	1,066	225	21.11%
29	63	22	34.92%
30	94	62	65.96%
31	87	52	59.77%
32	315	170	53.97%
33	87	52	59.77%
34	1,339	355	26.51%
35	521	426	81.77%
36	80	44	55.00%
37	287	167	58.19%
38	6,609	1,329	20.11%
39	42	13	30.95%
40	71	48	67.61%
41	164	59	35.98%

42	514	194	37.74%
43	1,088	351	32.36%
44	40	23	57.50%
45	32	24	75.00%
46	135	122	90.37%
47	138	94	68.12%
48	154	103	66.88%
49	58	39	67.24%
50	58	48	82.76%
51	180	112	62.22%
52	121	109	90.08%
53	4,179	1,252	29.96%
54	487	212	43.53%
55	2,380	713	29.96%
56	178	45	25.28%
57	106	73	68.87%
58	707	339	47.95%
59	101	67	66.34%
60	1,552	394	25.39%
61	110	51	46.36%
62	290	85	29.31%
63	50	15	30.00%
64	76	10	13.16%
65	21	18	85.71%
66	35	29	82.86%
67	31	31	100.00%
68	30	7	23.33%
69	191	34	17.80%
70	35	17	48.57%
71	118	70	59.32%
72	77	37	48.05%
73	25	25	100.00%
74	56	50	89.29%
75	60	51	85.00%
76	98	53	54.08%
77	39	6	15.38%
78	215	83	38.60%
79	57	38	66.67%
TOTAL	**33,835**	**11,890**	**55.77%**

4.3 Sample Characteristics

- The sample of workplaces was not randomly selected. In this respect, we surveyed workers grouped together in their workplaces, at the behest of employers who approached us and essentially 'self-selected' into the sample.

- Nevertheless, attempts were made to recruit a diverse range of suitable organisations in terms of public sector and private sector representation, industries, occupations and job roles within the workplaces, number of employees (i.e., balance of SMEs and larger organisations), and metropolitan and regional locations.

- Although not systematically sampled to match the profile of the Australian working population as compiled by the Australian Bureau of Statistics (ABS), the 2011 Australian Census provides a point of comparison for several of the demographic variables.

- The following tables describe the sample according to jurisdiction, sector, industry, and occupation. The sample also is described according to gender, age, organisational tenure, education, employment status, and work schedule.

4.3.1 Jurisdiction

Jurisdiction	*n*	%
Queensland (38 organisations)	3,888	32.7%
New South Wales (9 organisations)	3,345	28.1%
Victoria (12 organisations)	1,183	9.9%
Federal (14 organisations)	3,150	26.5%
Other	221	1.9%
Unable To Be Coded	103	0.9%

- Other contains 4 organisations from other states/jurisdictions, and 2 organisations with workers across multiple jurisdictions.

4.3.2 Sector

Sector	*n*	*PAW*	*2011 Census*
Public (33 organisations)	7,997	67.3%	15.8%
Private (48 organisations)	3,893	32.7%	84.2%

- The breakdown of sector indicates that two-thirds of the sample consists of government employees (67%).
- The breakdown of sector for the People at Work Project is compared to the Australian workforce, as reported by the 2011 Census (generated 21 November 2014 using data provided by the ABS). It shows that the public sector was overrepresented compared to the census numbers.

4.3.3 Industry - Organisations

Industry	*Number (organisations)*	*PAW*	*ABR*
Agriculture, Forestry, & Fishing	0	0.0%	8.5%
Mining	0	0.0%	0.4%
Manufacturing	7	8.9%	4.0%
Electricity, Gas, Water, & Waste Services	4	5.1%	0.3%
Construction	0	0.0%	16.7%
Wholesale Trade	0	0.0%	3.7%
Retail Trade	0	0.0%	6.5%
Accommodation & Food Services	0	0.0%	3.9%
Transport, Postal, & Warehousing	11	13.9%	6.4%
Information Media & Telecommunications	1	1.3%	1.0%
Financial & Insurance Services	0	0.0%	8.4%
Rental, Hiring, & Real Estate Services	0	0.0%	10.3%
Professional, Scientific, & Technical Services	4	5.1%	12.0%
Administrative & Support Services	0	0.0%	4.0%
Public Administration & Safety	15	19.0%	0.5%
Education & Training	15	19.0%	1.6%
Health Care & Social Assistance	17	21.5%	4.8%
Arts & Recreation Services	2	2.5%	1.6%
Other Services	3	3.8%	5.3%

- The breakdown of organisations across the 19 ANZSIC industries indicates that the majority of organisations are in Health Care, followed by Public Administration and Education. 9 industries are not represented.
- The breakdown of industry (across organisations) for the People at Work Project is compared to the Australian workforce, as reported by the Australian Business Register (March, 2013).
- Other Services is defined by ANZSIC as religious, civic, professional, and other interest group services; selected repair and maintenance activities; and private households employing staff.

4.3.4 Industry - Employees

Industry	*Number (employees)*	*PAW*	*2013/14 Labour Force Survey*
Agriculture, Forestry, and Fishing	0	0.0%	1.4%
Mining	0	0.0%	2.7%
Manufacturing	597	5.0%	8.5%
Electricity, Gas, Water, & Waste Services	2,065	17.4%	1.5%
Construction	0	0.0%	6.7%
Wholesale Trade	0	0.0%	3.5%
Retail Trade	0	0.0%	11.4%
Accommodation & Food Services	0	0.0%	7.1%
Transport, Postal, & Warehousing	582	4.9%	5.1%
Information Media & Telecommunications	37	0.3%	1.8%
Financial & Insurance Services	0	0.0%	3.9%
Rental, Hiring, & Real Estate Services	0	0.0%	1.6%
Professional, Scientific, & Technical Services	500	4.2%	6.7%
Administrative & Support Services	0	0.0%	2.8%
Public Administration & Safety	4,465	37.6%	7.8%
Education & Training	884	7.4%	8.8%
Health Care & Social Assistance	2,059	17.3%	13.3%
Arts & Recreation Services	234	2.0%	1.7%
Other Services	467	3.9%	3.6%

- The breakdown of sample size across the 19 ANZSIC industries indicates that the majority of the sample consists of employees from Public Administration, followed by Electricity and Health Care.
- The breakdown of industry (across workers) for the People at Work Project is compared to the 2013/14 Labour Force Survey, as reported by the Australian Bureau of Statistics.
- Other Services is defined by ANZSIC as religious, civic, professional, and other interest group services; selected repair and maintenance activities; and private households employing staff.

4.3.5 Occupation

Occupation	*n*	*PAW*	*2011 Census*
Managers	1,584	13.3%	13.0%
Professionals - Business (n = 583) - Design Engineering Science Transport (n = 428) - Education (n = 575) - Health (n = 267) - Miscellaneous Professionals (n = 1,147)	3,000	25.2%	21.6%
Technicians & Trades Workers - Engineering ICT Science Technicians (n = 401) - Electrical & Telecommunications Workers (n = 236) - Miscellaneous Technicians & Trades Workers (n = 554)	1,191	10.0%	14.1%
Community & Personal Service Workers - Health & Welfare Support Workers (n = 745) - Carers & Aides (n = 402) - Miscellaneous Community & Personal Service Workers (n = 89)	1,236	10.4%	9.7%
Clerical & Administrative Workers	2,620	22.0%	15.0%
Sales Workers	137	1.2%	9.5%
Machinery Operators & Drivers	385	3.2%	6.5%
Labourers	201	1.7%	9.3%
Unable to be Coded	189	1.6%	1.0%
No Response	1,347	11.3%	0.2%

- The breakdown of sample size across the 8 ANZSCO occupations indicates that the majority of the sample is employed as Professionals, followed by Clerical & Administrative Workers.

- The breakdown of occupation for the People at Work Project is compared to Australian workforce, as reported by the 2011 Census (generated 9 September 2014 using data provided by the ABS).

4.3.6 Jurisdictional Profiles by Sector, Industry, Occupation

Jurisdictional Profiles	Queensland *n* = 3,888 38 organisations	New South Wales *n* = 3,345 9 organisations	Victoria *n* = 1,183 12 organisations	Federal *n* = 3,150 14 organisations
Sector				
Public	1,374 (35.3%)	2,837 (84.8%)	442 (37.4%)	3,150 (100.0%)
Private	2,514 (64.7%)	508 (15.2%)	741 (62.6%)	-
Industry				
Manufacturing	265 (6.8%)	29 (0.9%)	176 (14.9%)	-
Electricity, Gas, Water, & Waste Services	-	2,003 (59.9%)	62 (5.2%)	-
Transport, Postal, & Warehousing	582 (15.0%)	-	-	-
Information Media & Telecommunications	20 (0.5%)	8 (0.2%)	6 (0.5%)	-
Professional, Scientific, & Technical Services	67 (1.7%)	167 (5.0%)	-	266 (8.4%)
Public Administration & Safety	1,020 (26.2%)	705 (21.1%)	249 (21.0%)	2,422 (76.9%)
Education & Training	654 (16.8%)	-	179 (15.1%)	-
Health Care & Social Assistance	1,116 (28.7%)	358 (10.7%)	511 (43.2%)	-
Arts & Recreation Services	164 (4.2%)	-	-	70 (2.2%)
Other Services	-	75 (2.2%)	-	392 (12.4%)
Occupation				
Managers	349 (9.0%)	317 (9.5%)	115 (9.7%)	761 (24.2%)
Business Professionals	174 (4.5%)	250 (7.5%)	73 (6.2%)	56 (1.8%)
Design Engineering Science Transport Professionals	67 (1.7%)	247 (7.4%)	19 (1.6%)	84 (2.7%
Education Professionals	409 (10.5%)	13 (0.4%)	101 (8.5%)	-
Health Professionals	91 (2.3%	75 (2.2%)	63 (5.3%)	15 (0.5%)
Miscellaneous Professionals	90 (2.3%)	269 (8.0%)	42 (3.6%)	741 (23.5%)
Engineering ICT Science Technicians	50 (1.3%)	293 (8.8%)	45 (3.8%)	6 (0.2%)
Electrical & Telecommunications Workers	7 (0.2%)	217 (6.5%)	2 (0.2%)	9 (0.3%)
Miscellaneous Technicians & Trades Workers	254 (6.5%)	104 (3.1%)	11 (0.9%)	180 (5.7%)
Health & Welfare Support Workers	472 (12.1%)	37 (1.1%)	235 (19.9%)	1 (0.1%)
Carers & Aides	99 (2.5%)	209 (6.2%)	94 (7.9%)	-
Miscellaneous Community & Personal Service Workers	16 (0.4%)	8 (0.2%)	7 (0.6%)	58 (1.8%)
Clerical & Administrative Workers	795 (20.4%)	724 (21.6%)	170 (14.4%)	896 (28.4%)
Sales Workers	72 (1.9%)	21 (0.6%)	19 (1.6%)	3 (0.1%)
Machinery Operators & Drivers	341 (8.8%)	16 (0.5%)	23 (1.9%)	3 (0.1%)
Labourers	129 (3.3%)	28 (0.8%)	36 (3.0%)	5 (0.2%)
No Response	473 (12.2%)	517 (15.5%)	128 (10.8%)	332 (10.5%)

- The high take-up in Transport, Postal, & Warehousing in the QLD jurisdiction is due to the targeted approach to recruitment.
- Other Services is defined by ANZSIC as religious, civic, professional, and other interest group services; selected repair and maintenance activities; and private households employing staff.

4.3.7 Gender

Gender	*n*	*PAW*	*2011 Census*
Male	5,431	45.7%	49.4%
Female	4,914	41.3%	50.6%
No Response	1,545	13.0%	

- The gender composition of the sample indicates that more males than females participated in the project.
- The breakdown of gender for the People at Work Project is compared to the Australian workforce, as reported by the 2011 Census (generated 9 September 2014 using data provided by the ABS).

4.3.8 Age

n		*M* (years)	*SD* (years)	Range (years)
Valid	Missing			
10,081	1,809	44.57	10.94	16-92

- Individual who is 92 years old verified as correct; individuals over 70 also checked.

Age Bracket	*n*	%
<21 years	63	0.5%
21-25 years	397	3.3%
26-30 years	796	6.7%
31-35 years	1,075	9.0%
36-40 years	1,299	10.9%
41-45 years	1,507	12.7%
46-50 years	1,607	13.5%
51-55 years	1,612	13.6%
56-60 years	1,165	9.8%
61-65 years	434	3.7%
66-70 years	107	0.9%
71-75 years	15	0.1%
76-80 years	0	0.0%
>80 years	4	0.1%
No response	1,809	15.2%

- Most workers are in the age brackets ranging from 31 to 60 years.

4.3.9 Organisational Tenure

Organisational Tenure	*n*	%
<5 years	4,099	34.5%
5-9.9 years	2,652	22.3%
10-14.9 years	1,607	13.5%
15-19.9 years	699	5.9%
20-24.9 years	411	3.5%
>25 years	660	5.6%
No response	1,762	14.8%

- The average organisational tenure is 8.68 years (*SD* = 8.15).

4.3.10 Education

Education	*n*	%
Year 10	834	7.0%
Year 12	911	7.7%
Trade Qualification	683	5.7%
Certificate	1,584	13.3%
Associate Diploma	389	3.3%
Diploma	1,745	14.7%
Undergraduate Degree	1,879	15.8%
Postgraduate Degree	1,974	16.6%
Other	313	2.6%
No Response	1,578	13.3%

- In terms of highest level of education, most participants hold some form of post-schooling qualification.

4.3.11 Employment Status

Employment Status	*n*	%
Full-time	8,388	70.5%
Part-time	1,376	11.6%
Casual	397	3.3%
Contract Worker	112	0.9%
Volunteer	20	0.2%
No Response	1,597	13.4%

- This compares to the breakdown of workers employed on a full-time (68%) and part-time (33%) basis in the Australian workforce, as reported by the 2011 Census (generated 21 November 2014 using data provided by the ABS).

4.3.12 Work Schedule

Work Schedule	*n*	%
Regular Daytime Schedule	9,184	77.2%
Regular Evening Schedule	85	0.7%
Regular Night Shift	81	0.7%
Rotating Shift	648	5.4%
Split Shift (days, evenings, nights)	122	1.0%
On Call	78	0.7%
Irregular Schedule	484	4.1%
Other	341	2.9%
No Response	867	7.3%

4.3.12 Jurisdictional Profiles by Demographic Characteristics

Jurisdictional Profiles	Queensland *n* = 3,888 38 organisations	New South Wales *n* = 3,345 9 organisations	Victoria *n* = 1,183 12 organisations	Federal *n* = 3,150 14 organisations
Gender				
Male	1,736 (44.7%)	1,649 (49.3%)	366 (30.9%)	1,563 (49.6%)
Female	1,777 (45.7%)	1,267 (37.9%)	667 (56.4%)	1,114 (35.4%)
No Response	375 (9.6%)	429 (12.8%)	150 (12.7%)	473 (15.0%)
Age				
Mean	43.72	45.08	44.25	45.30
No Response	460 (11.83%)	529 (15.81%)	176 (14.88%)	519 (16.48%)
Organisational Tenure				
Mean	6.77	11.08	6.39	9.40
No Response	454 (11.68%)	510 (15.25%)	163 (13.78%)	509 (16.16%)
Education				
Year 10	417 (10.7%)	202 (6.0%)	56 (4.7%)	153 (4.9%)
Year 12	371 (9.5%)	180 (5.4%)	79 (6.7%)	272 (8.6%)
Trade Qualification	258 (6.6%)	322 (9.6%)	24 (2.0%)	74 (2.3%)
Certificate	583 (15.0%)	510 (15.2%)	201 (17.0%)	275 (8.7%)
Associate Diploma	88 (2.3%)	112 (3.3%)	20 (1.7%)	166 (5.3%)
Diploma	542 (13.9%)	506 (15.1%)	173 (14.6%)	503 (16.0%)
Undergraduate Degree	613 (15.8%)	484 (14.5%)	196 (16.6%)	548 (17.4%)
Postgraduate Degree	504 (13.0%)	513 (15.3%)	214 (18.1%)	639 (20.3%)
Other	119 (3.1%)	87 (2.6%)	62 (5.2%)	39 (1.2%)
No Response	393 (10.1%)	429 (12.8%)	158 (13.4%)	481 (15.3%)
Employment Status				
Full-time	2,755 (70.9%)	2,521 (75.4%)	593 (50.1%)	2,341 (74.3%)
Part-time	537 (13.8%)	213 (6.4%)	327 (27.6%)	278 (8.9%)
Casual	189 (4.9%)	51 (1.5%)	109 (9.2%)	45 (1.4%)
Contract Worker	-	106 (3.2%)	-	6 (0.2%)
Volunteer	11 (0.3%)	-	-	3 (0.1%)
No Response	396 (10.2 %)	449 (13.4%)	154 (13.0%)	477 (15.1%)
Work Schedule				
Regular Daytime Schedule	2,952 (75.9%)	2,766 (82.7%)	772 (65.3%)	2,473 (78.5%)
Regular Evening Schedule	48 (1.2%)	15 (0.4%)	19 (1.6%)	3 (0.1%)
Regular Night Shift	46 (1.2%)	25 (0.7%)	10 (0.8%)	0 (0.0%)
Rotating Shift	218 (5.6%)	108 (3.2%)	124 (10.5%)	197 (6.3%)
Split Shift (days, evenings, nights)	85 (2.2%)	11 (0,3%)	22 (1.9%)	3 (0.1%)
On Call	30 (0.8%)	25 (0.7%)	14 (1.2%)	9 (0.3%)
Irregular Schedule	180 (4.6%)	76 (2.3%)	82 (6.9%)	132 (4.2%)
Other	165 (4.2%)	71 (2.1%)	55 (4.6%)	42 (1.3%)
No Response	164 (4.2%)	248 (7.4%)	85 (7.2%)	291 (9.2%)

Section 5 – Psychosocial Hazard Prevalence for Overall Sample

This section presents a hazards exposure analysis for each of the 13 Psychosocial Hazards for the Overall Sample (**Section 5**), along with breakdown analyses across jurisdictions (**Section 6**), sectors (**Section 7**), industries (**Section 8**), and occupations (**Section 9**). Prevalence analyses are important for ensuring that the time and effort directed towards investigating such phenomena is not misdirected on trivial job stressors that are not a commonplace experience for workers (see Jex, 2014).

5.1 Data Analysis Overview

Treatment of Missing Data

Listwise deletion of cases was used for the analyses undertaken for this report. Thus, sample sizes vary throughout and are indicated accordingly.

Summary of Variance Components Analyses

Because workers (level-1) were nested in organisations (level-2), it is important to take into account the non-independence of observations within groups on the variables. Variance components analyses were run for each of the 13 Psychosocial Hazards using Mplus V7.1. Such analyses partition the variance at both levels, establishing the extent to which variance in the 13 Psychosocial Hazards varies as a function of organisational membership. As can be seen in the table below, several of the intra-class correlations (*ICC*s) exceed 5%. Thus, it can be concluded that the total variance in several of the variables systematically differs as a function of organisation. Further, to ascertain the influence of clustering, design effects (*DEFF*s), which account for within-group sample size, were calculated using the following formula: 1+(average within group sample size-1)*ICC. All *DEFF* values are greater than 2, further reinforcing that group membership in organisations has an effect on the responses of workers. Under such circumstances, multi-level modeling is warranted to take into account the effects of nested data.

	ICC	*Z*	*p*	*DEFF*
Role overload	.114	4.329	.000	17.872
Role ambiguity	.063	5.308	.000	10.222
Role conflict	.042	4.467	.000	7.033
Cognitive demand	.054	4.194	.000	8.727
Emotional demand	.099	5.621	.000	14.861
Group task conflict	.039	4.590	.000	6.297
Group relationship conflict	.053	4.258	.000	8.142
Job control	.090	3.170	.002	14.396
Supervisor support	.039	3.668	.000	6.736
Co-Worker support	.040	3.432	.001	6.825
Praise and recognition	.032	4.508	.000	5.598
Procedural justice	.052	3.783	.000	8.341
Change consultation	.065	4.808	.000	10.049

Notes: *ICC* = intra-class correlation (values > 5% demonstrate nesting in groups has an effect on the responses of individuals); *DEFF* = design effect (values > 2 demonstrate nesting of the data).

Overall Sample

- Rank ordering of the 7 Job Demands for the Overall Sample using means and 99.9% Confidence Intervals demonstrating which Job Demands are significantly higher or lower relative to each other (**Sections 5.2 and 5.3**).
- Prevalence of the 7 Job Demands for the Overall Sample using percentages (**Section 5.4**).
- Rank ordering of the 6 Job Resources for the Overall Sample using means and 99.9% Confidence Intervals demonstrating which Job Resources are significantly higher or lower relative to each other (**Sections 5.5 and 5.6**).
- Prevalence of the 6 Job Resources for the Overall Sample using percentages (**Section 5.7**).
- The extent to which the 13 Psychosocial Hazards vary as a function of gender, status, and schedule is tested (**Section 5.8**).

Trends by Jurisdiction

- Using means for the 13 Psychosocial Hazards and tests of significance, the 4 Jurisdictions are compared to the balance of the Overall Sample, as determined by multi-level linear regressions that account the clustering effect of organisation (**Sections 6.1, 6.2, and 6.3**).
- Prevalence of the 7 Job Demands for each of the 4 Jurisdictions using percentages are presented in **Appendix 1**.
- Prevalence of the 6 Job Resources for each of the 4 Jurisdictions using percentages are presented in **Appendix 1**.

Trends by Sector

- Using means for the 13 Psychosocial Hazards and tests of significance, the 2 Sectors are compared to each other, as determined by multi-level linear regressions that account the clustering effect of organisation (**Section 7.1, 7.2, and 7.3**).
- Prevalence of the 7 Job Demands for each of the 2 Sectors using percentages are presented in **Appendix 2**.
- Prevalence of the 6 Job Resources for each of the 2 Sectors using percentages are presented in **Appendix 2**.

Trends by Industry

- Of the 10 industries for which there were data available, workers from Information, Media, and Telecommunications (*n* = 37) were omitted due to insufficient sample size (see Note below).
- Using means for the 13 Psychosocial Hazards and tests of significance, the 9 Industries are compared to the balance of the Overall Sample, as determined by multi-level linear regressions that account for the clustering effect of organisation (**Sections 8.1, 8.2, and 8.3**).
- Prevalence of the 7 Job Demands for each of the 9 Industries using percentages are presented in **Appendix 3**.
- Prevalence of the 6 Job Resources for each of the 9 Industries using percentages are presented in **Appendix 3**.

Trends by Occupation

- Of the 16 occupations, Miscellaneous Community and Personal Service Workers (*n* = 89) and Sales Workers (*n* = 137) were omitted due to insufficient sample size (see Note below).
- Using means for the 13 Psychosocial Hazards and tests of significance, the 14 Occupations are compared to the balance of the Overall Sample, as determined by multi-level linear regressions that account for the clustering effect of organisation (**Sections 9.1, 9.2, and 9.3**).
- Prevalence of the 7 Job Demands for each of the 14 Occupations using percentages are presented in **Appendix 4**.
- Prevalence of the 6 Job Resources for each of the 14 Occupations using percentages are presented in **Appendix 4**.

Note Regarding Sample Size and Standard Errors

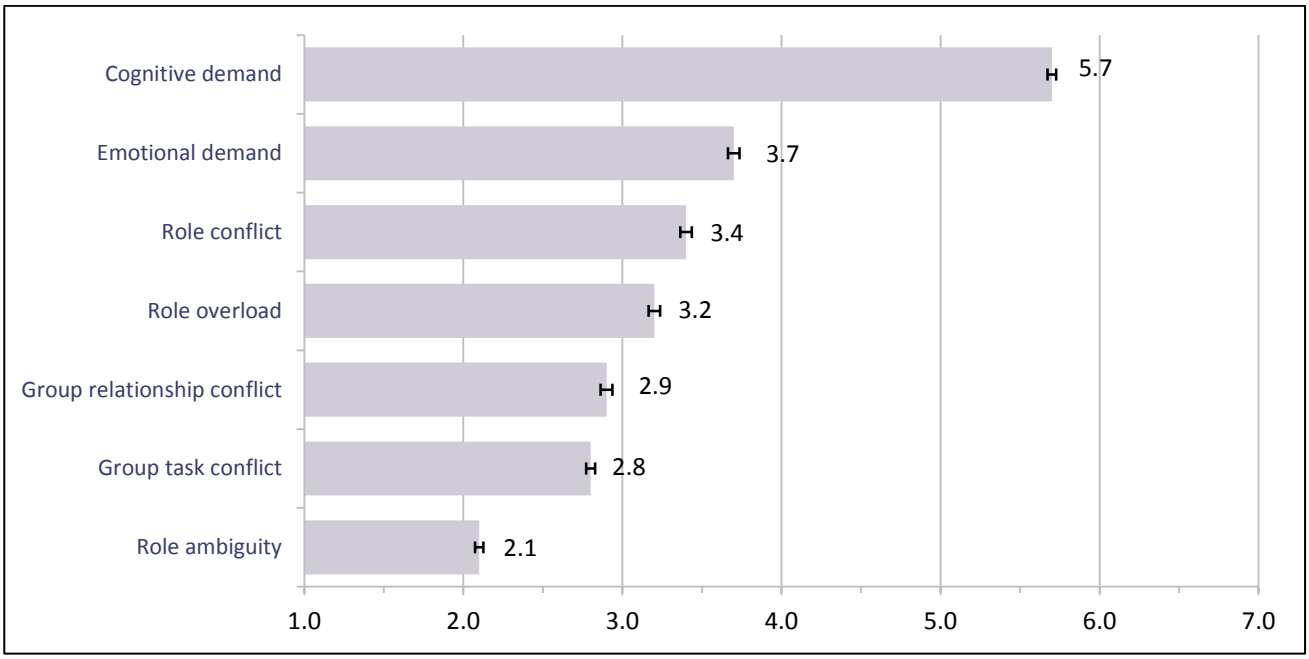
- The smaller the sample, the greater the uncertainty about the extent to which a sample value accurately reflects the true value in the population.
- Standard errors will be larger and less stable, and the analyst is at greater risk of incorrectly ruling something insignificant; in other words, wrongly concluding the level of some variable is not significantly different across groups or that a certain factor has no significant impact on the outcome of interest (known as a false negative or Type 2 error).
- Accordingly, while workers in smaller industries were retained in *whole sample* analyses that combined the data from different industries, they were omitted from all *subgroup* analyses where the variables of interest were broken down by industry. The same caution was naturally exercised in regard to occupations for which there were insufficient numbers.

5.2 Descriptive Data for Job Demands for Overall Sample

Job Demand	*n*	*M*	*SD*	Lower 99.9% *CI*	Upper 99.9% *CI*	Low %	Moderate %	High %
Role overload	11,771	3.2	1.4	3.2	3.3	45%	41%	14%
Role ambiguity	11,643	2.1	1.0	2.0	2.1	81%	17%	2%
Role conflict	11,427	3.4	1.4	3.3	3.4	42%	41%	17%
Cognitive demand	11,383	5.7	1.1	5.6	5.7	2%	18%	80%
Emotional demand	11,140	3.7	1.5	3.7	3.7	31%	45%	24%
Group task conflict	10,809	2.8	1.1	2.7	2.8	59%	35%	5%
Group relationship conflict	10,725	2.9	1.5	2.9	3.0	56%	31%	13%

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*), and 99.9% confidence intervals (*CIs*) for each Job Demand; Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7).

5.3 Rank Ordering of Job Demands for Overall Sample

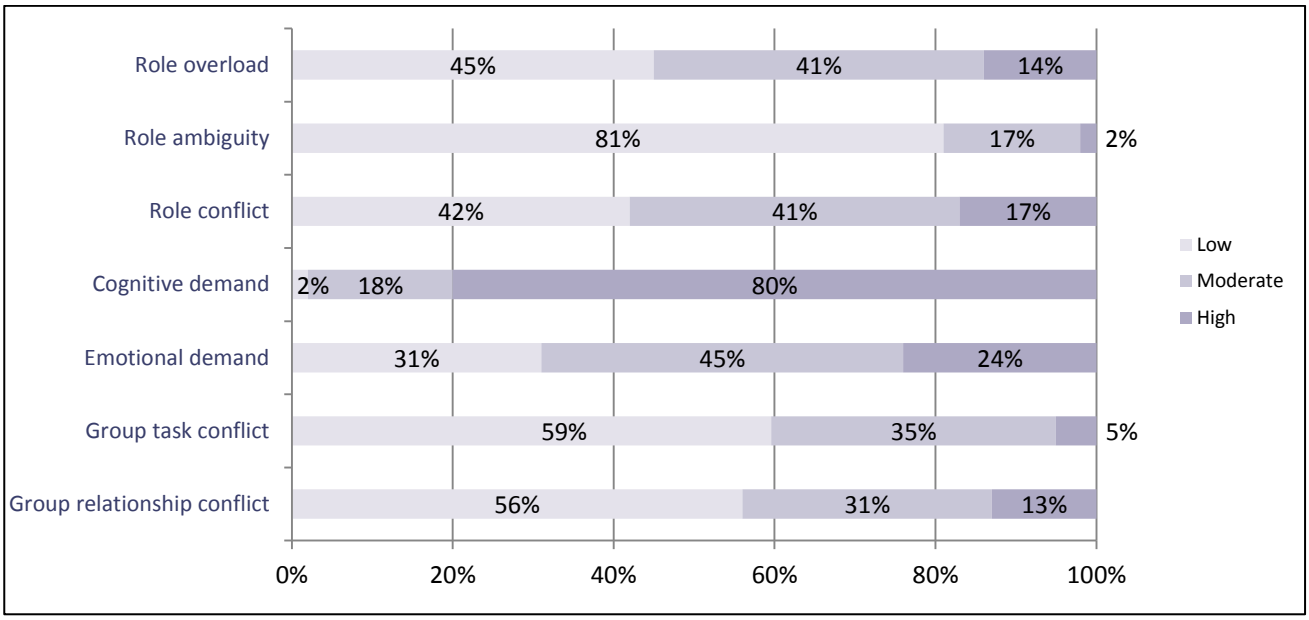


Notes: Means and 99.9% confidence intervals for each Job Demand, presented in the order from highest to lowest in prevalence. Job Demands are at significantly different levels from one another when their confidence intervals do not overlap.

Summary:

- A rank order analysis of the means for 7 Job Demands from highest to lowest in prevalence was determined, based on 99.9% confidence intervals.
- The most prevalent Job Demand is Cognitive Demand (mean = 5.7), followed by:
- Emotional Demand (mean = 3.7).
- Role Conflict (mean = 3.4) and Role Overload (mean = 3.2).
- Group Relationship Conflict (mean = 2.9).
- Group Task Conflict (mean = 2.8).
- The least prevalent Job Demand is Role Ambiguity (mean = 2.1).

5.4 Percentages for Job Demands for Overall Sample



Notes: Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7).

Summary:

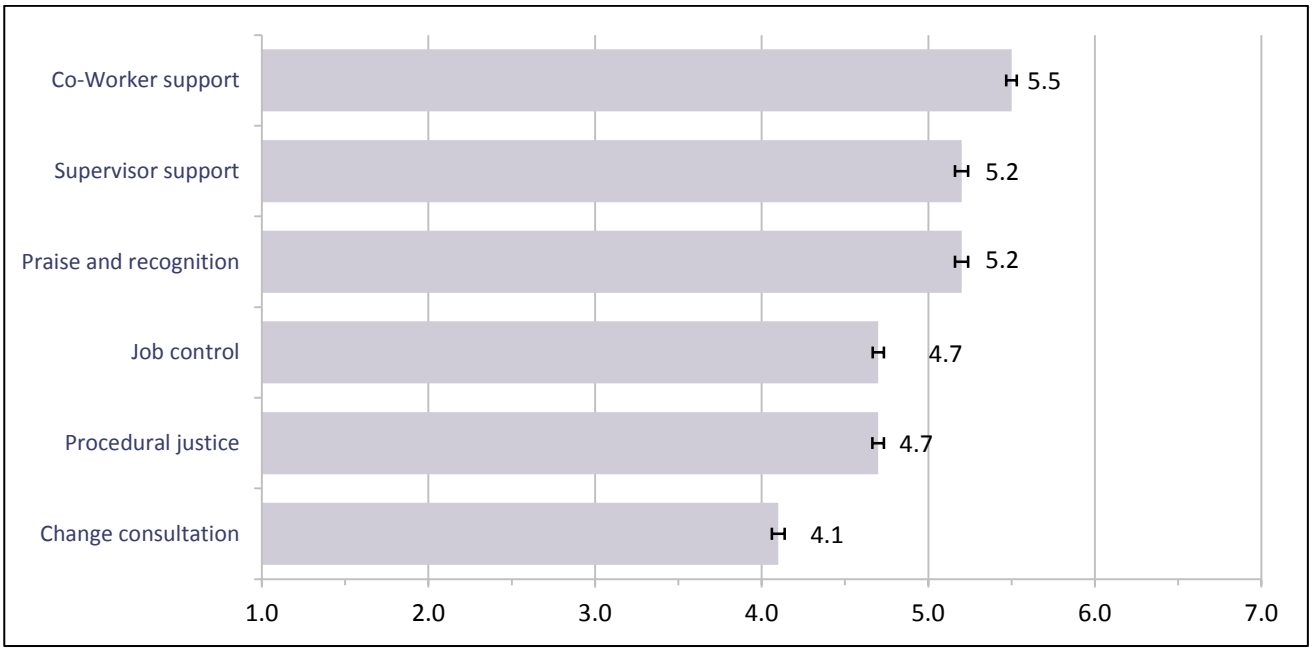
- 80% of the Overall Sample reports high Cognitive Demand.
- 24% of the Overall Sample reports high Emotional Demand.
- 17% of the Overall Sample reports high Role Conflict.
- 14% of the Overall Sample reports high Role Overload.
- 13% of the Overall Sample reports high Group Relationship Conflict.
- 5% of the Overall Sample reports high Group Task Conflict.
- 2% of the Overall Sample reports high Role Ambiguity.

5.5 Descriptive Data for Job Resources for Overall Sample

Job Resource	*n*	*M*	*SD*	Lower 99.9% *CI*	Upper 99.9% *CI*	Low %	Moderate %	High %
Job control	11,838	4.7	1.4	4.6	4.7	11%	39%	49%
Supervisor support	11,699	5.2	1.5	5.2	5.3	10%	21%	69%
Co-Worker support	11,584	5.5	1.2	5.4	5.5	5%	19%	77%
Praise and recognition	11,431	5.2	1.6	5.1	5.2	11%	21%	68%
Procedural justice	11,232	4.7	1.4	4.7	4.8	11%	37%	52%
Change consultation	11,077	4.1	1.5	4.0	4.1	24%	40%	36%

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*), and 99.9% confidence intervals (*CIs*) for each Job Resource; Low % = strongly disagree (1) disagree (2.9999); Moderate % = somewhat disagree (3) to neutral (4.9999); High % = somewhat agree (5) to strongly agree (7).

5.6 Rank Ordering of Job Resources for Overall Sample

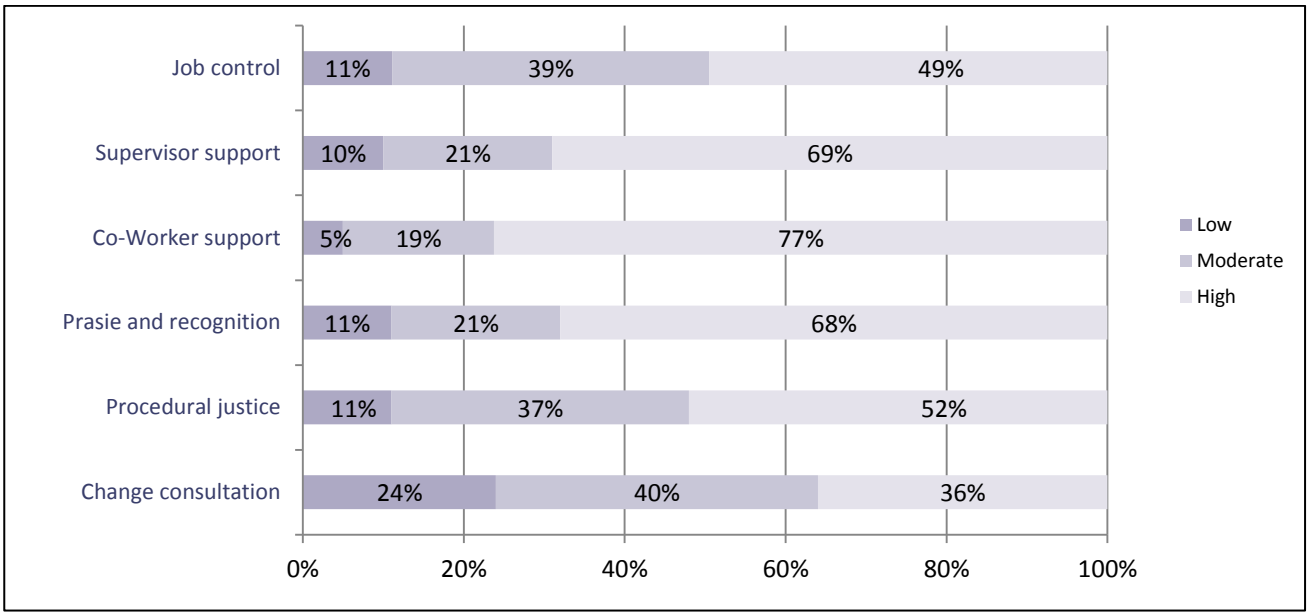


Notes: Means and 99.9% confidence intervals for each Job Resource, presented in the order from highest to lowest in prevalence. Job Resources are at significantly different levels from one another when their confidence intervals do not overlap.

Summary:

- A rank order analysis of the means for the 6 Job Resources from highest to lowest in prevalence was determined, based on 99.9% confidence intervals.
- The most prevalent Job Resource is Co-Worker Support (mean = 5.5), followed by:
- Supervisor Support (mean = 5.2) and Praise and Recognition (mean = 5.2).
- Job Control (mean = 4.7) and Procedural Justice (mean = 4.7).
- The lowest Job Resource is Change Consultation (mean = 4.1).

5.7 Percentages for Job Resources for Overall Sample



Notes: Low % = strongly disagree (1) disagree (2.9999); Moderate % = somewhat disagree (3) to neutral (4.9999); High % = somewhat agree (5) to strongly agree (7).

Summary:

- 24% of the Overall Sample reports low Change Consultation.
- 11% of the Overall Sample reports low Procedural Justice.
- 11% of the Overall Sample reports low Praise and Recognition.
- 11% of the Overall Sample reports low Job Control.
- 10% of the Overall Sample reports low Supervisor Support.
- 5% of the Overall Sample reports low Co-Worker Support.

5.8 Differences for Psychosocial Hazards as a Function of Gender, Status, and Schedule

5.8.1 Gender

ANOVAs ($p < .001$) were conducted to determine if there were significant differences in the means for males versus females on the 7 Job Demands and 6 Job Resources.

			Means	
Psychosocial Hazard	*F*	*p*	*Male*	*Female*
Role overload	42.271	*	3.3	3.1
Role ambiguity	45.557	*	2.1	2.0
Role conflict	107.547	*	3.5	3.2
Cognitive demand	6.045		5.7	5.6
Emotional demand	41.823	*	3.6	3.8
Group task conflict	12.124	*	2.8	2.7
Group relationship conflict	32.285	*	2.9	3.0
Job control	6.480		4.7	4.6
Supervisor support	35.968	*	5.2	5.3
Co-Worker support	32.985	*	5.4	5.6
Praise and recognition	25.760	*	5.1	5.3
Procedural justice	0.482		4.7	4.7
Change consultation	7.426		4.0	4.1

Notes: * indicates that the means for the psychosocial hazard in question is significantly different at $p < .001$.

Summary:

- There were 9 statistically significant differences in means between groups as a function of gender across the 13 Psychosocial Hazards. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.

5.8.2 Employment Status

ANOVAs ($p < .001$) were conducted to determine if there were significant differences in the means for full-time versus all other types of employment status on the 7 Job Demands and 6 Job Resources.

			Means	
Psychosocial Hazard	*F*	*p*	*Full-time*	*All Other Types of Employment Status*
Role overload	271.207	*	3.3	2.8
Role ambiguity	79.521	*	2.1	1.9
Role conflict	208.587	*	3.5	2.9
Cognitive demand	72.790	*	5.7	5.5
Emotional demand	1.203		3.7	3.7
Group task conflict	28.230	*	2.8	2.6
Group relationship conflict	0.002		2.9	2.9
Job control	31.310	*	4.7	4.5
Supervisor support	13.088	*	5.2	5.4
Co-Worker support	10.748	*	5.5	5.6
Praise and recognition	4.732		5.2	5.3
Procedural justice	2.821		4.7	4.8
Change consultation	36.691	*	4.0	4.3

Notes: All other types of employment status include part-time, casual, contract, & volunteer; * indicates that the means for the psychosocial hazard in question is significantly different at $p < .001$.

Summary:

- There were 9 statistically significant differences in means between groups as a function of employment status across the 13 Psychosocial Hazards. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.
- Nevertheless, it is worth noting that full-time workers report higher Role Overload (mean difference = .5) and Role Conflict (mean difference = .6) than non-full-time workers.

5.8.3 Work Schedule

ANOVAs ($p < .001$) were conducted to determine if there were significant differences in the means for those workers on a regular day schedule versus all other types of work schedule on the 7 Job Demands and 6 Job Resources.

			Means	
Psychosocial Hazard	*F*	*p*	*Regular Day Schedule*	*All Other Work Schedules*
Role overload	2.731		3.2	3.2
Role ambiguity	26.476	*	2.1	2.0
Role conflict	0.632		3.4	3.4
Cognitive demand	66.032	*	5.6	5.9
Emotional demand	91.314	*	3.6	4.0
Group task conflict	43.792	*	2.7	2.9
Group relationship conflict	63.559	*	2.9	3.2
Job control	147.257	*	4.7	4.3
Supervisor support	98.980	*	5.3	4.9
Co-Worker support	16.579	*	5.5	5.4
Praise and recognition	121.383	*	5.2	4.8
Procedural justice	39.052	*	4.7	4.5
Change consultation	11.311	*	4.1	4.0

Notes: All other types of work schedule include regular evening schedule, regular night shift, rotating shift, & split shift; * indicates that the means for the psychosocial hazard in question is significantly different at $p < .001$.

- There were 11 statistically significant differences in means between groups as a function of work schedule across the 13 Psychosocial Hazards. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.

Section 6 – Psychosocial Hazard Prevalence for Jurisdictions

6.1 Descriptive Data for Job Demands – Jurisdiction

	Role overload		Role ambiguity		Role conflict		Cognitive demand		Emotional demand		Group task conflict		Group relationship conflict	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Queensland *n* range = 3,650 - 3,851	3.2	1.5	2.0	1.0	3.3	1.4	5.7	1.1	3.8	1.5	2.8	1.1	3.0	1.5
New South Wales *n* range = 3,020 - 3,312	3.1	1.4	2.1	1.1	3.3	1.4	5.7	1.1	3.5	1.4	2.7	1.1	2.8	1.5
Victoria *n* range = 1,073 - 1,170	3.3	1.5	2.0	1.0	3.5	1.5	5.6	1.2	4.0	1.5	2.9	1.2	3.0	1.5
Federal *n* range = 2,766 - 3,120	3.4	1.4	2.2	1.0	3.5	1.4	5.6	1.0	3.7	1.4	2.9	1.1	3.0	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*).

6.2 Descriptive Data for Job Resources – Jurisdiction

	Job control		Supervisor support		Co-Worker support		Praise and recognition		Procedural justice		Change consultation	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Queensland *n* range = 3,276 - 3,860	4.7	1.3	5.3	1.5	5.5	1.2	5.2	1.6	4.8	1.3	4.2	1.5
New South Wales *n* range = 3,113 - 3,334	4.7	1.3	5.2	1.6	5.5	1.3	5.1	1.6	4.8	1.4	4.0	1.6
Victoria *n* range = 1,107 - 1,173	4.8	1.4	5.2	1.6	5.4	1.3	5.2	1.6	4.6	1.4	4.2	1.6
Federal *n* range = 2,880 - 3,147	4.5	1.4	5.1	1.5	5.4	1.2	5.2	1.5	4.6	1.4	3.9	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*).

6.3 Summary of Jurisdictional Comparisons to Overall Sample

Psychosocial Hazard	Jurisdiction Lower than Balance of the Overall Sample	Jurisdiction Higher than Balance of the Overall Sample
Role overload	-	-
Role ambiguity	-	-
Role conflict	-	-
Cognitive demand	-	▪ Queensland (5.7) higher than Overall Sample (5.6)
Emotional demand	-	-
Group task conflict	▪ New South Wales (2.7) lower than Overall Sample (2.8)	▪ Federal (2.9) higher than Overall Sample (2.7)
Group relationship conflict	▪ New South Wales (2.8) lower than Overall Sample (3.0)	-
Job control	-	-
Supervisor support	-	-
Co-Worker support	-	-
Praise and recognition	-	-
Procedural justice	-	-
Change consultation	-	-

Notes: Relevant jurisdiction is significantly different ($p < .001$) from the balance of the remaining jurisdictions considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There were 4 statistically significant differences in means for jurisdictions (when compared to the balance of the overall sample) across the 13 Psychosocial Hazards. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.

Section 7 – Psychosocial Hazard Prevalence for Sectors

7.1 Descriptive Data for Job Demands – Sector

	Role overload		Role ambiguity		Role conflict		Cognitive demand		Emotional demand		Group task conflict		Group relationship conflict	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Public *n* range = 7,192 - 7,971	3.2	1.4	2.2	1.0	3.4	1.4	5.6	1.0	3.6	1.4	2.8	1.1	3.0	1.5
Private *n* range = 3,533 - 3,867	3.2	1.5	1.9	0.9	3.3	1.5	5.7	1.1	3.8	1.5	2.7	1.1	2.9	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*).

7.2 Descriptive Data for Job Resources – Sector

	Job control		Supervisor support		Co-Worker support		Praise and recognition		Procedural justice		Change consultation	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Public *n* range = 7,192 - 7,971	4.6	1.4	5.2	1.5	5.5	1.2	5.1	1.6	4.6	1.4	4.0	1.5
Private *n* range = 3,533 - 3,867	4.8	1.3	5.3	1.5	5.5	1.3	5.2	1.5	4.9	1.3	4.3	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*).

7.3 Summary of Sector Comparisons to Overall Sample

Psychosocial Hazard	Sector Lower than Balance of the Overall Sample	Sector Higher than Balance of the Overall Sample
Role overload	-	-
Role ambiguity	-	▪ Public (2.2) higher than Private (1.9)
Role conflict	-	-
Cognitive demand	-	-
Emotional demand	-	-
Group task conflict	-	▪ Public (2.8) higher than Private (2.7)
Group relationship conflict	-	-
Job control	-	-
Supervisor support	-	-
Co-Worker support	-	-
Praise and recognition	-	-
Procedural justice	▪ Public (4.6) lower than Private (4.9)	-
Change consultation	▪ Public (4.0) lower than Private (4.3)	-

Notes: Relevant sector is significantly different ($p < .001$) from the balance of the remaining sectors considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There were 4 statistically significant differences in means between groups as a function of sector across the 13 Psychosocial Hazards. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.

Section 8 – Psychosocial Hazard Prevalence for Industries

8.1 Descriptive Data for Job Demands – Industry

	Role overload		Role ambiguity		Role conflict		Cognitive demand		Emotional demand		Group task conflict		Group relationship conflict	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Manufacturing *n* range = 503 - 589	3.5	1.4	2.0	0.8	3.6	1.4	5.6	1.0	3.5	1.4	2.8	1.0	2.6	1.3
Electricity, gas, water, & waste services *n* range = 1,857 - 2,055	3.1	1.3	2.1	1.1	3.4	1.4	5.7	1.0	3.5	1.4	2.7	1.1	2.8	1.5
Transport, postal, & warehousing *n* range = 550 - 579	3.1	1.5	1.7	0.8	3.2	1.5	5.9	1.1	3.3	1.5	2.6	1.1	2.7	1.4
Professional, scientific, & technical services *n* range = 450 - 498	3.4	1.5	2.0	1.0	3.0	1.3	5.5	1.0	3.4	1.3	2.6	1.1	2.8	1.4
Public administration & safety *n* range = 4,014 - 4,452	3.2	1.4	2.2	1.1	3.4	1.4	5.5	1.1	3.6	1.4	2.8	1.1	3.0	1.5
Education & training *n* range = 842 - 880	**3.7**	1.5	2.1	0.9	3.4	1.4	5.9	0.9	**4.2**	1.5	2.7	1.1	2.9	1.4
Health care & social assistance *n* range = 1,835 - 2,050	3.0	1.4	1.9	1.0	3.3	1.5	5.6	1.2	4.1	1.4	2.9	1.2	3.1	1.6
Arts & recreation services *n* range = 225 - 234	3.5	1.6	**2.4**	1.1	**3.8**	1.6	5.6	1.0	3.7	1.5	**3.0**	1.2	**3.3**	1.5
Other services *n* range = 418 - 467	3.1	1.3	1.8	0.9	3.3	1.3	**6.1**	1.0	3.5	1.3	2.9	1.1	2.8	1.2

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*); Mean **bolded** denotes industry with highest job demand and mean underlined denotes industry with lowest job demand.

