

**THE RELATIONSHIP BETWEEN WORK  
CHARACTERISTICS, WELLBEING,  
DEPRESSION AND WORKPLACE BULLYING  
SUMMARY REPORT**



**JUNE 2013**



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# INTRODUCTION

This summary report can be used with or without reference to the material in the corresponding [technical report](#). In this summary square brackets enclose references to sections of the technical report that contain the relevant literature citations and detailed descriptions of analyses and findings. Tables and figures are numbered according to the technical report.

## Background

With the movement from a manual to a knowledge-based and service-based economy, the psychosocial characteristics of work will become an increasing focus of efforts to promote health and avoid injury and lost productivity in the workplace. Consideration of psychosocial work characteristics reflects theoretical and empirical evidence of the association between the social environment at work, psychological processes and workers' physical and mental health. Job strain and effort-reward imbalance are among the most studied psychological work characteristics as they have been associated with significant health problems such as depression.

Depression is one of the leading causes of disability and disease burden in Australia. It is associated with decreased productivity and high levels of sickness absence. Reports from the World Health Organization's World Mental Health surveys have rated depression and bipolar disorder as the two most severely disabling mental disorders in developed countries [2.2.4]. Analysis of multi-nation data from the WHO World Mental Health surveys has shown that in higher income countries depression is associated with an average of 35 days out of role per year [2.2.4]. In Australia depression and anxiety disorders have been estimated to be the leading causes of non-fatal burden of disease among men and women [2.2.4]. Analyses of the National Survey of Mental Health and Wellbeing indicated that over 40% of Australians are likely to have experienced a mental disorder in their lifetime [2.2.4]. Depression is also a risk factor for other disabling chronic conditions and often coexists with conditions like cardiovascular disease and major neurological impairment.

The measurement and evaluation of the impact of psychosocial work characteristics is a major focus of The Australian National University's Personality and Total Health (PATH) Through Life Project. The PATH study began in 1999 as an ongoing community survey of residents of Canberra and Queanbeyan. It includes three groups of participants aged in their early 20s, 40s and 60s at the beginning of the survey.

Since it began the PATH study has included a focus on the intersection between work and health. This focus acknowledges the fact that the workplace represents an important context in which to promote health and wellbeing as well as being a potential source of health risks and adversities. Health is a key factor that needs to be considered in efforts to achieve policy goals related to productivity and workforce participation. Conversely, the social and economic consequences of disability and ill-health are manifest through low levels and disrupted patterns of workforce participation. The PATH study provides a unique longitudinal resource to inform policy in these and related areas. In 2011–2012 Safe Work Australia and the Centre for Research on Ageing, Health and Wellbeing at The Australian National University formed a partnership to undertake wave 4 data collection from a group participating in the PATH study. This undertaking was called the Work Wellbeing Project.

## **Main messages from the Work Wellbeing Project**

### **Key findings**

- *Respondents with significant depression symptoms had double the risk of taking time off work than those without depression symptoms. Depression was more strongly associated with unpaid sick leave than with paid sick leave.*
- *Respondents who reported low levels of support from their colleagues and managers reported more than twice the rate of significant depression symptoms than those who reported higher levels of support.*
- *For respondents who strongly advocated working to meet material needs, the perception of insecure employment was associated with greater risk of depression compared to those in more secure employment.*
- *Workplace bullying was strongly associated with increased risk of significant depression symptoms.*
- *Workplace bullying was associated with double the risk of having suicidal thoughts.*
- *Respondents with significant depression symptoms measured 4 years earlier had almost double the risk of reporting experiencing workplace bullying 12 years later.*
- *Experiences of violent or intimidating workplace bullying were related to lack of support from colleagues and poor organisational culture.*

### **Practical implication**

- *Adequate support from colleagues and managers and fair reward for effort may help to prevent the occurrence or minimise the consequences of depression and workplace bullying.*

## **Aims of the report**

This report provides an overview of the Work Wellbeing Project and highlights the main findings from the first analysis of data. The findings provide a number of insights into the inter-relationship between the psychosocial aspects of work, health and productivity, and describe important policy-relevant issues. The current findings also provide a guide to future research.

## **Data collection methods and limitations**

Participants in the PATH study are reinterviewed every four years. The purpose of the Work Wellbeing Project was to conduct the wave 4 interviews with respondents in the youngest PATH study sample (the PATH '20+' sample), aged 32–36 years in 2011–2012. The project involved data collection through an online survey and face-to-face interviews and the inclusion of new items focussing on salient work characteristics and experiences. The broad parameters for data collection were:

- face-to-face interviews with at least 500 PATH study respondents which would include a psychiatric clinical interview, tests of physical health, cognitive assessment, and survey items related to workplace bullying and attitudes to work, and
- repeating the core PATH survey questionnaire in an online format with the addition of items related to work-related injury, career interruption and planned return to work, sick leave/days out of role, and aspects of the psychosocial work environment not included in previous PATH surveys.

Overall, 2050 respondents were in-scope for the wave 4 survey. This comprised the 1978 people who participated in the wave 3 survey and a further 72 people who participated in the wave 2 survey but were temporarily unavailable at the time of the wave 3 survey.