8.2 Descriptive Data for Job Resources – Industry

	Job control		Supervisor support		Co-Worker support		Praise and recognition		Procedural justice		Change consultation	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Manufacturing *n* range = 503 - 589	4.6	1.3	5.3	1.3	5.4	1.2	5.3	1.4	4.8	1.2	4.3	1.4
Electricity, gas, water, & waste services *n* range = 1,857 - 2,055	4.6	1.3	5.2	1.5	5.5	1.2	5.0	1.6	4.8	1.3	3.9	1.5
Transport, postal, & warehousing *n* range = 550 - 579	4.6	1.4	5.3	1.4	**5.3**	1.2	5.1	1.5	4.9	1.3	4.3	1.5
Professional, scientific, & technical services *n* range = 450 - 498	5.3	1.1	5.4	1.5	5.6	1.2	5.5	1.5	4.9	1.4	4.3	1.4
Public administration & safety *n* range = 4,014 - 4,452	4.6	1.4	5.2	1.5	5.5	1.2	5.2	1.5	4.6	1.4	4.0	1.5
Education & training *n* range = 842 - 880	4.8	1.3	5.4	1.4	5.7	1.1	5.4	1.4	4.6	1.3	4.1	1.5
Health care & social assistance *n* range = 1,835 - 2,050	4.8	1.3	5.2	1.6	5.4	1.3	5.1	1.7	4.8	1.4	4.4	1.6
Arts & recreation services *n* range = 225 - 234	4.5	1.3	5.1	1.6	**5.3**	1.3	5.0	1.7	**4.3**	1.5	**3.5**	1.5
Other services *n* range = 418 - 467	**4.2**	1.4	**4.9**	1.6	5.6	1.1	**4.9**	1.7	4.6	1.4	4.0	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*); Mean **bolded** denotes industry with lowest job resource and mean underlined denotes industry with highest job resource.

8.3 Summary of Industry Comparisons to Overall Sample

Psychosocial Hazard	Industry Lower than Balance of the Overall Sample	Industry Higher than Balance of the Overall Sample
Role overload	▪ Health Care & Social Assistance (3.0) lower than Overall Sample (3.3)	▪ Education & Training (3.7) higher than Overall Sample (3.2) ▪ Arts & Recreation Services (3.5) higher than Overall Sample (3.2)
Role ambiguity	▪ Transport, Postal, & Warehousing (1.7) lower than Overall Sample (2.1)	▪ Public Administration & Safety (2.2) higher than Overall Sample (2.0)
Role conflict	-	▪ Arts & Recreation Services (3.8) higher than Overall Sample (3.4)
Cognitive demand	-	▪ Education & Training (5.9) higher than Overall Sample (5.6)
Emotional demand	▪ Manufacturing (3.5) lower than Overall Sample (3.7) ▪ Transport, Postal, & Warehousing (3.3) lower than Overall Sample (3.7) ▪ Professional, Scientific, & Technical Services (3.4) lower than Overall Sample (3.7) ▪ Other Services (3.5) lower than Overall Sample (3.7)	▪ Education & Training (4.2) higher than Overall Sample (3.7)
Group task conflict	-	-
Group relationship conflict	▪ Manufacturing (2.6) lower than Overall Sample (3.0)	-
Job control	-	▪ Professional, Scientific, & Technical Services (5.3) higher than Overall Sample (4.6)
Supervisor support	-	-
Co-Worker support	▪ Arts & Recreation Services (5.3) lower than Overall Sample (5.5)	-
Praise and recognition	-	▪ Professional, Scientific, & Technical Services (5.5) higher than Overall Sample (5.2)
Procedural justice	-	-
Change consultation	▪ Arts & Recreation Services (3.5) lower than Overall Sample (4.1)	-

Notes: Relevant industry is significantly different ($p < .001$) from the balance of the remaining industries considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There were 17 statistically significant differences in means for industries (when compared to the balance of the overall sample) across the 13 Psychosocial Hazards. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.
- Nevertheless, it is worth noting that Education & Training workers report higher Role Overload (mean difference = .5) and Emotional Demand (mean difference = .5) than the rest of the sample. Professional, Scientific, & Technical Services workers report higher Job Control than the rest of the sample (mean difference = .7). Arts & Recreation Services workers report lower Change Consultation than the rest of the sample (mean difference = .6).

Section 9 – Psychosocial Hazard Prevalence for Occupations

9.1 Descriptive Data for Job Demands – Occupation

	Role overload		Role ambiguity		Role conflict		Cognitive demand		Emotional demand		Group task conflict		Group relationship conflict	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Managers *n* range = 1,535 - 1,584	3.8	1.3	2.1	1.0	**3.9**	1.3	**5.9**	0.8	3.9	1.3	2.9	1.0	3.0	1.3
Business professionals *n* range = 568 - 582	3.2	1.4	**2.2**	1.0	3.4	1.4	5.6	1.0	3.5	1.3	2.8	1.1	2.7	1.5
Design engineering science transport professionals *n* range = 416 - 428	3.6	1.4	**2.2**	1.0	3.3	1.4	5.6	1.0	3.5	1.4	2.6	1.0	2.7	1.4
Education professionals *n* range = 567 - 574	**4.3**	1.4	**2.2**	0.9	3.6	1.4	**5.9**	0.9	**4.6**	1.3	2.8	1.1	2.9	1.4
Health professionals *n* range = 260 - 267	3.3	1.4	2.0	1.0	3.4	1.5	**5.9**	0.9	4.3	1.3	2.6	1.0	2.8	1.4
Miscellaneous professionals *n* range = 1,115 - 1,147	3.3	1.4	**2.2**	1.1	3.6	1.4	5.7	1.0	3.5	1.4	2.9	1.1	2.9	1.5
Engineering ICT science technicians *n* range = 395 - 401	3.1	1.4	**2.2**	1.0	3.4	1.4	5.8	0.9	3.5	1.5	2.8	1.1	2.9	1.5
Electrical & telecommunications workers *n* range = 230 - 236	3.0	1.3	**2.2**	1.1	3.4	1.4	5.7	1.0	3.6	1.5	2.9	1.1	3.1	1.5
Miscellaneous technicians & trades workers *n* range = 542 - 553	3.0	1.3	2.1	1.0	3.3	1.4	5.6	1.1	3.3	1.4	2.8	1.1	3.0	1.5
Health & welfare support workers *n* range = 722 - 744	2.9	1.4	1.9	1.0	3.2	1.5	5.7	1.2	4.3	1.4	**3.0**	1.3	**3.4**	1.6
Carers & aides *n* range = 380 - 402	2.5	1.2	1.6	0.8	**2.9**	1.5	5.3	1.4	4.0	1.5	2.5	1.2	2.9	1.6
Clerical & administrative workers *n* range = 2,548 - 2,617	2.9	1.3	2.0	1.0	3.2	1.4	5.6	1.1	3.5	1.4	2.7	1.1	3.0	1.5
Machinery operators & drivers *n* range = 377 - 384	2.7	1.4	1.5	0.7	2.9	1.4	5.8	1.3	3.0	1.5	2.6	1.2	**2.7**	1.5
Labourers *n* range = 194 - 201	2.8	1.4	2.0	1.0	3.2	1.4	5.4	1.3	3.1	1.5	2.7	1.2	2.9	1.6

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*); Mean **bolded** denotes occupation with highest job demand and mean underlined denotes occupation with lowest job demand.

9.2 Descriptive Data for Job Resources – Occupation

	Job control		Supervisor support		Co-Worker support		Praise and recognition		Procedural justice		Change consultation	
Psychosocial Hazard	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*	*M*	*SD*
Managers *n* range = 1,581 - 1,584	5.2	1.1	5.2	1.4	5.4	1.2	5.4	1.4	4.9	1.3	4.4	1.5
Business professionals *n* range = 580 - 582	5.0	1.1	5.4	1.4	5.5	1.2	5.4	1.4	4.8	1.4	4.2	1.4
Design engineering science transport professionals *n* range = 424 - 428	5.1	1.2	5.3	1.5	5.5	1.2	5.3	1.5	4.8	1.3	4.1	1.4
Education professionals *n* range = 571 - 575	4.7	1.2	5.2	1.5	5.7	1.2	5.2	1.6	**4.4**	1.4	3.8	1.4
Health professionals *n* range = 266 - 267	5.0	1.2	5.4	1.5	5.7	1.2	5.5	1.4	5.0	1.3	4.4	1.5
Miscellaneous professionals *n* range = 1,145 - 1,147	4.5	1.3	5.1	1.6	5.4	1.2	5.0	1.6	4.5	1.4	3.8	1.5
Engineering ICT science technicians *n* range = 399 - 401	4.6	1.3	5.2	1.6	5.7	1.1	5.1	1.5	4.6	1.4	**3.6**	1.5
Electrical & telecommunications workers *n* range = 234 - 236	4.4	1.3	**4.9**	1.5	5.5	1.2	**4.6**	1.7	4.6	1.3	3.7	1.5
Miscellaneous technicians & trades workers *n* range = 551 - 554	4.8	1.3	5.2	1.4	5.4	1.2	5.1	1.5	4.7	1.3	4.0	1.5
Health & welfare support workers *n* range = 742 - 744	4.6	1.3	5.1	1.7	**5.3**	1.4	4.9	1.8	4.6	1.5	4.3	1.6
Carers & aides *n* range = 396 - 400	4.4	1.4	5.2	1.6	**5.3**	1.3	5.1	1.6	4.8	1.3	4.5	1.6
Clerical & administrative workers *n* range = 2,611 - 2,618	4.4	1.4	5.4	1.5	5.5	1.2	5.3	1.5	4.7	1.4	4.0	1.5
Machinery operators & drivers *n* range = 379 - 384	**4.3**	1.4	5.4	1.4	**5.3**	1.3	5.1	1.5	4.8	1.3	4.3	1.5
Labourers *n* range = 196 - 201	4.6	1.5	5.3	1.6	5.5	1.2	5.0	1.7	4.8	1.4	4.2	1.6

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*); Mean **bolded** denotes occupation with lowest job resource and mean underlined denotes occupation with highest job resource.

9.3 Summary of Occupational Comparisons to Overall Sample

Psychosocial Hazard	Occupation Lower than Balance of the Overall Sample	Occupation Higher than Balance of the Overall Sample
Role overload	▪ Carers & Aides (2.5) lower than Overall Sample (3.3) ▪ Clerical & Administrative Workers (2.9) lower than Overall Sample (3.3) ▪ Machinery Operators & Drivers (2.7) lower than Overall Sample (3.3)	▪ Managers (3.8) higher than Overall Sample (3.1) ▪ Design Engineering Science Transport Professionals (3.6) higher than Overall Sample (3.2) ▪ Education Professionals (4.3) higher than Overall Sample (3.2)
Role ambiguity	▪ Carers & Aides (1.6) lower than Overall Sample (2.1) ▪ Machinery Operators & Drivers (1.5) lower than Overall Sample (2.1)	▪ Education Professionals (2.2) higher than Overall Sample (2.0)
Role conflict	▪ Carers & Aides (2.9) lower than Overall Sample (3.4) ▪ Clerical & Administrative Workers (3.2) lower than Overall Sample (3.4) ▪ Machinery Operators & Drivers (2.9) lower than Overall Sample (3.4)	▪ Managers (3.9) higher than Overall Sample (3.3) ▪ Education Professionals (3.6) higher than Overall Sample (3.4)
Cognitive demand	▪ Carers & Aides (5.3) lower than Overall Sample (5.7)	▪ Managers (5.9) higher than Overall Sample (5.7) ▪ Health Professionals (5.9) higher than Overall Sample (5.7)
Emotional demand	▪ Clerical & Administrative Workers (3.5) lower than Overall Sample (3.8) ▪ Machinery Operators & Drivers (3.0) lower than Overall Sample (3.7) ▪ Labourers (3.1) lower than Overall Sample (3.7)	▪ Managers (3.9) higher than Overall Sample (3.7) ▪ Education Professionals (4.6) higher than Overall Sample (3.6) ▪ Health Professionals (4.3) higher than Overall Sample (3.7)
Group task conflict	▪ Clerical & Administrative Workers (2.7) lower than Overall Sample (2.8)	▪ Electrical & Telecommunications Workers (2.9) higher than Overall Sample (2.8) ▪ Health & Welfare Support Workers (3.0) higher than Overall Sample (2.8)
Group relationship conflict		▪ Electrical & Telecommunications Workers (3.1) higher than Overall Sample (2.9)
Job control	▪ Machinery Operators & Drivers (4.3) lower than Overall Sample (4.7)	▪ Managers (5.2) higher than Overall Sample (4.6) ▪ Business Professionals (5.0) higher than Overall Sample (4.7)
Supervisor support	▪ Education Professionals (5.2) lower than Overall Sample (5.3) ▪ Electrical & Telecommunications Workers (4.9) lower than Overall Sample (5.3)	▪ Clerical & Administrative Workers (5.4) higher Overall Sample (5.2)

Co-Worker support	-	-
Praise and recognition	▪ Electrical & Telecommunications Workers (4.6) lower than Overall Sample (5.2)	▪ Managers (5.4) higher than Overall Sample (5.2)
Procedural justice	▪ Education Professionals (4.4) lower than Overall Sample (4.7) ▪ Miscellaneous Professionals (4.5) lower than Overall Sample (4.7) ▪ Electrical & Telecommunications Workers (4.6) lower than Overall Sample (4.7)	▪ Managers (4.9) higher than Overall Sample (4.7)
Change consultation	-	▪ Managers (4.4) higher than Overall Sample (4.1)

Notes: Relevant occupation is significantly different ($p < .001$) from the balance of the remaining occupations considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There were 40 statistically significant differences in means for industries (when compared to the balance of the overall sample) across the 13 Psychosocial Hazards. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.
- Nevertheless, it is worth noting the following trends:
- Carers & Aides (mean difference = .8) and Machinery Operators & Drivers (mean difference = .6) report lower Role Overload than the rest of the sample. Managers (mean difference = .7) and Education Professionals (mean difference = 1.1) report higher Role Overload than the rest of the sample.
- Carers & Aides (mean difference = .5) and Machinery Operators & Drivers (mean difference = .6) report lower Role Ambiguity than the rest of the sample.
- Carers & Aides (mean difference = .5) and Machinery Operators & Drivers (mean difference = .5) report lower Role Conflict than the rest of the sample. Managers report higher Role Conflict than the rest of the sample (mean difference = .6).
- Machinery Operators & Drivers (mean difference = .7) and Labourers (mean difference = .6) report lower Emotional Demand than the rest of the sample. Education Professionals (mean difference = 1.0) and Health Professionals (mean difference = .6) report higher Emotional Demand than the rest of the sample.
- Managers report higher Job Control than the rest of the sample (mean difference =.6).
- Electrical & Telecommunications Workers report lower Praise and Recognition than the rest of the sample (mean difference = .6).

Section 10 – Prevalence of Worker Outcomes

In addition to assessing psychosocial hazards, the People at Work Project measures several indicators of employee strain, each of which are defined and measured as described below. This section then presents prevalence analyses for each of the 3 Worker Outcomes for the Overall Sample, along with breakdown analyses to detect trends across 4 Jurisdictions, 2 Sectors, 9 Industries, and 14 Occupations.

10.1 Worker Outcomes Scales

The first worker outcome of interest was the experience of Psychological Strain. This variable was assessed with the 12-item version of the General Health Questionnaire (GHQ-12; Goldberg, 1972; Goldberg & Williams, 1988), which represents a context-free assessment of psychological strain. It includes a combination of both positively (e.g., been feeling reasonably happy, all things considered) and negatively (e.g., been thinking of yourself as worthless) worded items designed to tap minor psychiatric disorders (i.e., anxiety, depression, social dysfunction, and loss of confidence) in non-clinical populations. Ye (2009) recommended that the GHQ-12 be used as a tool for a general evaluation of one's mental health status, for which a unidimensional structure is preferred. Since Banks et al. (1980) found that a Likert rating scale performed better than the original scoring method in terms of score distribution, a 7-point Likert rating scale was used in the present research. Thus, participants were asked to rate how they had been feeling over the last 4 weeks in regards to each item on a 7-point scale, ranging from 1 (never) to 7 (always).

Recent research has concluded that the predictive power of work-related psychosocial variables is dependent on different mental well-being outcomes. For instance, Marchand and Durand (2011) demonstrated that their model of psychosocial risk factors predicted a larger part of the variance in the emotional exhaustion subscale of job burnout (39%) compared to psychological strain as measured by the GHQ-12 (22%). Given that the GHQ-12 represents a context-free assessment of psychological strain, it was considered important to include a work-specific measure of mental well-being. Thus, the second worker outcome was Job Burnout. Job burnout was measured with six items reflecting physical (e.g., I feel physically drained) and psychological (e.g., I feel burned out) exhaustion taken from the Shirom-Melamed Burnout Measure (SMBM; Shirom & Melamed, 2006). Employees were asked to respond to each item in regards to how they feel when thinking about their job on a 7-point scale, ranging from 1 (never or almost never) to 7 (always or almost always).

The third worker outcome was the experience of Musculoskeletal Symptoms. Musculoskeletal symptoms are the self-reported ache, pain, or discomfort experienced by employees in the neck, shoulders, wrists/hands, upper back, or lower back areas (Kuorinka et al., 1987). Musculoskeletal problems over the last 4 weeks were measured with five items representing each of these five body locations (as per Kuorinka et al., 1987) and rated on a 7-point scale, ranging from 1 (never) to 7 (always).

Worker Outcomes	Scale Reliability
Psychological strain	.912
Job burnout	.947
Musculoskeletal symptoms	.867

Notes: Scale reliability assessed with Cronbach's (1951) alpha coefficient.

10.2 Data Analysis Overview

Summary of Variance Components Analyses

Because workers (level-1) were nested in organisations (level-2), it is important to take into account the non-independence of observations within groups on the variables. Variance components analyses were run for each of the 3 Worker Outcomes using Mplus V7.1. Such analyses partition the variance at both levels, establishing the extent to which variance in the 3 Worker Outcomes varies as a function of organisational membership. As can be seen in the table below, none of the intra-class correlations exceed 5%. Thus, it can be concluded that the total variance in these variables did not systematically differ as a function of organisation. However, to ascertain the influence of clustering, design effects, which account for within-group sample size, also were calculated using the following formula: 1+(average within group sample size-1)*ICC. All values are greater than 2, suggesting that group membership in organisations has an effect on the responses of workers. Under such circumstances, multi-level modeling is warranted to take into account such effects.

	ICC	*Z*	*p*	*DEFF*
Psychological strain	.041	3.898	.000	6.486
Job burnout	.044	4.653	.000	6.865
Musculoskeletal symptoms	.021	4.149	.000	3.812

Notes: *ICC* = intra-class correlation (values > 5% demonstrate nesting in groups has an effect on the responses of individuals); *DEFF* = design effect (values > 2 demonstrate nesting of the data).

In the subsequent sections, we present:

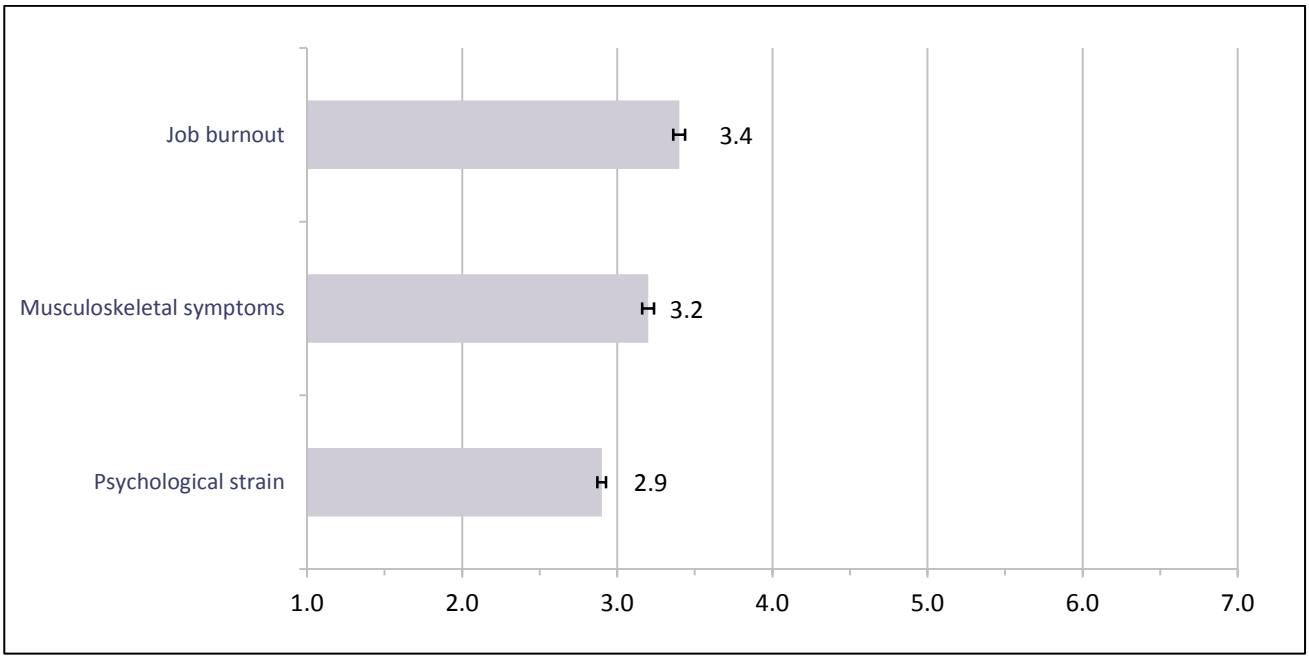
- Rank ordering of the 3 Worker Outcomes for the Overall Sample using means and 99.9% Confidence Intervals demonstrating which Worker Outcomes are significantly higher or lower relative to each other (**Sections 10.3 and 10.4**).
- Prevalence of the 3 Worker Outcomes for the Overall Sample using percentages (**Section 10.5**).
- The extent to which the 3 Worker Outcomes vary as a function of gender, status, and schedule is tested (**Section 10.6**).
- A more detailed analysis of the musculoskeletal symptoms according to 5 body locations also is provided (**Sections 10.7, 10.8, and 10.9**).
- Using means and tests of significance, the 4 Jurisdictions are compared to the balance of the Overall Sample on the 3 Worker Outcomes, as determined by multi-level linear regressions that account for the clustering effect of organisation (**Sections 10.10 and 10.11**).
- Using means and tests of significance, the 2 Sectors are compared to each other on the 3 Worker Outcomes, as determined by multi-level linear regressions that account for the clustering effect of organisation (**Sections 10.12 and 10.13**).
- Using means and tests of significance, the 9 Industries are compared to the balance of the Overall Sample on the 3 Worker Outcomes, as determined by multi-level linear regressions that account for the clustering effect of organisation (**Sections 10.14 and 10.15**).
- Using means and tests of significance, the 14 Occupations are compared to the balance of the Overall Sample on the 3 Worker Outcomes, as determined by multi-level linear regressions that account for the clustering effect of organisation (**Sections 10.16 and 10.17**).
- Prevalence of the 3 Worker Outcomes for each of the 4 Jurisdictions (**Appendix 1**), 2 Sectors (**Appendix 2**), 9 Industries (**Appendix 3**), and 14 Occupations (**Appendix 4**) using percentages are presented in the appendices.

10.3 Descriptive Data for Worker Outcomes for Overall Sample

Worker Outcome	*n*	*M*	*SD*	Lower 99.9% *CI*	Upper 99.9% *CI*	Low %	Moderate %	High %
Psychological strain	10,650	2.9	1.1	2.9	2.9	57%	38%	4%
Job burnout	10,609	3.4	1.5	3.4	3.5	40%	43%	17%
Musculoskeletal symptoms	10,657	3.2	1.5	3.2	3.3	46%	39%	16%

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*), and 99.9% confidence intervals (*CIs*) for each Worker Outcome; For Psychological Strain, Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7); For Job Burnout, Low % = never or almost never (1) to very infrequently (2.9999); Moderate % = quite infrequently (3) to sometimes (4.9999); High % = quite frequently (5) to always or almost always (7); For Musculoskeletal Symptoms, Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7).

10.4 Rank Ordering of Worker Outcomes for Overall Sample

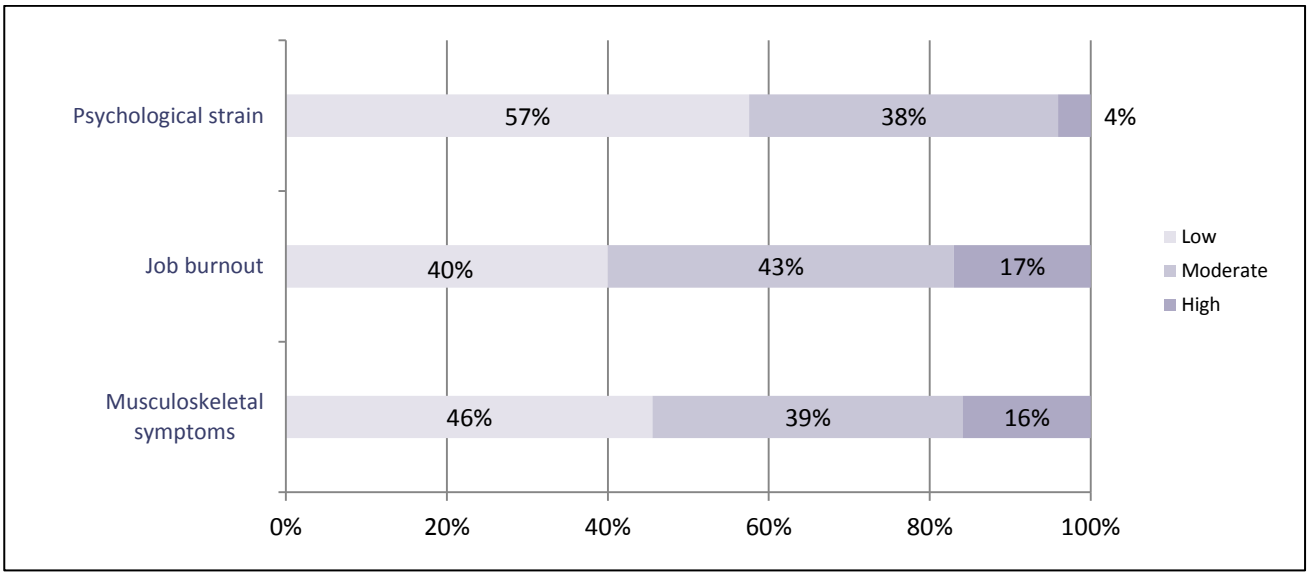


Notes: Means and 99.9% confidence intervals for Worker Outcomes, presented in the order of highest to lowest in prevalence. Worker Outcomes are at significantly different levels from one another when their confidence intervals do not overlap.

Summary:

- A rank order analysis of the means for Worker Outcomes from highest to lowest in prevalence was determined, based on 99.9% confidence intervals.
- The most prevalent Worker Outcomes is Job Burnout (mean = 3.4), followed by Musculoskeletal Symptoms (mean = 3.2)
- The lowest Worker Outcome is Psychological Strain (mean = 2.9).

10.5 Percentages for Worker Outcomes for Overall Sample



Notes: For Psychological Strain, Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7); For Job Burnout, Low % = never or almost never (1) to very infrequently (2.9999); Moderate % = quite infrequently (3) to sometimes (4.9999); High % = quite frequently (5) to always or almost always (7); For Musculoskeletal Symptoms, Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7).

Summary:

- For the experience of Psychological Strain, 4% of the Overall Sample report high levels and 57% of the Overall Sample report low levels.
- For the experience of Job Burnout, 17% of the Overall Sample report high levels, and 40% of the Overall Sample report low levels.
- For the experience of Musculoskeletal Symptoms, 16% of the Overall Sample report high levels, and 46% of the Overall Sample report themselves as relatively free from such symptoms.

10.6 Differences for Worker Outcomes as a Function of Gender, Status, and Schedule

10.6.1 Gender

ANOVAs ($p < .001$) were conducted to determine if there were significant differences in the means for males versus females on the 3 Worker Outcomes.

			Means	
Psychosocial Hazard	*F*	*p*	*Male*	*Female*
Psychological Strain	0.537		2.9	2.9
Job Burnout	13.344	*	3.4	3.5
Musculoskeletal Symptoms	246.851	*	3.0	3.5

Notes: * indicates that the means for the worker outcome in question is significantly different at $p < .001$.

Summary:

- There were 2 statistically significant differences in means between groups as a function of gender across the 3 Worker Outcomes. However, in regard to Job Burnout, the effect size is insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size. Nevertheless, it is worth noting that males report lower Musculoskeletal Symptoms than females (mean difference = .5).

10.6.2 Employment Status

ANOVAs ($p < .001$) were conducted to determine if there were significant differences in the means for full-time versus all other types of employment status on the 3 Worker Outcomes.

			Means	
Psychosocial Hazard	*F*	*p*	*Full-time*	*All Other Types of Employment Statuses*
Psychological Strain	85.601	*	2.9	2.7
Job Burnout	95.498	*	3.5	3.1
Musculoskeletal Symptoms	2.442		3.2	3.2

Notes: All other types of employment status include part-time, casual, contract, & volunteer; * indicates that the means for the worker outcome in question is significantly different at $p < .001$.

Summary:

- There were 2 statistically significant differences in means between groups as a function of employment status across the 3 Worker Outcomes. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.

10.6.3 Work Schedule

ANOVAs ($p < .001$) were conducted to determine if there were significant differences in the means for those workers on a regular day schedule versus all other types of work schedule on the on the 3 Worker Outcomes.

			Means	
Psychosocial Hazard	*F*	*p*	*Regular Day Schedule*	*All Other Work Schedules*
Psychological Strain	0.589		2.9	2.9
Job Burnout	0.657		3.4	3.5
Musculoskeletal Symptoms	3.696		3.2	3.2

Notes: All other types of work schedule include regular evening schedule, regular night shift, rotating shift, & split shift ; * indicates that the means for the worker outcome in question is significantly different at $p < .001$.

Summary:

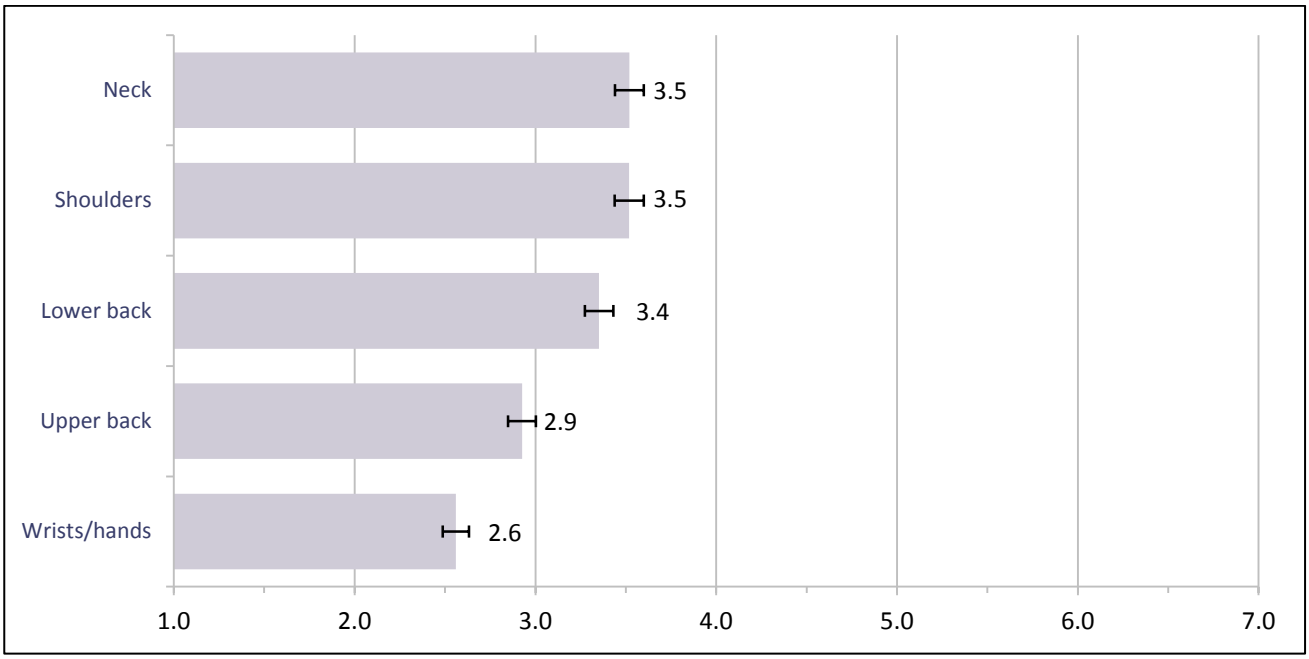
- There were no statistically significant differences in means between groups as a function of work schedule across the 3 Worker Outcomes.

10.7 Descriptive Data for Body Locations for Overall Sample

Musculoskeletal Symptom	*n*	*M*	*SD*	Lower 99.9% *CI*	Upper 99.9% *CI*	Low %	Moderate %	High %
Neck	10,691	3.5	1.9	3.5	3.6	35%	32%	33%
Shoulders	10,684	3.5	1.9	3.5	3.6	36%	31%	33%
Wrists/hands	10,673	2.6	1.7	2.6	2.7	59%	24%	17%
Upper back	10,677	2.9	1.8	2.9	3.0	52%	26%	22%
Lower back	10,690	3.4	1.9	3.4	3.5	38%	32%	30%

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*), and 99.9% confidence intervals (*CIs*) for each body location; Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7).

10.8 Rank Ordering of Body Locations for Overall Sample

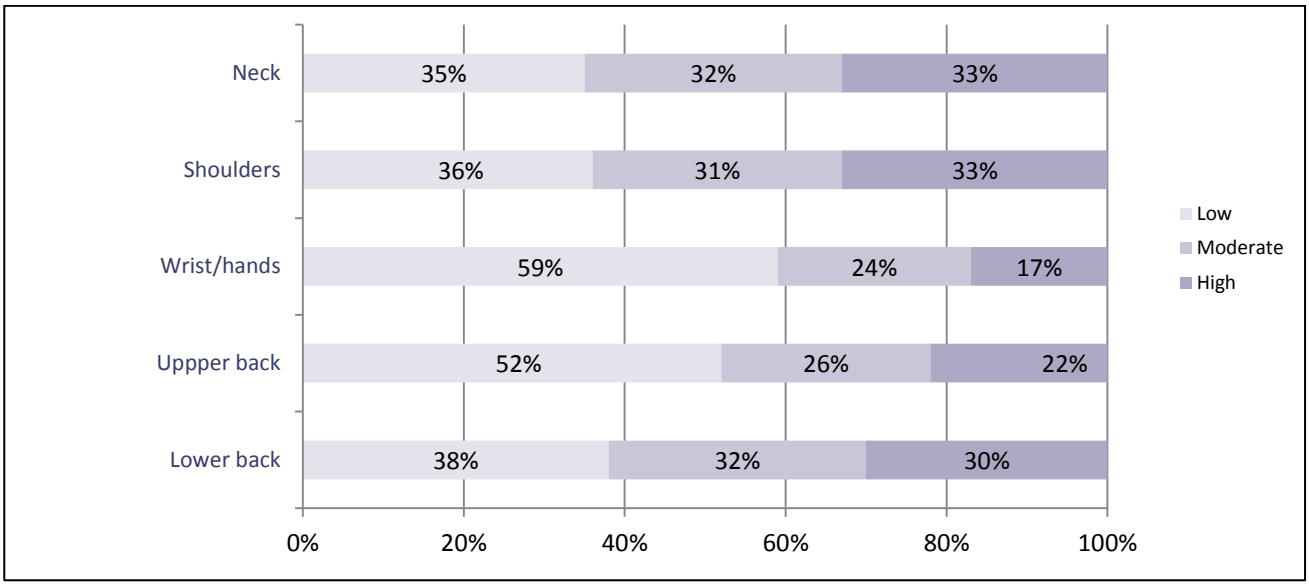


Notes: Means and 99.9% confidence intervals for body locations, presented in order from highest to lowest in prevalence. Body locations are at significantly different levels from one another when their confidence intervals do not overlap.

Summary:

- A rank order analysis of the means for body locations from highest to lowest in prevalence was determined, based on 99.9% confidence intervals.
- The most prevalent body locations for musculoskeletal pain are Neck (mean = 3.5) and Shoulders (mean = 3.5), followed by:
- Lower Back (mean = 3.4).
- Upper Back (mean = 2.9).
- The least frequent body location for musculoskeletal pain is Wrists/Hands (mean = 2.6).

10.9 Percentages for Body Locations for Overall Sample



Notes: Low % = never (1) to rarely (2.9999); Moderate % = once in a while (3) to some of the time (4.9999); High % = fairly often (5) to always (7).

Summary:

- For Neck Symptoms, 33% of the Overall Sample report high levels.
- For Shoulders Symptoms, 33% of the Overall Sample report high levels.
- For Lower Back Symptoms, 30% of the Overall Sample report high levels.
- For Upper Back Symptoms, 22% of the Overall Sample report high levels.
- For Wrist/Hand Symptoms, 17% of the Overall Sample report high levels.

10.10 Descriptive Data for Worker Outcomes – Jurisdiction

	Psychological strain		Job burnout		Musculoskeletal symptoms	
Worker Outcome	*M*	*SD*	*M*	*SD*	*M*	*SD*
Queensland *n* range = 3,585 - 3,592	2.8	1.1	3.3	1.5	3.2	1.5
New South Wales *n* range = 2,984 - 2,997	2.9	1.1	3.3	1.5	3.2	1.5
Victoria *n* range = 1,043 - 1,049	2.9	1.1	3.4	1.5	3.2	1.6
Federal *n* range = 2,761 - 2,796	3.0	1.1	3.7	1.5	3.3	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*).

10.11 Summary of Jurisdictional Comparisons to Overall Sample

Worker Outcome	Jurisdiction Lower than Balance of the Overall Sample	Jurisdiction Higher than Balance of the Overall Sample
Psychological strain	-	-
Job burnout	-	-
Musculoskeletal symptoms	-	-

Notes: Relevant jurisdiction is significantly different ($p < .001$) from the balance of the remaining jurisdictions considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There were no statistically significant differences in means for jurisdictions (when compared to the balance of the overall sample) across the 3 Worker Outcomes.

10.12 Descriptive Data for Worker Outcomes – Sector

	Psychological strain		Job burnout		Musculoskeletal symptoms	
Worker Outcome	*M*	*SD*	*M*	*SD*	*M*	*SD*
Public *n* range = 7,101 - 7,148	2.9	1.1	3.5	1.5	3.2	1.5
Private *n* range = 3,508 - 3,520	2.8	1.0	3.3	1.5	3.2	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*).

10.13 Summary of Sector Comparisons to Overall Sample

Worker Outcome	Sector Lower than Balance of the Overall Sample	Sector Higher than Overall Sample
Psychological strain	-	-
Job burnout	-	▪ Public Sector (3.5) higher than Private Sector (3.3)
Musculoskeletal symptoms	-	-

Notes: Relevant sector is significantly different ($p < .001$) from the balance of the remaining sectors considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There was 1 statistically significant difference in means between groups as a function of sector across the 3 Worker Outcomes. However, the effect size is insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.

10.14 Descriptive Data Worker Outcomes – Industry

	Psychological strain		Job burnout		Musculoskeletal symptoms	
Worker Outcome	*M*	*SD*	*M*	*SD*	*M*	*SD*
Manufacturing *n* range = 511 - 515	2.9	0.9	3.4	1.3	3.1	1.4
Electricity, gas, water, & waste services *n* range = 1,866 - 1,875	3.0	1.1	3.4	1.5	3.2	1.5
Transport, postal, & warehousing *n* range = 553 - 557	2.7	1.0	3.0	1.4	2.9	1.5
Professional, scientific, & technical services *n* range = 433 – 436	2.7	1.0	3.2	1.4	3.0	1.4
Public administration & safety *n* range = 3,951 - 3,984	3.0	1.1	3.6	1.5	3.3	1.5
Education & training *n* range = 839 - 839	3.0	1.1	3.6	1.5	3.4	1.5
Health care & social assistance *n* range = 1,780 - 1,791	2.7	1.1	3.2	1.5	3.2	1.6
Arts & recreation services *n* range = 219 - 220	**3.2**	1.2	**3.7**	1.6	**3.6**	1.5
Other services *n* range = 420 - 421	2.7	1.0	3.4	1.4	3.0	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD)*; Mean **bolded** denotes industry with highest worker outcome and mean underlined denotes industry with lowest worker outcome.

10.15 Summary of Industry Comparisons to Overall Sample

Worker Outcome	Industry Lower than Balance of the Overall Sample	Industry Higher than Balance of the Overall Sample
Psychological strain	▪ Health Care & Social Assistance (2.7) lower than Overall Sample (2.9)	▪ Education & Training (3.0) higher than Overall Sample (2.9)
Job burnout	▪ Transport, Postal, & Warehousing (3.0) lower than Overall Sample (3.4)	▪ Education & Training (3.6) higher than Overall Sample (3.4)
Musculoskeletal symptoms	▪ Professional, Scientific, & Technical Services (3.0) lower than Overall Sample (3.2)	▪ Arts & Recreation Services (3.6) higher than Overall Sample (3.2)

Notes: Relevant industry is significantly different ($p < .001$) from the balance of the remaining industries considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There were 6 statistically significant differences in means for industries (when compared to the balance of the overall sample) across the 3 Worker Outcomes. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.

10.16 Descriptive Data for Worker Outcomes – Occupation

	Psychological strain		Job burnout		Musculoskeletal symptoms	
Worker Outcome	*M*	*SD*	*M*	*SD*	*M*	*SD*
Managers *n* range = 1,534 - 1,546	2.9	1.0	3.4	1.5	3.1	1.5
Business professionals *n* range = 562 - 564	2.8	1.0	3.3	1.5	3.2	1.5
Design engineering science transport professionals *n* range = 414 - 416	2.9	1.0	3.4	1.4	3.0	1.4
Education professionals *n* range = 568 – 570	**3.2**	1.1	**4.0**	1.4	**3.5**	1.5
Health professionals *n* range = 254 - 257	2.7	1.1	3.3	1.4	3.1	1.5
Miscellaneous professionals *n* range = 1,112 - 1,124	2.9	1.1	3.5	1.5	3.1	1.5
Engineering ICT science technicians *n* range = 386 - 390	2.9	1.1	3.4	1.5	3.3	1.4
Electrical & telecommunications workers *n* range = 228 - 229	3.0	1.1	3.4	1.5	3.0	1.4
Miscellaneous technicians & trades workers *n* range = 541 - 545	2.8	1.0	3.3	1.4	3.1	1.4
Health & welfare support workers *n* range = 688 - 696	2.8	1.1	3.3	1.5	3.1	1.6
Carers & aides *n* range = 372 - 374	2.7	1.1	3.0	1.5	3.1	1.6
Clerical & administrative workers *n* range = 2,517 - 2,531	2.9	1.1	3.5	1.6	3.4	1.6
Machinery operators & drivers *n* range = 377 - 379	2.6	1.0	2.8	1.4	2.9	1.6
Labourers *n* range = 194 - 199	2.8	1.0	3.2	1.4	3.0	1.5

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*); Mean **bolded** denotes occupation with highest worker outcome and mean underlined denotes occupation with lowest worker outcome.

10.17 Summary of Occupational Comparisons to Overall Sample

Worker Outcome	Occupation Lower than Balance of the Overall Sample	Occupation Higher than Balance of the Overall Sample
Psychological strain	▪ Machinery Operators & Drivers (2.6) lower than Overall Sample (2.9)	▪ Education Professionals (3.2) higher than Overall Sample (2.9)
Job burnout	▪ Machinery Operators & Drivers (2.8) lower than Overall Sample (3.4)	▪ Education Professionals (4.0) higher than Overall Sample (3.4)
Musculoskeletal symptoms	-	▪ Clerical & Administrative Workers (3.4) higher than Overall Sample (3.1)

Notes: Relevant occupation is significantly different ($p < .001$) from the balance of the remaining occupations considered as a whole, as determined by multi-level linear regressions (for these analyses, sample size varies as a function of its comparison group).

Summary:

- There were 5 statistically significant differences in means for occupations (when compared to the balance of the overall sample) across the 3 Worker Outcomes. However, the effect sizes are insubstantial (i.e., no appreciable practical significance), due to the test being overpowered by the large sample size.
- Nevertheless, it is worth noting that Machinery Operators & Drivers report lower Job Burnout than the rest of the sample (mean difference = .6). Education Professionals report higher Job Burnout than the rest of the sample (mean difference =. 6).

Section 11 – Risk Analyses

11.1 Relationships between Psychosocial Hazards and Worker Outcomes

Although prevalence analyses document the extent to which psychosocial hazards occur frequently or infrequently, such data do not inform us about impact in regards to synchronous stress reactions (see Ford et al., 2014). Thus, this section outlines the results of 3 multi-level linear regressions modelling the extent to which each of the 13 Psychosocial Hazards is a risk to workers through examination of concurrent associations with Psychological Strain, Job Burnout, and Musculoskeletal Symptoms for the Overall Sample.

Each multi-level model regresses each of the 3 Worker Outcomes against all 13 Psychosocial Hazards simultaneously, while allowing for the nested grouping structure of the data (i.e., for the fact that respondents work together within particular organisations).

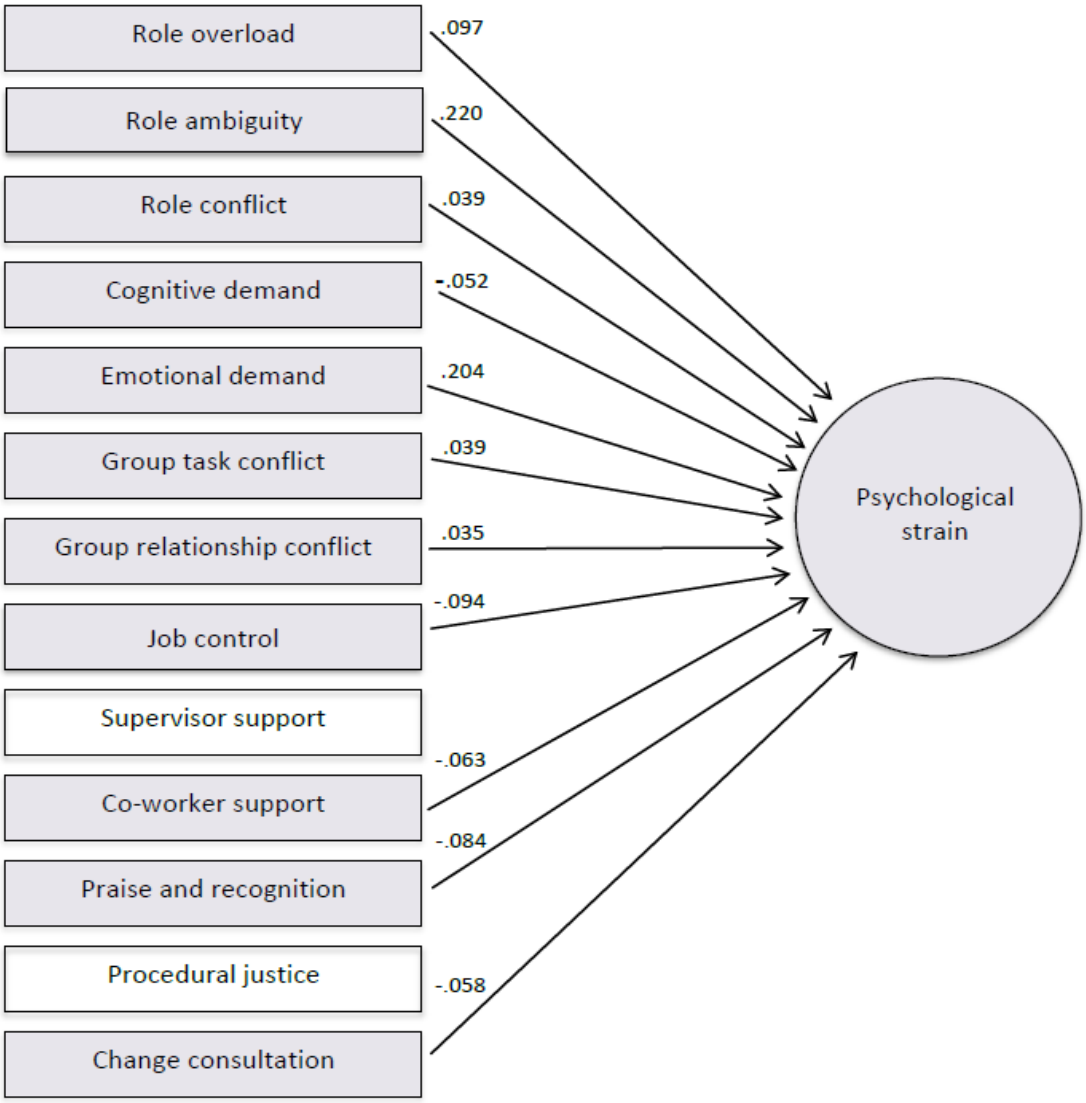
Because the 13 Psychosocial Hazards are all scored on the same scale (1-7), it is possible to gauge the relative impact of the different psychosocial hazards on the worker outcome in question by simply comparing the size of the *B* coefficients.

The *B* coefficients can be interpreted as follows: a 1-unit increase or decrease in the psychosocial hazard is expected to lead to a *B* change in the Worker Outcome, controlling for the other psychosocial hazards in the model (i.e., 'holding constant' and separating out the influence of all other psychosocial hazards).

	Psychological Strain n = 10,378			Job Burnout n = 10,361			Musculoskeletal Symptoms n = 10,370		
Psychosocial Hazard	*B*	*se*	*p*	*B*	*se*	*p*	*B*	*se*	*p*
Role overload	0.097	0.010	*	0.187	0.015	*	0.074	0.015	*
Role ambiguity	0.220	0.017	*	0.177	0.016	*	-0.002	0.018	
Role conflict	0.039	0.007	*	0.048	0.013	*	0.019	0.014	
Cognitive demand	-0.052	0.012	*	0.002	0.016		0.048	0.015	*
Emotional demand	0.204	0.009	*	0.262	0.013	*	0.212	0.013	*
Group task conflict	0.039	0.008	*	0.076	0.016	*	0.020	0.017	
Group relationship conflict	0.035	0.009	*	0.077	0.009	*	0.067	0.013	*
Job control	-0.094	0.007	*	-0.089	0.010	*	-0.072	0.013	*
Supervisor support	0.009	0.008		-0.002	0.012		0.043	0.015	
Co-Worker support	-0.063	0.011	*	-0.014	0.015		-0.025	0.013	
Praise and recognition	-0.084	0.009	*	-0.071	0.013	*	-0.032	0.014	
Procedural justice	0.004	0.009		0.008	0.010		-0.004	0.012	
Change consultation	-0.058	0.008	*	-0.126	0.014	*	-0.111	0.013	*
Constant	2.699	0.138	*	2.186	0.206	*	2.476	0.141	*

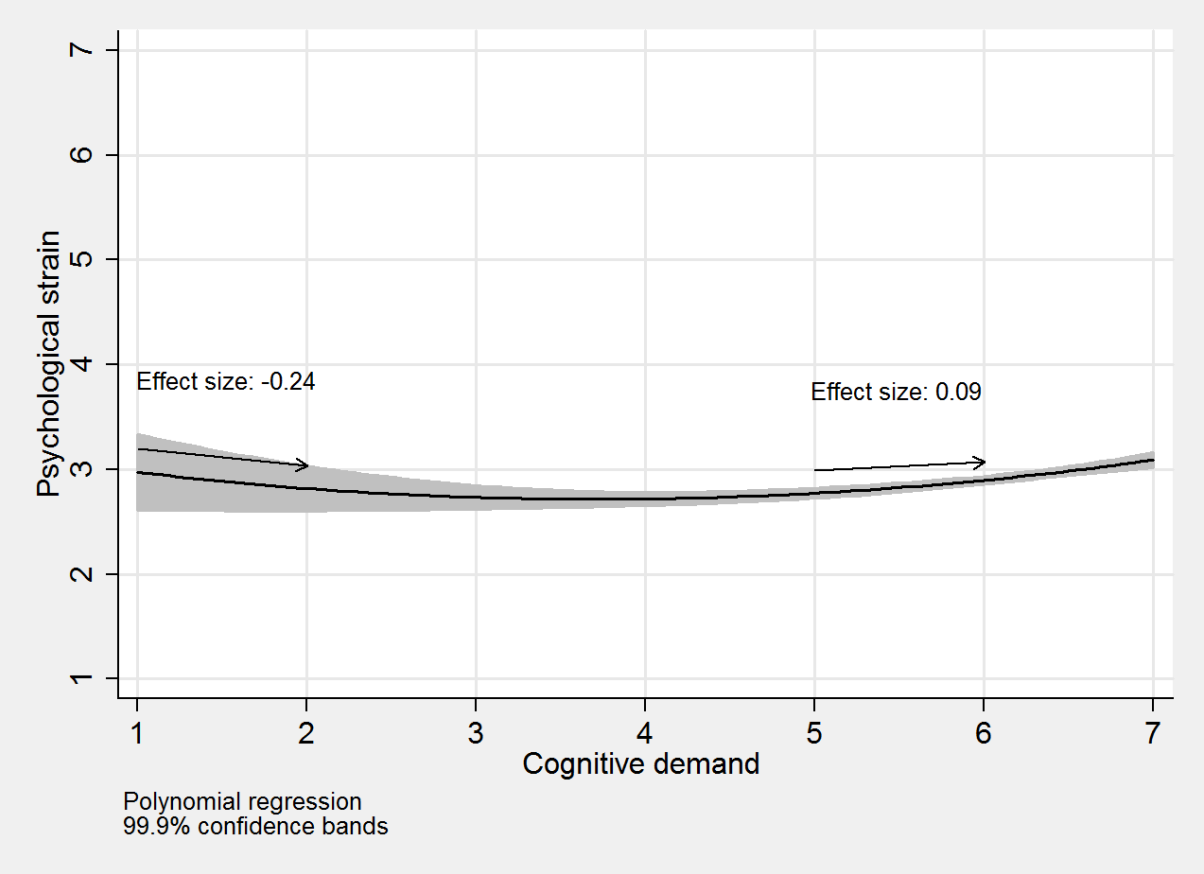
Notes: Table entries are unstandardised partial regression coefficients (*B*), standard errors (*se*) and significance tests (*p*); * indicates that the psychosocial hazard in question is significantly related to the relevant Worker Outcome at $p < .001$.

11.2 Risk Analyses for Psychological Strain



Summary:

- Psychological Strain is most strongly predicted by Role Ambiguity (*B* = .220). Thus, a 1-unit increase in Role Ambiguity (e.g., going from 'often' to 'always' experiencing this job demand) is expected to lead to a .220 increase in Psychological Strain, other things being equal.
- The next strongest psychosocial hazard is Emotional Demand (*B* = .204).
- Other psychosocial risk factors with significant relationships to Psychological Strain include Role Overload (*B* = .117), Job Control (*B* = -.094), Praise and Recognition (*B* = -.084), Co-Worker Support (*B* = -.063), Change Consultation (*B* = -.058), Role Conflict (*B* = .039), Group Task Conflict (*B* = .039), and Group Relationship Conflict (*B* = .035).
- Psychological Strain is not significantly related to Supervisor Support or Procedural Justice.
- It is of interest to note that Cognitive Demand has a significant negative relationship with Psychological Strain (*B* = -.052). This unexpected finding was further investigated by conducting a multi-level polynomial regression to check for the presence of a non-linear relationship.

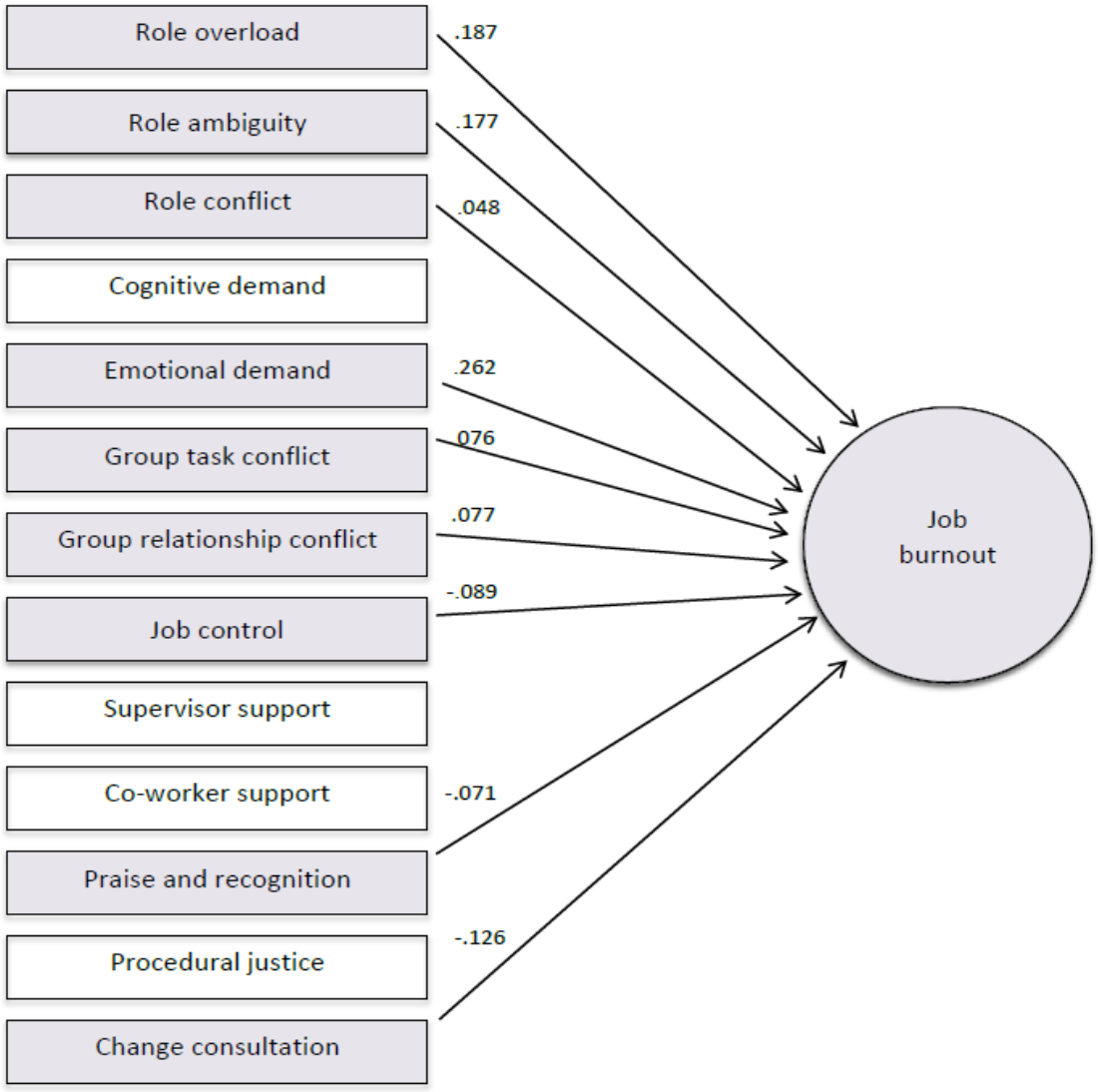


Notes: Graph depicts regression slope derived from regressing Psychological Strain against Cognitive Demand, as determined by a multi-level polynomial regression that accounts for the clustering effect of organisation while including a polynomial term to capture any non-linearity in the relationship (*n* = 10,638).

Summary:

- The figure indicates some non-linearity in the relationship between Cognitive Demand and Psychological Strain, such that there is a negative effect of Cognitive Demand on Psychological Strain at very low levels of this demand (effect size = -.24, *Z* = -3.50, *p* = .000) and a positive effect of Cognitive Demand on Psychological Strain at high levels of this demand (effect size = .09, *Z* = 4.57, *p* = .000).
- First, these findings suggest that Psychological Strain is at its lowest when Cognitive Demand is kept moderate.
- Second, these findings suggest that low and high levels of Cognitive Demand are detrimental for Psychological Strain. Such a finding is noteworthy given that 80% of workers reported high levels of this psychosocial hazard.

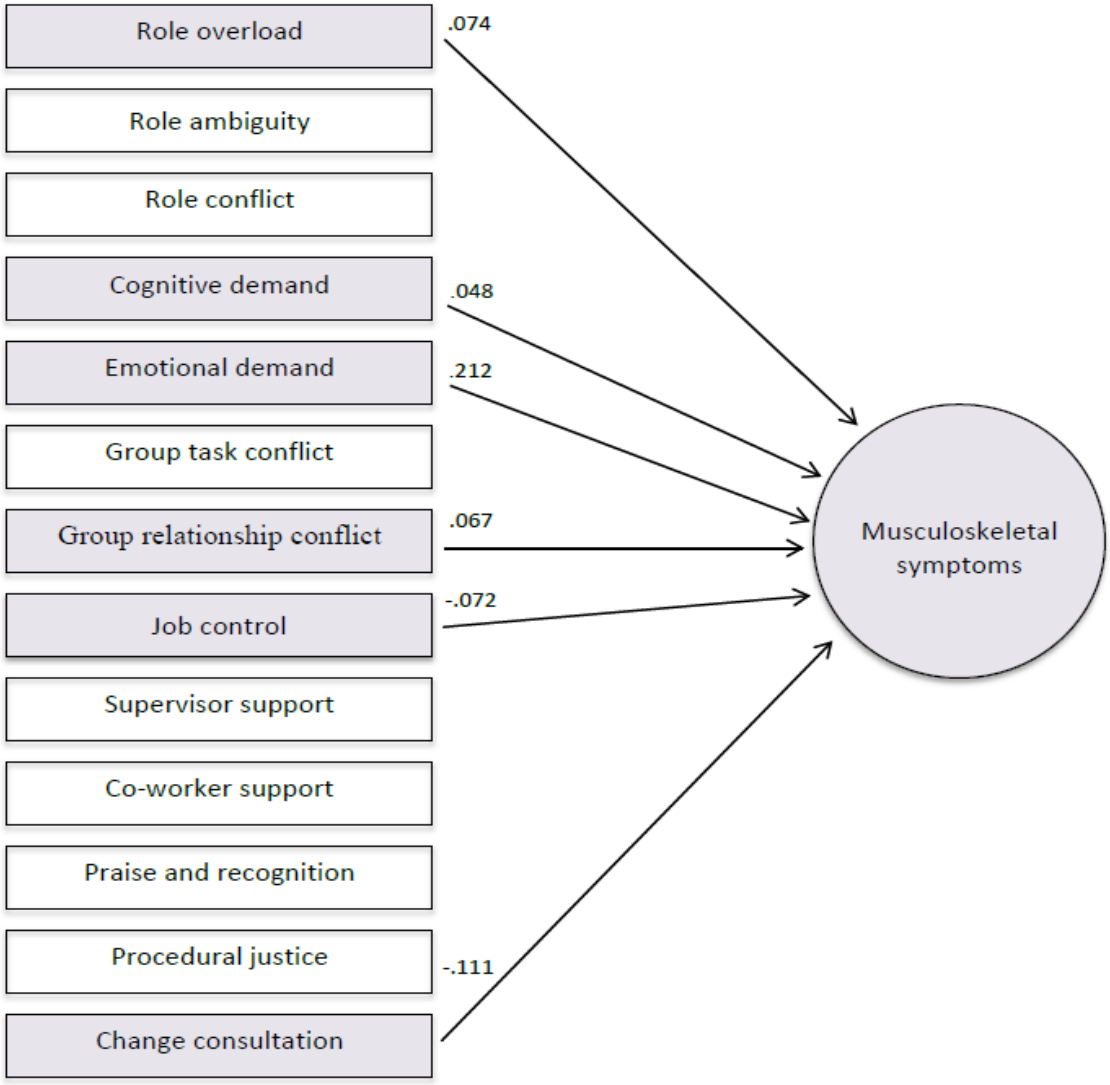
11.3 Risk Analyses for Job Burnout



Summary:

- Job Burnout is most strongly predicted by Emotional Demand (*B* = 0.262). Thus, a 1-unit increase in Emotional Demand (e.g., going from 'often' to 'always' experiencing this job demand) is expected to lead to a .262 increase in Job burnout, other things being equal.
- The next strongest psychosocial hazard is Role Ambiguity (*B* = .177).
- Other psychosocial risk factors with significant relationships to Job Burnout include Role Overload (B = .187), Change Consultation (*B* = -.126), Job Control (*B* = -.089), Group Relationship Conflict (*B* = .077), Group Task Conflict (*B* = .076), Praise and Recognition (*B* = -.071), and Role Conflict (*B* = .048).
- Job Burnout is not significantly related to Cognitive Demand, Supervisor Support, Co-Worker Support, or Procedural Justice.

11.4 Risk Analyses for Musculoskeletal Symptoms



Summary:

- Musculoskeletal Symptoms is best predicted by Emotional Demand (*B* = .212). Thus, a 1-unit increase in Emotional Demand (e.g., going from 'often' to 'always' experiencing this job demand) is expected to lead to a .212 increase in Musculoskeletal Symptoms, other things being equal.

- Other psychosocial risk factors with significant relationships to Musculoskeletal Symptoms include Change Consultation (*B* = -.111), Role Overload (*B* = .074), Job Control (*B* = -.072), Group Relationship Conflict (*B* = .067), and Cognitive Demand (*B* = .048).

- Musculoskeletal Symptoms is not significantly related to Role Ambiguity, Role Conflict, Group Task Conflict, Supervisor Support, Co-Worker Support, Praise and Recognition, or Procedural Justice.

11.5 Predicting Worker Outcomes for Individuals

It is possible to predict the level of a Worker Outcome for individuals (Y) under varying conditions of risk by inserting the values of the psychosocial hazards (X) into the regression equation: $Y = b_0 + b_1(X_1) + b_2(X_2) + b_3(X_3) + b_4(X_4) + b_5(X_5) + b_6(X_6) + b_7(X_7) + b_8(X_8) + b_9(X_9) + b_{10}(X_{10}) + b_{11}(X_{11}) + b_{12}(X_{12}) + b_{13}(X_{13})$. Thus, if one used the psychosocial hazard scores as provided by an individual worker, the following formula derived from this normative dataset could be applied:

For Psychological Strain = 2.699 + .097(insert individual score for role overload) + .220(insert individual score for role ambiguity) + .039(insert individual score for role conflict) + -.052(insert individual score for cognitive demand) + .204(insert individual score for emotional demand) + .039(insert individual score for group task conflict) + .035(insert individual score for group relationship conflict) + -.094(insert individual score for job control) + .009(insert individual score for supervisor support) + -.063(insert individual score for co-worker support) + -.084(insert individual score for praise and recognition) + .004(insert individual score for procedural justice) + -.058(insert individual score for change consultation).

For Job Burnout = 2.186 + .187(insert individual score for role overload) + .177(insert individual score for role ambiguity) + .048(insert individual score for role conflict) + .015(insert individual score for cognitive demand) + .262(insert individual score for emotional demand) + .076(insert individual score for group task conflict) + .077(insert individual score for group relationship conflict) + -.089(insert individual score for job control) + -.002(insert individual score for supervisor support) + -.014(insert individual score for co-worker support) + -.071(insert individual score for praise and recognition) + .008(insert individual score for procedural justice) + -.126(insert individual score for change consultation).

For Musculoskeletal Symptoms = 2.476 + .074(insert individual score for role overload) + -.002(insert individual *score* for role ambiguity) + .019(insert individual score for role conflict) + .048(insert individual score for cognitive demand) + .212(insert individual score for emotional demand) + .020(insert individual score for group task conflict) + .067(insert individual score for group relationship conflict) + -.072(insert individual score for job control) + .043(insert individual score for supervisor support) + -.025(insert individual score for co-worker support) + -.032(insert individual score for praise and recognition) + -.004(insert individual score for procedural justice) + -.111(insert individual score for change consultation).

11.6 Effect Sizes

Because multi-level regression modelling techniques do not provide a universally accepted indication of effect size, the models were repeated not controlling for the effect of organisation in order to provide an indication of the amount of variance in the Worker Outcome that the 13 Psychosocial Hazards (as a set) explained:
Psychological Strain: R squared = .509, F= 827.919, p = .000; thus, 51% of the variance.
Job Burnout: R squared = .447, F= 642.593, p = .000; thus, 45% of the variance.
Musculoskeletal Symptoms: R squared = .155, F= 145.934, p = .000; thus, 16% of the variance.

11.7 Conclusions for Risk Analyses

- Role Overload emerged as a consistent positive predictor across all 3 Worker Outcomes, as did Emotional Demand and Group Relationship Conflict.
- Job Control emerged as a consistent negative predictor across all 3 Worker Outcomes, as did Change Consultation.
- Role Ambiguity was the strongest predictor of Psychological Strain, and Emotional Demand was the strongest predictor of Job Burnout and Musculoskeletal Symptoms.
- Cognitive Demand was found to have a curvilinear association with Psychological Strain, such that Psychological Strain is at its lowest when Cognitive Demand is kept moderate.
- Such findings underscore the importance of examining both prevalence and impact for a comprehensive understanding of psychosocial risk factors in the workplace.
- Risk analysis conducted for the attitude of Job Satisfaction is presented in Appendix 5.
- Risk analysis conducted for the behavioural intention of Turnover is presented in Appendix 6.

Section 12 – Workplace Bullying

12.1 Introduction and Definitions

Workplace bullying has profound negative effects on working populations and the organisations in which they work. Indeed, two meta-analyses published in 2012 demonstrate the robust nature of such relationships (Nielsen & Einarsen, 2012). In their first meta-analysis of cross-sectional relationships representing 77,721 employees, workplace bullying was significantly associated with a vast array of employee stress reactions (i.e., anxiety, depression, strain, burnout, post-traumatic stress, somatisation, and physical health complaints) and organisational outcomes (i.e., reduced job satisfaction and organisational commitment, as well as increased absenteeism and intentions to leave). Their second meta-analysis focused on prospective relationships for a sample of 62,916 employees, finding that workplace bullying predicted mental health problems and, to a lesser extent, absenteeism, over time.

Subsequent empirical studies continue to demonstrate the negative implications of exposure to workplace bullying. For instance, Trepanier, Fernet, and Austin (2013) conducted a study of 1,179 nurses in Quebec and demonstrated that workplace bullying increased burnout and decreased engagement. These authors showed that this form of social stress in the workplace had its effect on employee strain because it undermined employees' psychological needs for self-determination. Similarly, in a study of 2,068 UK workers, Cassidy, McLaughlin, and McDowell (2014) showed that workplace bullying was associated with reduced positive mental health and increased negative mental health. In this latter study, such relationships were explained via the erosion of an individual's psychological capital and social resources.

Finne et al. (2014) provided evidence that *experienced* bullying predicted mental distress in both their cross-sectional and longitudinal datasets of Norwegian workers and *observed* bullying was associated with mental distress in their Time 2 only analyses. The long-term consequences of bullying on mental distress also have been demonstrated by Gullander et al. (2014) who reported that the odds ratio of newly onset depression among Danish employees who had experienced bullying two years prior "occasionally" and "frequently" was 2.17 and 9.63, respectively (N = 8,376). Witnessing of bullying, however, was found not to have such consequences (N = 8,846).

In addition, a cohort analysis of 21,834 employed Norwegian adults from the Nord-Trondelag Health Study (HUNT) by Stromhold, Pape, Ose, Krokstad, and Bjorngaard (2015) revealed that being bullied/harassed at work at Time 1 was associated with increased odds of sickness absence of more than 4 weeks one year later, diagnosed in relation to mental disorders (OR = 1.76, 95% CI, 1.26-2.46). Aagestad, Johannessen, Tynes, Gravseth, and Sterud (2014) showed that bullying predicted medically confirmed long-term sickness leave (of 40 days or more) one year later for a sample of 6,700 Norwegian workers drawn from the working population (although this significant effect disappeared once the model was adjusted for other psychosocial factors). Bullying also has been shown to be associated with occupational injuries (which required a medical treatment and at least one day of absence) for men (N = 26,883) and women (N = 20,079) drawn from the French population, but only the effect for men (N = 22,990) remained significant once the other statistically significant psychosocial factors were included in the model (Lesuffleur, Chastang, Sandret, & Niedhammer, 2015).

Thus, the People at Work Project also examined exposure to workplace bullying and its impact on employee stress reactions. For the purposes of the People at Work Project, workplace bullying adhered to the National Definition arising from the 2012 Federal Inquiry into Workplace Bullying (Rishworth & Australian Parliament House of Representatives Standing Committee on Education and Employment, 2012) and was defined as "repeated, unreasonable behaviour directed towards a worker or group of workers that creates a risk to health and safety".

For organisations in the Victorian jurisdiction, workplace bullying was defined as being characterised by "persistent and repeated negative behaviour directed at an employee that creates a risk to health and safety".

The extent to which workers report themselves as having experienced workplace bullying is dependent on a number of methodological issues, including whether respondents are provided with a definition of workplace bullying prior to them being asked if they have been exposed to workplace bullying. The provision of a definition has been argued to increase the accuracy of the measure as it limits variability from respondents using their own definition. In this respect, Nielsen, Matthiesen, and Einarsen (2010) demonstrated that the provision of a definition provided more conservative prevalence rates. Thus, the People at Work Project provided the above definitions to all respondents prior to asking about their experiences of workplace bullying.

12.2 Data Analysis Overview

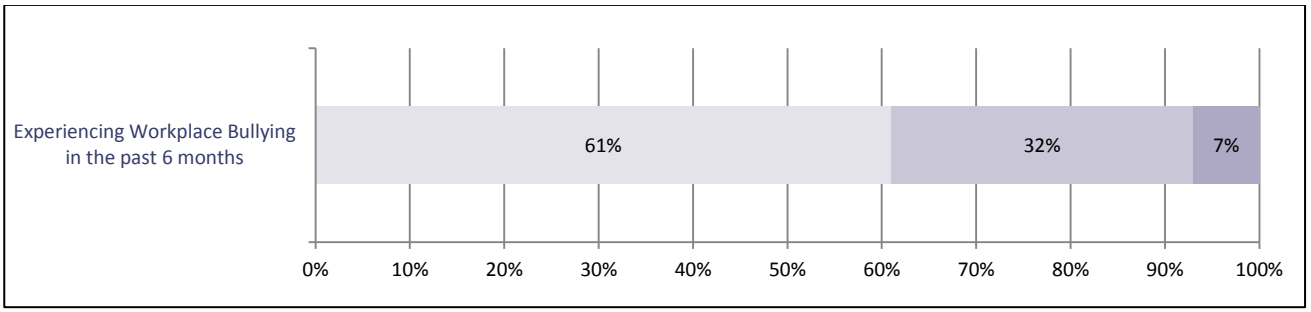
This section outlines prevalence statistics for the (1) Experience and (2) Witnessing of Workplace Bullying for the Overall Sample, as well as breakdowns for industries and occupations (**Sections 12.3 and 12.4**), along with a breakdown analysis of the most prevalent types of Bullying Behaviours (**Sections 12.5, 12.6, and 12.7**) and Bullying Sources (**Section 12.8)** for the Overall Sample.

Three multi-level polynomial regressions were undertaken to examine the extent to which the Experience of Workplace Bullying was associated with Psychological Strain, Job Burnout, and Musculoskeletal Symptoms) for the Overall Sample (**Section 12.9**).

Last, a single multi-level linear regression (taking into account the clustering effect of organisation) was undertaken to examine the extent to which the 13 Psychosocial Hazards were associated with the Experience of Workplace Bullying for the Overall Sample (**Section 12.10**).

12.3 Prevalence for Experiencing Workplace Bullying

12.3.1 Experiencing Workplace Bullying (Overall Sample)



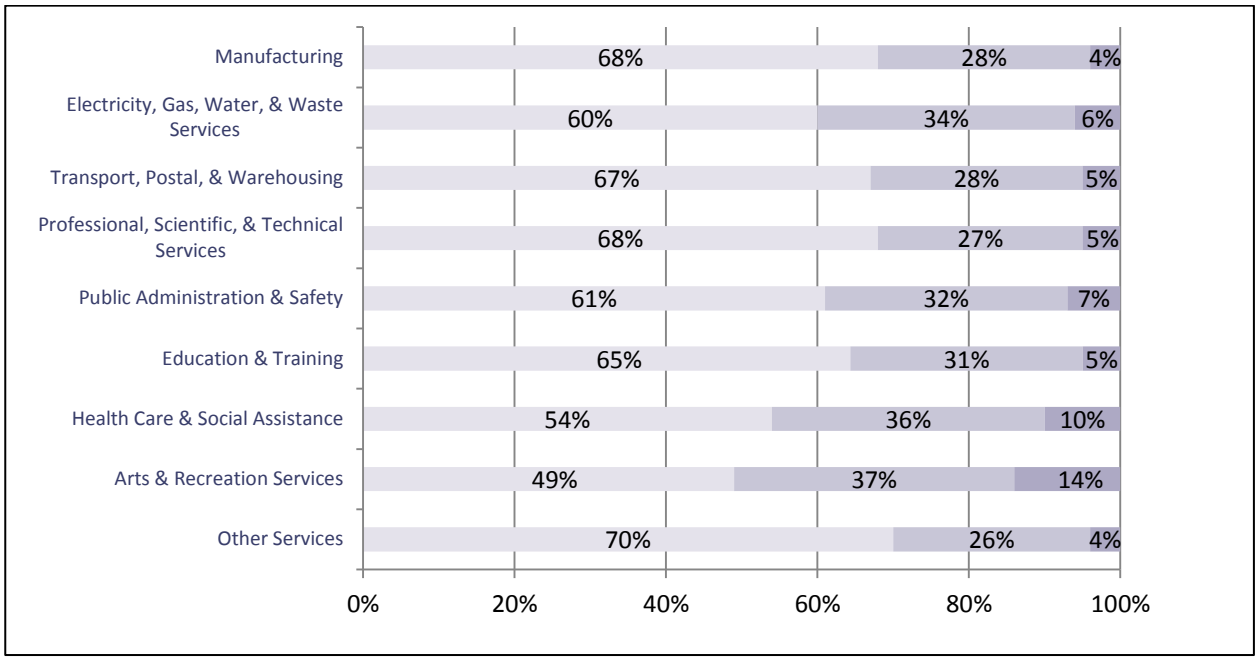
Notes: never; rarely to some of the time; monthly to almost daily

To report their experience of Workplace Bullying, workers responded to the "In the past 6 months, have you been subjected to workplace bullying in your workgroup?" The scale was never (1) to almost daily (7).

Summary:

- 61% of the Overall Sample report never.
- 32% of the Overall Sample report rarely (16%), once in a while (9%), or some of the time (7%).
- 7% of the Overall Sample report monthly (2%), weekly (3%), or almost daily (2%).

12.3.2 Experiencing Workplace Bullying (Industries)

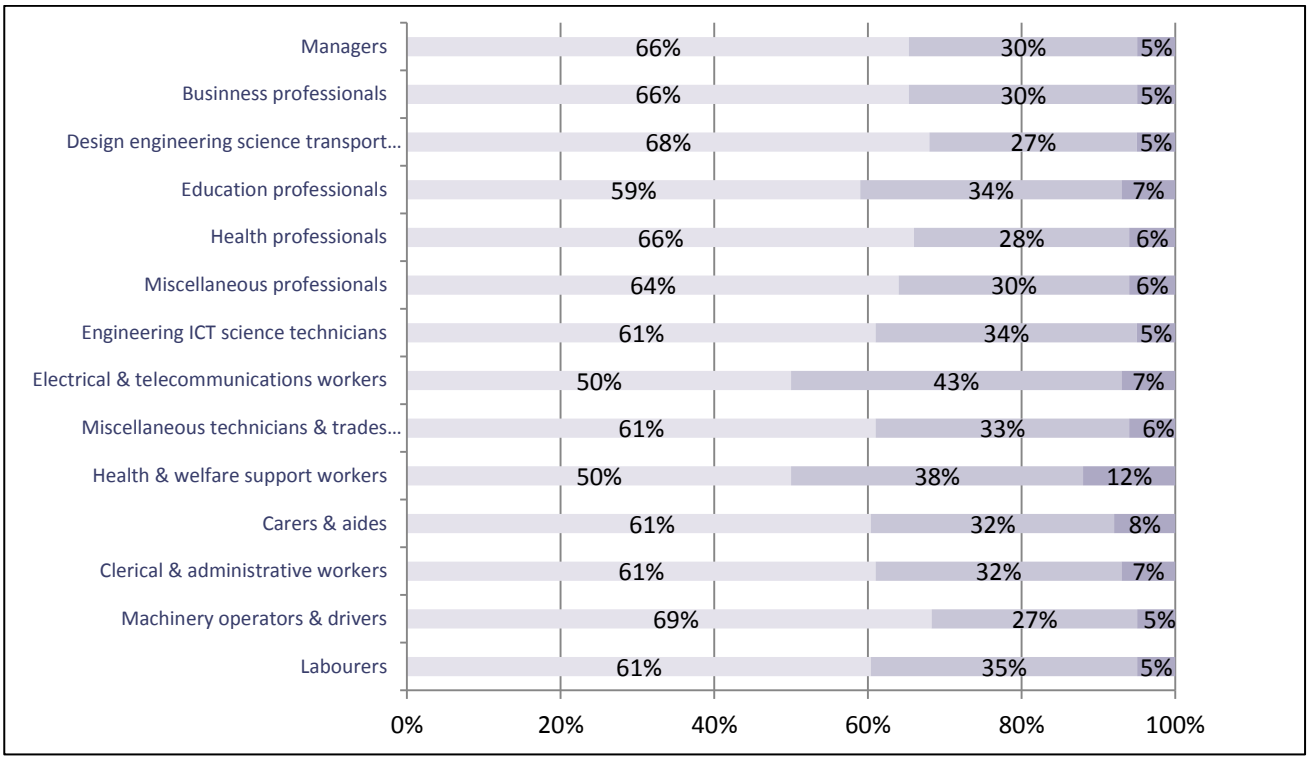


Notes: never; rarely to some of the time; monthly to almost daily

Summary:

- The industry with the lowest experiencing bullying prevalence is Other Services (70% report never).
- The industry with the highest experience bullying prevalence is Arts & Recreation Services (51% report rarely to almost daily).

12.3.3 Experiencing Workplace Bullying (Occupations)



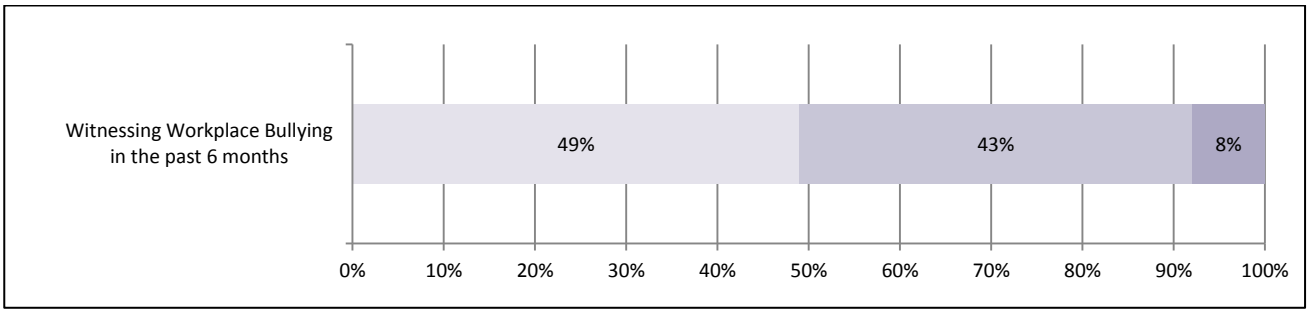
Notes: never; rarely to some of the time; monthly to almost daily

Summary:

- The occupations with the lowest experiencing bullying prevalence are Design Engineering Science Transport Professionals and Machinery Operators & Drivers (69% report never).
- The occupations with the highest experience bullying prevalence are Health & Welfare Support Workers and Electrical & Telecommunications Workers (both with 50% report rarely to almost daily).

12.4 Prevalence for Witnessing Workplace Bullying

12.4.1 Witnessing Workplace Bullying (Overall Sample)



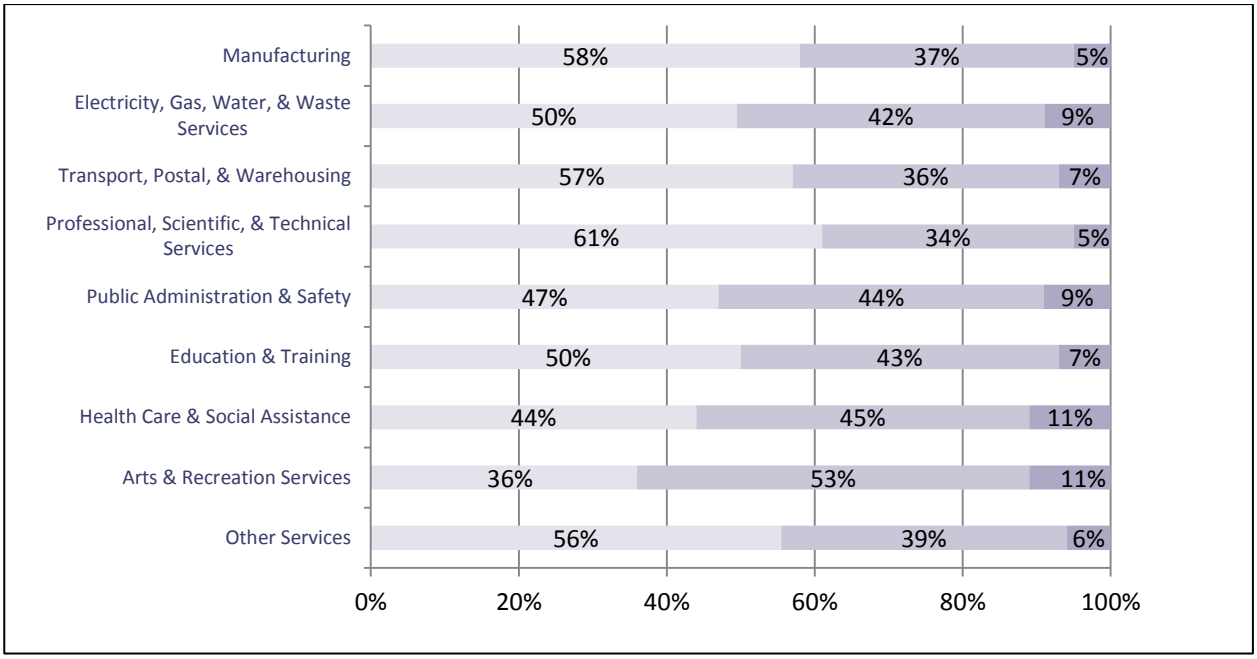
Notes: never; rarely to some of the time; monthly to almost daily

To report their witnessing of Workplace Bullying, workers responded to the question “In the past 6 months, have you witnessed workplace bullying in your workgroup?” The scale was never (1) to almost daily (7).

Summary:

- 49% of the Overall Sample report never.
- 43% of the Overall Sample report rarely (20%), once in a while (14%), or some of the time (9%).
- 8% of the Overall Sample report monthly (2%), weekly (4%), or almost daily (2%).
- More respondents stated that they had witnessed bullying (51%) than experiencing it themselves (39%), perhaps as a function of workplace bullying occurring in public with multiple witnesses to such events.

12.4.2 Witnessing Workplace Bullying (Industries)

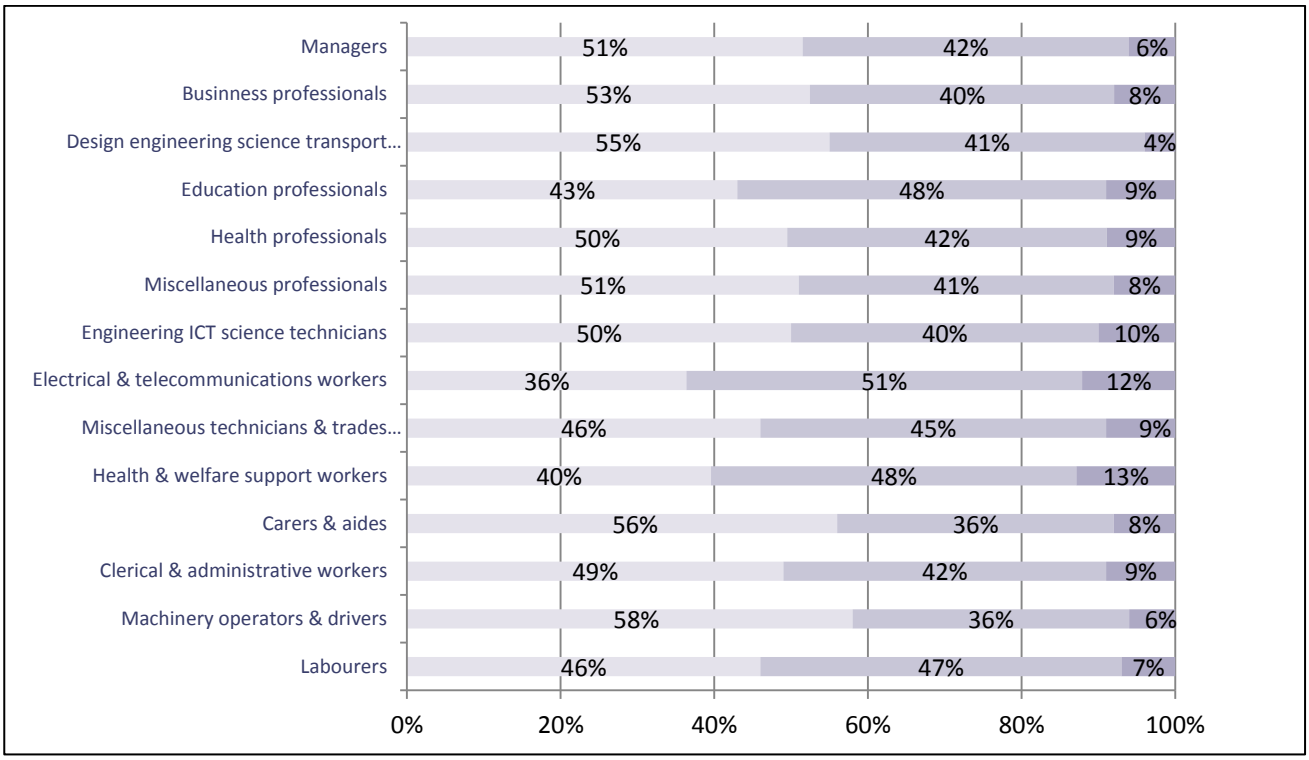


Notes: never; rarely to some of the time; monthly to almost daily

Summary:

- The industry with the lowest witnessing bullying prevalence is Professional, Scientific, & Technical Services (61% report never).
- The industry with the highest witnessing bullying prevalence is Arts & Recreation Services (64% report rarely to almost daily).

12.4.3 Witnessing Workplace Bullying (Occupations)



Notes: never; rarely to some of the time; monthly to almost daily

Summary:

- The occupation with the lowest witnessing bullying prevalence is Machinery Operators & Drivers (58% report never).
- The occupation with the highest witnessing bullying prevalence is Electrical & Telecommunications Workers (63% report rarely to almost daily).

12.5 Types of Bullying Behaviours

Workplace bullying can take many forms. To ascertain the nature of workplace bullying, workers were asked to indicate how often they had experienced each of the following 9 Bullying Behaviours in the past 6 months (7-point scale ranging from never to almost daily), in reference to either the National or Victorian definitions of workplace bullying. This approach also is known as the behavioural experience approach to assessing workplace bullying.

The 9 Bullying Behaviours in the People at Work Project were sourced from code of practice and guidance materials from Queensland, New South Wales, and Victoria, and cross-referenced against the Negative Acts Questionnaire-Revised, developed by Einarsen, Hoel, and Notelaers (2009). This scale is one of the most widely recognised frameworks of bullying behaviours used in research globally.

The 9 Bullying Behaviours in the People at Work Project map quite closely onto the behaviours outlined in the 2012 Federal Inquiry into Workplace Bullying (Rishworth & Australian Parliament House of Representatives Standing Committee on Education and Employment, 2012), as well as the *2013 Safe Work Australia Guide for Preventing and Responding to Workplace Bullying* (Safe Work Australia, 2013).

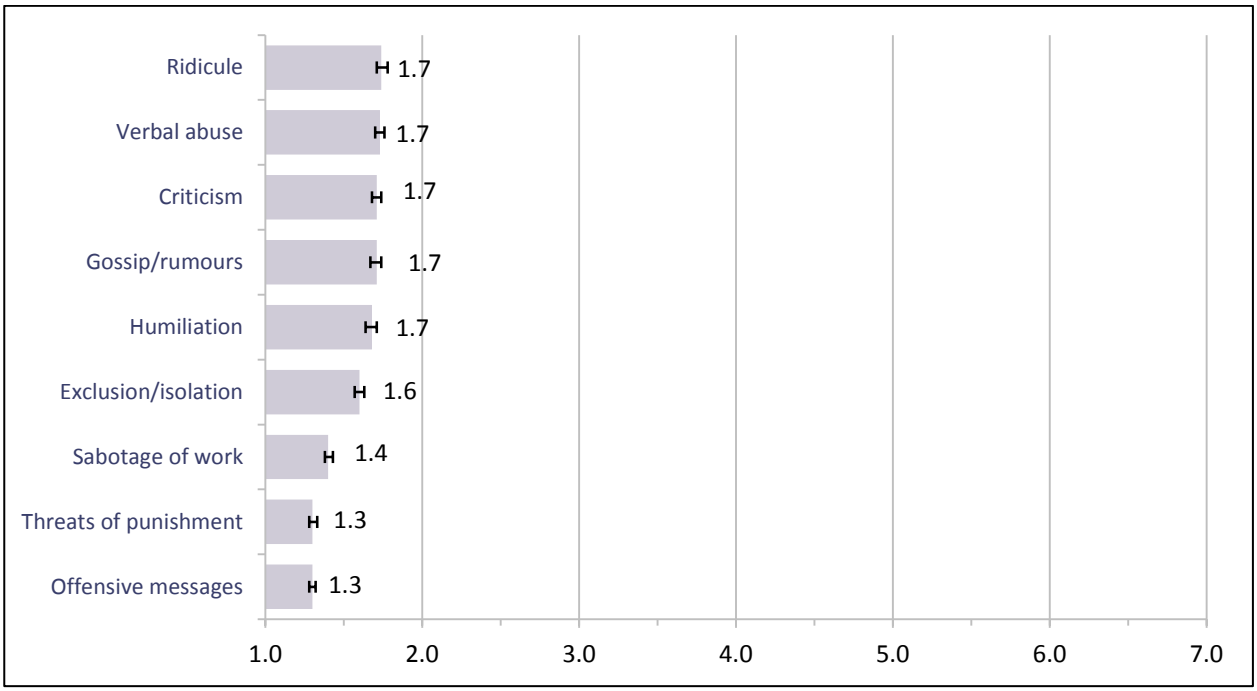
Bullying Behaviour	*n*	*M*	*SD*	Lower 99.9% *CI*	Upper 99.9% *CI*
Offensive messages	10,656	1.30	0.88	1.3	1.3
Threats of punishment	10,658	1.34	0.94	1.3	1.4
Sabotage of work	10,660	1.41	1.04	1.4	1.5
Exclusions or isolation	10,662	1.63	1.29	1.6	1.7
Humiliation	10,658	1.66	1.66	1.6	1.7
Gossip/rumours	10,653	1.67	1.30	1.6	1.7
Criticism	10,658	1.69	1.32	1.7	1.7
Verbal Abuse	10,659	1.70	1.28	1.7	1.7
Ridicule	10,661	1.73	1.30	1.7	1.8

Notes: Table entries are sample size (*n*), mean (*M*), standard deviation (*SD*), and 99.9% confidence intervals (*CIs*) for each Bullying Behaviour.

Summary:

- Overall, the reported incidence for each of the 9 Bullying Behaviours ranged from 1.30 to 1.73 on a scale from never (1) to almost daily (7).

12.6 Rank Ordering of Bullying Behaviours

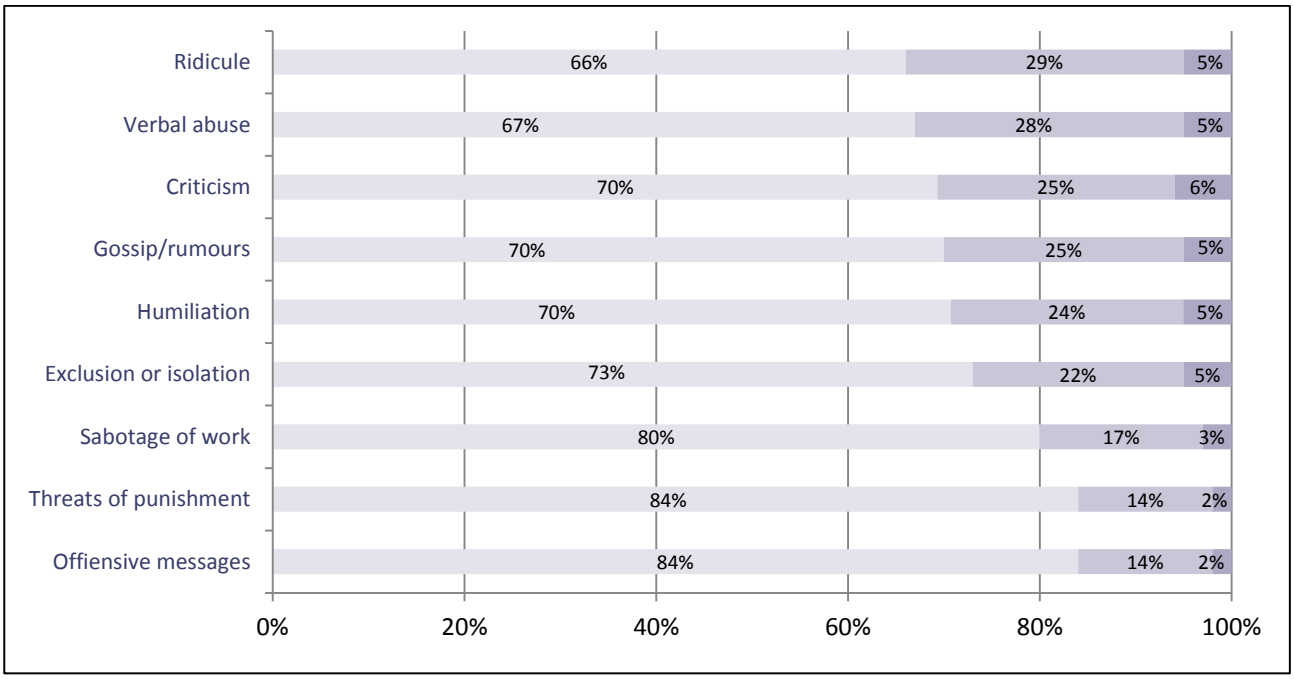


Notes: Means and 99.9% confidence intervals for 9 Behaviours, presented in order from highest to lowest in prevalence. Bullying behaviours are at significantly different levels from one another when their confidence intervals do not overlap.

Summary:

- A rank order analysis of the 9 Bullying Behaviours from highest to lowest in prevalence was determined, based on 99.9% confidence intervals.
- Six of the bullying behaviours are equally the most prevalent: ridicule and being put down (mean = 1.7); verbal abuse (mean = 1.7); persistent and unjustified criticism (mean = 1.7); being subjected to gossip or false, malicious rumours (mean = 1.7); humiliation through gestures, sarcasm, criticism, or insults (mean = 1.7); and exclusion or isolation from workplace activities (mean = 1.6).
- The least prevalent behaviours are sabotage of work (mean = 1.4), threats of punishment for no reason (mean = 1.3) and offensive messages via telephone, written, or electronic means (mean = 1.3).

12.7 Percentages for Bullying Behaviours



Notes: never; rarely to some of the time; monthly to almost daily

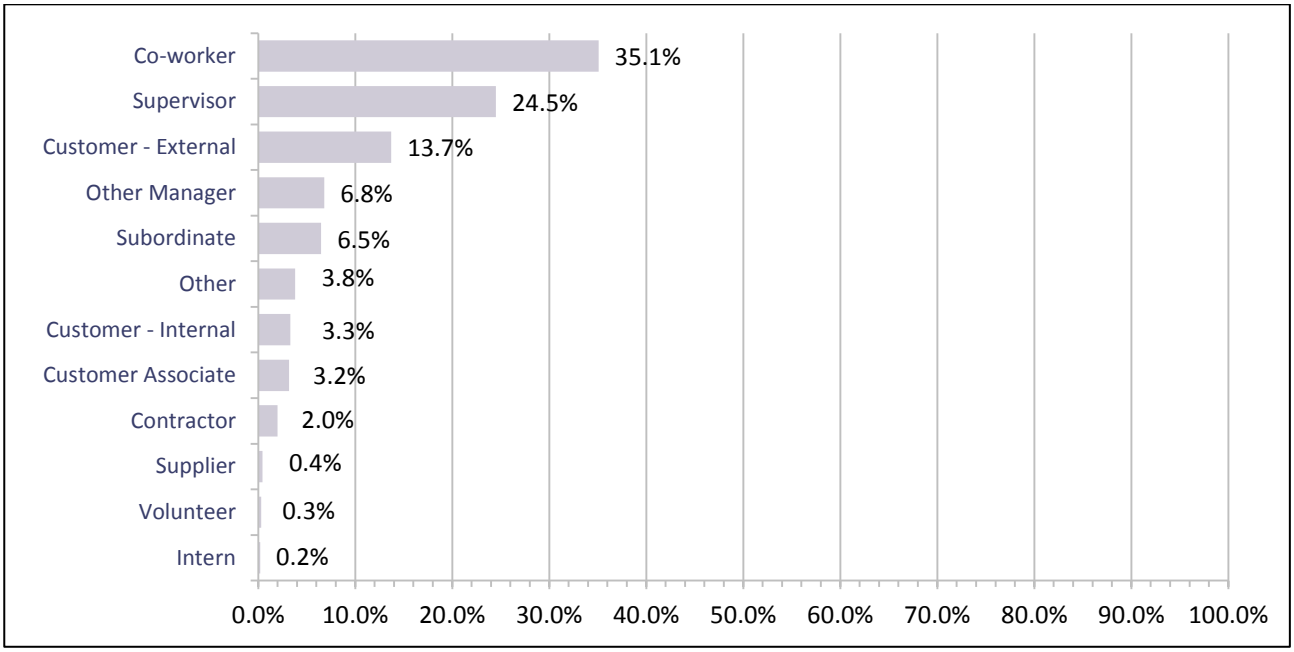
Summary:

- 5% of the Overall Sample reports very frequent ridicule.
- 5% of the Overall Sample reports very frequent verbal abuse.
- 6% of the Overall Sample reports very frequent criticism.
- 5% of the Overall Sample reports very frequent gossip/rumours.
- 5% of the Overall Sample reports very frequent humiliation.
- 5% of the Overall Sample reports very frequent exclusion or isolation.
- 3% of the Overall Sample reports very frequent sabotage of work.
- 2% of the Overall Sample reports very frequent threats of punishment.
- 2% of the Overall Sample reports very frequent offensive messages.

12.8 Sources of Workplace Bullying

Workplace bullying can occur at all levels of the organisation and has been categorised as: upwards bullying, where subordinates bully their supervisors or managers; horizontal (or sideways) bullying, where co-workers or peers bully other co-workers or peers; and downwards bullying, where managers or supervisors bully their subordinates.

Workers indicating that they had been subjected to workplace bullying, or experienced one or more of the 9 Bullying Behaviours, were asked to indicate the source(s).



Notes: Graph indicates percentage of respondents nominating each workplace actor as a source of workplace bullying. Respondents could indicate more than one source.

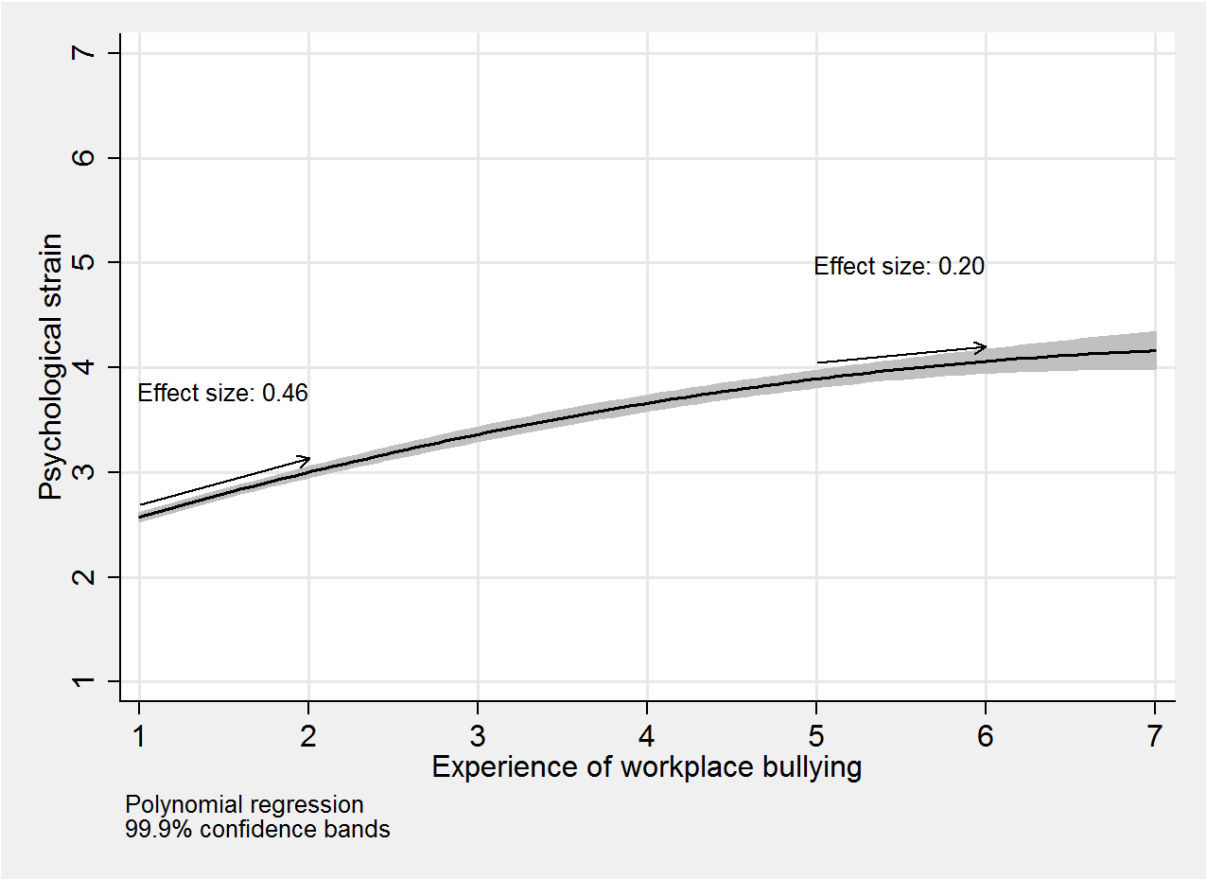
Summary:

- The main Source of Workplace Bullying is Co-Worker (35.1%), followed by Supervisors (25.5%), and then External Customers (13.7%).

12.9 Workplace Bullying Risk Analyses for Overall Sample

The Experience of Workplace Bullying in the past 6 months was found to have an incidence rate of 32% (rarely, once in a while, or some of the time) and 7% (monthly, weekly, almost daily), the consequences of which can be detrimental to employees. Three multi-level polynomial regressions were undertaken to examine the extent to which the Experience of Workplace Bullying was associated with Psychological Strain, Job Burnout, and Musculoskeletal Symptoms) for the Overall Sample. Such analyses account for the clustering effect of organisation while including a polynomial term to capture any non-linearity in the relationship.

12.9.1 Relationship between Experience of Workplace Bullying and Psychological Strain

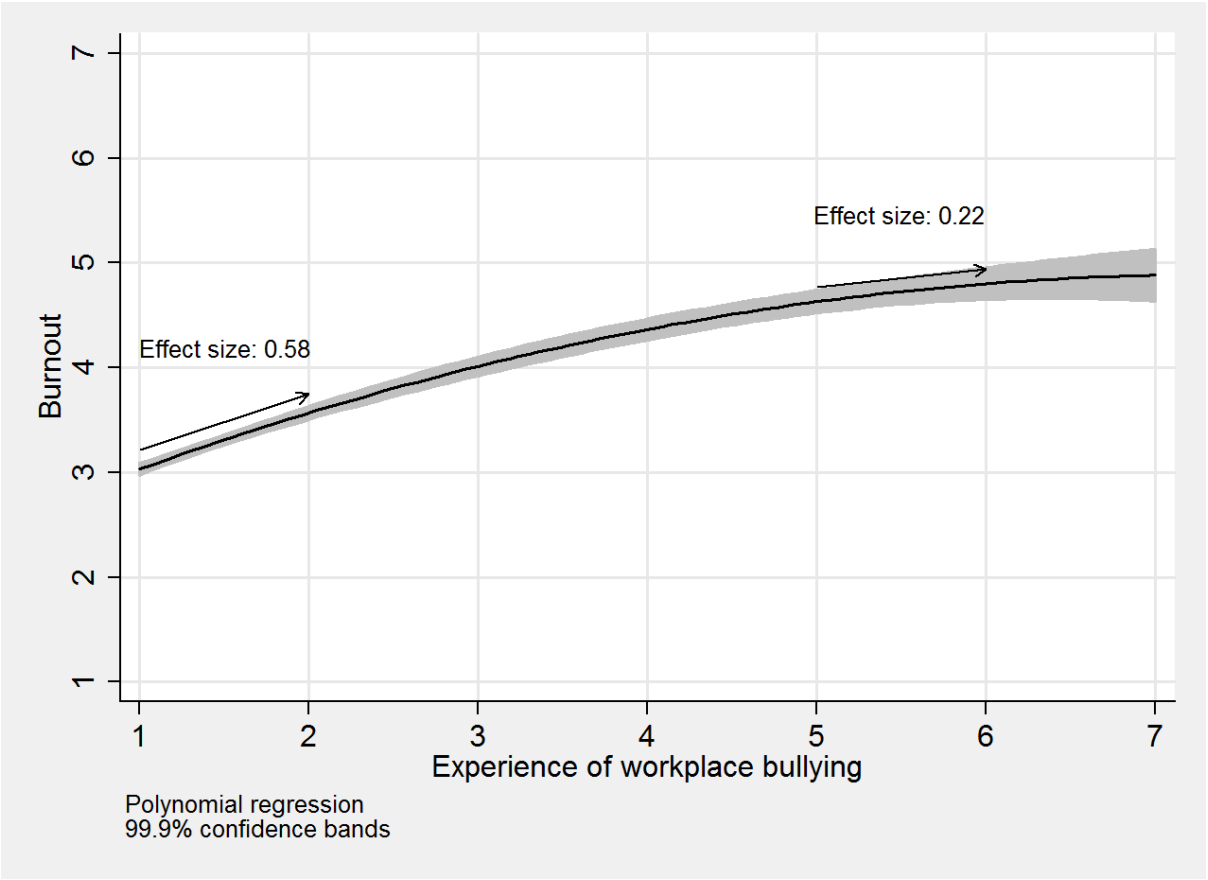


Notes: Graph depicts regression slope derived from regressing Psychological Strain against experience of workplace bullying, as determined by a multi-level polynomial regression that accounts for the clustering effect of organisation while including a polynomial term to capture any non-linearity in the relationship (*n* = 10,490).

Summary:

- First, results show that the higher the Experience of Workplace Bullying, the higher the levels of reported Psychological Strain.
- Second, the figure indicates some non-linearity in this relationship, such that the positive effect of the Experience of Workplace Bullying on Psychological Strain is stronger at very low levels of bullying (i.e., moving from never to rarely; effect size = .46, $Z = 20.71$, $p = .000$) but then tapers off at very high levels of bullying (i.e., monthly, weekly, almost daily; effect size = .20, $Z = 10.57$, $p = .000$).
- Overall, these findings suggest that all levels of the Experience of Workplace Bullying, even very low levels, exacerbate Psychological Strain.

12.9.2 Relationship between Experience of Workplace Bullying and Job Burnout

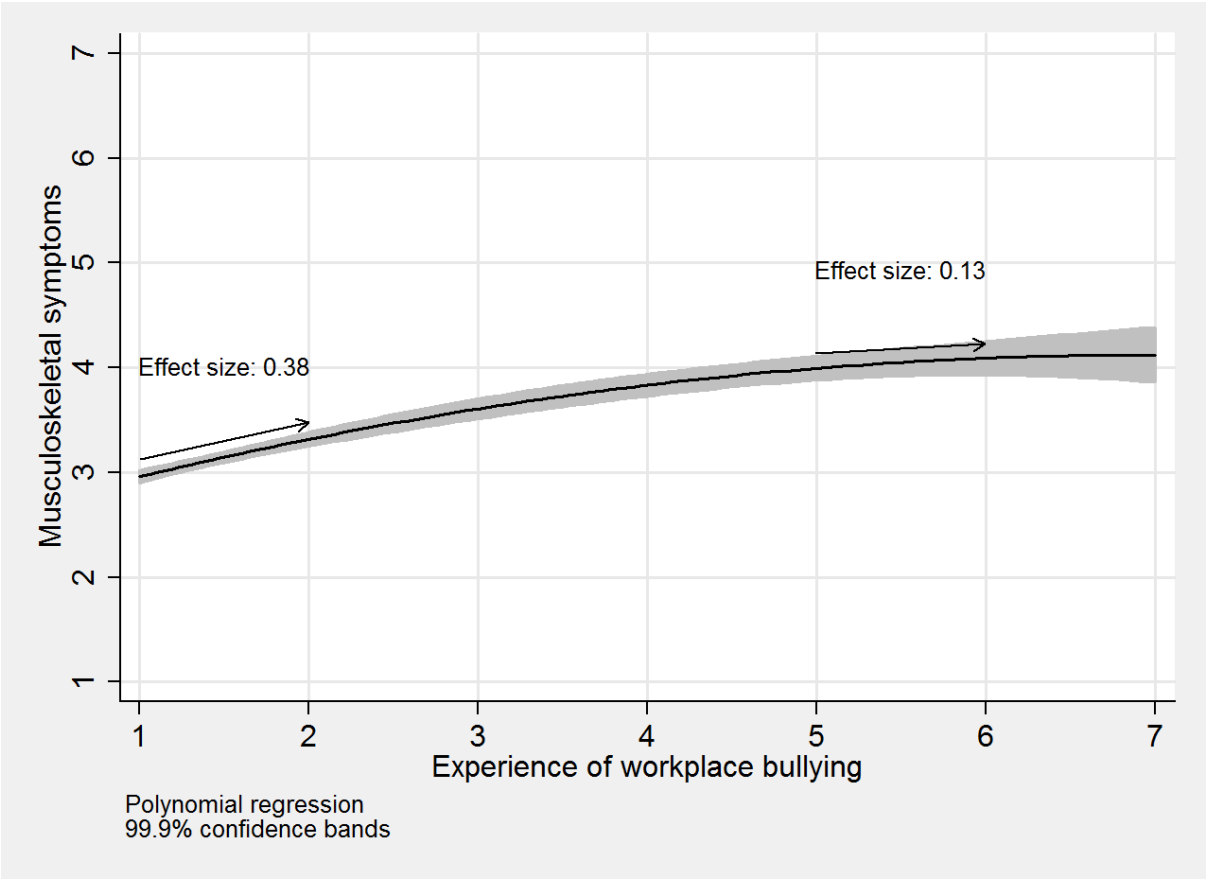


Notes: Graph depicts regression slope derived from regressing Job Burnout against Experience of Workplace Bullying, as determined by a multi-level polynomial regression that accounts for the clustering effect of organisation while including a polynomial term to capture any non-linearity in the relationship (n = 10,490).

Summary:

- First, results show that the higher the Experience of Workplace Bullying, the higher the levels of reported Job Burnout.
- Second, the figure indicates some non-linearity in this relationship, such that the positive effect of the Experience of Workplace Bullying on Job Burnout is stronger at very low levels of bullying (i.e., moving from never to rarely; effect size = .58, Z = 17.42, p = .000) but then tapers off at very high levels of bullying (i.e., monthly, weekly, almost daily; effect size = .22, Z = 9.81, p = .000).
- Overall, these findings suggest that all levels of the Experience of Workplace Bullying, even very low levels, exacerbate Job Burnout.

12.9.3 Relationship between Experience of Workplace Bullying and Musculoskeletal Symptoms



Notes: Graph depicts regression slope derived from regressing Musculoskeletal Symptoms against Experience of Workplace Bullying, as determined by a multi-level polynomial regression that accounts for the clustering effect of organisation while including a polynomial term to capture any non-linearity in the relationship (n = 10,497).

Summary:

- First, results show that the higher the Experience of Workplace Bullying, the higher the levels of reported Musculoskeletal Symptoms.
- Second, the figure indicates some non-linearity in this relationship, such that the positive effect of the Experience of Workplace Bullying on Musculoskeletal Symptoms is stronger at very low levels of bullying (i.e., moving from never to rarely; effect size = .38, Z = 11.89, p = .000) but then tapers off at very high levels of bullying (i.e., monthly, weekly, almost daily; effect size = .13, Z = 5.37, p = .000).
- Overall, these findings suggest that all levels of the Experience of Workplace Bullying, even very low levels, exacerbate Musculoskeletal Symptoms.

12.9.4 Conclusions

In sum, the Experience of Workplace Bullying is positively related to all 3 Worker Outcomes. The more bullying experienced at work, the more the likelihood of Psychological Strain, Job Burnout, and Musculoskeletal Symptoms. Importantly, the impact of bullying on employee strain plateaus the more frequent it becomes. In other words, the sharpest increase in the 3 Worker Outcomes was observed for those workers who report rare incidents of bullying compared to those who report never. Overall, these findings have important practical implications, as all levels of exposure to bullying are harmful to employees, including for those employees for whom bullying does not occur often.

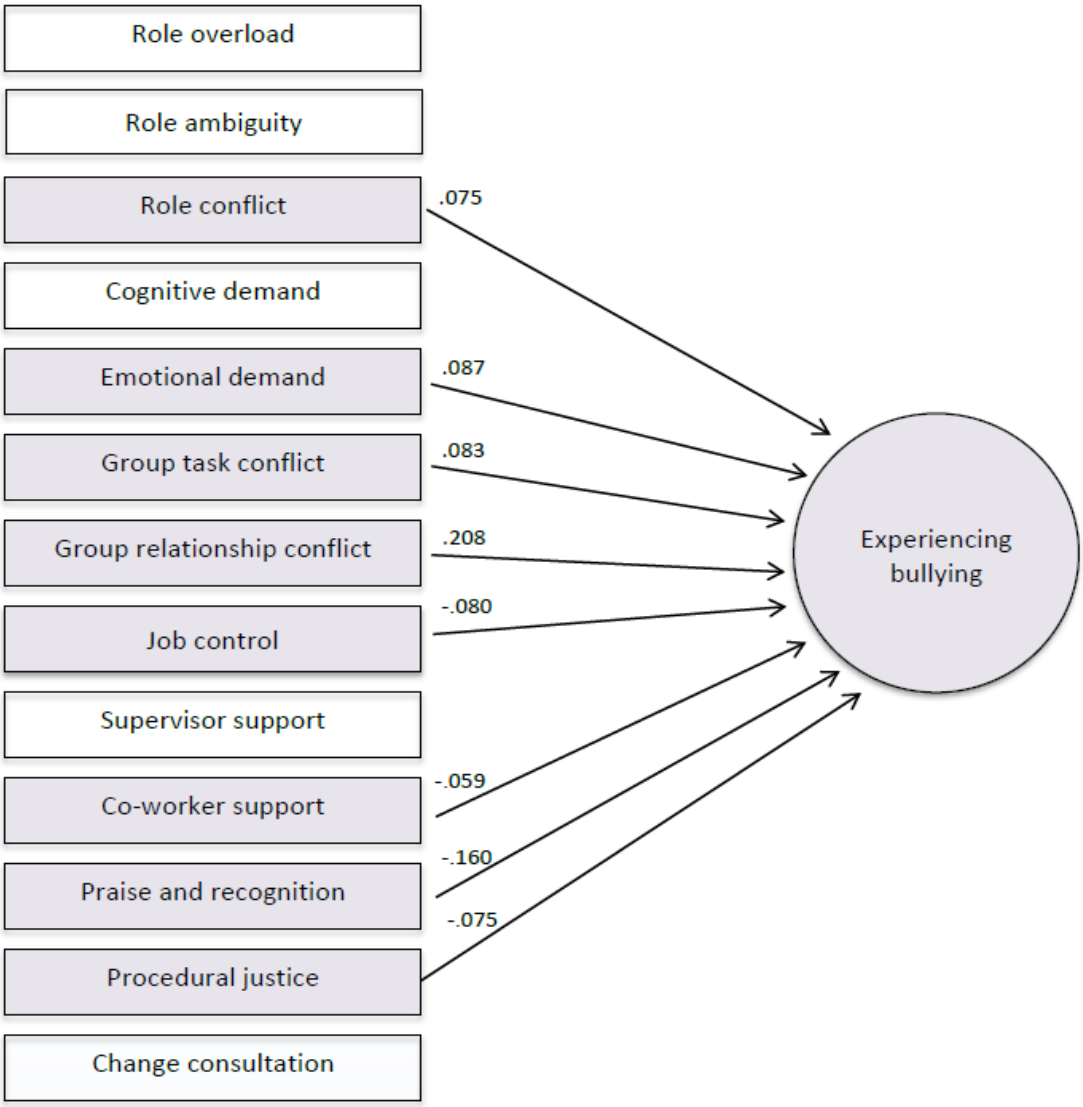
12.10 Psychosocial Hazards Predicting the Experience of Workplace Bullying

A single multi-level linear regression (taking into account the clustering effect of organisation) was undertaken to examine the extent to which the 13 Psychosocial Hazards were associated with the Experience of Workplace Bullying (*ICC* = 0.030, *Z* = 4.727, *p* < .001, *DEFF* = 5.028).

	Experience of Workplace Bullying n = 10,505		
Psychosocial Hazard	*B*	*se*	*p*
Role overload	-.012	.011	
Role ambiguity	-.028	.016	
Role conflict	.075	.015	*
Cognitive demand	-.002	.015	
Emotional demand	.087	.012	*
Group task conflict	.083	.016	*
Group relationship conflict	.208	.014	*
Job control	-.080	.011	*
Supervisor support	-.043	.015	
Co-Worker support	-.059	.016	*
Praise and recognition	-.160	.016	*
Procedural justice	-.075	.014	*
Change consultation	-.013	.016	
Constant	1.264	2.734	

Notes: Table entries are unstandardised partial regression coefficients (*B*), standard errors (*se*) and significance tests (*p*); * indicates that the psychosocial hazard in question is significantly related to the Experience of Workplace Bullying at *p* < .001.

Because multi-level regression modelling techniques do not provide a universally accepted indication of effect size, the model was repeated not controlling for the effect of organisation in order to provide an indication of the amount of variance in the Experience of Workplace Bullying that the 13 Psychosocial Hazards (as a set) explained: R squared = .325, F= 389.353, p = .000; thus, 33% of the variance.



Summary:

- Experiencing Bullying is most strongly predicted by Group Relationship Conflict (*B* = .208). Thus, a 1-unit increase in Group Relationship Conflict (e.g., going from 'often' to 'always' experiencing this job demand) is expected to lead to a .208 increase in Experiencing Bullying, other things being equal.
- The next strongest psychosocial hazard is Praise and Recognition (*B* = -.160).
- Other psychosocial risk factors with significant relationships to Experiencing Bullying include Emotional Demand (*B* = .087), Group Task Conflict (*B* = .083), Job Control (*B* = -.080), Role Conflict (*B* = .075), Procedural Justice(*B* = -.075), and Co-Worker Support (*B* = -.059).
- Experiencing Bullying is not significantly related to Role Overload, Role Ambiguity, Cognitive Demand, Supervisor Support, or Change Consultation.

Section 13 – Conclusions

This concluding chapter provides an overview of the main findings and take-away messages in regards to prevalence and impact for each job demand, job resource, and worker outcome, taken in turn. The summary results for workplace bullying, the behaviours and sources to target, and its consequences for employee strain also are presented. Last, this report concludes with a summary of the psychosocial educational achievements of the People at Work Project, along with qualitative feedback from Participating Organisations and Participating Managers.

13.1 Summary of Findings for Job Demands

Job Demands	Take-Away Messages
1. **Role Overload** occurs when an individual feels pressured by excessive workloads, difficult deadlines, and a general inability to fulfil organisational expectations in the time available.	▪ Prevalence rate = 14% of workers reported high levels of Role Overload (mean = 3.2 on a 1-7 scale of never to always). Of the 7 Job Demands, Role Overload had the 3rd highest-ranking (along with Role Conflict). ▪ There were no discernible differences in levels of Role Overload for males and females or those on regular day schedules versus all other types of work schedules. Levels of Role Overload were found to be the same across jurisdictions (compared to overall balance) and the public and private sectors. ▪ Full-time workers (mean = 3.3) reported higher Role Overload than those working less than a full-time week (mean = 2.8). Workers in Education & Training (mean = 3.7) were exposed to higher Role Overload than the rest of the sample (mean = 3.2). Similarly, at the occupation-level, Education Professionals (mean = 4.3) reported higher Role Overload than the rest of sample (mean = 3.2). ▪ Inter-industry comparisons showed that Education & Training workers (mean = 3.7) had the highest Role Overload and Health Care & Social Assistance workers (mean = 3.0) had the lowest Role Overload. Inter-occupation comparisons showed that Education Professionals (mean = 4.3) had the highest Role Overload and Carers & Aides (mean = 2.5) had the lowest Role Overload. ▪ Role Overload had negative implications for workers. In this respect, Role Overload had a positive association with Psychological Strain, Job Burnout, and Musculoskeletal Symptoms. It did not predict the Experience of Workplace Bullying, nor was it related to Job Satisfaction. However, workers with high Role Overload were more likely to be contemplating leaving their organisation.
2. **Role Ambiguity** refers to the lack of clarity or uncertainty with respect to job responsibilities, or	▪ Prevalence rate = 2% of workers reported high levels of Role Ambiguity (mean = 2.1 on a 1-7 scale of never to always). As such, of the 7 Job Demands, Role Ambiguity was the least prevalent.

the perceived lack of important job-related information.	▪ There were no discernible differences in levels of Role Ambiguity according to gender, employment status, and work schedule. Nor did Role Ambiguity vary across jurisdictions (compared to overall balance), sectors, and industries (compared to overall balance). ▪ There were several occupational differences. Carers & Aides (mean = 1.6) and Machinery Operators & Drivers (mean = 1.5) reported lower Role Ambiguity than the rest of the sample (means = 2.1 & 2.1, respectively). ▪ Inter-industry comparisons showed that workers in Arts & Recreation Services (mean = 2.4) had the highest Role Ambiguity and workers in Transport, Postal, & Warehousing (mean = 1.7) had the lowest Role Ambiguity. Inter-occupation comparisons revealed that 6 occupational groupings (i.e., Business; Design; Education; Miscellaneous; Engineering; Electrical), all with a mean of 2.2, had the highest Role Ambiguity and Machinery Operators & Drivers (mean = 1.5) had the lowest Role Ambiguity. ▪ Although very low in prevalence, Role Ambiguity was found to have the strongest positive association with Psychological Strain and the strongest negative association with Job Satisfaction. Thus, Role Ambiguity may not occur often, but when it does, it takes its toll on workers. It also was deleterious for Job Burnout and Turnover Intentions. Role Ambiguity was not a hazard of importance in regards to Musculoskeletal Symptoms and the Experience of Workplace Bullying. ▪ Guidance material on preventing Role Ambiguity is available on the websites of Workplace Health and Safety Queensland (Tip Sheet 8: Role Clarity and Role Ambiguity), WorkSafe Victoria (Chapter 8: Role Clarity and Role Ambiguity), and Comcare (Information Sheet 11: Role Clarity for Good Mental Health).
3. **Role Conflict** reflects the degree to which employees are expected to perform two or more mutually exclusive tasks simultaneously and has been described as incompatible demands and expectations placed on an employee.	▪ Prevalence rate = 17% of workers reported high levels of Role Conflict (mean = 3.2 on a 1-7 scale of never to always). Of the 7 Job Demands, Role Conflict had the 3rd highest-ranking (along with role Overload). ▪ Full-time workers (mean = 3.5) reported higher Role Conflict than those working less than a full-time week (mean = 2.9). ▪ There were no discernible differences in levels of Role Conflict for males and females or those on regular day schedules versus all other types of work schedules. Levels of Role Conflict were found to be the same across jurisdictions (compared to overall balance), sectors, and industries (compared to overall balance). ▪ There was, however, some variation in Role Conflict across the occupations (compared to overall balance). Carers & Aides (mean = 2.9) and Machinery Operators & Drivers (mean = 2.9) reported lower Role Conflict than the rest of the sample (means = 3.4 & 3.4, respectively). Managers (mean = 3.9) experienced more Role Conflict

	than the rest of the sample (mean = 3.3). ▪ Inter-industry comparisons showed that workers in Arts & Recreation Services (mean = 3.8) had the highest Role Conflict and workers in Professional, Scientific, & Technical Services (mean = 3.0) had the lowest Role Conflict. Inter-occupation comparisons showed that Managers (mean = 3.9) had the highest Role Conflict and Carers & Aides (mean = 2.9) and Machinery Operators & Drivers (mean = 2.9) had the lowest Role Conflict. ▪ Role Conflict has negative implications for workers. In this respect, Role Conflict had a positive association with Psychological Strain and Job Burnout. As to be expected, Role Conflict and the Experience of Workplace Bullying went hand in hand. It did not emerge as a job demand associated with Musculoskeletal Symptoms, Job Satisfaction, and Turnover Intentions.
4. **Cognitive Demand** is the degree to which an individual must engage in cognitive monitoring and attentiveness in order to meet the demands of the role.	▪ Prevalence rate = 80% of workers reported high levels of Cognitive Demand (mean = 5.7 on a 1-7 scale of never to always). As such, of the 7 Job Demands, Cognitive Demand was, by far, the most prevalent. ▪ Levels of Cognitive Demand were very consistent for all types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, industry (compared to overall balance), and occupation (compared to overall balance). ▪ Inter-industry comparisons showed that workers in Other Services (mean = 6.1) had the highest Cognitive Demand and workers in Professional, Scientific, & Technical Services (mean = 5.5) and Public Administration & Safety (mean = 5.5) had the lowest Cognitive Demand. Inter-occupation comparisons showed that Managers (mean = 5.9), Education Professionals (mean = 5.9), and Health Professionals (mean = 5.9) all had the highest Cognitive Demand and Carers & Aides (mean = 5.3) had the lowest Cognitive Demand. ▪ Inconsistent with initial expectations, Cognitive Demand was found to have a negative association with Psychological Strain. When probing this finding further, a curvilinear association with Psychological Strain was detected, such that there is a negative effect of Cognitive Demand on Psychological Strain at very low levels and a positive effect of Cognitive Demand on Psychological Strain at high levels. First, these findings suggest that Psychological Strain is at its lowest when Cognitive Demand is kept moderate. Second, these findings suggest that low and high levels of Cognitive Demand are detrimental for Psychological Strain. Such a finding is noteworthy given that 80% of workers reported high levels of this psychosocial hazard. ▪ In addition, Cognitive Demand was found to be a good thing for Job Satisfaction. This is known as the ‘challenge’ stressor effect.

	▪ However, higher levels of Cognitive Demand were associated with higher levels of Musculoskeletal Symptoms. Cognitive Demand was unrelated to the Experience of Workplace Bullying, Job Burnout, and Turnover Intentions.
5. **Emotional Demand** occurs when employees are confronted with emotionally taxing, upsetting, or disturbing situations inherent in the job that impact on them personally.	▪ Prevalence rate = 24% of workers reported high levels of Emotional Demand (mean = 3.7 on a 1-7 scale of never to always). Of the 7 Job Demands, Emotional Demand had the 2nd highest-ranking. ▪ Exposure to Emotional Demand did not vary according to gender, employment status, and work schedule. Nor were there any discernible differences in relation to jurisdiction (compared to overall balance) and sector. ▪ Workers in Education & Training (mean = 4.2) reported higher Emotional Demand than the rest of the sample (mean = 3.7). Following on from this industry-level difference, Education Professionals (mean = 4.6) reported higher Emotional Demand than the other occupations combined (mean = 3.6). ▪ Health Professionals (mean = 4.3) was another occupational group with higher Emotional Demand than the rest of the sample (mean = 3.7). ▪ Machinery Operators & Drivers (mean = 3.0) and Labourers (mean = 3.1) were the least exposed to Emotional Demand compared to the rest of the sample (means = 3.7 & 3.7, respectively). ▪ Inter-industry comparisons showed that workers in Education & Training (mean = 4.2) had the highest Emotional Demand and workers in Transport, Postal, & Warehousing (mean = 3.3) had the lowest Emotional Demand. Inter-occupation comparisons showed that Education Professionals (mean = 4.6) had the highest Cognitive Demand and Machinery Operators & Drivers (mean = 3.0) had the lowest Emotional Demand. ▪ Of the 7 Job Demands, Emotional Demand was the strongest driver of Job Burnout, Musculoskeletal Symptoms, and Turnover Intentions; and it was the second strongest driver of Psychological Strain (after Role Ambiguity). ▪ Workers under Emotional Demand also reported more instances of being Bullied and lower levels of Job Satisfaction. ▪ Guidance material on preventing Emotional Demand is available on the websites of Workplace Health and Safety Queensland (Tip Sheet 5: Work Demands), WorkSafe Victoria (Chapter 5: Work Demands), and Comcare (Information Sheet 15: Building Resilience).
6. **Group Task Conflict** refers to disagreements	▪ Prevalence rate = 5% of workers reported high levels of Group Task Conflict (mean = 2.8 on a 1-7 scale of never to always). Of the Job

with one's colleagues regarding the work to be undertaken.	Demands, Group Task Conflict had the 5th highest-ranking. ▪ Levels of Group Task Conflict were very consistent across different types of workers, with no discernible differences due to gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, industry (compared to overall balance), and occupation (compared to overall balance). ▪ Inter-industry comparisons showed that workers in Arts & Recreation Services (mean = 3.0) had the highest Group Task Conflict, whereas workers in Transport, Postal, & Warehousing (mean = 3.3) and Professional, Scientific, & Technical Services (mean = 3.3) had the lowest Group Task Conflict. Inter-occupation comparisons showed that Health & Welfare Support Workers (mean = 3.0) had the highest Group Task Conflict and Carers & Aides (mean = 2.5) had the lowest Group Task Conflict. ▪ Group Task Conflict was found to be detrimental to Psychological Strain and Job Burnout, as well as Job Satisfaction; but of no consequence to the development of Musculoskeletal Symptoms and Turnover Intentions. ▪ Group Task Conflict also had a positive association with the Experience of Workplace Bullying.
7. **Group Relationship Conflict** refers to interpersonal disagreements and frictions with one's colleagues arising from differences in personal style, values, and norms.	▪ Prevalence rate = 13% of workers reported high levels of Group Relationship Conflict (mean = 2.9 on a 1-7 scale of never to always). Of the 7 Job Demands, Group Relationship Conflict had the 4th highest-ranking. ▪ Levels of Group Relationship Conflict were very consistent across different types of workers, with no appreciable differences detected as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, industry (compared to overall balance), and occupation (compared to overall balance). ▪ Inter-industry comparisons showed that workers in Arts & Recreation Services (mean = 3.3) had the highest Group Relationship Conflict and workers in the industry of Manufacturing (mean = 2.6) had the lowest Group Relationship Conflict. Inter-occupation comparisons showed that Health & Welfare Support Workers (mean = 3.4) experienced the highest Group Relationship Conflict and, together, Business Professionals (mean 2.7), Design Engineering Science Transport Professionals (mean = 2.7), and Machinery Operators & Drivers (mean = 2.7) all had the least exposure to Group Relationship Conflict. ▪ Group Relationship Conflict was found to be detrimental to Psychological Strain and Job Burnout, as well as Musculoskeletal Symptoms. Further, this form of conflict was detrimental to workers' Job Satisfaction and Turnover Intentions. ▪ As to be expected, Group Relationship Conflict and the Experience of

	Workplace Bullying went hand in hand. Indeed, of all 13 Psychosocial Hazards, Group Relationship Conflict had the strongest association. This finding suggests that general conflict among colleagues can escalate to feeling bullied.

13.2 Summary of Findings for Job Resources

Job Resources	Take-Away Messages
1. **Job Control** is the degree to which an employee has the discretion to approach their work in a manner of their choosing.	▪ Prevalence rate = 11% of workers reported low levels of Job Control (mean = 4.7 on a 1-7 scale of never to always). Of the 6 Job Resources, Job Control had the 2nd lowest-ranking (along with Procedural Justice). ▪ Levels of Job Control were very consistent across different types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), and sector. ▪ Workers in Professional, Scientific, & Technical Services (mean = 5.3) reported higher levels of Job Control compared to the rest of the sample (mean = 4.6). Managers (5.2) also have higher levels of Job Control than the rest of the sample (mean = 4.6). ▪ Inter-industry comparisons showed that workers in Professional, Scientific, & Technical Services (mean = 5.3) had the highest Job Control and workers in Other Services (mean = 4.2) had the lowest Job Control. Inter-occupation comparisons showed that Managers (mean = 5.2) had the highest Job Control and Machinery Operators & Drivers (mean = 4.3) had the lowest Job Control. ▪ Of the 6 Job Resources, having high Job Control was the strongest protective factor against Psychological Strain and Turnover Intentions. Control at work also was shown to be important for protecting against Job Burnout, Musculoskeletal Symptoms, and the Experience of Workplace Bullying, and a promoter of Job Satisfaction.
2. **Supervisor Support** refers to offering practical help to solve problems and emotional support, caring, and listening sympathetically.	▪ Prevalence rate = 10% of workers reported low levels of Supervisor Support (mean = 5.2 on a 1-7 scale of never to always). Of the 6 Job Resources, Supervisor Support had the 2nd highest-ranking (along with Praise and Recognition). ▪ Levels of Supervisor Support were very consistent across different types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, industry (compared to overall balance), and occupation (compared to overall balance).

	▪ Inter-industry comparisons showed that those workers in Professional, Scientific, & Technical Services (mean = 5.4) and Education & Training (mean = 5.4) received the most Supervisor Support and workers in Other Services (mean = 5.0) received the least Supervisor Support. Inter-occupation comparisons showed that Business Professionals (mean = 5.4), Health Professionals (mean = 5.4), Clerical & Administrative Workers (mean = 5.4), and Machinery Operators & Drivers (mean = 5.4) all received the most Supervisor Support and Electrical & Telecommunications Workers (mean = 4.9) received the least Supervisor Support, perhaps due to the field-based nature of their work. ▪ Supervisor Support did not have significant associations with the 3 Worker Outcomes (nor the Experience of Workplace Bullying or Job Satisfaction), suggesting that, when considered in combination with all other job demands and job resources, other factors mattered more to the well-being of workers. Nevertheless, Supervisor Support was important for keeping workers' Turnover Intentions low.
3. **Co-Worker Support** refers to offering practical help to solve problems and emotional support, caring, and listening sympathetically.	▪ Prevalence rate = 5% of workers reported low levels of Co-Worker Support (mean = 5.5 on a 1-7 scale of never to always). Of the 6 Job Resources, Co-Worker Support had the highest rate of prevalence. ▪ Levels of Co-Worker Support were very consistent across different types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, industry (compared to overall balance), and occupation (compared to overall balance). ▪ Inter-industry comparisons showed that workers in Education & Training (mean = 5.7) received the most Co-Worker Support, whereas workers in Transport, Postal, & Warehousing (mean = 5.3) and Arts & Recreation Services (mean = 5.3) received the least Co-Worker Support. Inter-occupation comparisons showed that Education Professionals (mean = 5.7), Health Professionals (mean = 5.7), and Engineering ICT Science Technicians (mean = 5.7) all received the most Co-Worker Support, whereas Health & Welfare Support Workers (mean = 5.3), Carers & Aides (mean = 5.3), and Machinery Operators & Drivers (mean = 5.3) all received the least Co-Worker Support. ▪ Having the practical and emotional support of co-workers was shown to be important for protecting against Psychological Strain. It was not related to Job Burnout and Musculoskeletal Symptoms. Thus, although Co-Worker Support was very high in prevalence, when it comes to these two indicators of employee strain, other job demands and job resources mattered more. ▪ Co-Worker Support had a negative association with the Experience of Workplace Bullying and Turnover Intentions; and a positive association with Job Satisfaction.

4. **Praise and Recognition** from supervisors can be in the form of encouragement, compliments, and other gestures of appreciation.	▪ Prevalence rate = 11% of workers reported low levels of Praise and Recognition (mean = 5.2 on a 1-7 scale of never to always). Of the 6 Job Resources, Praise and Recognition had the 2nd highest-ranking (along with Supervisor Support). ▪ Levels of Praise and Recognition were very consistent across different types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, and industry (compared to overall balance). ▪ Electrical & Telecommunications Workers (4.6) received lower levels of Praise and Recognition from supervisors than the rest of the sample (mean = 5.2), perhaps due to the field-based nature of their work. ▪ Inter-industry comparisons showed that workers in Professional, Scientific, & Technical Services (mean = 5.5) received the most Praise and Recognition and workers in Arts & Recreation Services (mean = 5.0) received the least Praise and Recognition. Inter-occupation comparisons showed that Health Professionals (mean = 5.5) received the most Praise and Recognition and Electrical & Telecommunications Workers (mean = 4.6) received the least Praise and Recognition from supervisors, perhaps due to the field-based nature of their work. ▪ Having high Praise and Recognition was shown to be important for protecting against Psychological Strain, Job Burnout, and Turnover Intentions (but unrelated to Musculoskeletal Symptoms). ▪ It is of interest to note that, of the 6 Job Resources, Praise and Recognition had the strongest protective effect against feelings of being bullied. This finding suggests that a lack of praise and recognition from one's supervisor may feel like the experience of being bullied. ▪ Of the 6 Job Resources, Praise and Recognition had the strongest association with Job Satisfaction.
5. **Procedural Justice** relates to employees' perceptions of the fairness of the formal policies, procedures, and processes used to arrive at decisions and achieve end-goals and other outcomes.	▪ Prevalence rate = 11% of workers reported low levels of Procedural Justice (mean = 4.7 on a 1-7 scale of never to always). Of the 6 Job Resources, Procedural Justice was the 2nd lowest-ranking (along with Job Control). ▪ Levels of Procedural Justice were very consistent across different types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, industry (compared to overall balance), and occupation (compared to overall balance). ▪ Inter-industry comparisons showed that those workers in

	Professional, Scientific, & Technical Services (mean = 4.9) and Public Administration & Safety (mean = 4.9) perceived the highest Procedural Justice and workers in Arts & Recreation Services (mean = 4.3) perceived the lowest Procedural Justice. Inter-occupation comparisons showed that Health Professionals (mean = 5.0) perceived the highest Procedural Justice and Education Professionals (mean = 4.4) perceived the lowest Procedural Justice. ▪ Procedural Justice did not have significant associations with the 3 Worker Outcomes (nor Turnover Intentions), suggesting that, when considered in combination with all other job demands and job resources, other factors mattered more to the well-being of workers. Nevertheless, Procedural Justice was important for workers' Job Satisfaction. ▪ Procedural Justice had a negative association with the Experience of Workplace Bullying.
6. **Change Consultation** refers to being provided with information about organisational changes and provided the opportunity to participate in decisions that may affect one's work.	▪ Prevalence rate = 24% of workers reported low levels of Change Consultation (mean = 4.1 on a 1-7 scale of never to always). Of the 6 Job Resources, Change Consultation was the lowest in prevalence. ▪ Levels of Change Consultation were very consistent across different types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, and occupation (compared to overall balance). ▪ Workers in Arts & Recreation Services (mean = 3.5) reported lower levels of Change Consultation than the rest of the sample (mean = 4.1). ▪ Inter-industry comparisons showed that those workers in Health Care & Social Assistance (mean = 4.4) had the highest Change Consultation and workers in Arts & Recreation Services (mean = 3.5) had the lowest Change Consultation. Inter-occupation comparisons showed that Carers & Aides (mean = 4.5) had the highest Change Consultation and Engineering ICT Science Technicians (mean = 3.6) had the lowest Change Consultation. ▪ Being consulted about change was important for protecting against Psychological Strain. Of the 6 Job Resources, having high Change Consultation was the strongest protective factor against Job Burnout and Musculoskeletal Symptoms. It also was important for keeping Job Satisfaction high and Turnover Intentions low. Given its low prevalence and high impact, Change Consultation should be targeted as an area for improvement in Australian organisations when designing psychosocial hazard interventions. ▪ Change Consultation was unrelated to the Experience of Workplace Bullying.

13.3 Summary of Findings for Worker Outcomes

Worker Outcomes	Take-Away Messages
1. **Psychological Strain**	▪ Prevalence rate = the majority of workers (57%) reported low levels of Psychological Strain and just 4% of workers were classified as having high levels of Psychological Strain (mean = 2.9 on a 1-7 scale of never to always). Psychological Strain was the lowest-ranking indicator of employee strain. ▪ Levels of Psychological Strain were very consistent for all types of workers, with no discernible differences as a function of gender, employment status, work schedule, jurisdiction (compared to overall balance), sector, industry (compared to overall balance), and occupation (compared to overall balance). ▪ Inter-industry comparisons showed that workers in Arts & Recreation Services (mean = 3.2) had the highest Psychological Strain and 4 groups of workers in Transport, Postal, & Warehousing (mean = 2.7), Professional, Scientific, & Technical Services (mean = 2.7), Health Care & Social Assistance (mean = 2.7), and Other Services (mean = 2.7) all had the lowest Psychological Strain. Inter-occupation comparisons showed that Education Professionals (mean = 3.2) had the highest Psychological Strain and Machinery Operators & Drivers (mean = 2.6) had the lowest Psychological Strain. ▪ With the exception of Cognitive Demand (which had a U-shape relationship), all remaining Job Demands were associated with higher levels of Psychological Strain (Role Ambiguity being the strongest) and 4 of the 6 Job Resources (Job Control; Co-Worker Support; Praise and Recognition; Change Consultation) were associated with lower levels of Psychological Strain. ▪ Supervisor Support and Procedural Justice did not have significant associations with Psychological Strain when all 13 Psychosocial Hazards were considered in a simultaneous analysis, suggesting that the other psychosocial hazards mattered more. ▪ The more the subjective feeling of being bullied at work, the more the likelihood of reported Psychological Strain.
2. **Job Burnout**	▪ Prevalence rate = 40% of workers reported low levels of Job Burnout and 17% of workers reported high levels of Job Burnout (mean = 3.4 on a 1-7 scale of never to always). Job Burnout was the highest-ranking indicator of employee strain. ▪ There were no discernible differences in levels of Job Burnout for males versus females, full-time workers versus others, and workers

	on regular day schedules versus all other types of work schedules. Comparison of workers across jurisdictions (compared to overall balance), sectors, and industries (compared to overall balance) did not reveal any group differences in Job Burnout. ▪ Machinery Operators & Drivers (mean = 2.8) reported lower Job Burnout than the rest of the sample (mean 3.4). Education Professionals (mean = 4.0) reported higher Job Burnout than the rest of the sample (mean = 3.4). ▪ Inter-industry comparisons showed that workers in Arts & Recreation Services (mean = 3.7) had the highest Job Burnout and workers in Transport, Postal, & Warehousing (mean = 3.0) had the lowest Job Burnout. Inter-occupation comparisons showed that Education Professionals (mean = 4.0) had the highest Job Burnout and Machinery Operators & Drivers (mean = 2.8) had the lowest Job Burnout. ▪ With the exception of Cognitive Demand (which was unrelated), all other Job Demands were associated with higher levels of Job Burnout (with Emotional Demand being the strongest) and 3 of the 6 Job Resources (Job Control; Praise and Recognition; Change Consultation) were associated with lower levels of Job Burnout. ▪ Supervisor Support, Co-Worker Support, and Procedural Justice did not have significant associations with Job Burnout when all 13 Psychosocial Hazards were considered in a simultaneous analysis, suggesting that the other psychosocial hazards mattered more. ▪ The more the subjective feeling of being bullied at work, the more the likelihood of reported Job Burnout.
3. **Musculoskeletal Symptoms**	▪ Prevalence rate = the majority of workers (46%) reported low levels of Musculoskeletal Symptoms and 16% of workers reported high levels of Musculoskeletal Symptoms (mean = 3.2 on a 1-7 scale of never to always). ▪ The Neck (33%) and Shoulders (33%) were the most problematic body locations and least frequent was Wrist/Hands, with 17% of workers reporting pain in this body location. ▪ Males (mean = 3.0) reported lower Musculoskeletal Symptoms than females (mean = 3.5). ▪ There were no other discernible differences in levels of Musculoskeletal Symptoms for full-time workers versus others or workers on regular day schedules versus all other types of work schedules. Comparison of workers across jurisdictions (compared to balance of overall sample), sectors, industries (compared to balance of overall sample), and occupations (compared to balance of overall sample) did not reveal any group differences in Musculoskeletal Symptoms.

	▪ Inter-industry comparisons showed that workers in Arts & Recreation Services (mean = 3.6) had the highest Musculoskeletal Symptoms and workers in Transport, Postal, & Warehousing (mean = 2.9) had the lowest Musculoskeletal Symptoms. Inter-occupation comparisons showed that Education Professionals (mean = 3.5) had the highest Musculoskeletal Symptoms and Machinery Operators & Drivers (mean = 2.9) had the lowest Musculoskeletal Symptoms. ▪ Of the7 Job Demands, Musculoskeletal Symptoms was best-predicted by Emotional Demand and, of the 6 Job Resources, Musculoskeletal Symptoms was best-predicted by Change Consultation. ▪ The more the subjective feeling of being bullied at work, the more the likelihood of reported Musculoskeletal Symptoms.

13.4 Summary of Findings for Workplace Bullying

Workplace Bullying	Take-Away Messages
1. **Experiencing and Witnessing Workplace Bullying**	▪ 61% of workers reported never experiencing bullying in their workplace. This leaves 32% being exposed to some occasional workplace bullying and 7% being exposed to frequent workplace bullying. Prevalence was the lowest in Manufacturing (86% report never) and the highest in Arts & Recreation Services (34% report rarely to almost daily). Occupations with the lowest exposure were Design Engineering Science Transport Professionals (83% report never) and Machinery Operators & Drivers (83% report never). The occupation with the highest exposure was Health & Welfare Support Workers (34% report rarely to almost daily). ▪ 49% of workers reported never witnessing bullying in their workplace. This leaves 43% being a witness to some occasional workplace bullying and 8% being a witness to frequent workplace bullying. Prevalence was the lowest in Manufacturing (81% report never) and Professional, Scientific, & Technical Services (81% report never) and highest in Arts & Recreation Services (41% report rarely to almost daily). The occupation with the lowest exposure was Design Engineering Science Transport Professionals (79% report never). The occupation with the highest exposure was Health & Welfare Support Workers (45% report rarely to almost daily). ▪ More respondents stated that they had witnessed bullying (51%) than experiencing it themselves (39%), perhaps as a function of workplace bullying occurring in public with multiple witnesses to such events. ▪ Of the 9 Bullying Behaviours, 6 were equal in prevalence (criticism,

ridicule, verbal abuse, gossip/rumours, humiliation, and exclusion/isolation). Thus, when designing interventions, it is important to educate workers about the full range of bullying behaviours.

- Co-Workers (35.1%) were found to be the main perpetrator of workplace bullying, followed by Supervisors (24.5%).

- Given that high Group Relationship Conflict and low Co-Worker Support were shown to have associations with the subjective feeling of being bullied, approaches to addresing co-worker-driven bullying should focus on conflict management skill development and building up positive and supportive relationships among co-workers.

- Given that high Praise and Recognition (from supervisors) and high Procedural Justice were related to lower levels of being bullied, approaches to addressing supervisor-driven bullying should focus on educating supervisors about the importance of giving praise and recognition to employees about their performance and ensuring fair and just procedures are followed and making this procedural justice visible to employees.

- The more bullying experienced at work, the more the likelihood of Psychological Strain, Job Burnout, and Musculoskeletal Symptoms. Importantly, the impact of bullying on employee strain plateaus the more frequent it becomes. In other words, the sharpest increase in the 3 Worker Outcomes was observed for those workers who report rare incidents of bullying compared to those who report never. Overall, these findings have important practical implications, as all levels of exposure to bullying are harmful to employees, including for those employees for whom bullying does not occur often.

- Guidance material on preventing workplace bullying is available on the websites of Workplace Health and Safety Queensland (Tip Sheet 9: Managing Relationships), WorkSafe Victoria (Chapter 9: Managing Relationships; Chapter 11: Civility in the Workplace), and Comcare (Information Sheet 4: Creating a Respectful Workplace; Information Sheet 5: Preventing Bullying at Work).

13.5 Overall Take-Away Messages

1. Generally, there were few substantial differences in prevalence across the jurisdictions, sectors, industries, and occupations in terms of the 13 Psychosocial Hazards and 3 Worker Outcomes.
2. There were several specific differences in prevalence for some industries and occupations that can inform practice.
3. Gender, employment status, and work schedule did not determine exposure levels.
4. 7% of the sample had experienced workplace bullying monthly, weekly, or almost daily and co-worker was the most common perpetrator.
5. No particular bullying behaviour was more prevalent than others, so it is best to target all of them in educational campaigns.
6. The impact of workplace bullying on employee strain plateaus the more frequent it becomes, suggesting that even infrequent incidents are harmful to employees.
7. Overall, there needs to be a balanced consideration of both prevalence and impact of psychosocial hazards when deciding which risks to target for interventions because high prevalence and impact on employee strain do not always go hand-in-hand.
8. In the case of cognitive demand, there was evidence to suggest a moderate 'dose' is beneficial for the psychological well-being of employees.

13.6 Project Achievements

The People at Work Project had an ambitious agenda. It brought together three large state jurisdictions (Queensland, New South Wales, & Victoria), Commonwealth agencies (Comcare & Safe Work Australia), *beyondblue*, and university researchers from QUT and ANU, with the important aim of building and strengthening enterprise-level capabilities of Australian organisations in the ongoing monitoring and management of psychosocial hazards in the workplace.

13.6.1 Other Deliverables

1. Development and validation of a survey tool for assessing psychosocial hazards.
2. Creation of an automated report generation system, facilitating timely and responsive turn-around of reports to participating organisations, usually within a week.
3. Creation of a set of Australian benchmarks documenting the prevalence of psychosocial hazards across jurisdictions, sectors, industries, and occupations.
4. Design and launch of a project website (58,535 total visits and 53,146 unique visits to the site since it launched in March, 2013, up until December, 2015) and associated branding.
5. Freely available guidance materials to support organisations through the psychosocial risk management process (e.g., project management plan, pre- and post-survey communication plans, tip sheets for conducting focus groups and writing action plans).
6. Written and video case studies, one each for the public and private sector.

13.6.2 Achievements in Psychosocial Education

Educating Australian organisations about psychosocial hazards and their management was a critical aim of the People at Work Project. In this respect, we prepared and delivered 85 overall reports and 197 workgroup reports to participating organisations. Members of the People at Work Project team were on hand to discuss and help managers to interpret the results of their reports in one-one-one telephone debriefings, and discuss options for future remedial actions.

In our experience, most organisations did not have the in-house expertise or resources to undertake a psychosocial risk assessment process and required a lot of support and assistance about how to manage the general survey process, and when and how to use the guidance materials.

13.6.3 Feedback from Participating Managers

A sample of 11 managers who participated in the People at Work Project was asked 3 questions regarding their organisation's involvement. The purpose of these questions was to conduct a qualitative evaluation of the People at Work Project. The questions asked for an overall evaluation of the experience, what was useful/not useful, and the usability of the reports and how the results were used in their organisation. A research assistant employed by the Universities conducted all interviews one-on-one, either face-to-face or via telephone. Approval to conduct the interviews was obtained by the Human Research Ethics Committees of QUT and ANU. Comments are presented in Appendix 7.

In conclusion, the People at Work Project has provided an assessment of psychosocial hazard prevalence in the Australian workforce for 2013-2015. Using empirical evidence for both (1) prevalence and (2) impact provides direction as to the specific psychosocial hazards to target and which worker groups to direct resources towards when devising psychological health strategies that meet the needs of the Australian workforce.

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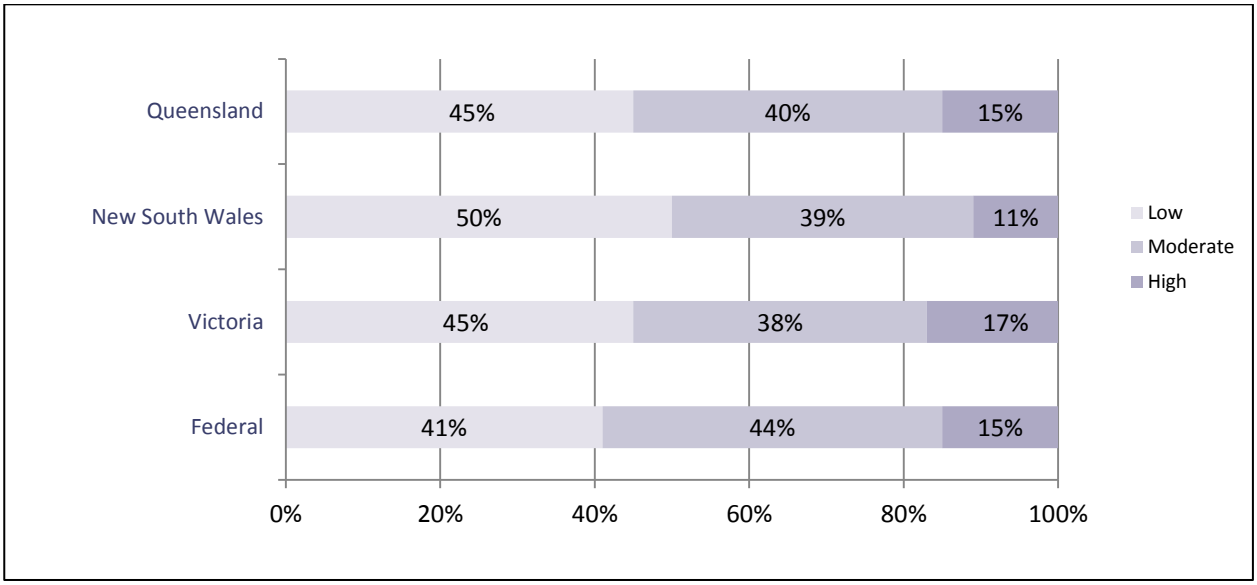
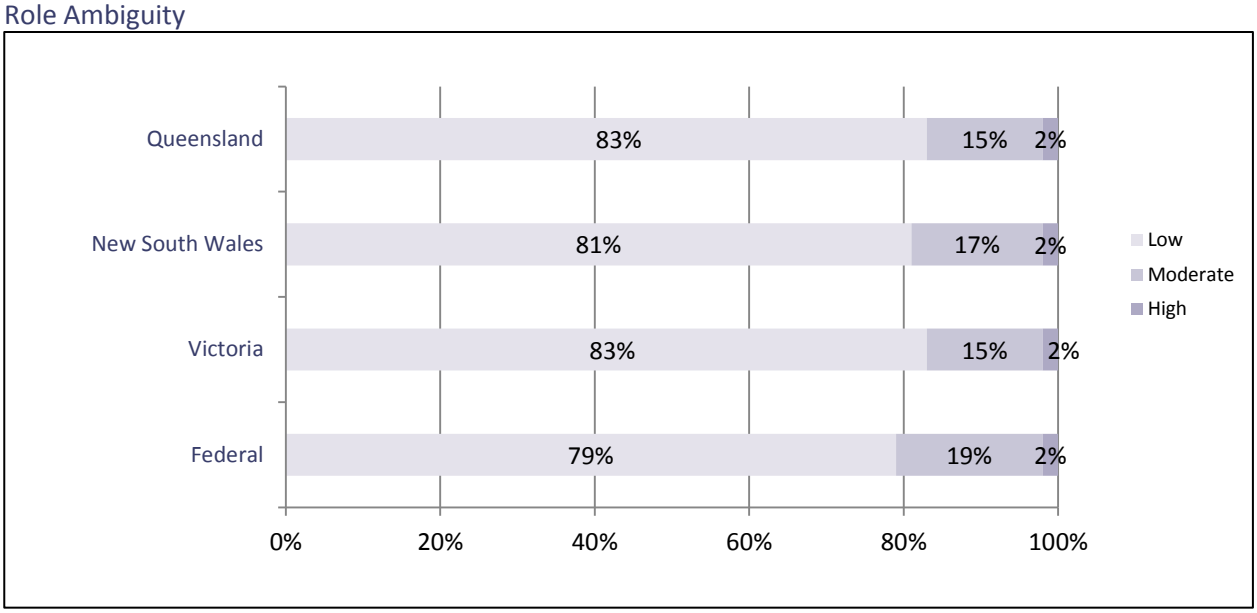
Appendix 1

Percentage of Workers Experiencing Low, Moderate, and High Psychosocial Hazards and Worker Outcomes across 4 Jurisdictions

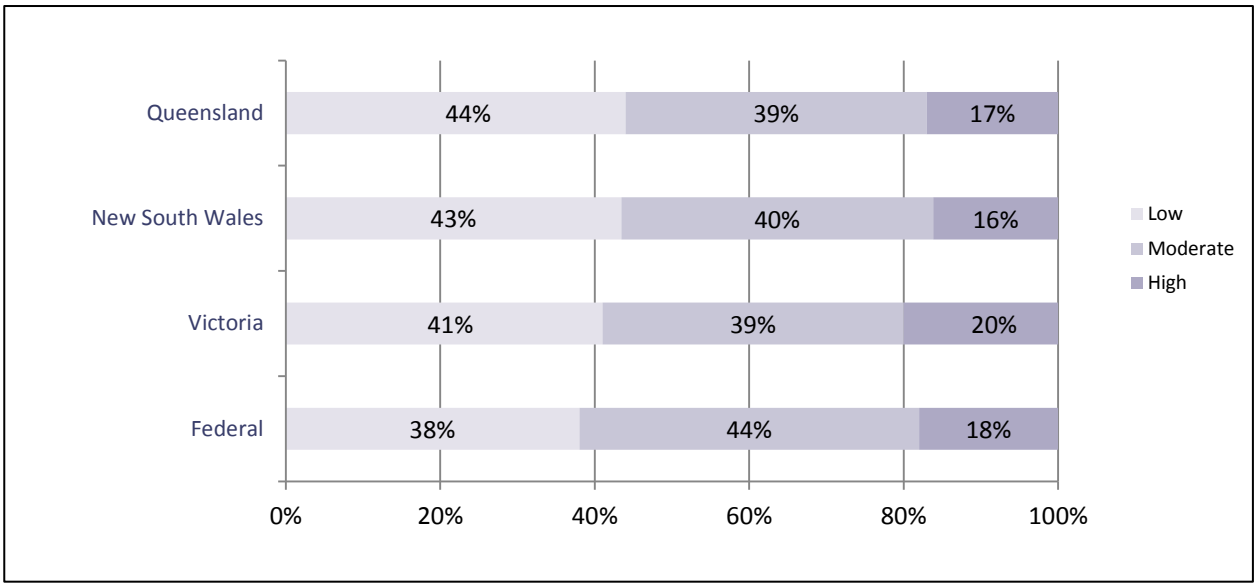
Role Overload



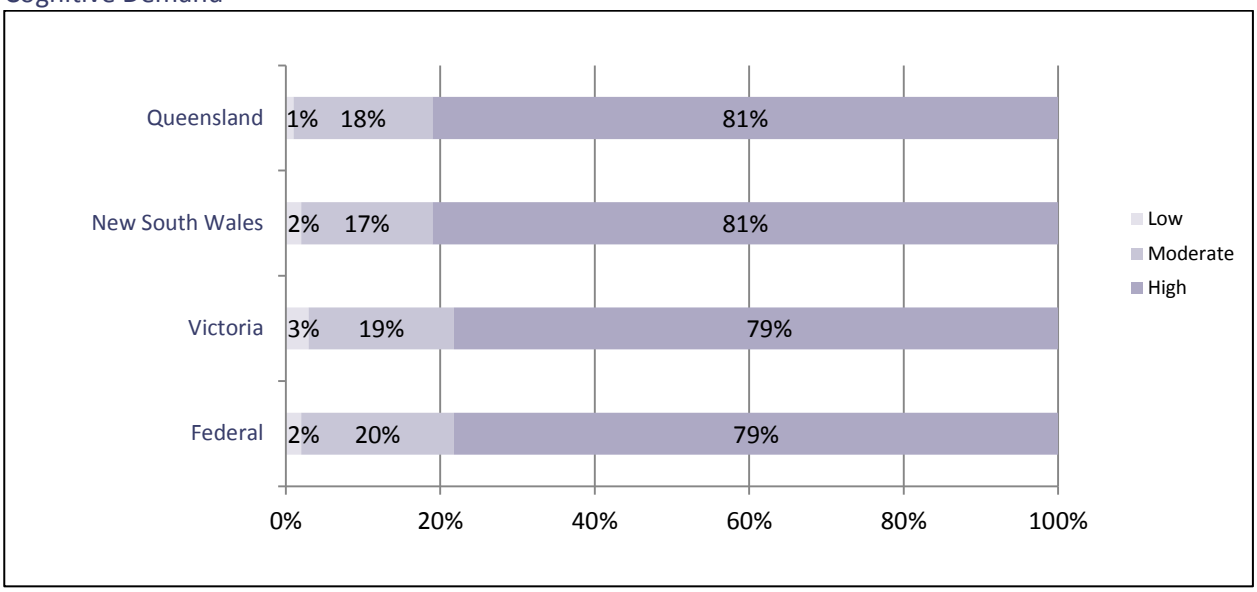
Role Ambiguity



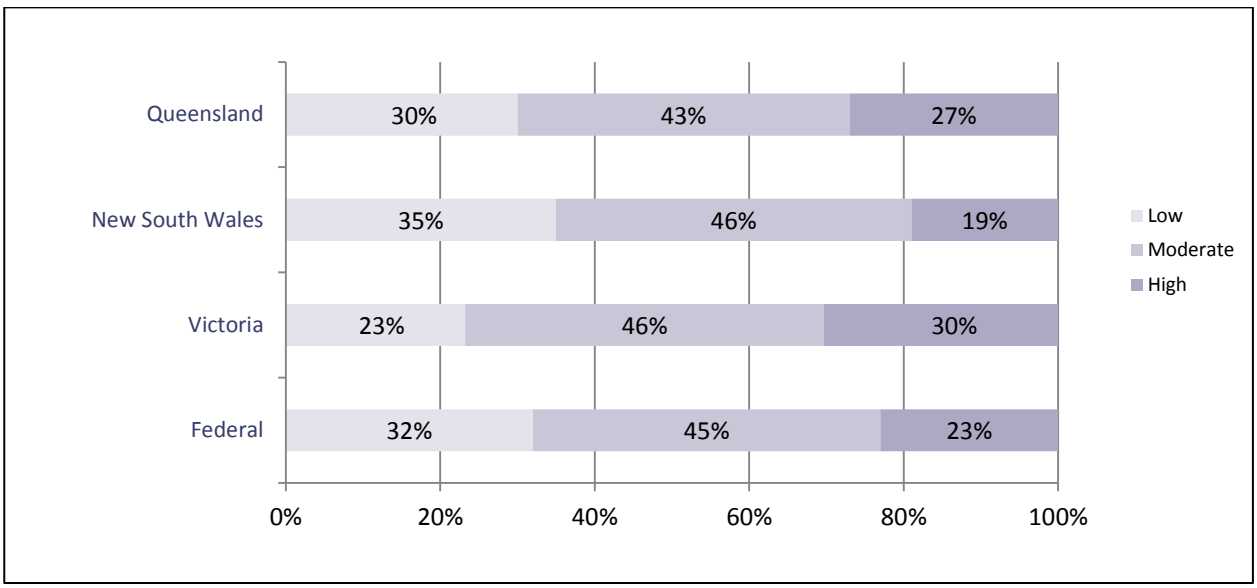
Role Conflict



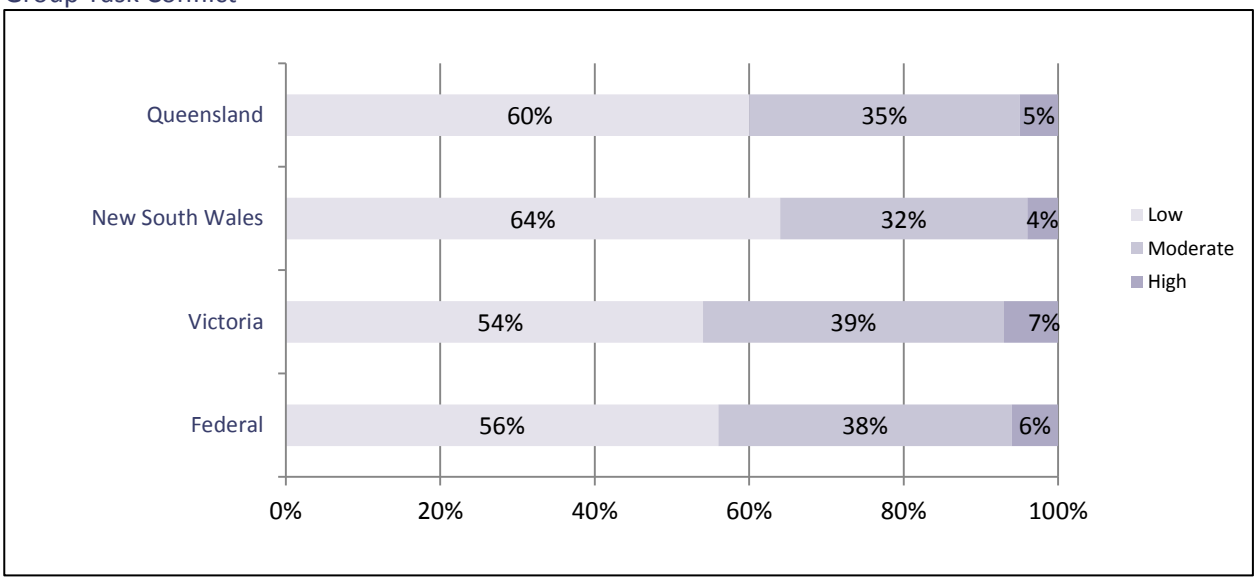
Cognitive Demand



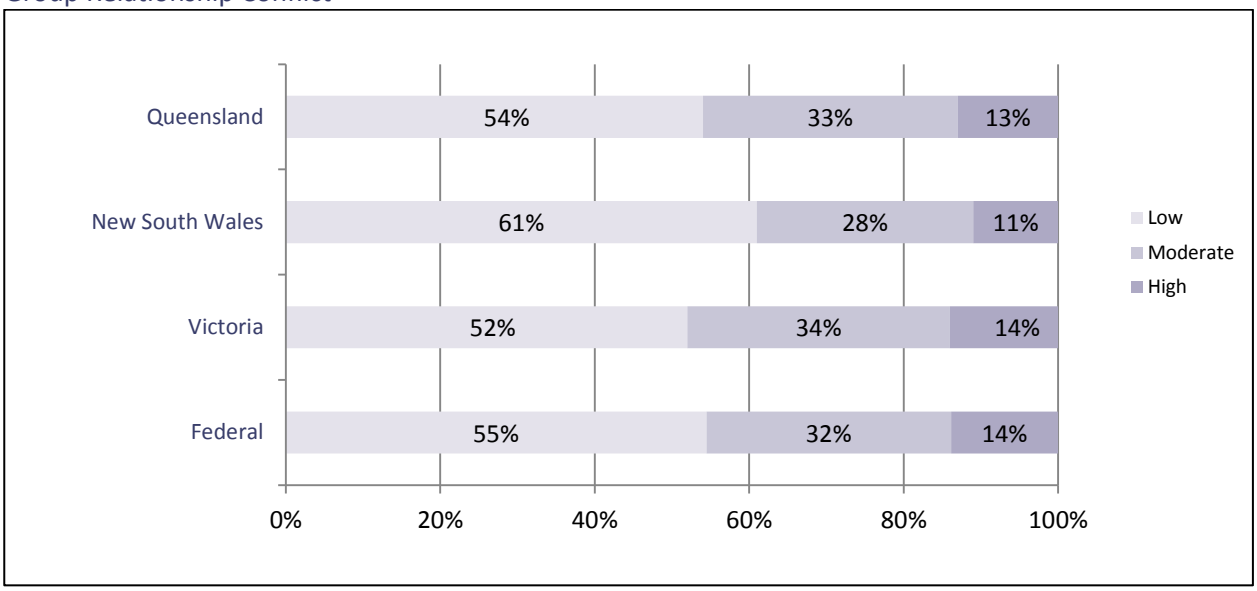
Emotional Demand



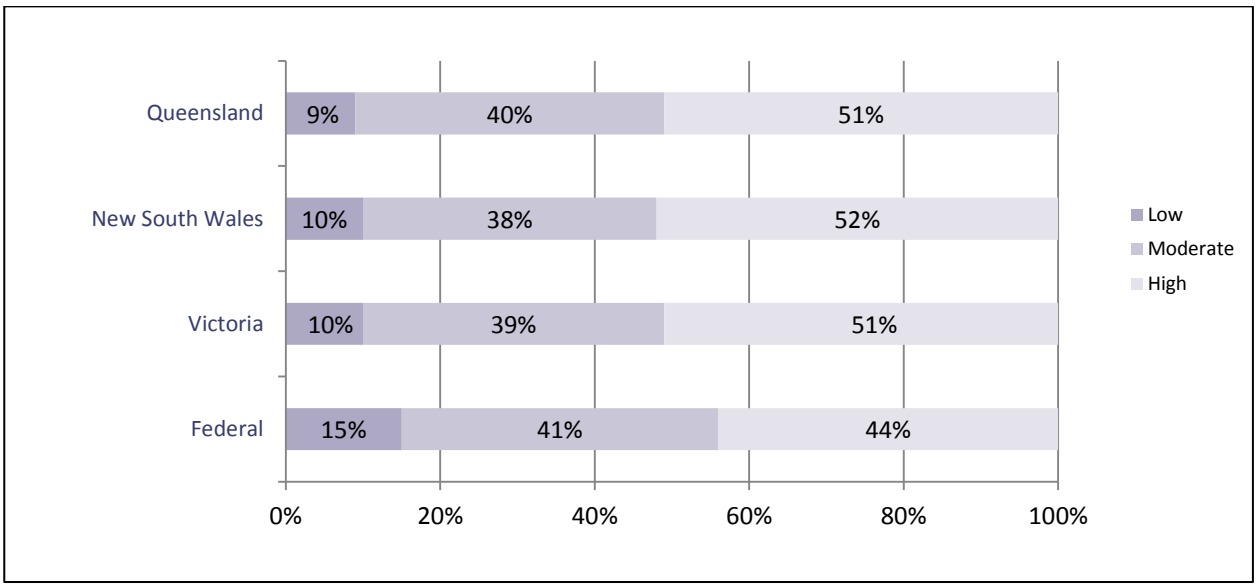
Group Task Conflict



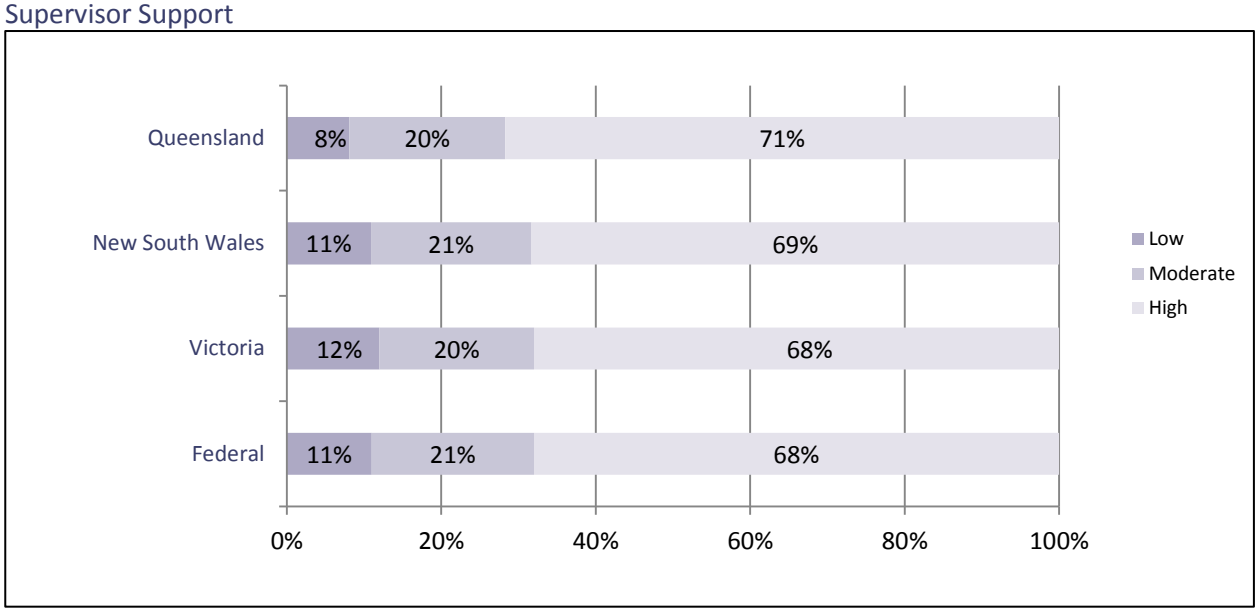
Group Relationship Conflict



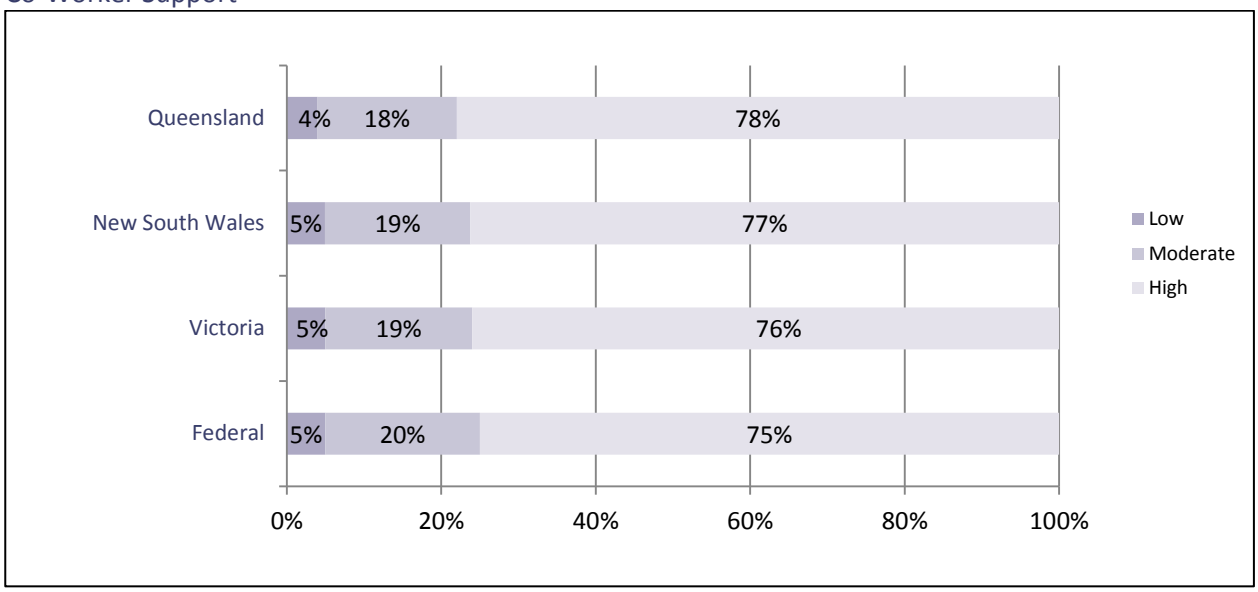
Job Control



Supervisor Support

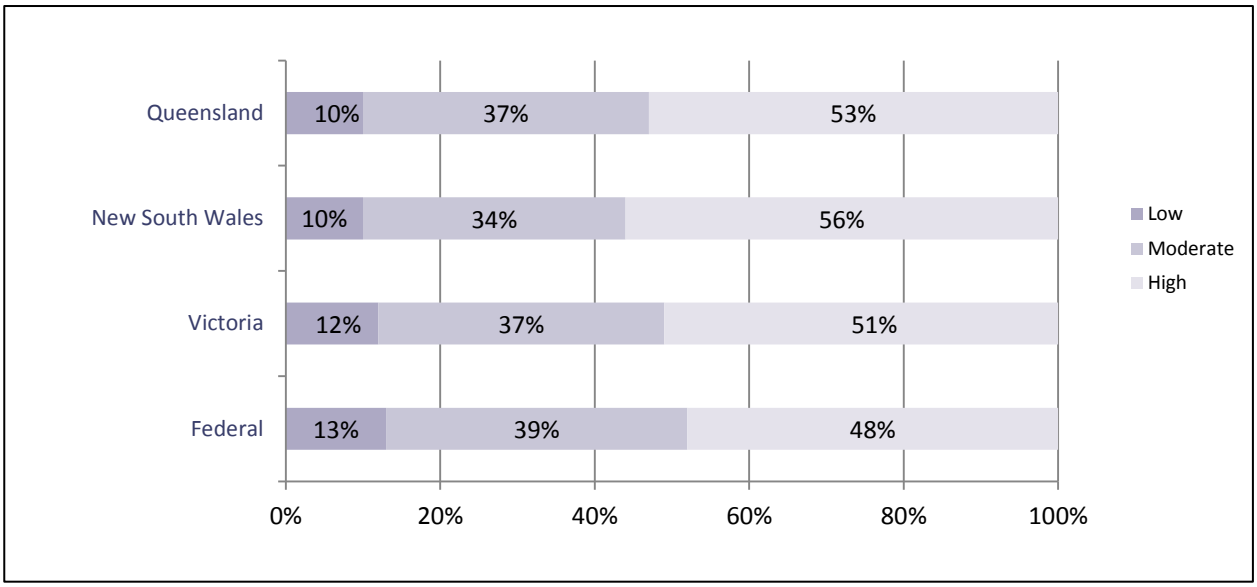


Co-Worker Support

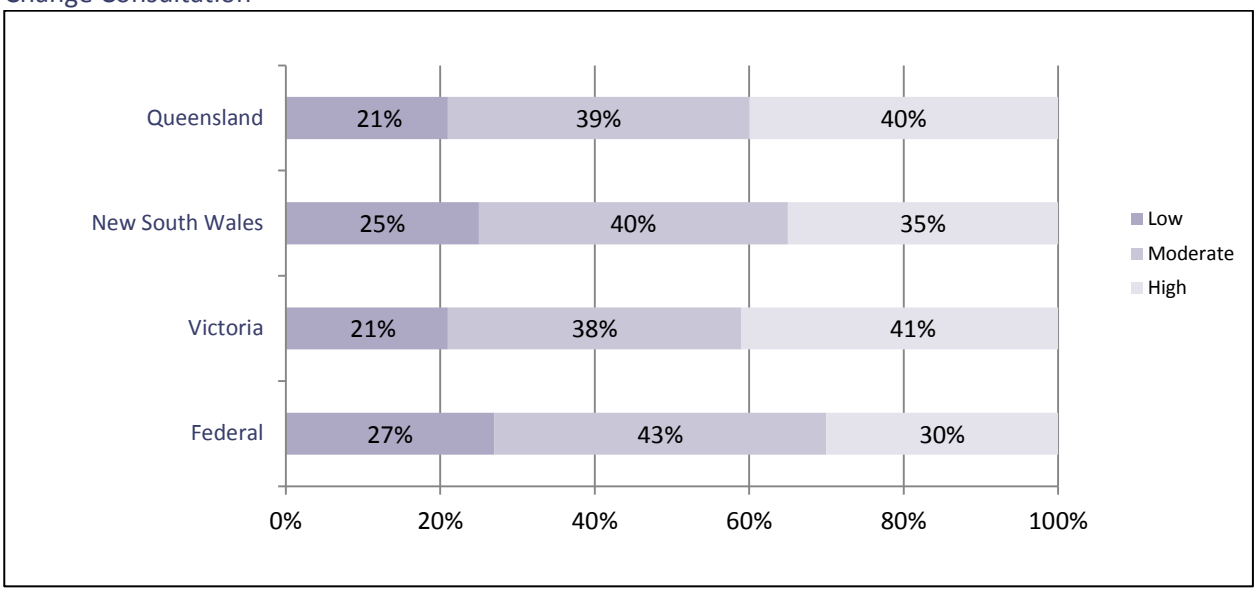


Praise and Recognition

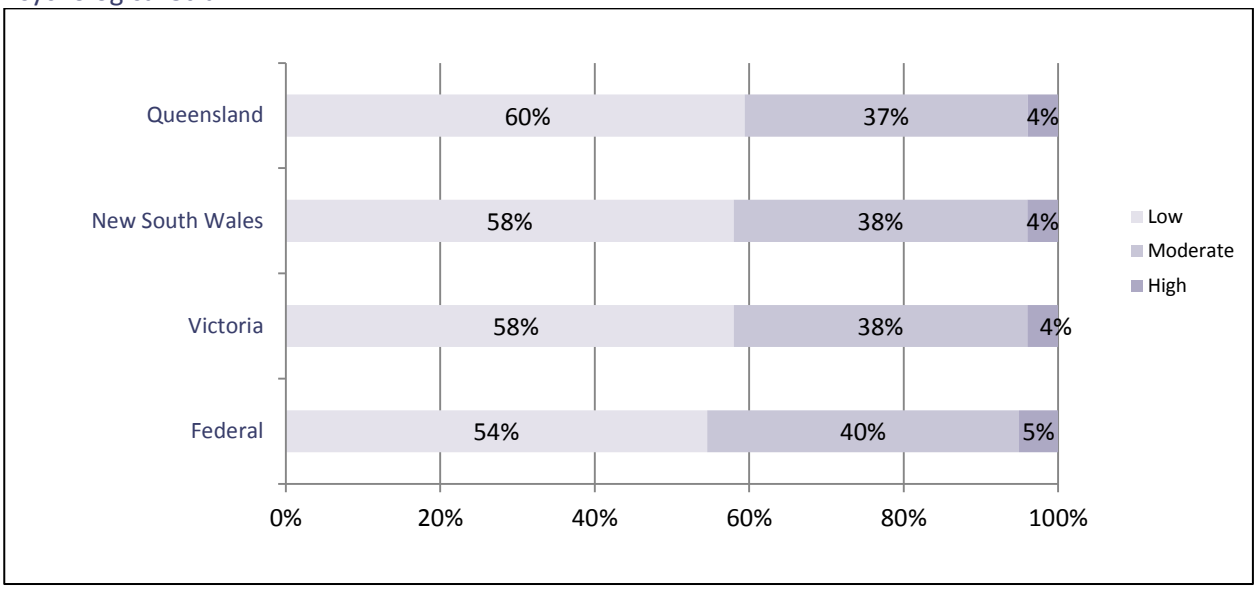
Procedural Justice



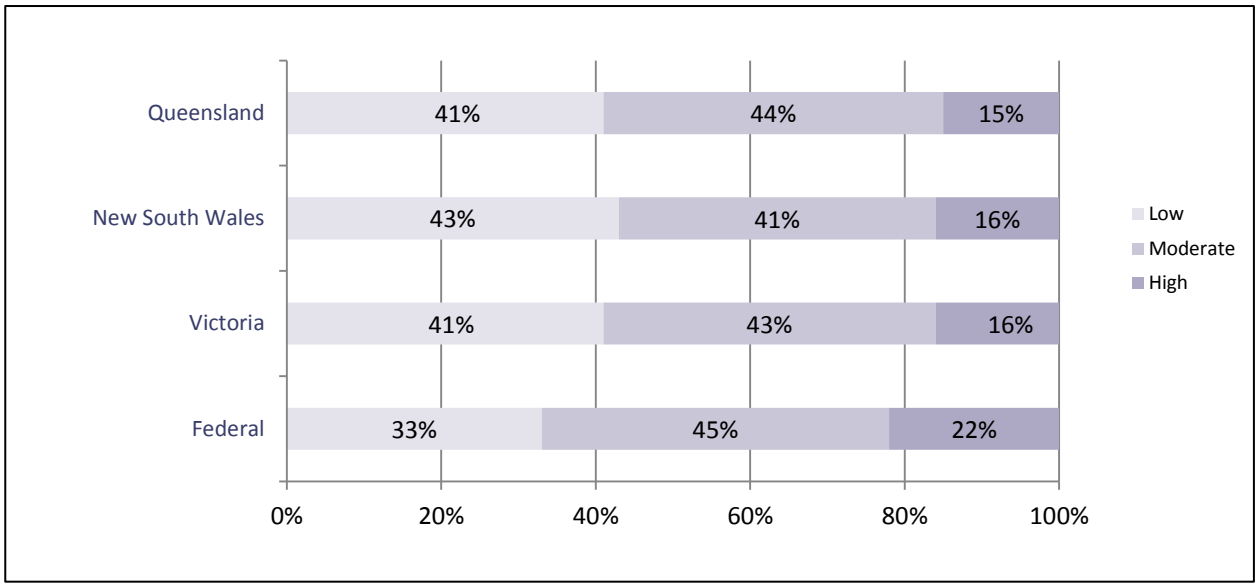
Change Consultation



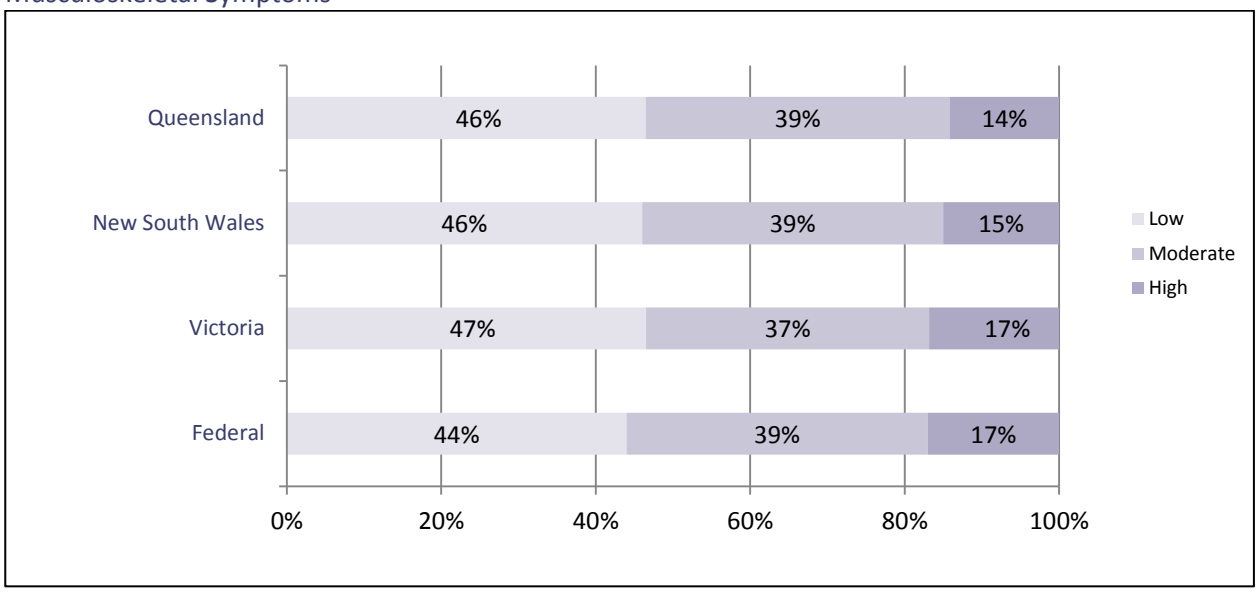
Psychological Strain



Job Burnout



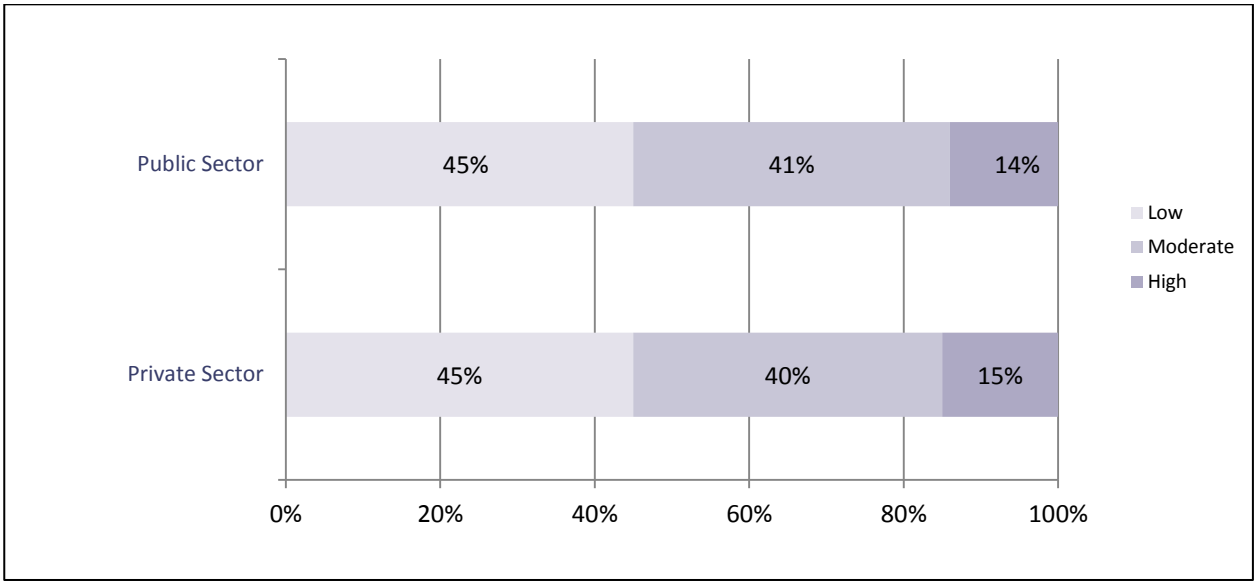
Musculoskeletal Symptoms



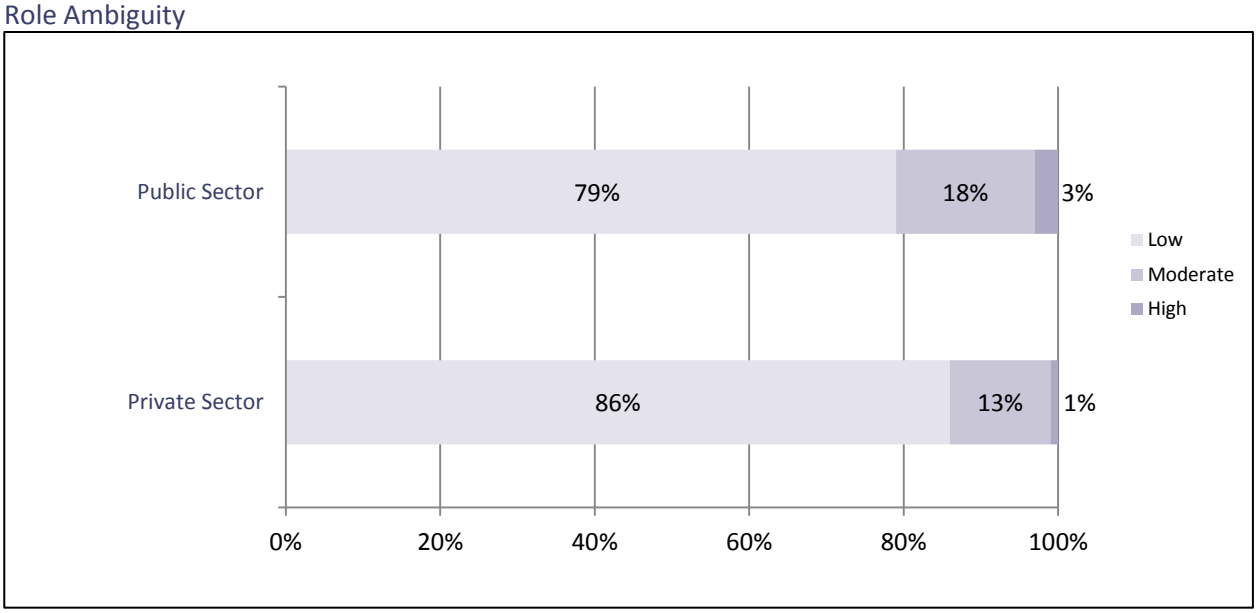
Appendix 2

Percentage of Workers Experiencing Low, Moderate, and High Psychosocial Hazards and Worker Outcomes across 2 Sectors

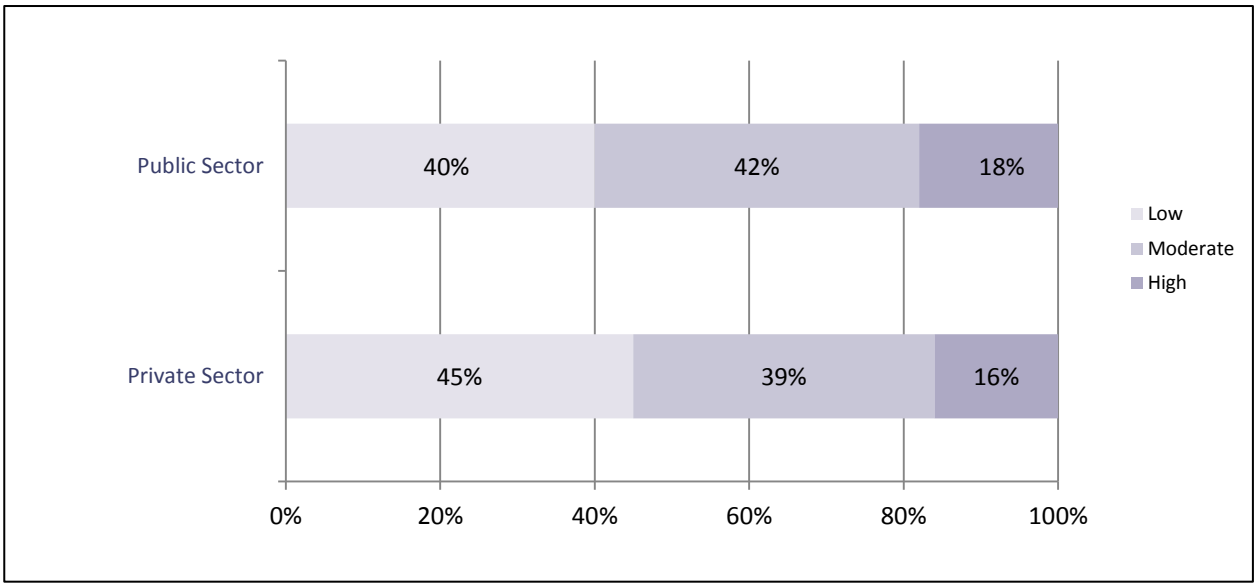
Role Overload



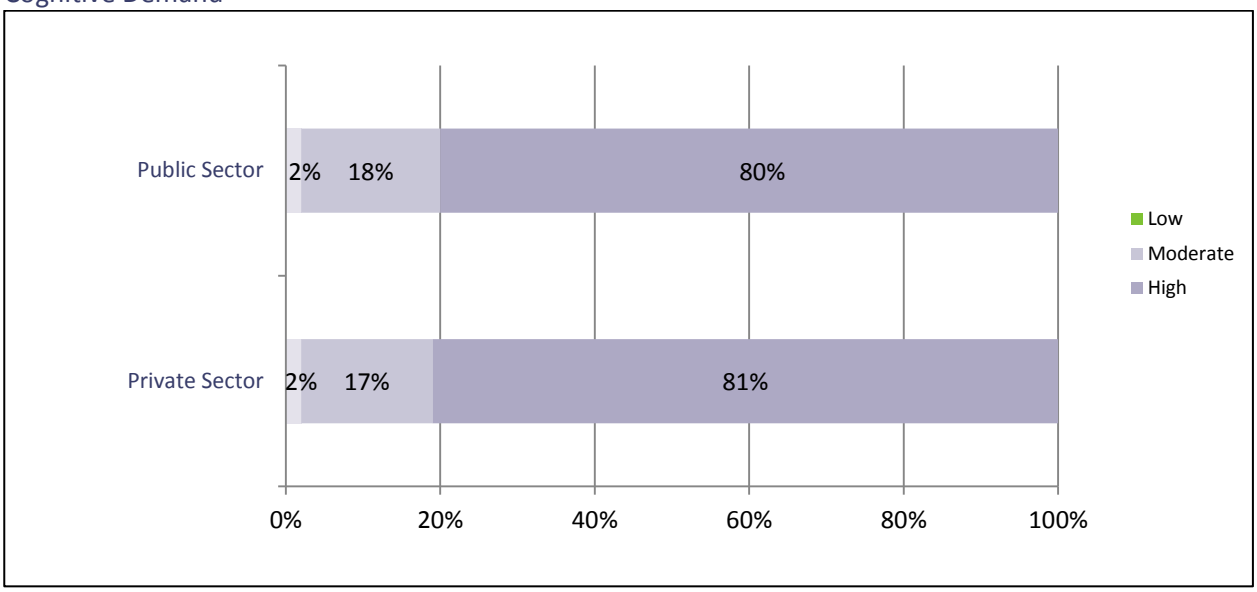
Role Ambiguity



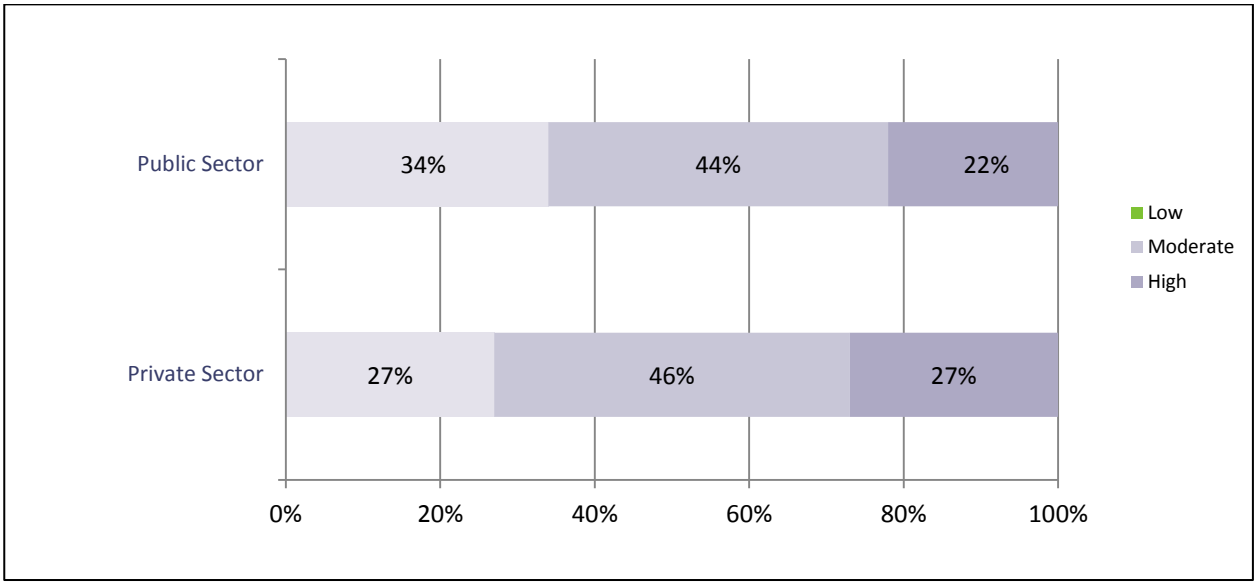
Role Conflict



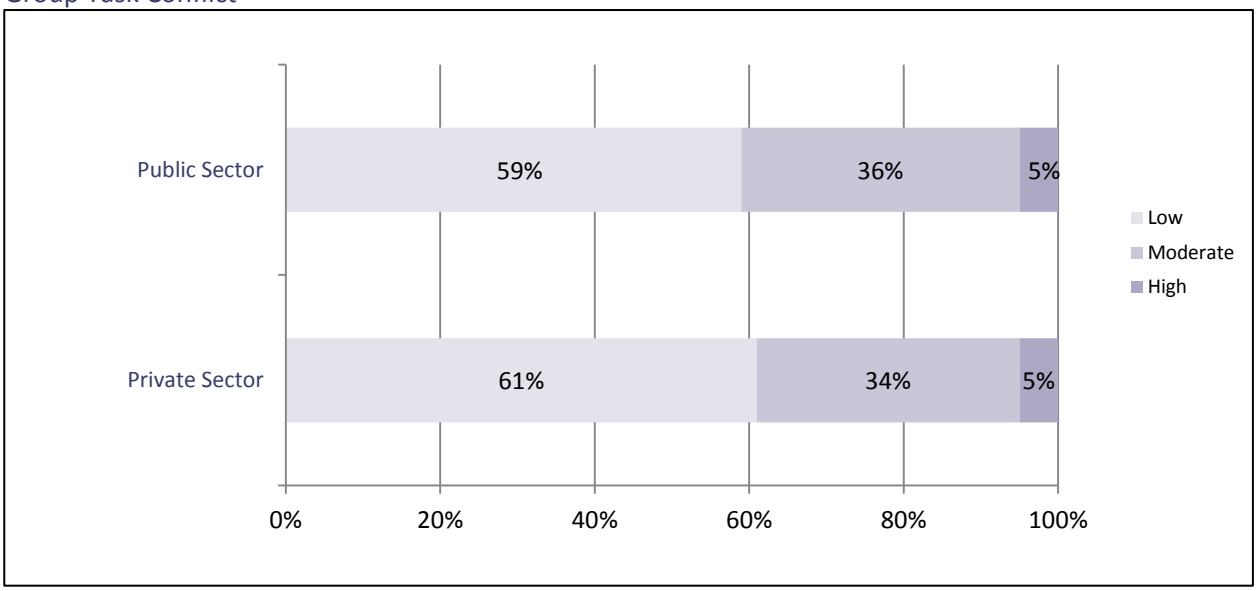
Cognitive Demand



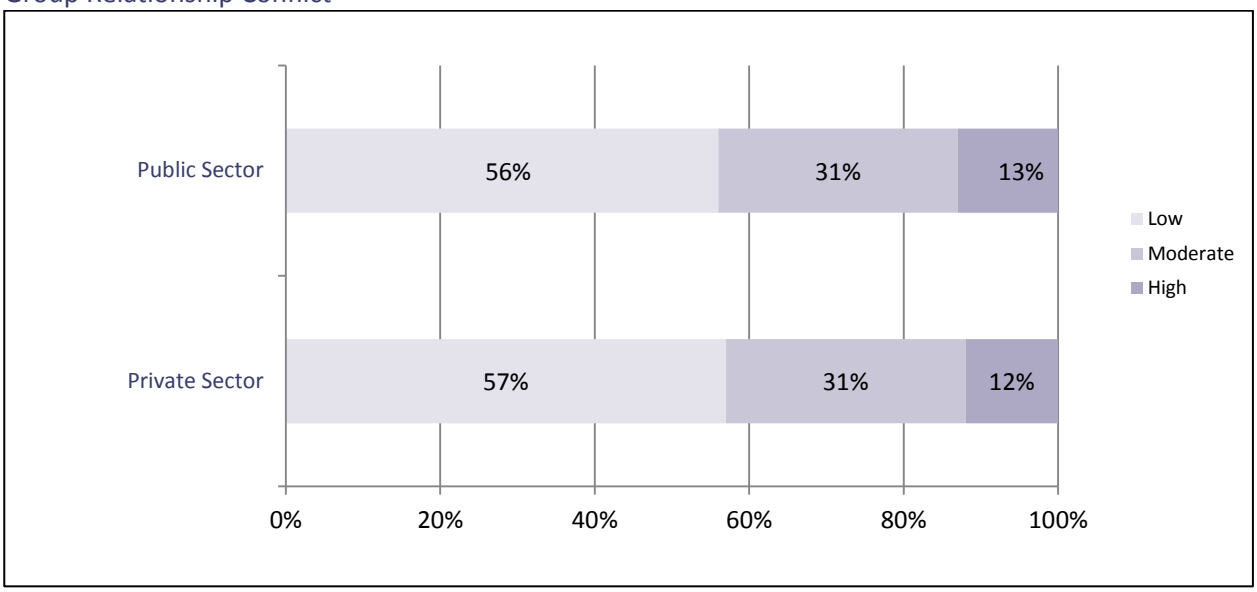
Emotional Demand



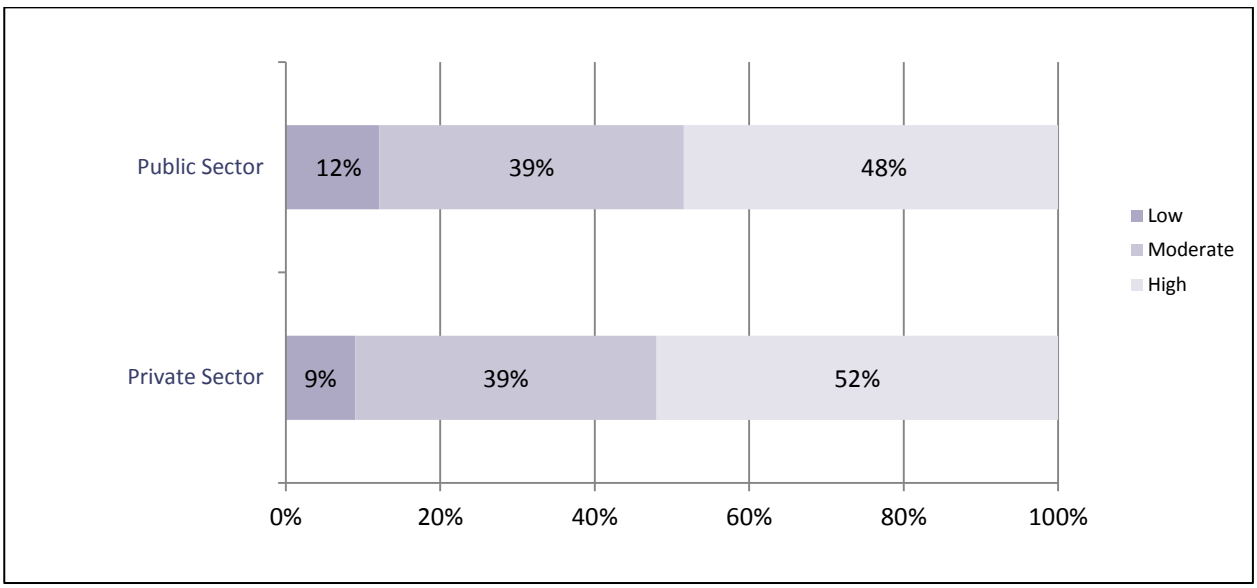
Group Task Conflict



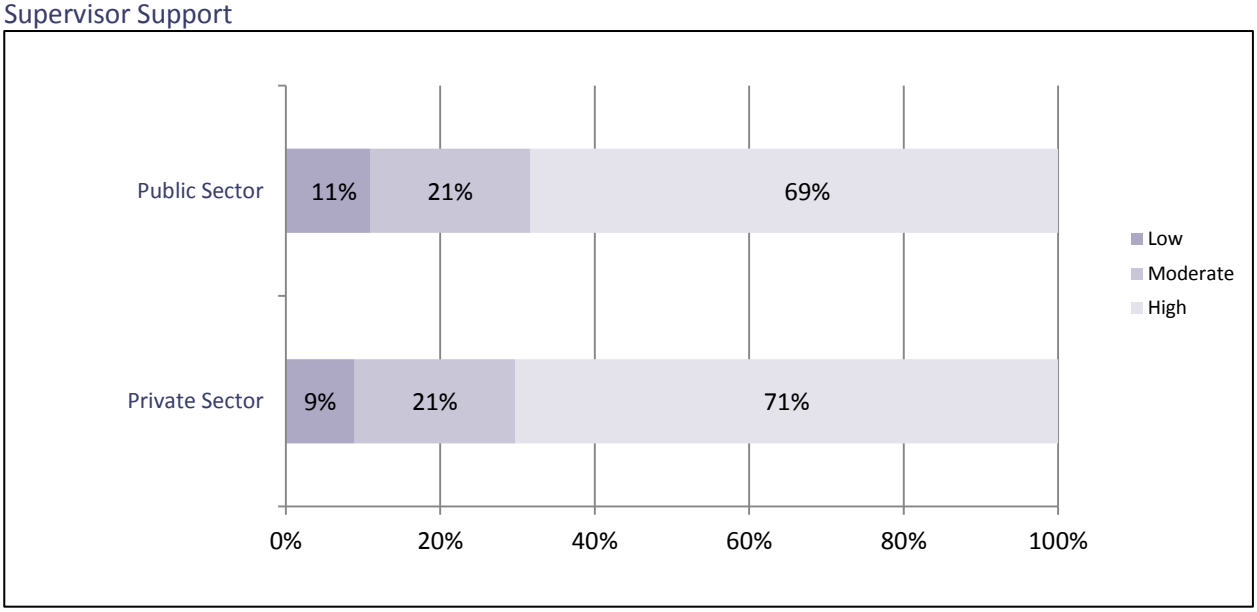
Group Relationship Conflict



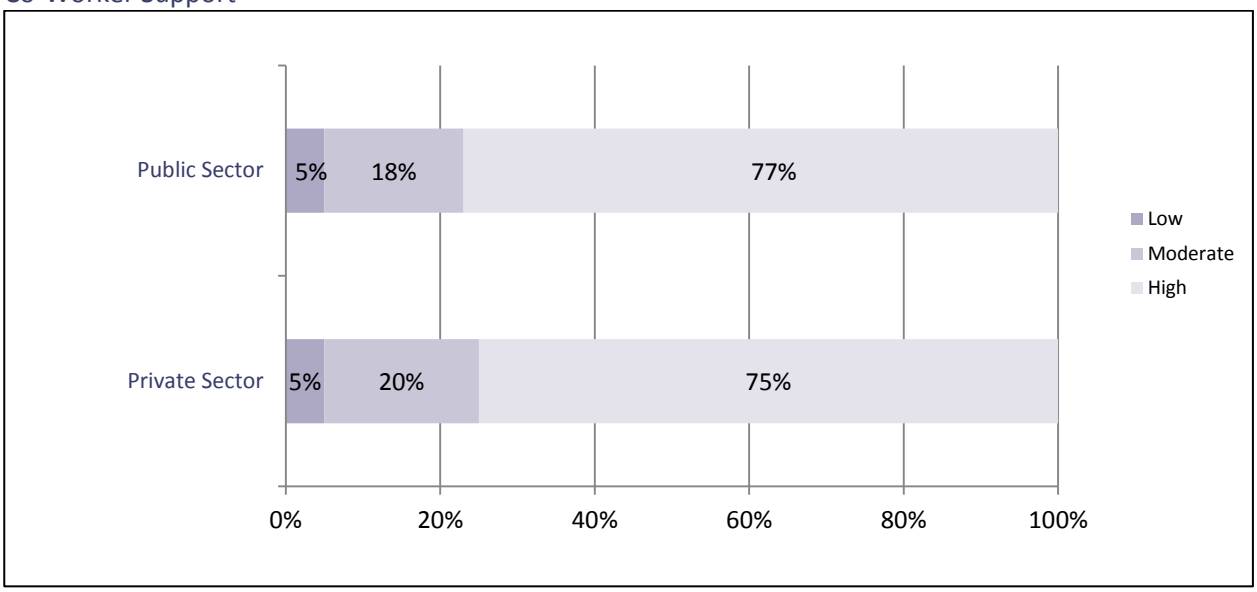
Job Control



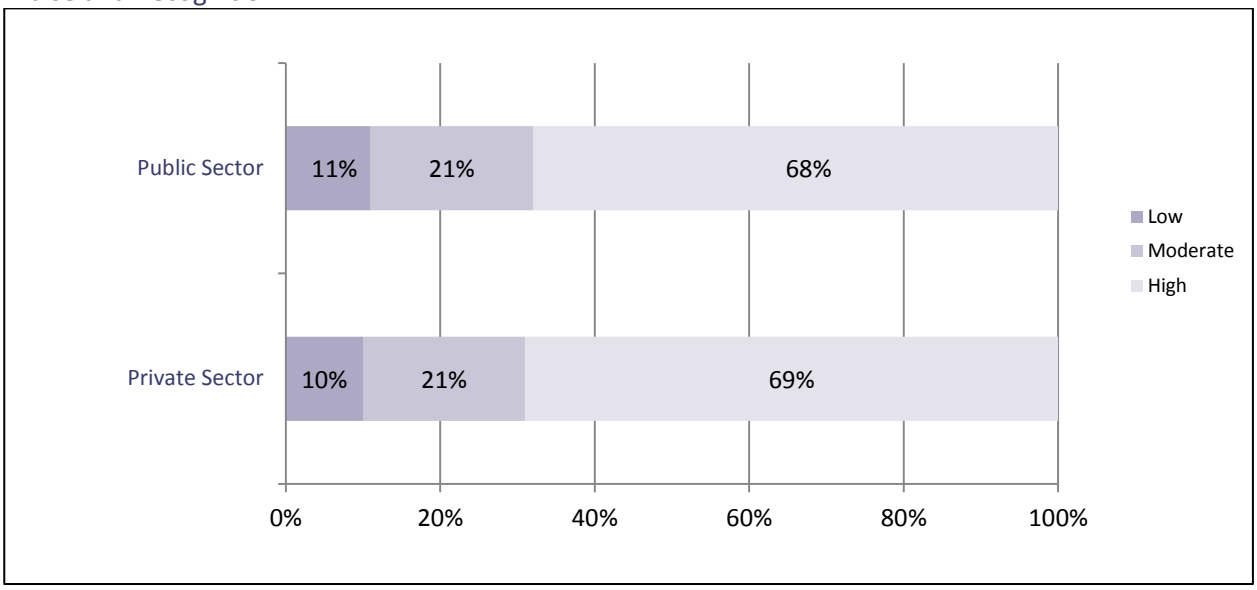
Supervisor Support



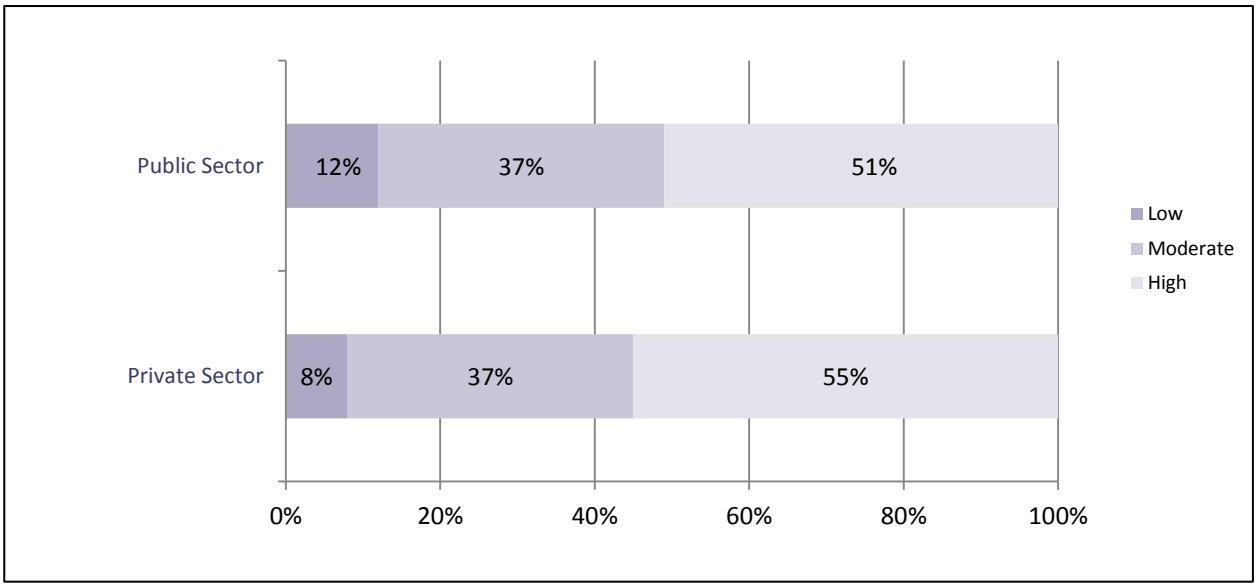
Co-Worker Support



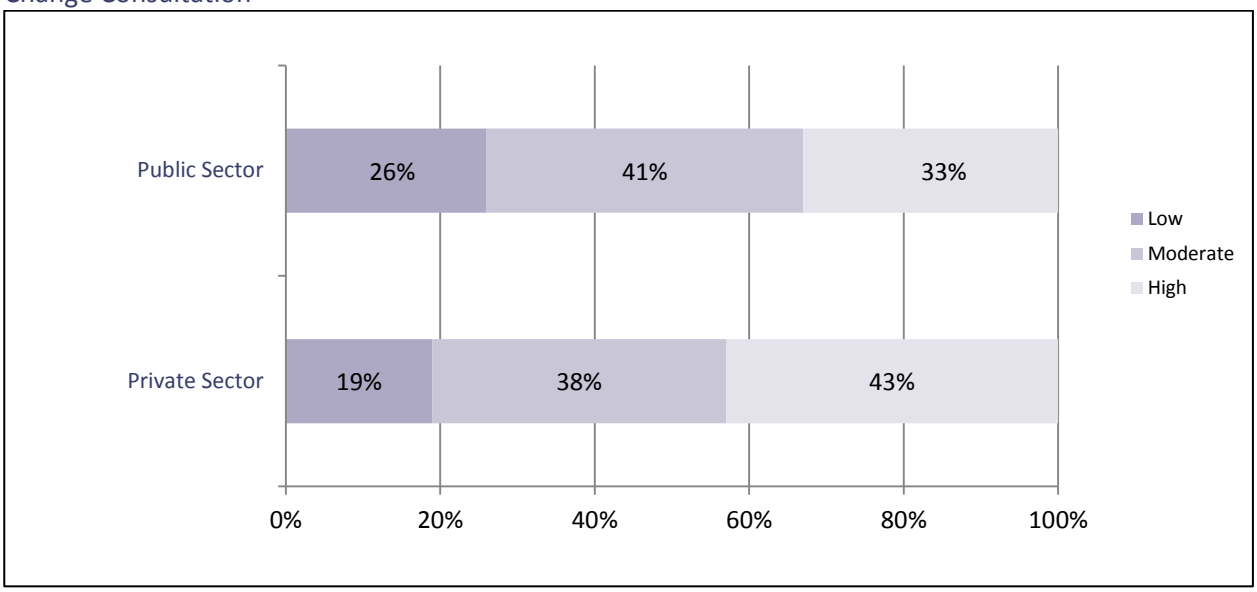
Praise and Recognition



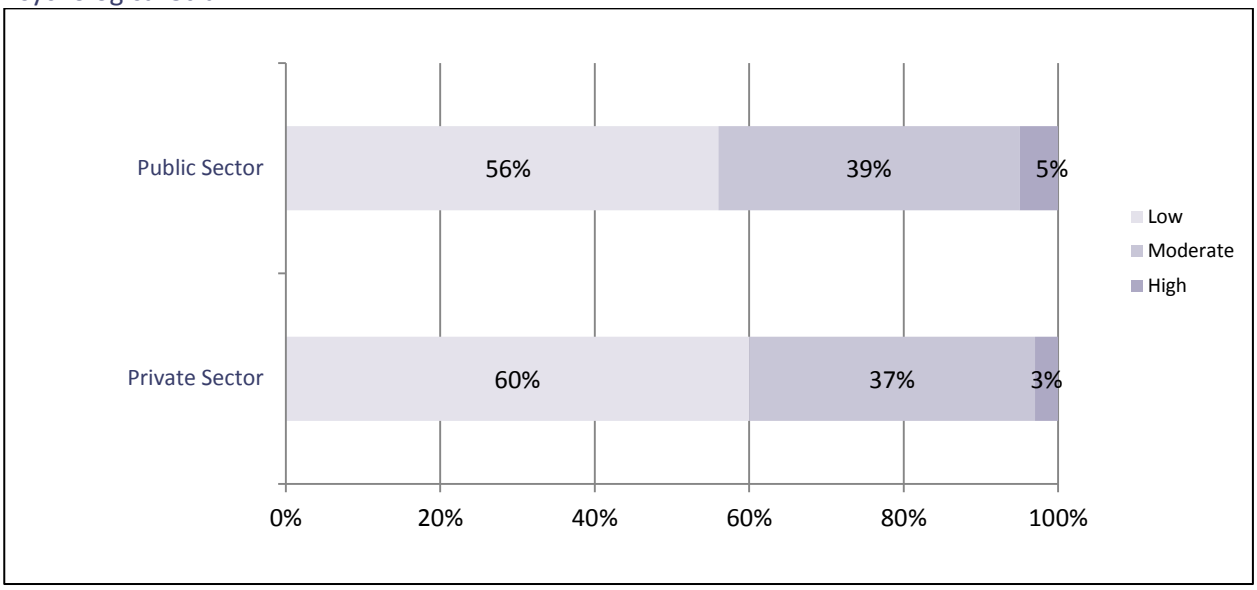
Procedural Justice



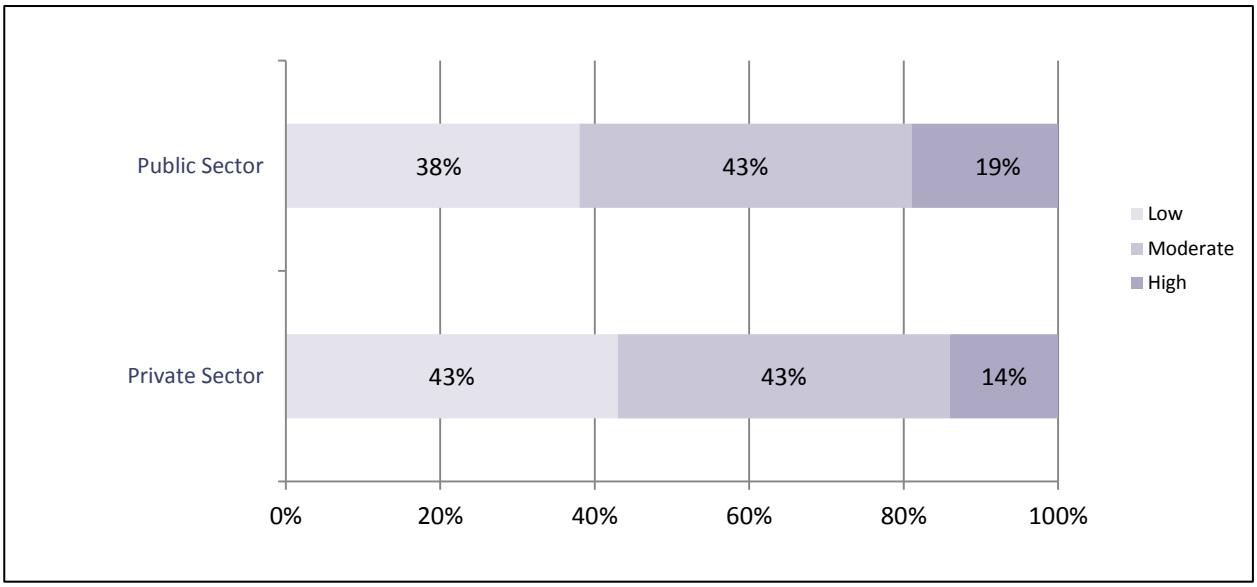
Change Consultation



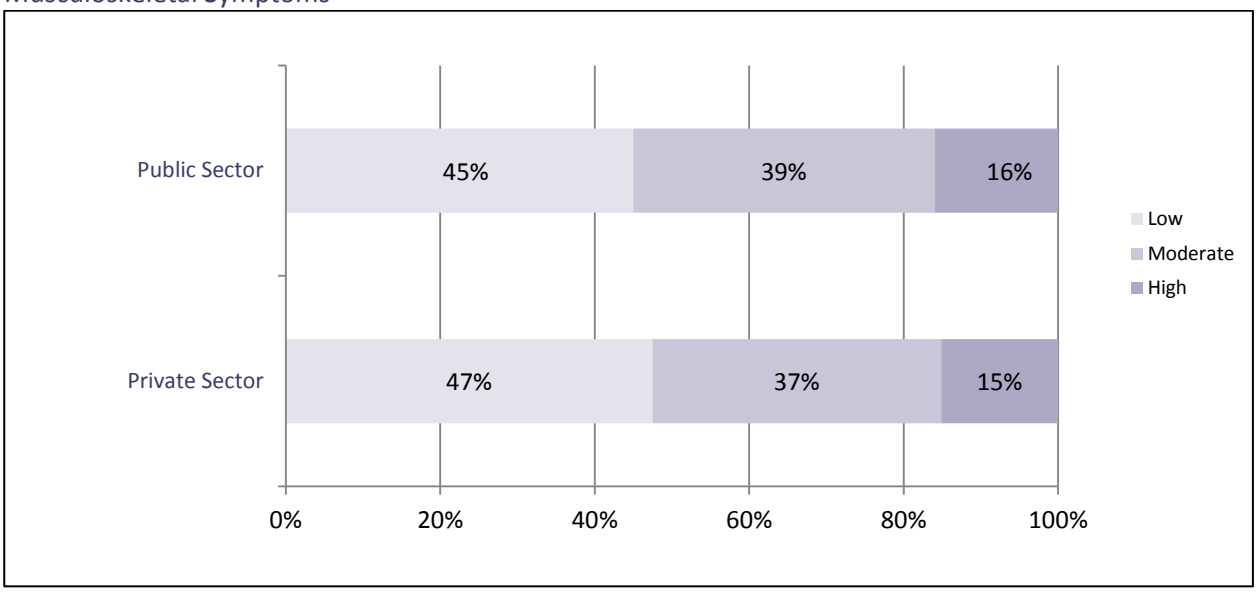
Psychological Strain



Job Burnout



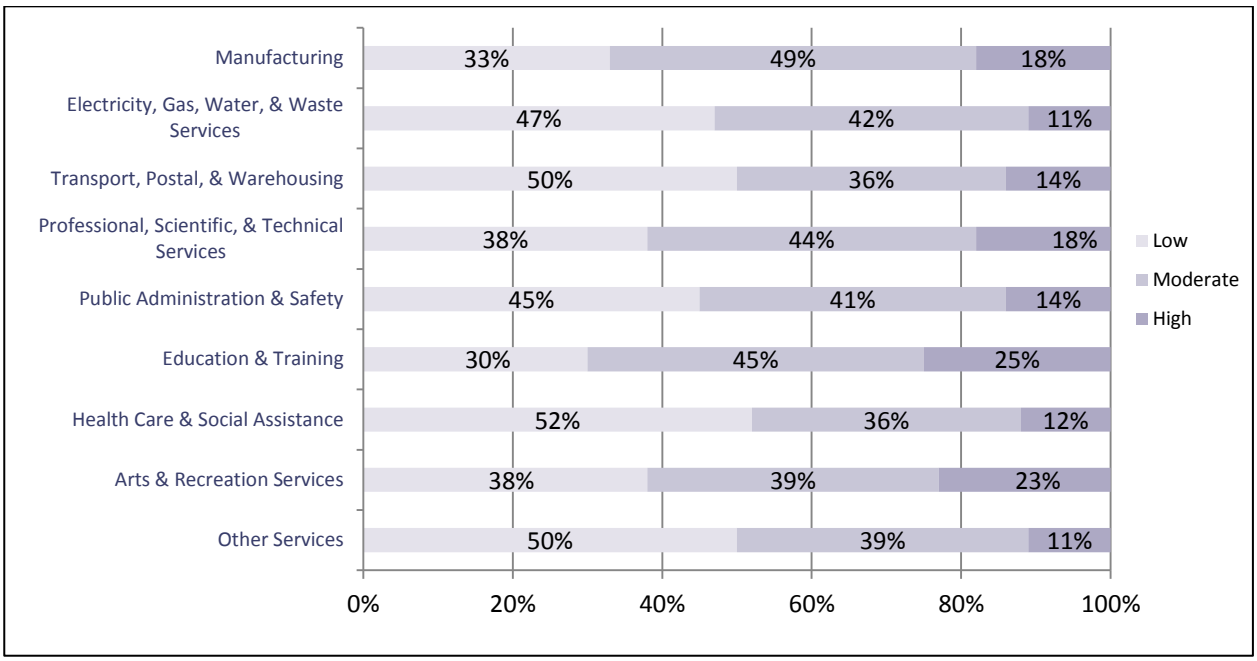
Musculoskeletal Symptoms



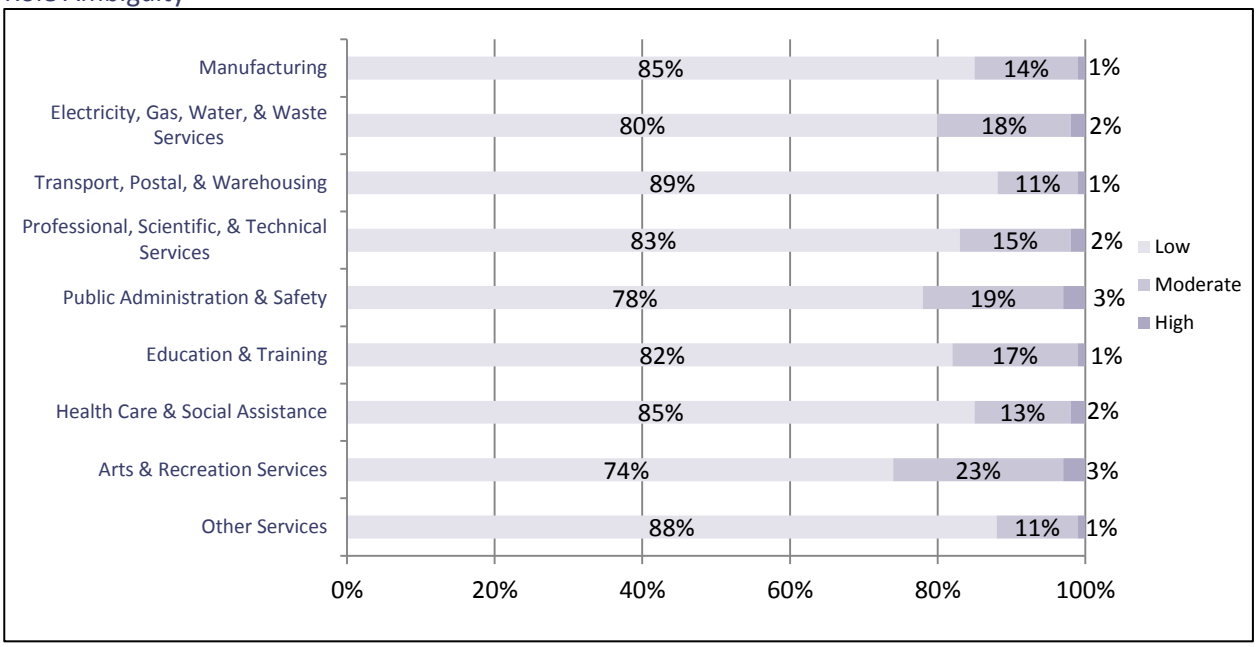
Appendix 3

Percentage of Workers Experiencing Low, Moderate, and High Psychosocial Hazards and Worker Outcomes across 9 Industries

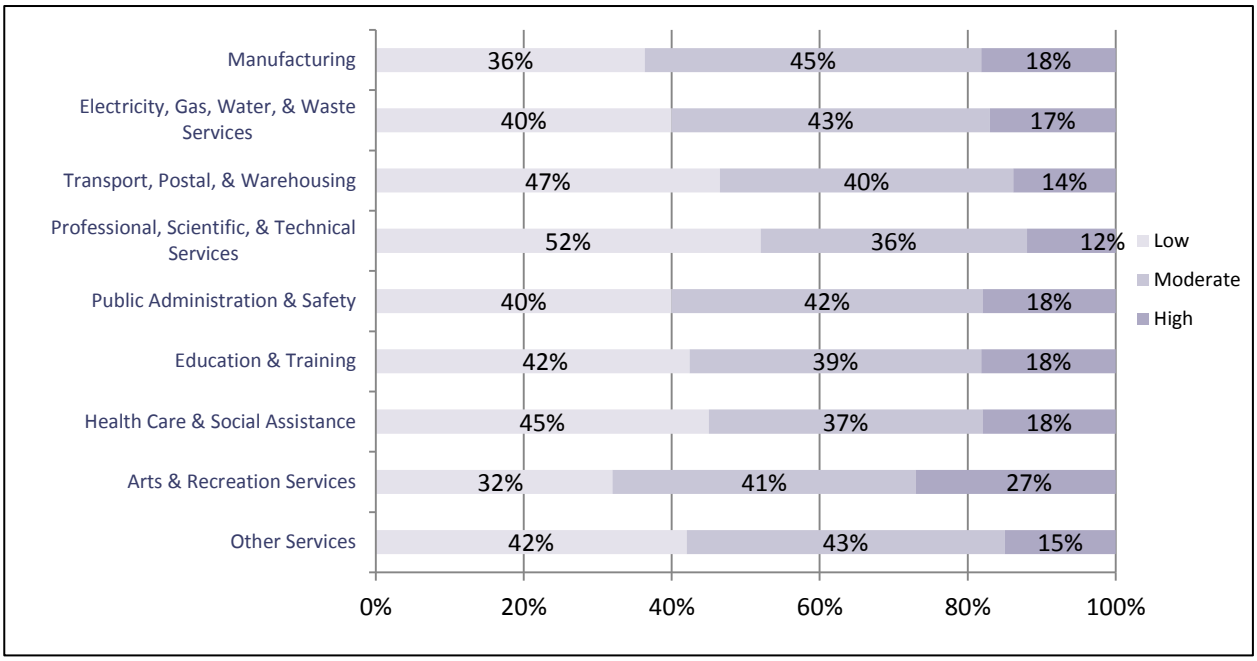
Role Overload



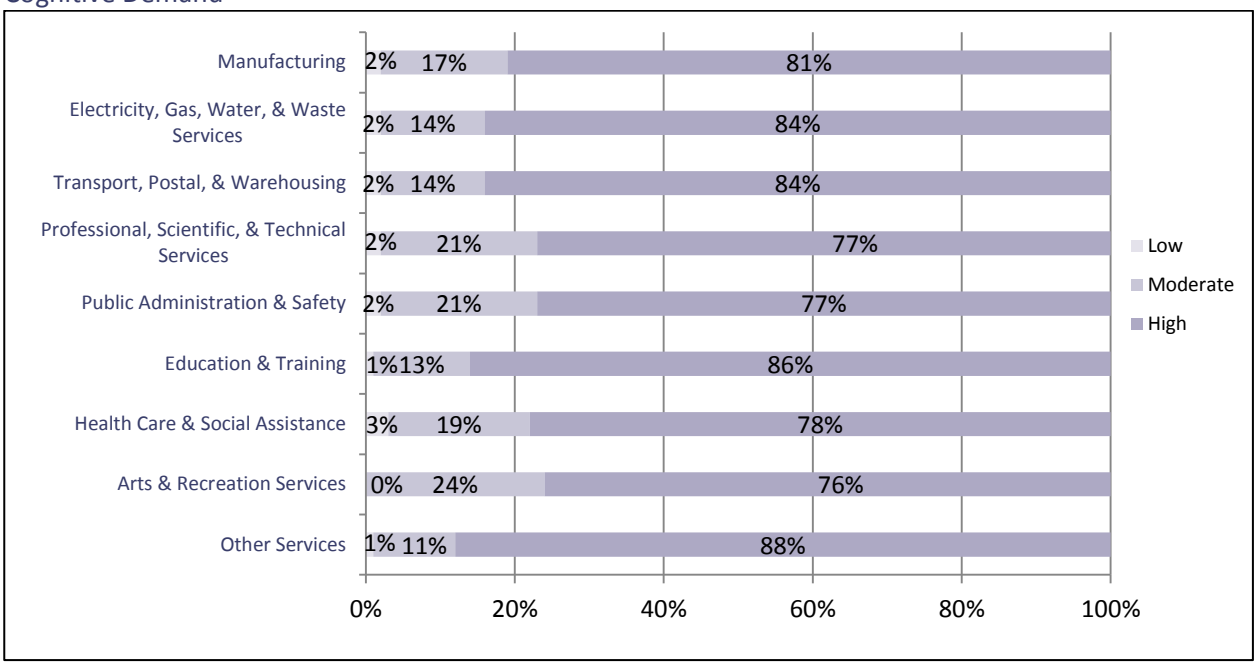
Role Ambiguity



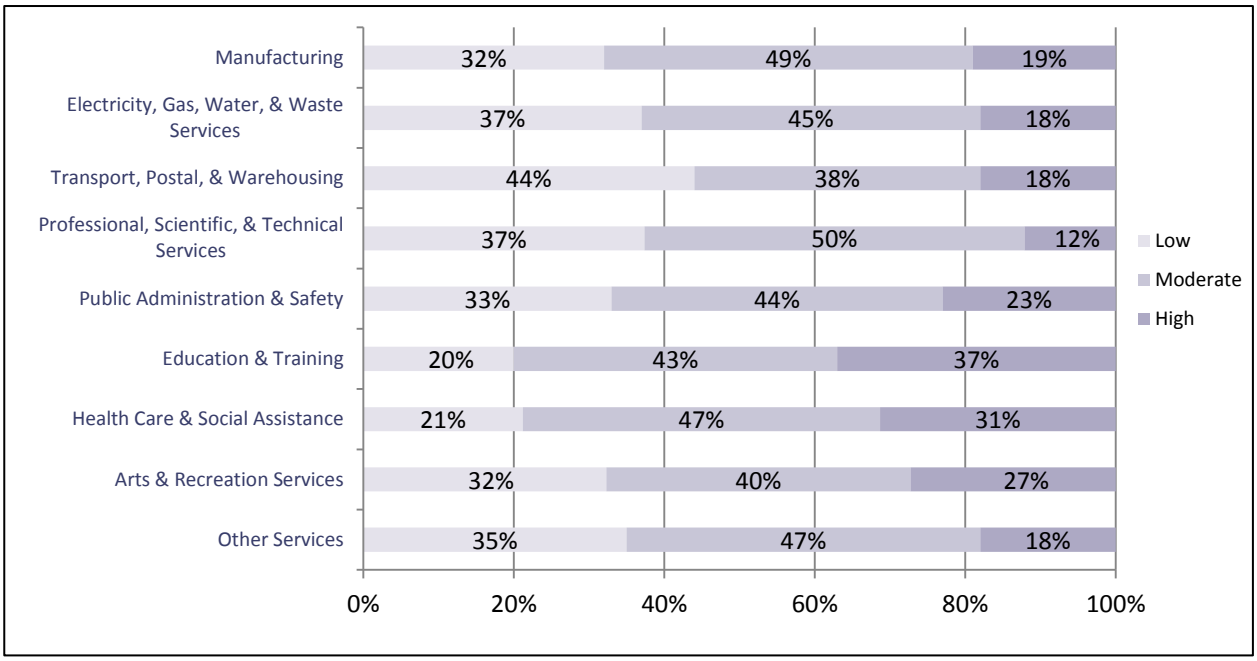
Role Conflict



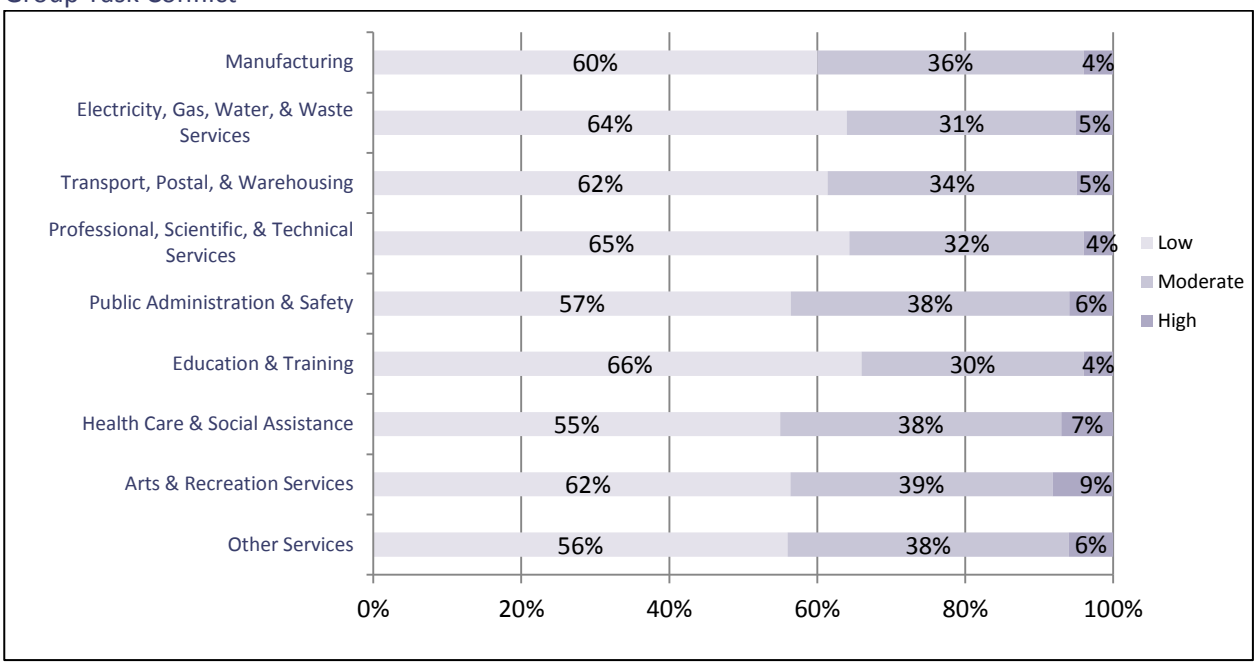
Cognitive Demand



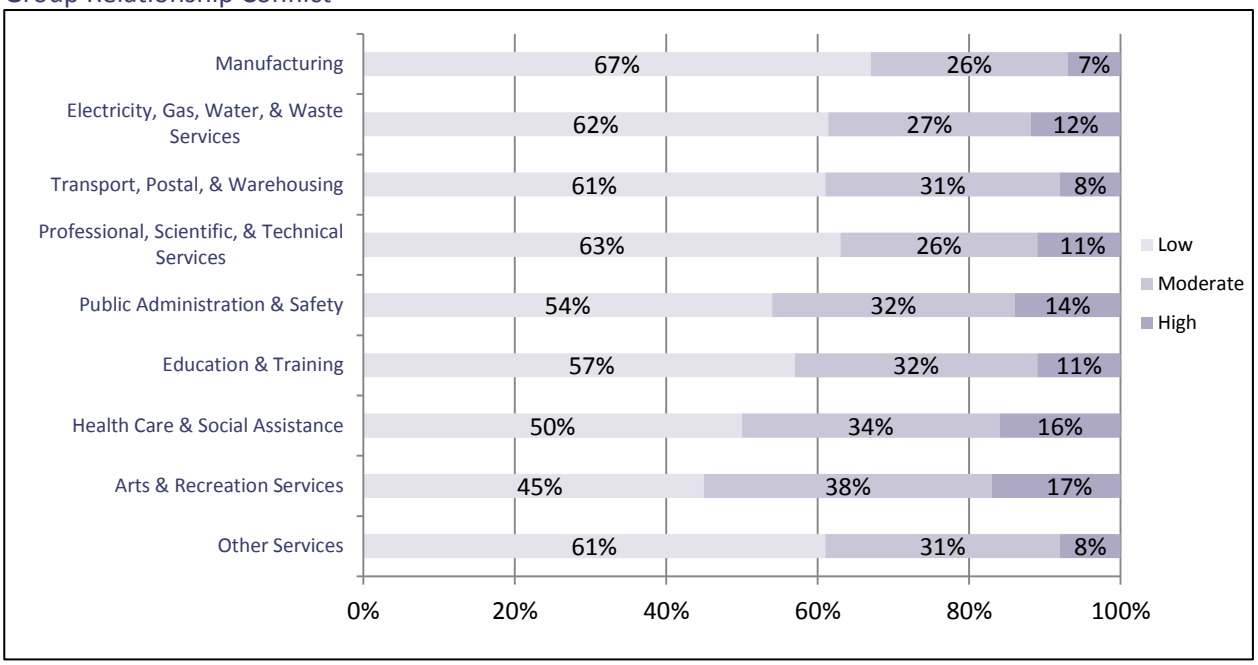
Emotional Demand



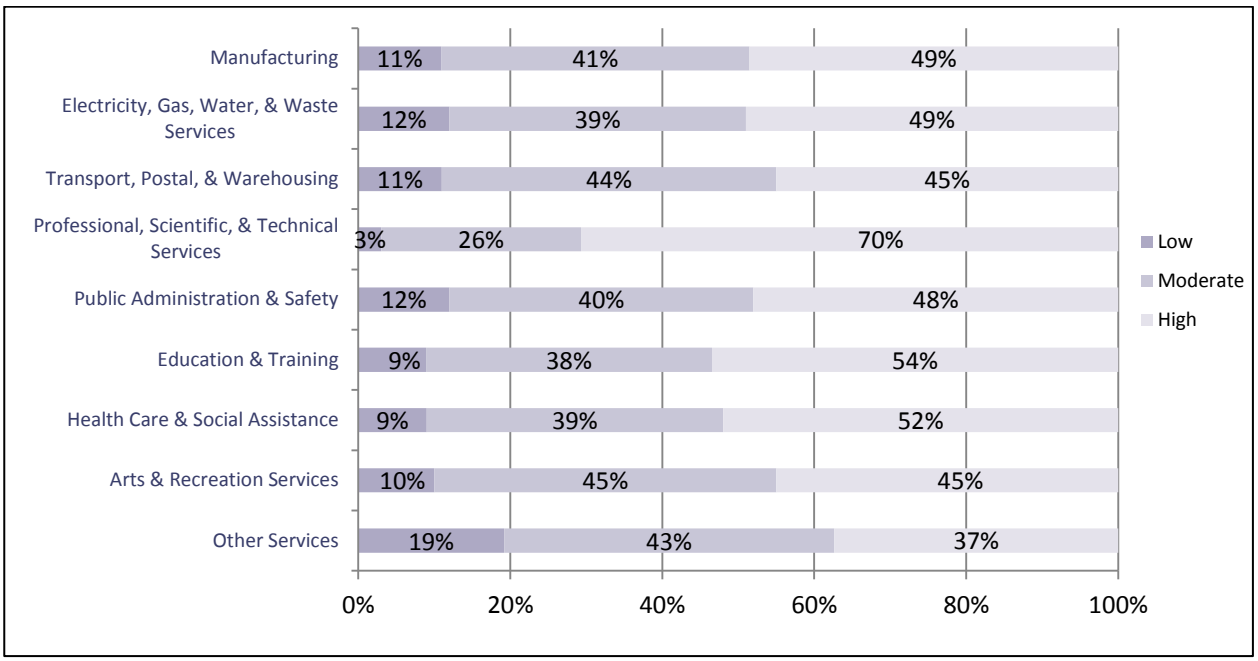
Group Task Conflict



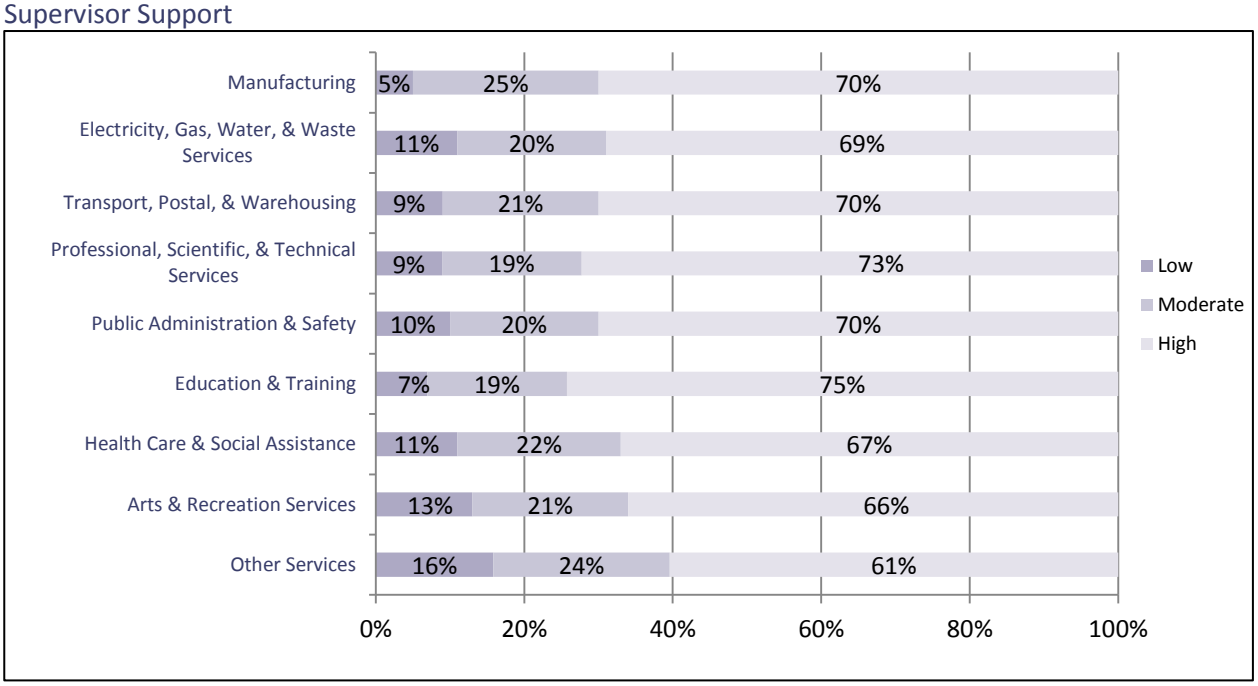
Group Relationship Conflict



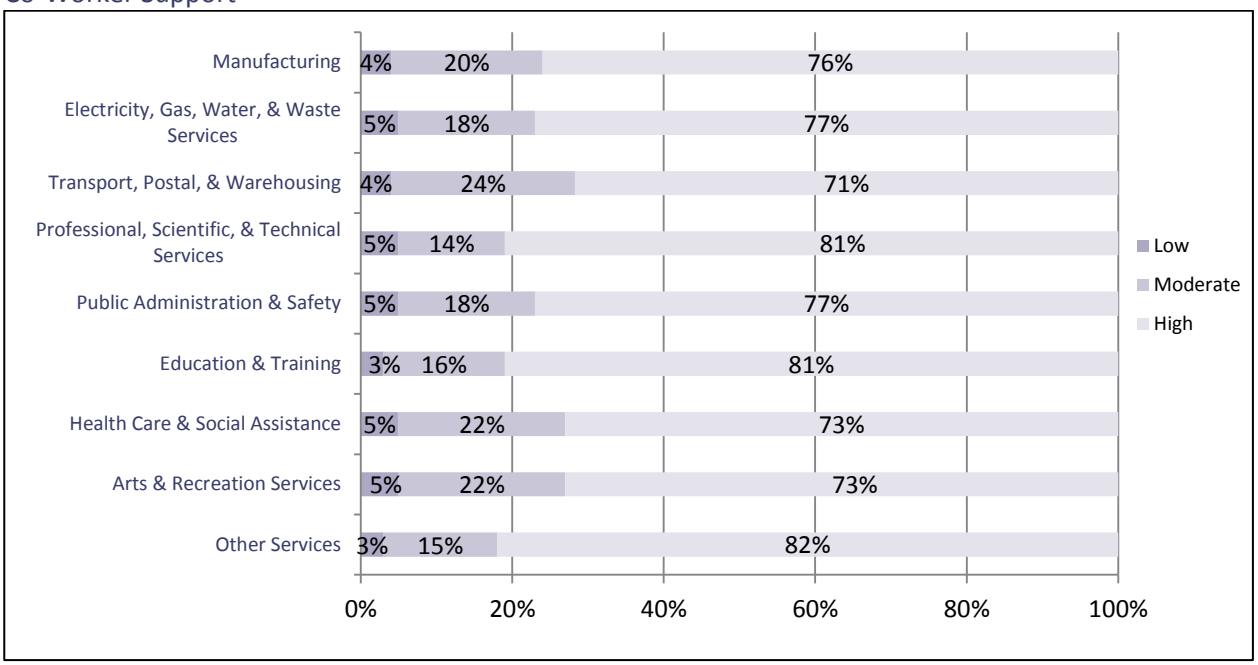
Job Control



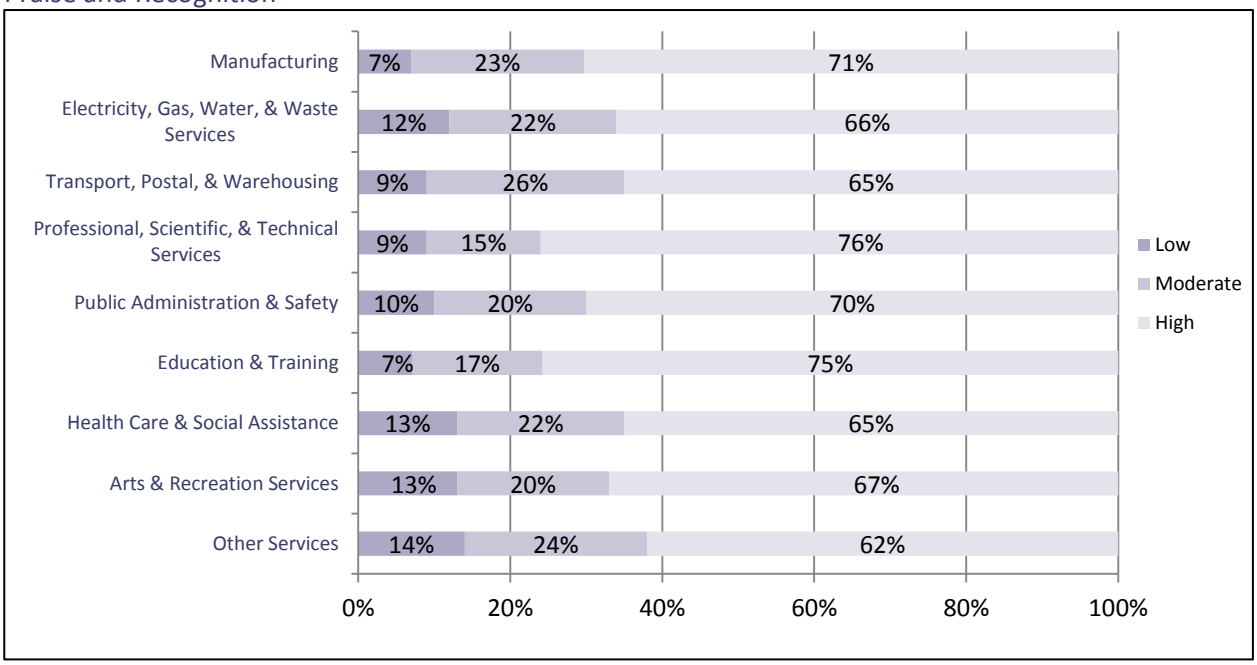
Supervisor Support



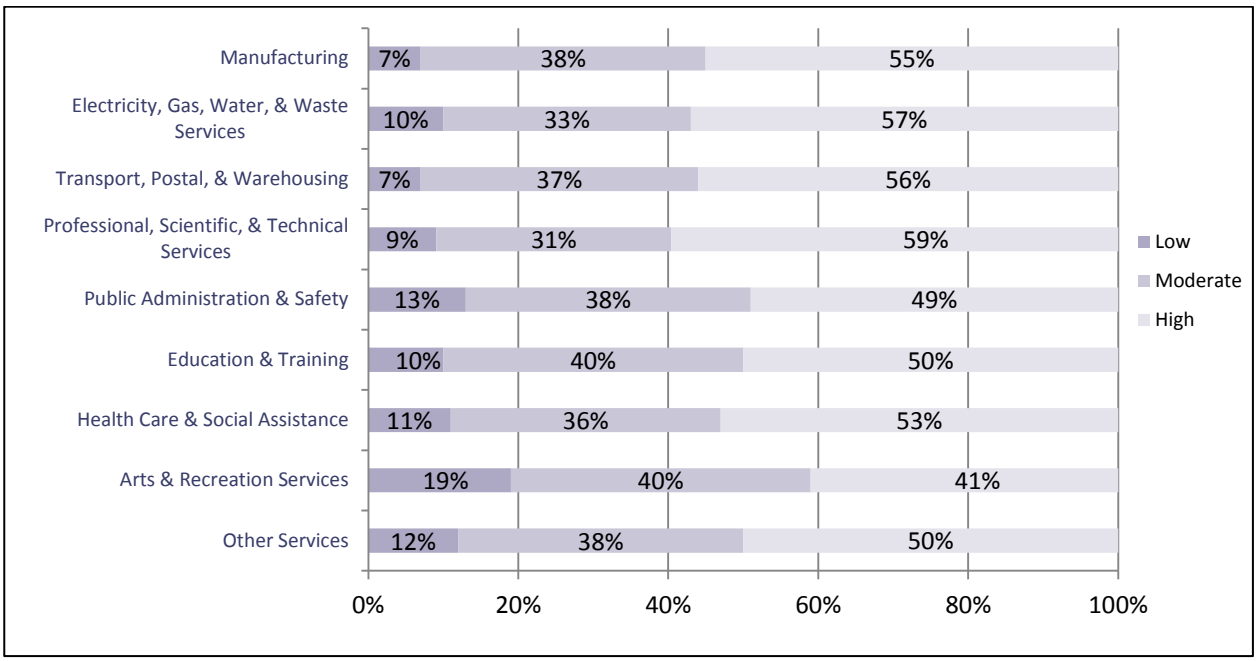
Co-Worker Support



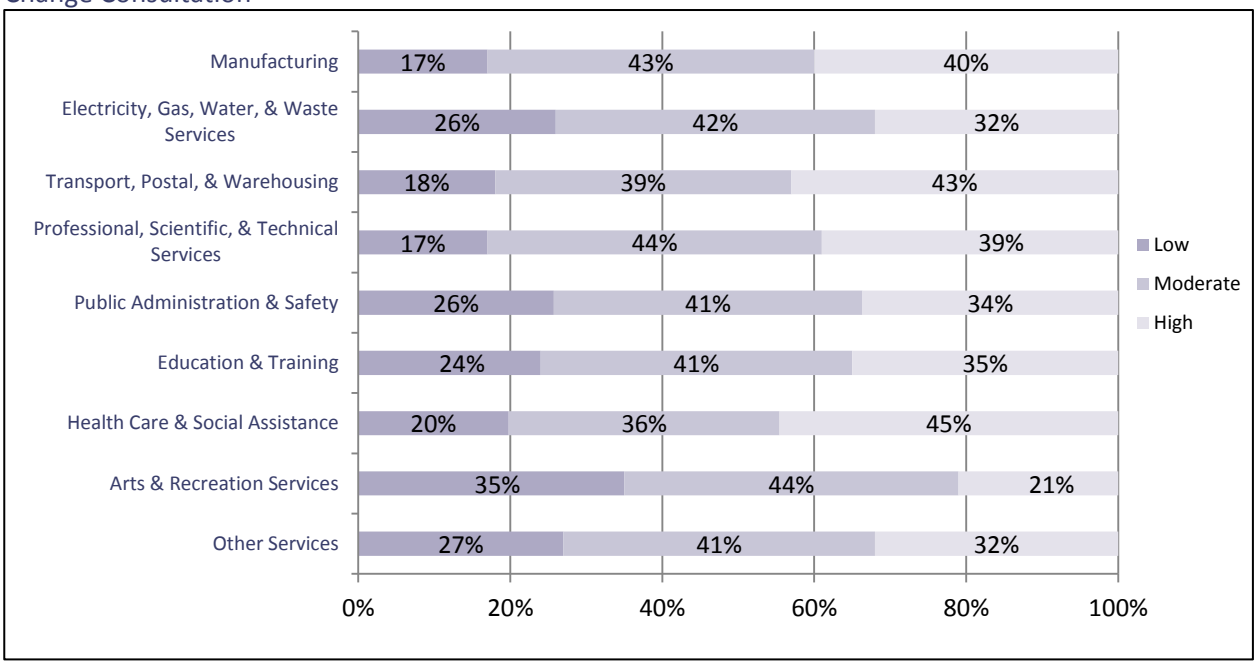
Praise and Recognition



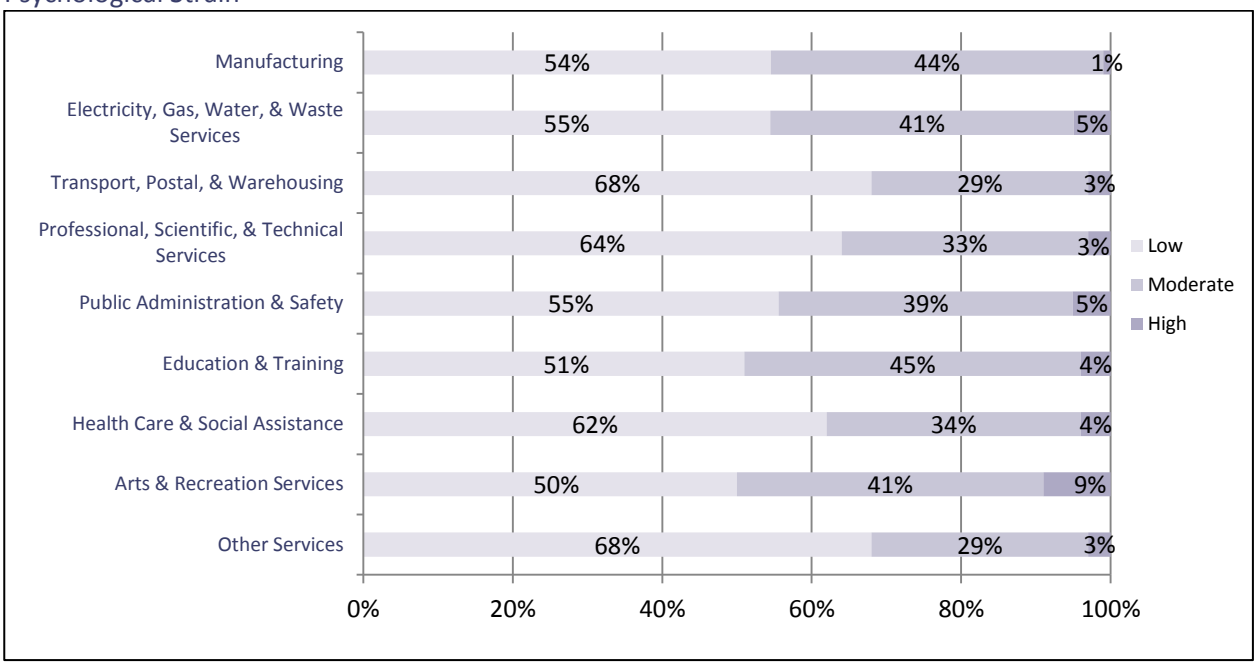
Procedural Justice



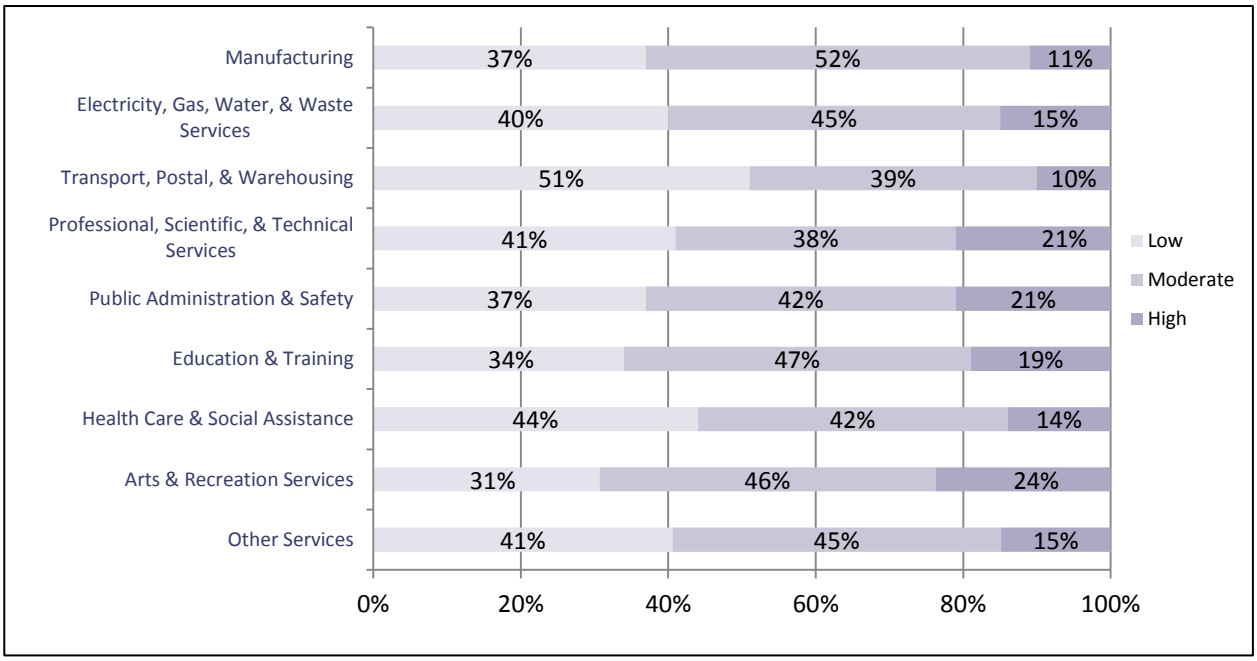
Change Consultation



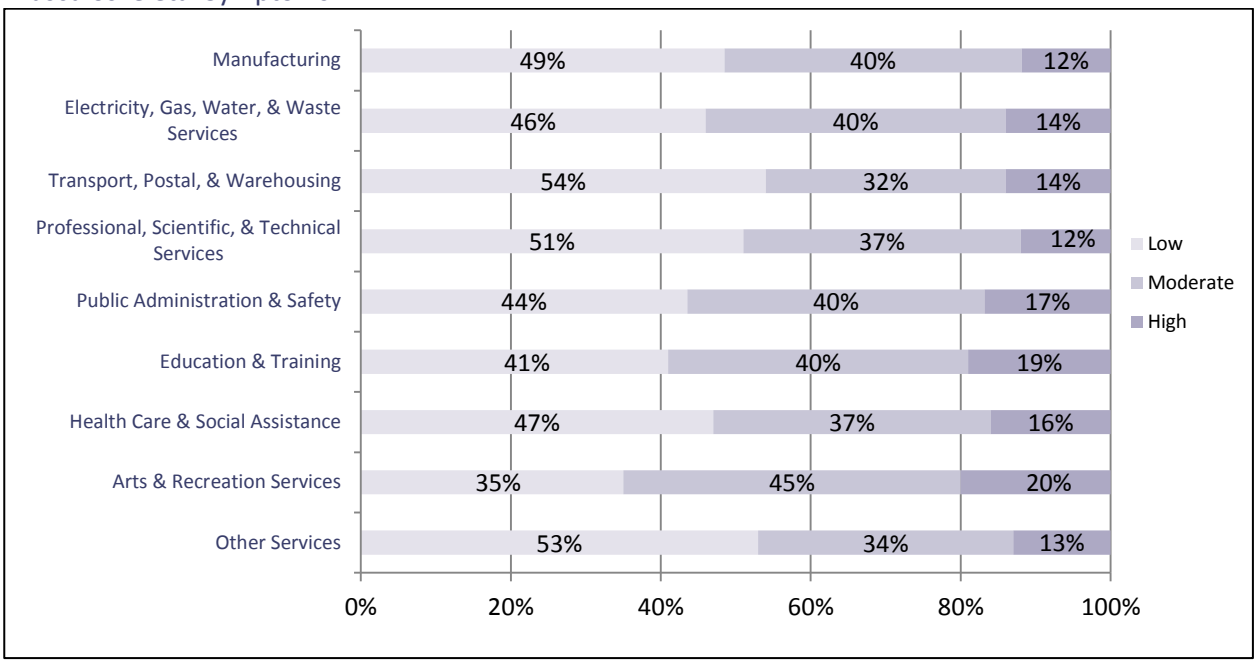
Psychological Strain



Job Burnout



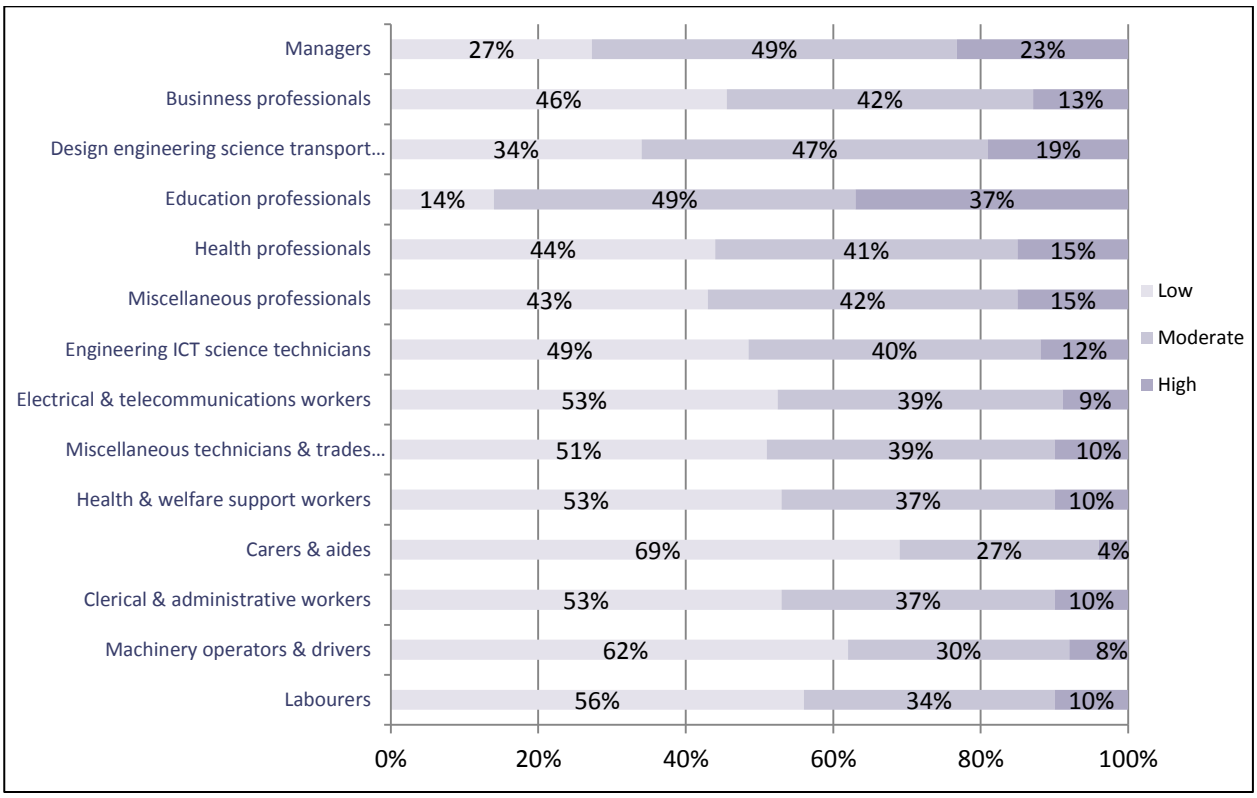
Musculoskeletal Symptoms



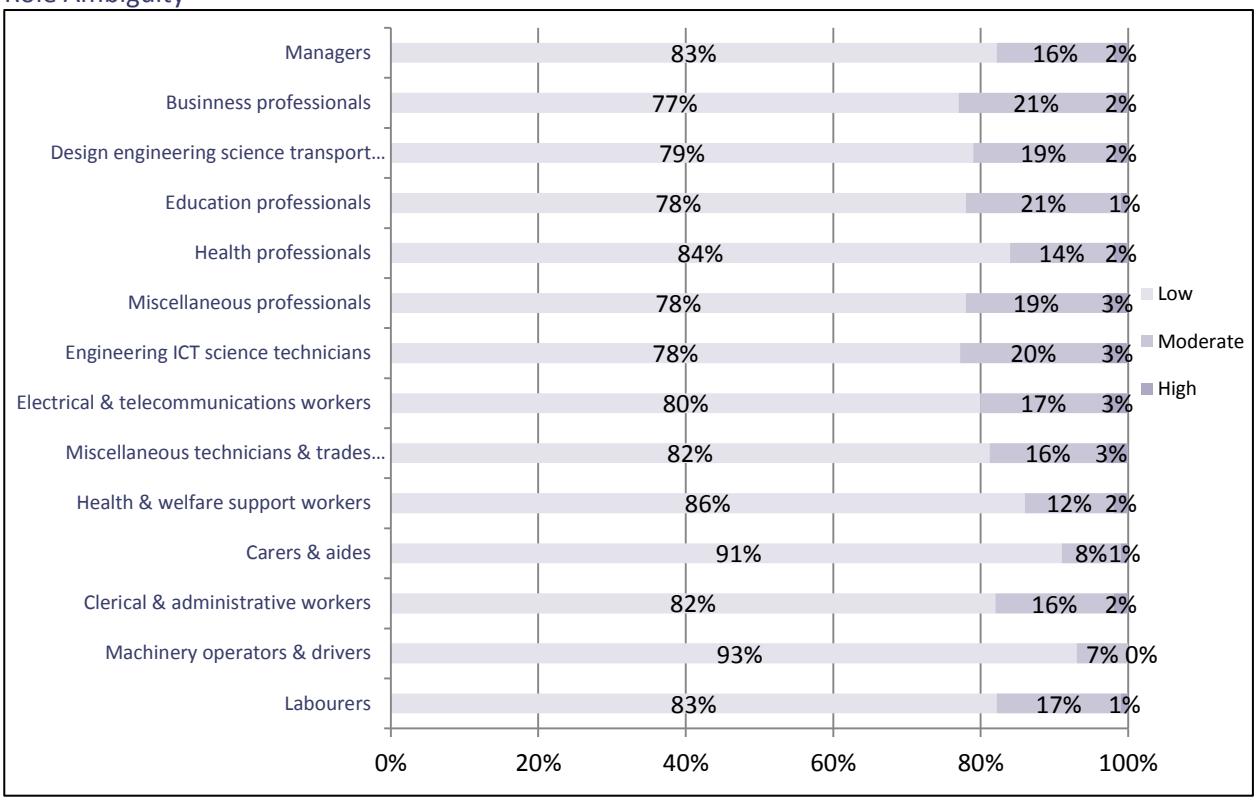
Appendix 4

Percentage of Workers Experiencing Low, Moderate, and High Psychosocial Hazards and Worker Outcomes across 14 Occupations

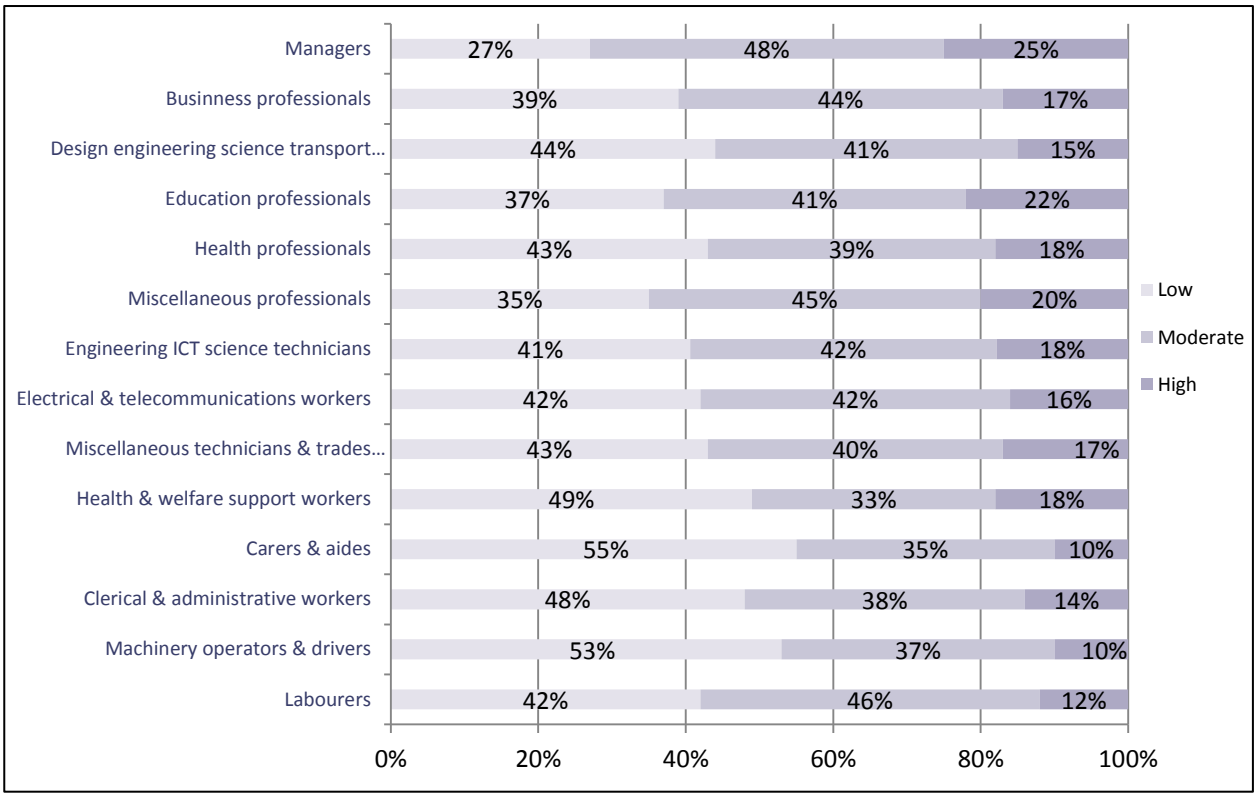
Role Overload



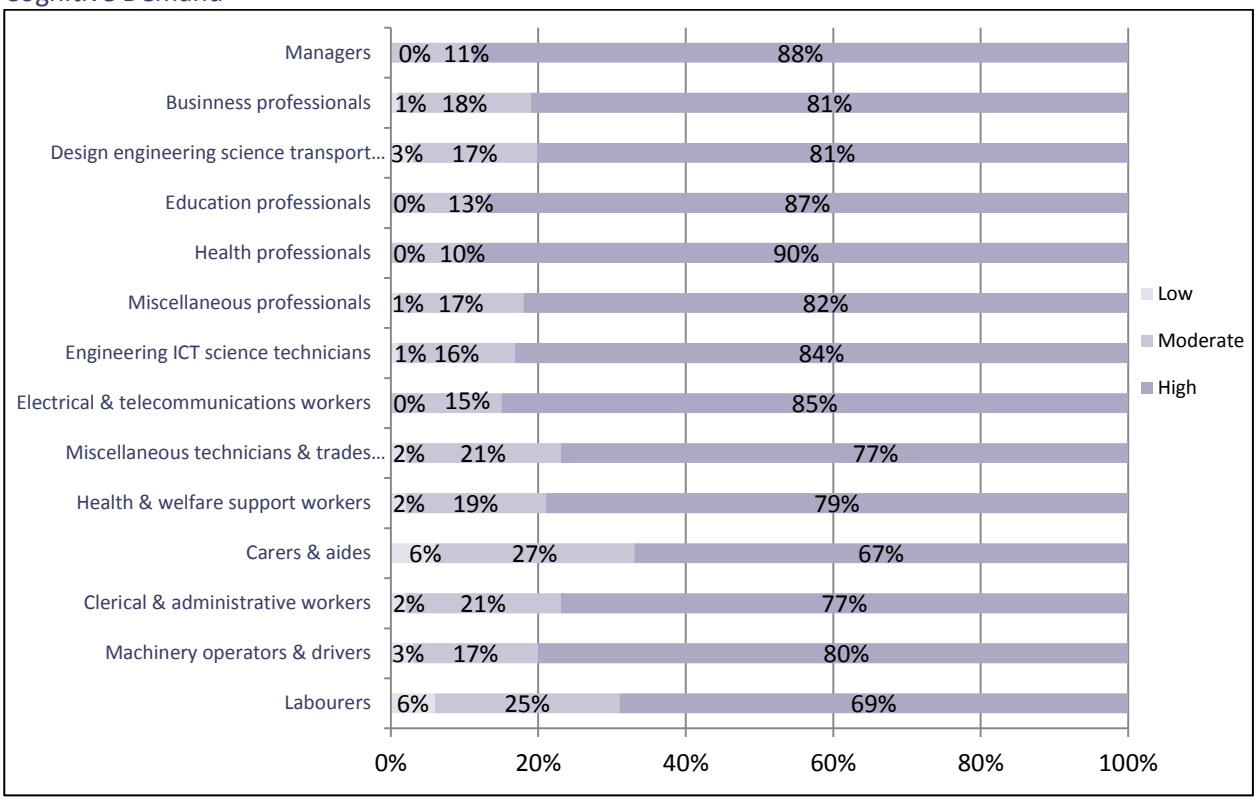
Role Ambiguity



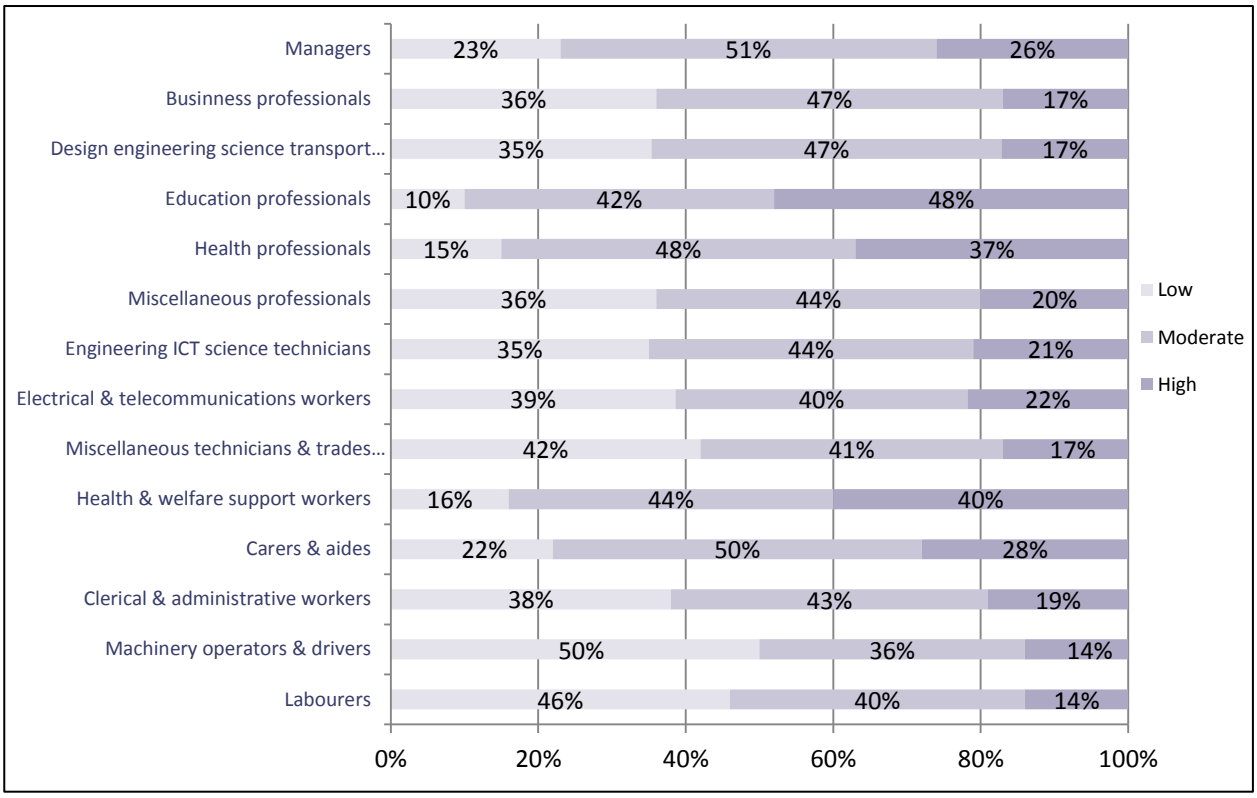
Role Conflict



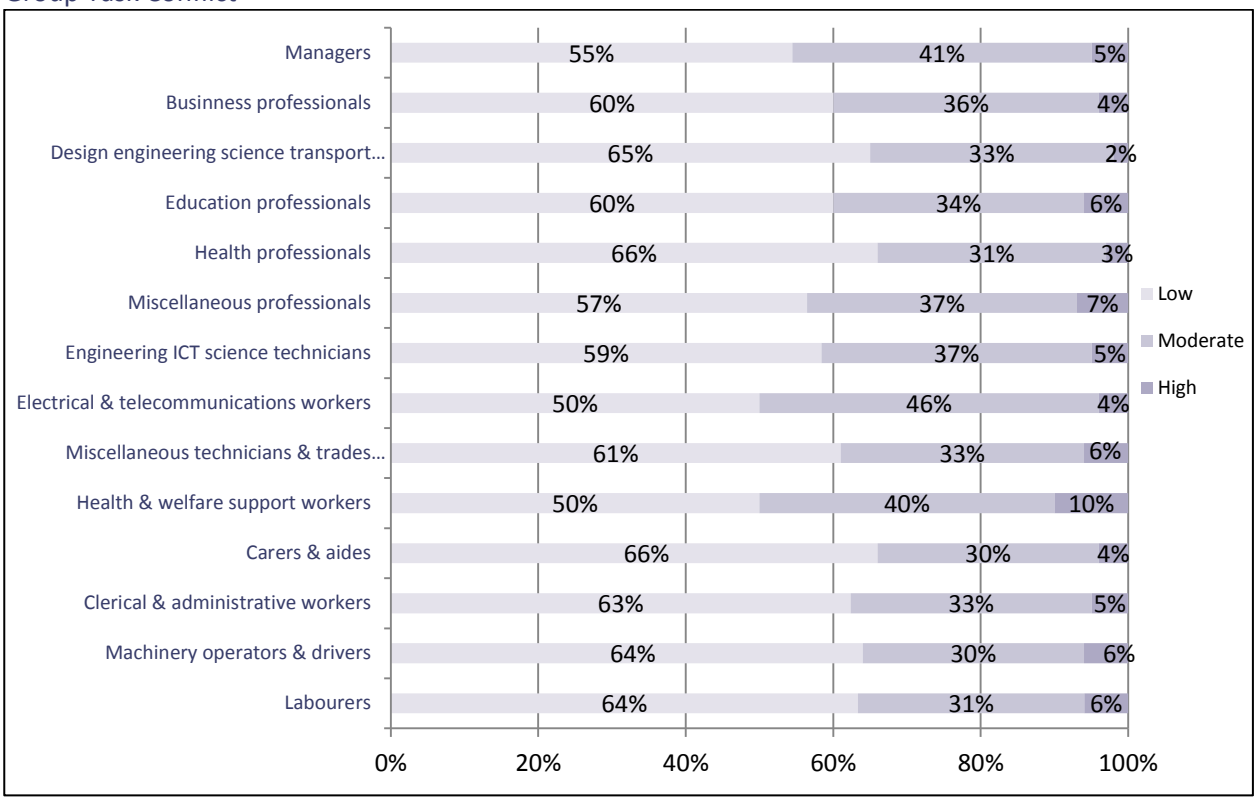
Cognitive Demand



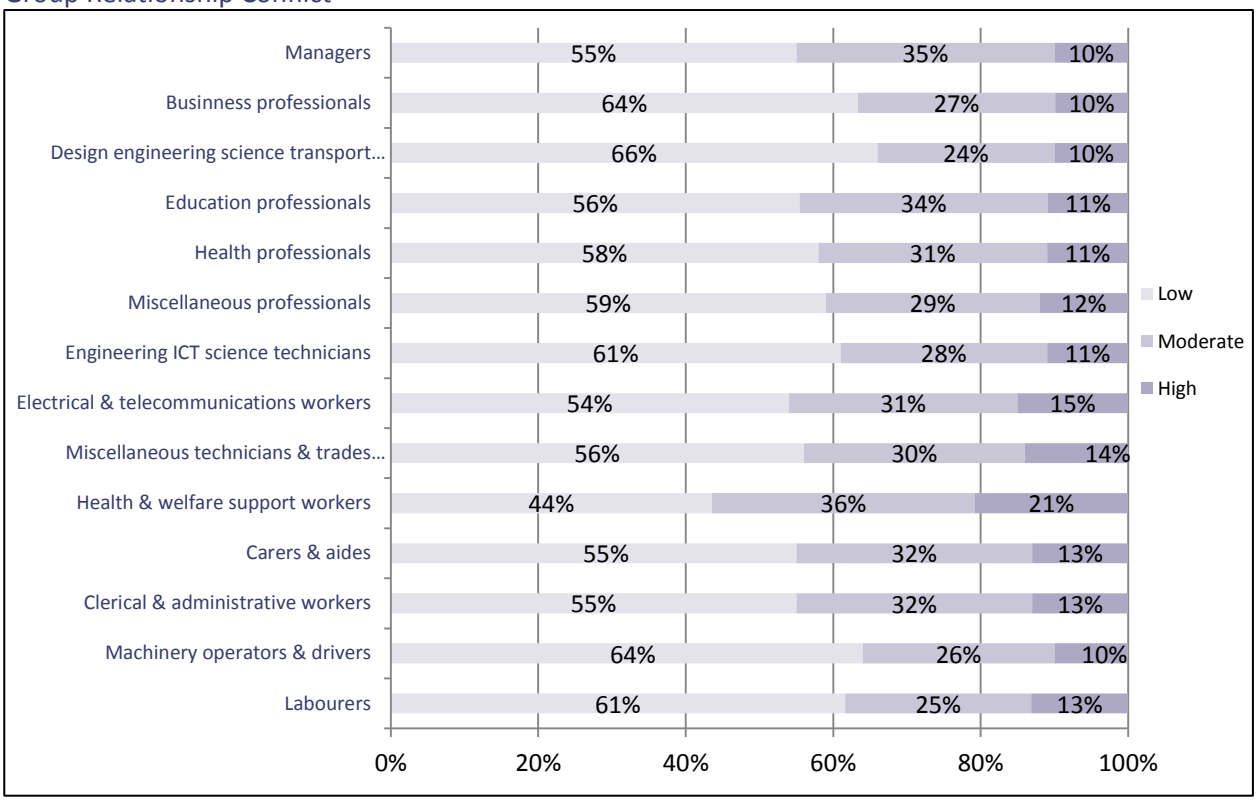
Emotional Demand



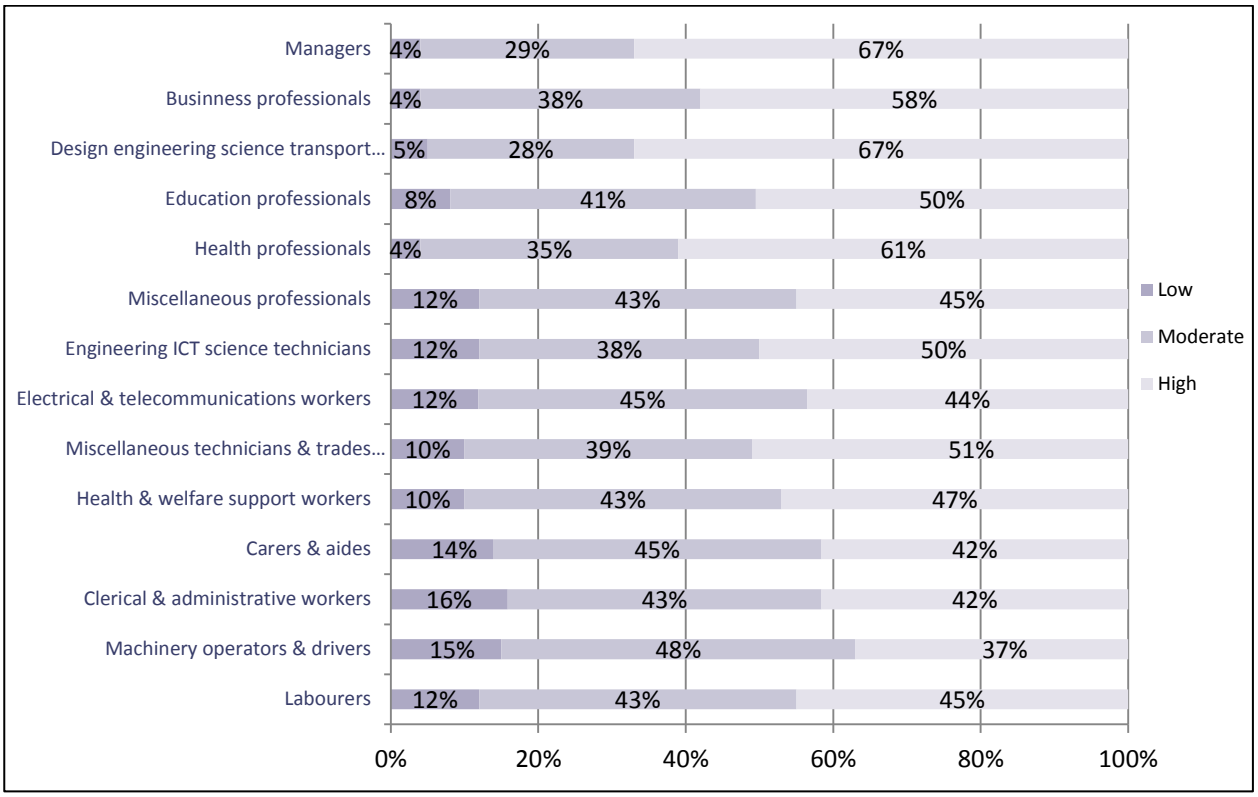
Group Task Conflict



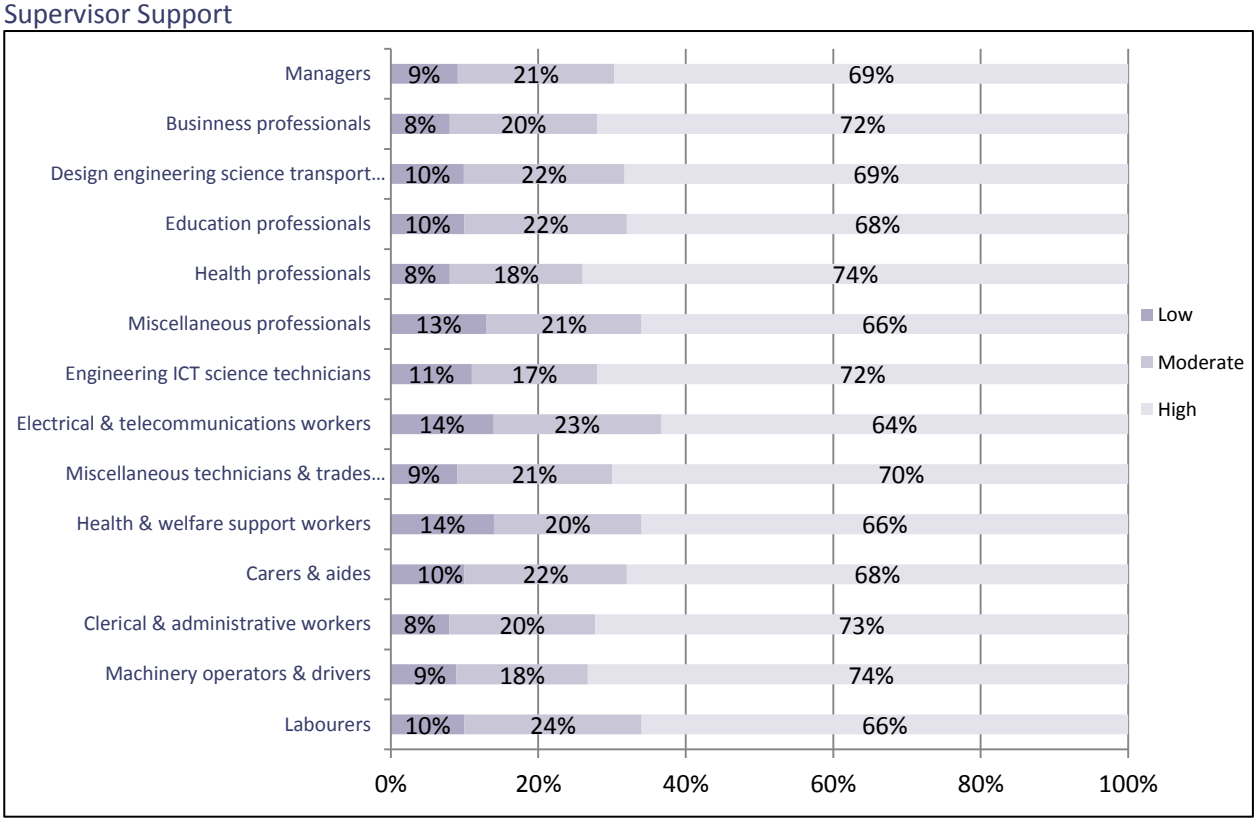
Group Relationship Conflict



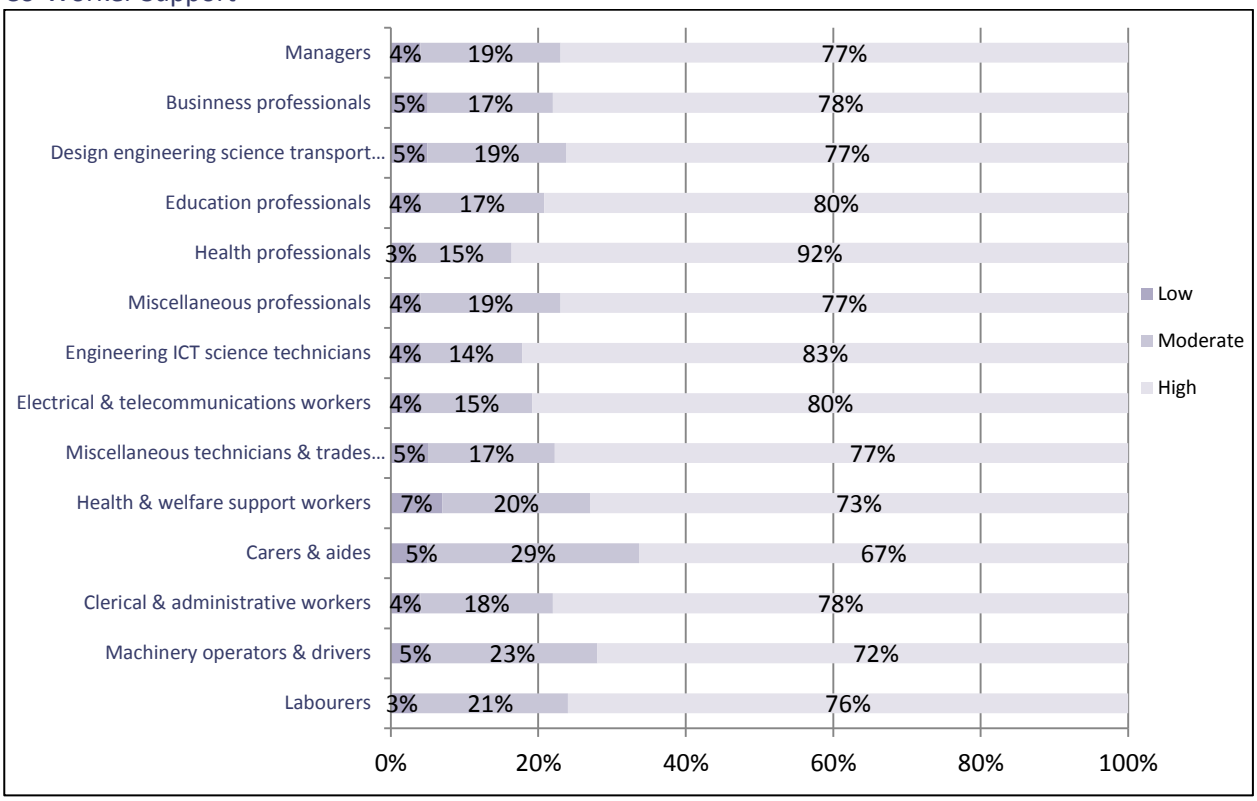
Job Control



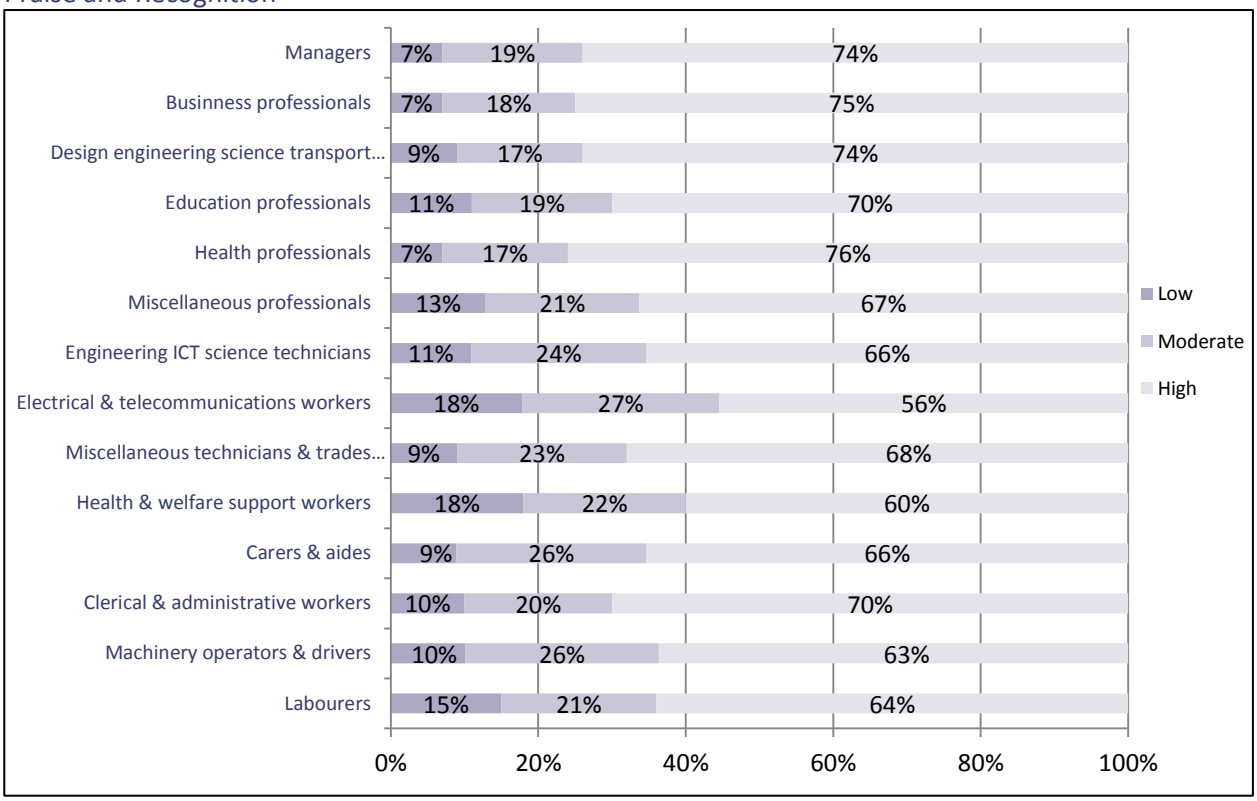
Supervisor Support



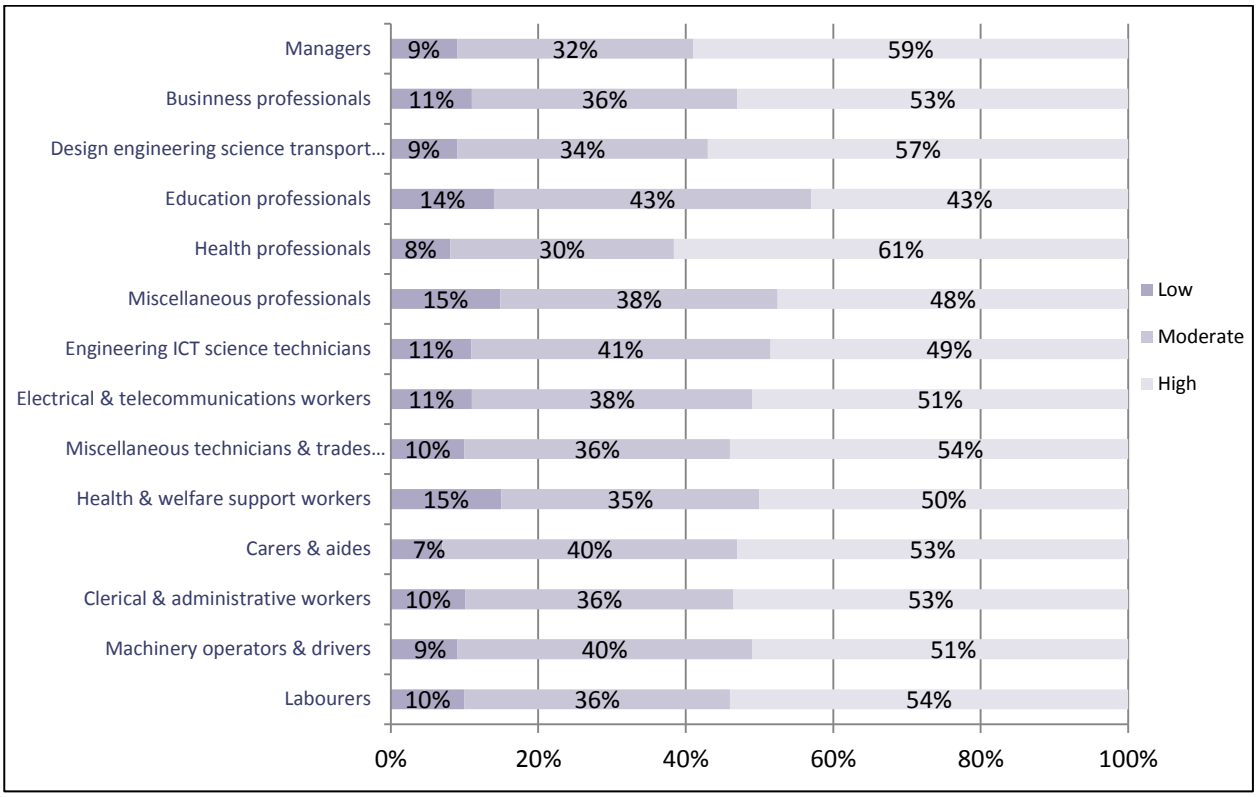
Co-Worker Support



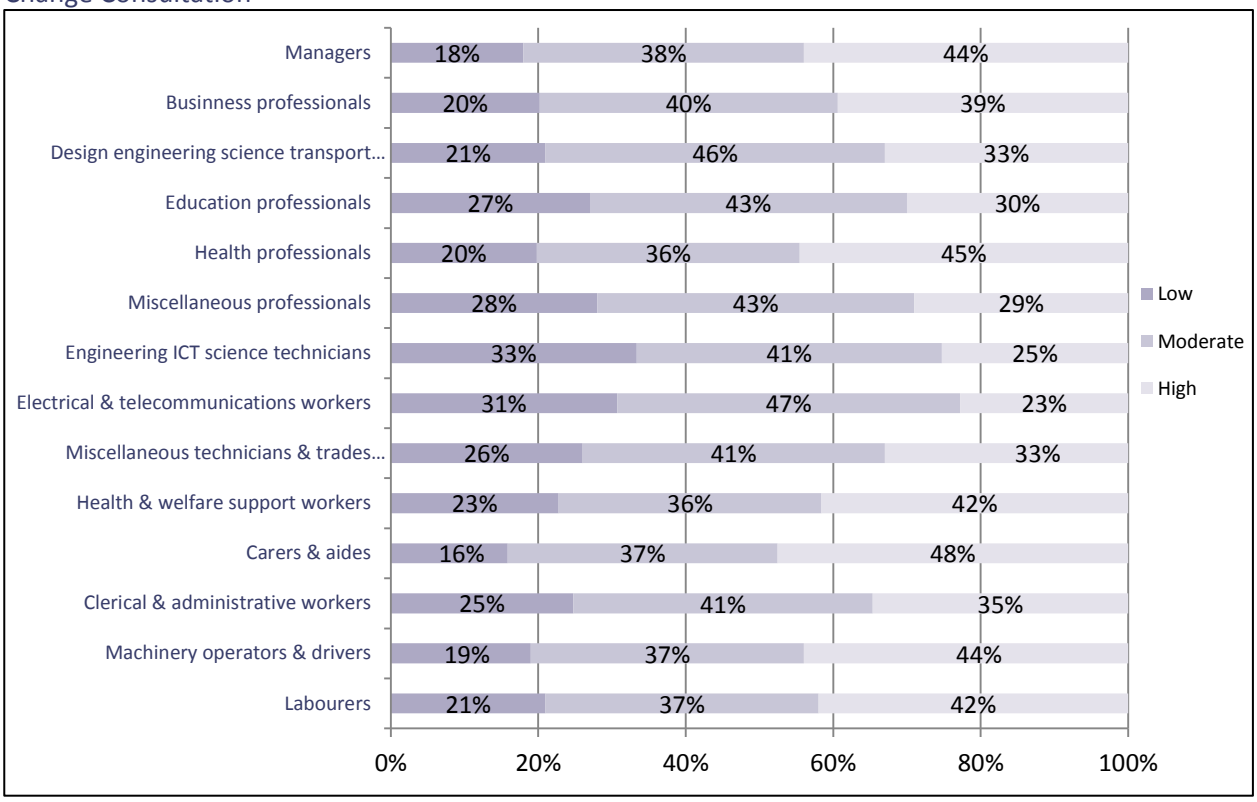
Praise and Recognition



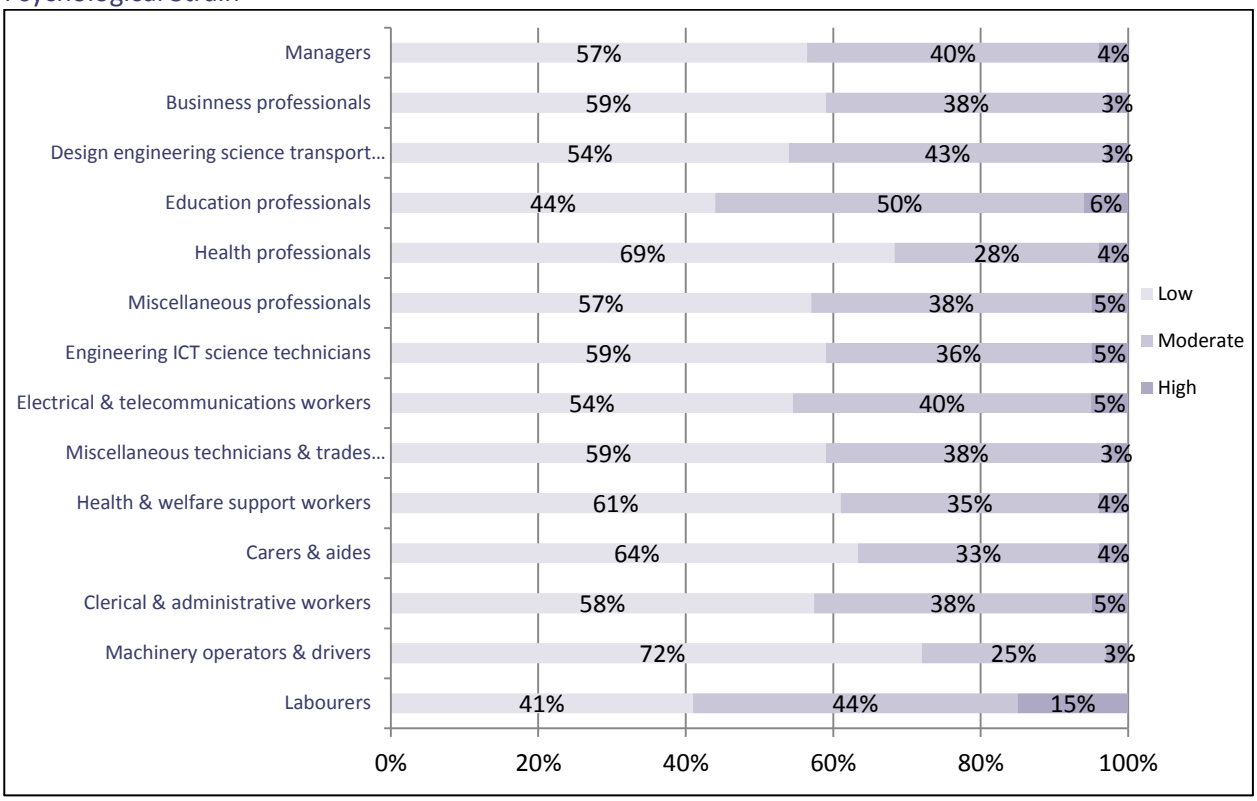
Procedural Justice



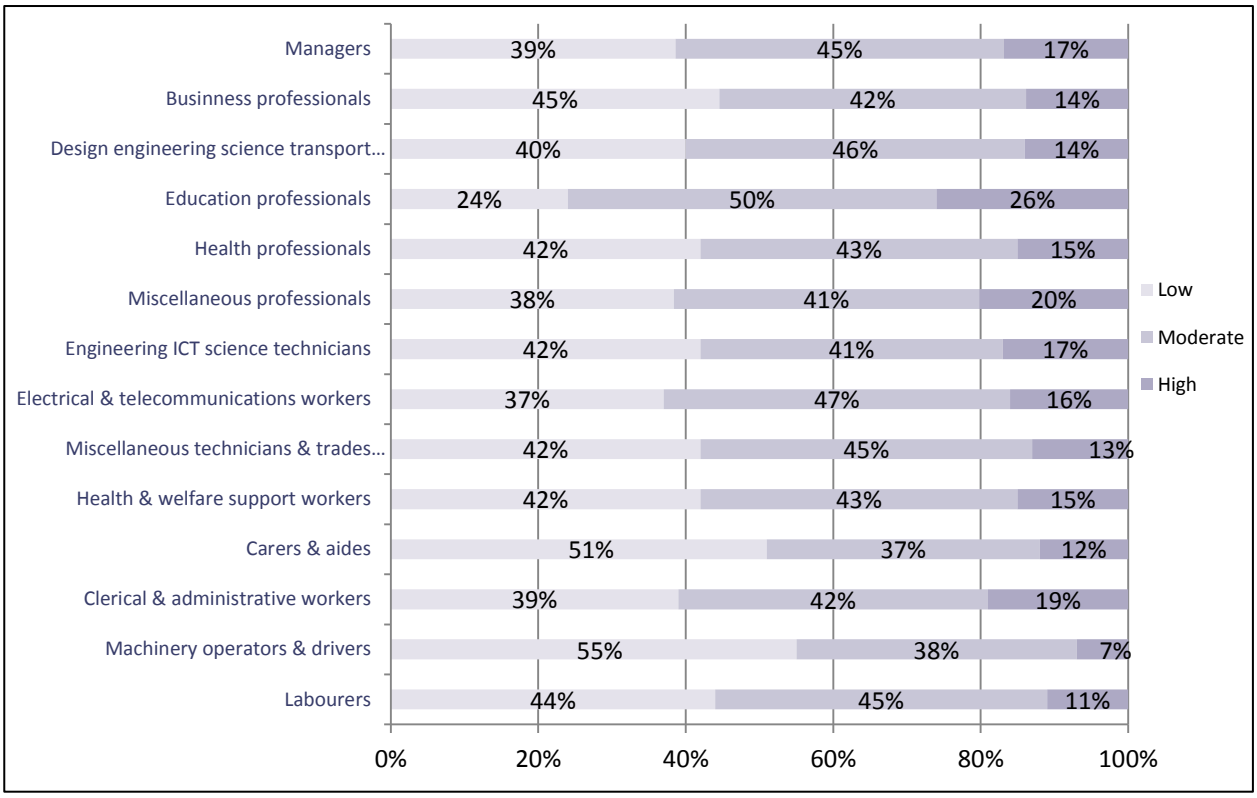
Change Consultation



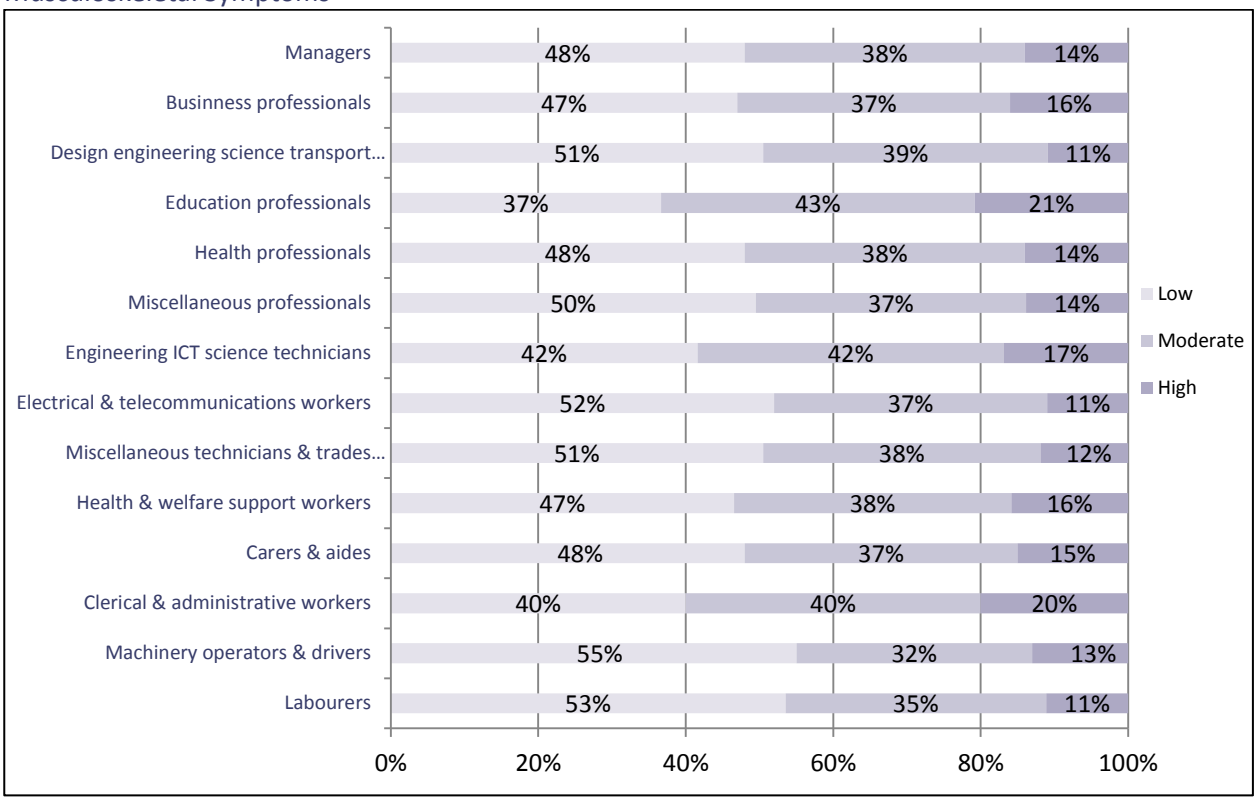
Psychological Strain



Job Burnout



Musculoskeletal Symptoms



Appendix 5

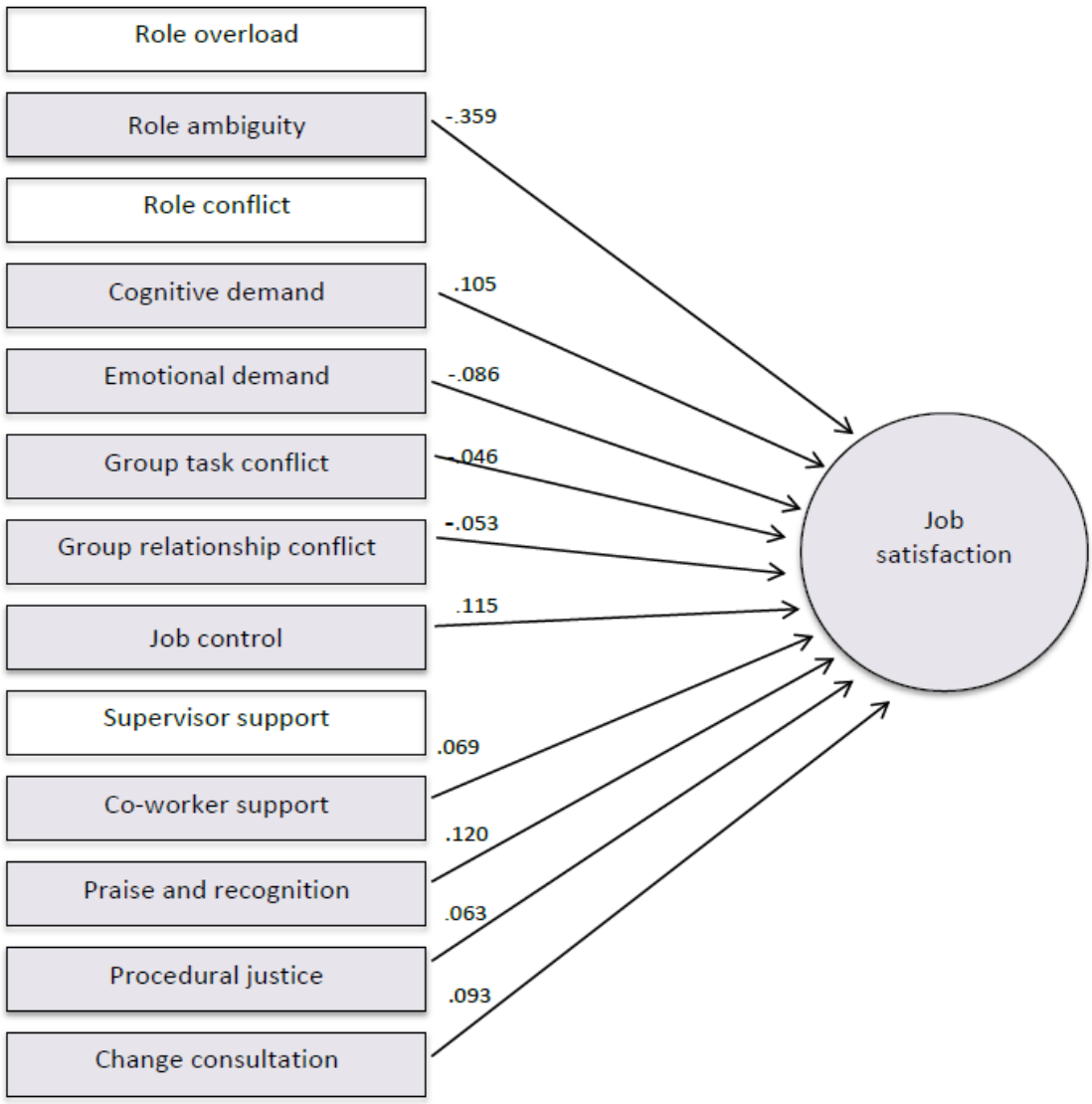
Risk Analysis for Job Satisfaction

A single multi-level linear regression (taking into account the clustering effect of organisation) was undertaken to examine the extent to which the 13 Psychosocial Hazards were associated with Job Satisfaction (*ICC* = 0.049, *Z* = 4.917, *p* < .001, *DEFF* = 7.418).

	Job Satisfaction n = 10,252		
Psychosocial Hazard	*B*	*se*	*p*
Role overload	-.058	.019	
Role ambiguity	-.359	.022	*
Role conflict	.009	.012	
Cognitive demand	.105	.022	*
Emotional demand	-.086	.012	*
Group task conflict	-.046	.014	*
Group relationship conflict	-.053	.010	*
Job control	.115	.015	*
Supervisor support	.049	.019	
Co-Worker support	.069	.015	*
Praise and recognition	.120	.015	*
Procedural justice	.063	.013	*
Change consultation	.093	.013	*
Constant	2.383	1.126	

Notes: Table entries are unstandardised partial regression coefficients (*B*), standard errors (*se*) and significance tests (*p*); * indicates that the psychosocial hazard in question is significantly related to Job Satisfaction at *p* < .001.

Because multi-level regression modelling techniques do not provide a universally accepted indication of effect size, the model was repeated not controlling for the effect of organisation in order to provide an indication of the amount of variance in Job Satisfaction that the 13 Psychosocial Hazards (as a set) explained: R squared = .390, F= 503.282, p = .000; thus, 39% of the variance.



Summary:

- Job Satisfaction is most strongly predicted by Role Ambiguity (*B* = -.359). Thus, a 1-unit increase in Role Ambiguity (e.g., going from 'often' to 'always' experiencing this job demand) is expected to lead to a .359 decrease in Job Satisfaction, other things being equal.
- The next strongest psychosocial hazard is Praise and Recognition (*B* = .120).
- Other psychosocial risk factors with significant relationships to Job Satisfaction include Job Control (*B* = .115), Cognitive Demand (*B* = .105), Change Consultation (*B* = .093), Emotional Demand (*B* = -.086), Co-Worker Support (*B* = .069), Procedural Justice (*B* = .063), Group Relationship Conflict (*B* = -.053), and Group Task Conflict (*B* = -.046).
- Job Satisfaction is not significantly related to Role Overload, Role Conflict, or Supervisor Support.

Appendix 6

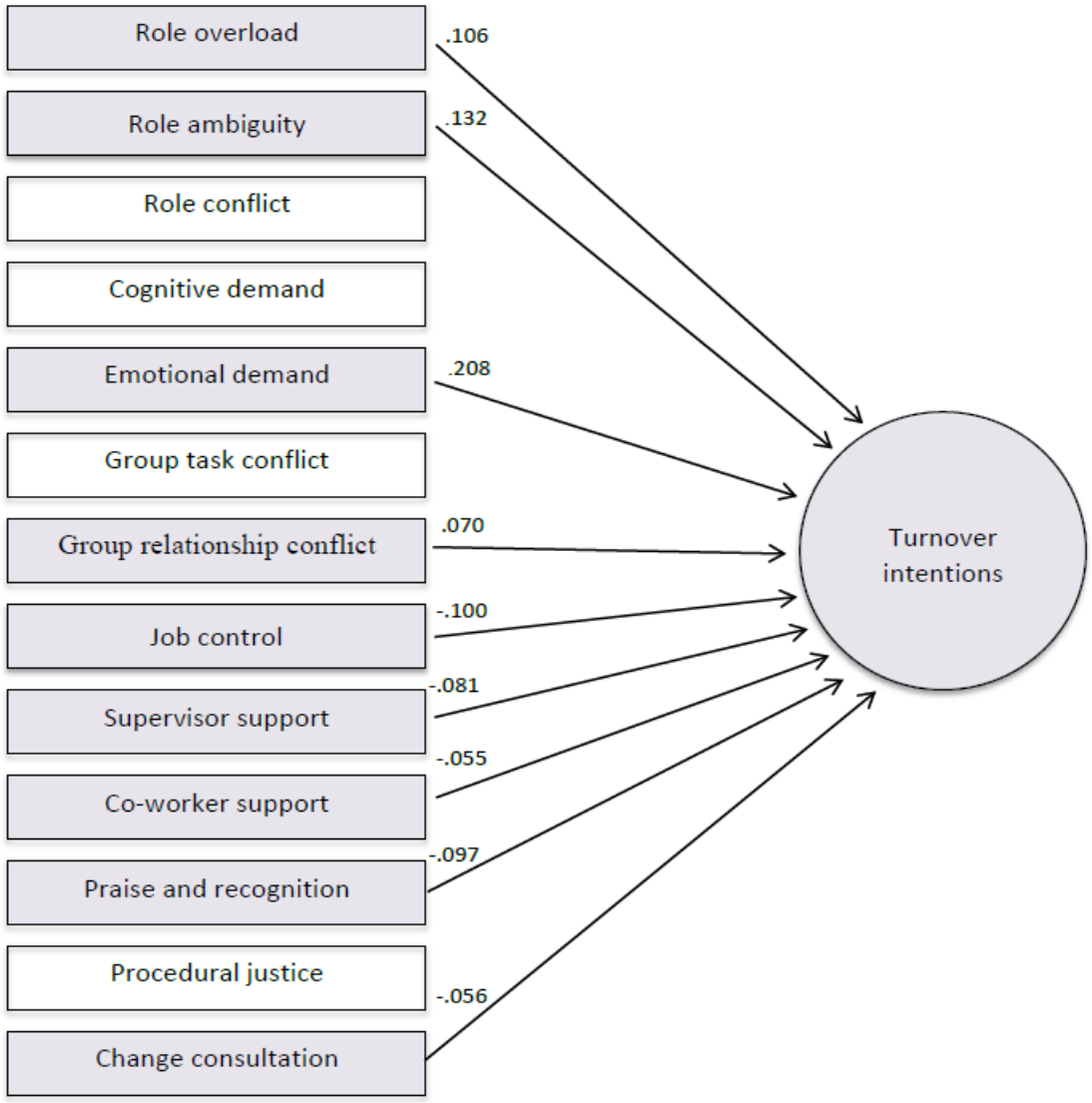
Risk Analysis for Turnover Intentions

A single multi-level linear regression (taking into account the clustering effect of organisation) was undertaken to examine the extent to which the 13 Psychosocial Hazards were associated with Turnover Intentions (*ICC* = 0.026, *Z* = 4.989, *p* < .001, *DEFF* = 4.438).

	Turnover Intentions n = 10,349		
Psychosocial Hazard	*B*	*se*	*p*
Role overload	.106	.014	*
Role ambiguity	.132	.027	*
Role conflict	.042	.016	
Cognitive demand	-.040	.016	
Emotional demand	.208	.015	*
Group task conflict	.065	.022	
Group relationship conflict	.070	.016	*
Job control	-.100	.011	*
Supervisor support	-.081	.015	*
Co-Worker support	-.055	.014	*
Praise and recognition	-.097	.014	*
Procedural justice	-.012	.013	
Change consultation	-.056	.013	*
Constant	.584	2.780	

Notes: Table entries are unstandardised partial regression coefficients (*B*), standard errors (*se*) and significance tests (*p*); * indicates that the psychosocial hazard in question is significantly related to Turnover Intentions at *p* < .001.

Because multi-level regression modelling techniques do not provide a universally accepted indication of effect size, the model was repeated not controlling for the effect of organisation in order to provide an indication of the amount of variance in Turnover Intentions that the 13 Psychosocial Hazards (as a set) explained: R squared = .300, F= 340.360, p = .000; thus, 33% of the variance.



Summary:

- Turnover intentions is most strongly predicted by Emotional Demand (*B* = .208). Thus, a 1-unit increase in Emotional Demand (e.g., going from 'often' to 'always' experiencing this job demand) is expected to lead to a .208 increase in Turnover Intentions, other things being equal.
- The next strongest psychosocial hazard is Role Ambiguity (*B* = .132).
- Other psychosocial risk factors with significant relationships to Turnover Intentions include Role Overload (*B* = .106), Job Control (*B* = -.100), Prasie and Recognition (*B* = -.097), Supervisor Support (*B* = -.081), Group Relationship Conflict (*B* =.070), Change Consultation *B* = (-.056), and Co-Worker Support (*B* = -.055).
- Turnover Intentions is not significantly related to Role Conflict, Cognitive Demand, or Group Task Conflict.

Appendix 7

Feedback from Participating Managers

A sample of 11 managers who participated in the People at Work Project was asked 3 questions regarding their organisation's involvement. The purpose of these questions was to conduct a qualitative evaluation of the People at Work Project. A research assistant employed by the Universities conducted all interviews one-on-one, either face-to-face or via telephone. Approval to conduct the interviews was obtained by the Human Research Ethics Committees of QUT and ANU. The key points made by participants are summarised below:

Question 1:
Overall, how did you find your organisation's participation in the People at Work Project?

Major Themes	Sub Themes
General Positive Comments	A very positive, worthwhile experience. The results demonstrated we clearly need to put a lot of work in, and I'm comfortable with that, because I think it's a balanced view of the organisation. It has been a really good process, and I have been really engaged in it. There has been a sense of hopefulness in the organisation that I attribute to the project, so I really liked it.
Beneficial to Employees	Participation demonstrated to employees that the organisation is making a genuine commitment, and desire to truly understand critical organisational stressors. Engagement in the project was critical to its success; seeing an increase in participation was important because it demonstrated greater trust by employees in the organisation. The project helped employees feel listened to. My workgroup's participation was effective.
Positive Change	It was well received and there was a practical use of the information. The feedback received through the survey shows that we are improving which is encouraging. Critical to our participation was creating an action plan with staff, and following through on that action plan. The survey meant that we could see whether or not we were actually having an impact, because you can do all sorts of activities and have all sorts of initiatives and actually not be addressing the problem. The survey has been crucial and came at the right time. I really welcomed it because it enabled us to drill down further into workgroups, so that we can actually iron out some of the creases that are associated with big change. The organisation's participation in the project represents a cultural shift that places health and well-being more at the heart. I think employees treated the survey with a healthy scepticism. The organisation was interested in the results and in delivering change, and in this instance it was positive change. It would be interesting to repeat the survey again now to see any changes in participation/ideas/interaction during groups. There has been an improvement in levels of cynicism as employees now feel issues will be addressed. There is a long way to go in terms of culture shift but I am encouraged by the fact people are expressing more to me now. There is a lot of action we will continue to build as a result of it.

Question 2:
What about the People at Work Project was useful/not useful?

Major Themes	Sub Themes
Useful Aspects	All of the information was useful in one form or another. Everything was useful. I think all of it was useful. Completing the survey twice. Anonymity was beneficial (because normally staff have a fear of retribution). It enabled us to understand what the problems and issues were, create a plan, address those issues, and have a follow-up. The survey was helpful because it meant that we could see whether or not we were actually having an impact. Consistency of the survey method. Provision of good comparative data. It focused the organisation on a couple of programs such as positive workplace behaviour to address issues regarding values, attitudes, and bullying. It was a real positive that external people conducted the process. It gave employees skills to be able to identify their triggers, and was a good tool for managers in terms of supporting employees. It showed from a cultural perspective that the organisation feels this is important, and issues are being addressed; it is a good benchmark for a healthy organisation. It was a good measure of where we were; it provided an outlet for people who were feeling under attack. It allowed us to say where we are going and what we can do to improve things. Has been fascinating to see how people use the information. The feedback sessions have been very good. The seminars were really good. It is a really good thing to have; it takes stock of where you are and what you can improve on. You have to look at the big picture; I think the challenge for management is finding out what the root causes are and getting everyone's perspective on things. It provided tangible data to start addressing issues; it is a great way that people can feed in and feel there is change. Results of the first survey were really interesting. I was happy with it; I was not surprised by the second survey results, so I was content with it. The face-to-face presentations were critical and added value because if you are prepared to come and talk through the results with us, then we have the ability, and are prepared to work through the results with our team, rather than treating the results as just another survey.
Less Useful Aspects	Some of the questions in the survey were a bit leading. Lack of consideration regarding external variables that may have influenced the results. The survey related to immediate management, and did not address problems with higher-level management. Lack of provision of feedback regarding open-ended comments. Due to the frequency of previous surveys and lack of change, there was a cynicism regarding engagement. There is an opinion that if we give poor results, then we will be punished.

Question 3:
Were the reports useful? How were they used in your organisation?

Major Themes	Sub Themes
General Feedback Regarding Reports	The information from the results has been good. All the information is useful in one form or another. It is useable, workable, and action could be taken from that information, or teased out within the team. The results were detailed, and the depth of information was useful. The specific work group details were useful. The reports were useful; the fact that they identified red flags according to workgroups was good because you could really assess areas of opportunity and areas of concern. It was difficult to understand the negatives and positives in the report but the red and green colours were helpful. There are some challenges because I think there are negative behaviours that you do not necessarily want feedback on; you just want the positive feedback; so there are challenges, but I think we are on the right track. Having the face-to-face presentation of the results was really good and critical. We had lots of questions after the briefing session because we had never seen anything like it before.
How Reports Were Utilised	<u>Positive Comments:</u> Each of the areas got to view the outcomes of the survey and to look within their own areas and deal with the feedback; they needed to do that and I think that was useful. The results were used to run focus groups, which enabled employees to discuss results. Participation in the focus groups was quite high. I liked how senior managers dealt with the results. It focused the organisation on a couple of programs such as positive workplace behaviour to address issues regarding values/attitudes and bullying. The information regarding bullying was critical and enabled us to better communicate what is or is not acceptable behaviour in the workplace. There were training sessions on the issue of bullying, focused on reasonable management action. There was training that came as a consequence of the results. While some employees do not view training as a solution, I found it very interesting. It was interesting to see employees' participation; some were reluctant, while some really embraced it, and saw subsequent training as an opportunity to shape things. The outcomes of the second survey enabled me to see whether my team had improved, and I found it hard when they had not. There have been good changes, for example, all-staff meetings, and we have been able to address issues regarding communication. I think the follow-up workshops/training have given people more confidence. Management want a happy workforce, and I think management intentions have been well communicated and well received. <u>Negative Comments:</u> The results were used to say we were failing in certain areas. I think we have only been given parts of the report; without a broad picture of all of the results you cannot interpret them correctly. I think my team has been a bit cynical about the way in which the information was reported back to them. I am concerned that the process of trying to mitigate stressors creates new stressors.