To enable the face-to-face component of the data collection process a subsample of 580 respondents was randomly selected and invited to complete the online survey and then participate in a personal interview. The aim was for the online assessment to occur no more than two weeks before the face-to-face interview. The interviewers contacted all other potential respondents by telephone and invited them to participate in the online survey. In the end there were 1286 online respondents and 546 face-to-face respondents.

Reflecting the Canberra/Queanbeyan region, just over half of the working respondents were employed by either the Commonwealth or a state/territory government and most were employed in professional or semi-professional occupations. While this may raise concerns about the generalisability of the research findings, it is important to recognise that occupational samples are also subject to limitations to generalisability. Further, some of the most profound insights in epidemiological research have come from well-studied and documented longitudinal studies which themselves had limitations around generalisability; for example, the Whitehall study, the Framingham study and the British Doctors study. A necessary feature of such research is the presence of variability in exposure levels that can be linked to outcomes and a justifiable assumption that while the sample may not be representative of the broader population on all characteristics, the relationship observed between exposures and outcomes is similar in the population examined as in other populations.

Although the combined population of Canberra and Queanbeyan may differ in some ways from the broader Australian population, there is representation in the sample across important socio-demographic dimensions such as social disadvantage and employment circumstances. At an average population level the Canberra community is relatively advantaged. However, this prosperity is not shared evenly amongst all residents and about 13% of Canberra households are in the bottom 20% of the nation's incomes. Further, the town of Queanbeyan does not share Canberra's socio-economic advantage and is closer to the national average on a variety of economic measures [4.2]. Hence there is no reason to anticipate that any association between, for instance, insecure employment and depression or between workplace bullying and suicidal thoughts would be different in the PATH sample to what one would observe in a sample drawn from another Australian town or city. Other features of the sample include the fact that half of the respondents were employed in managerial or supervisory roles, the majority had permanent employment, and on average respondents worked 40 hours per week.

# MAIN FINDINGS

## Work wellbeing issues

### Work-related injury

The items assessing the experience of work-related injuries and illnesses were introduced in the online questionnaire at wave 4 [2.2.2]. Overall 7% of respondents reported that they had experienced a work-related injury or illness in the past 12 months. There were no significant gender differences in the reported experience of work-related injuries [5.2]. Table 5.1 lists the types of injuries/illnesses reported by the survey respondents.

By comparison, the most recent published data on workplace injury and illness from the Australian Bureau of Statistics (ABS) [5.2] reported a somewhat lower overall injury rate across all ages (5.3%) and a rate that was lower again for the age-range comparable to the PATH 20+ sample (4.0%). The profile of injuries also differed between the ABS and PATH samples. Compared to the PATH results, the ABS data reported for all ages combined showed a higher proportion of injuries within the categories of fractures (7.5%), sprains/strain (30%), cut/open wound (15.7%), crushing injury/internal organ damage (7%) and burns (5%). In contrast, the PATH data show a higher proportion of injuries in the categories of chronic joint or muscle condition (vs 17.7% in the ABS data), superficial injury (vs 3.8%) and stress or other mental conditions (vs 4.9%). These differences most likely reflect differences in the occupational profile of the PATH sample compared to the broader Australian population.

**Table 5.1: Reported experience of work-related injury in the past 12 months**

Type of injury/illness	Percent of injuries/illnesses
Chronic joint or muscle condition	24.7
Sprain/strain	21.9
Stress or other mental condition	15.1
Superficial injury	8.2
Cut/open wound	6.9
Fracture	5.5
Crushing injury/internal organ damage	1.4
Burns	1.4
Other	15.1

We examined whether the risk of work-related injury is associated with key socio-demographic, occupational, health, lifestyle, and personality characteristics. Where relevant, measures used in this analysis were drawn from the previous wave of data collection conducted four years earlier so that the analysis is investigating predispositions and risks for later injury rather than the consequences of injury. The exception to this was the respondents' current occupation.

Respondents who were not in a marriage-like relationship had an elevated risk of a work-related injury [5.2]. Consistent with much published data, those working in the trades or manual occupations had an elevated risk of injury, particularly sprains and strains [5.2], compared with those in professional occupations. The analysis also shows that respondents employed by non-government organisations had an elevated risk of injury relative to those

working in the public sector. The personality trait of impulsivity measured four years before the assessment of work-related injury is strongly associated with risk of subsequent work-related injury and identified an important individual characteristic at play in the workplace. Similarly, prior symptoms of depression also increased the risk of work-related injury as did the personality trait of ruminative style when the injury was classified as stress or other mental condition [5.2]. It was somewhat of a surprise that prior harmful levels of alcohol consumption were not related to experience of work-related injury. Overall these results highlight the relevance of factors such as personality, health and employment sector to an individual's risk of reporting a work-related injury.

## **Sick leave**

The data collected through the online survey showed that 27% of respondents reported that they had stayed away from work for more than half a day in the last four weeks because of an illness or injury [2.2.4]. Figure 5.1 presents the characteristics of those who reported taking sick leave. The results demonstrate that women were more likely to report taking sick leave than men and that those employed in the private or non-government organisation (NGO) sector were least likely to take sick leave compared with Commonwealth Government employees. There was no significant difference in the use of sick leave across the broad occupation classification, by managerial status, or between those employed full-time or part-time [5.4].

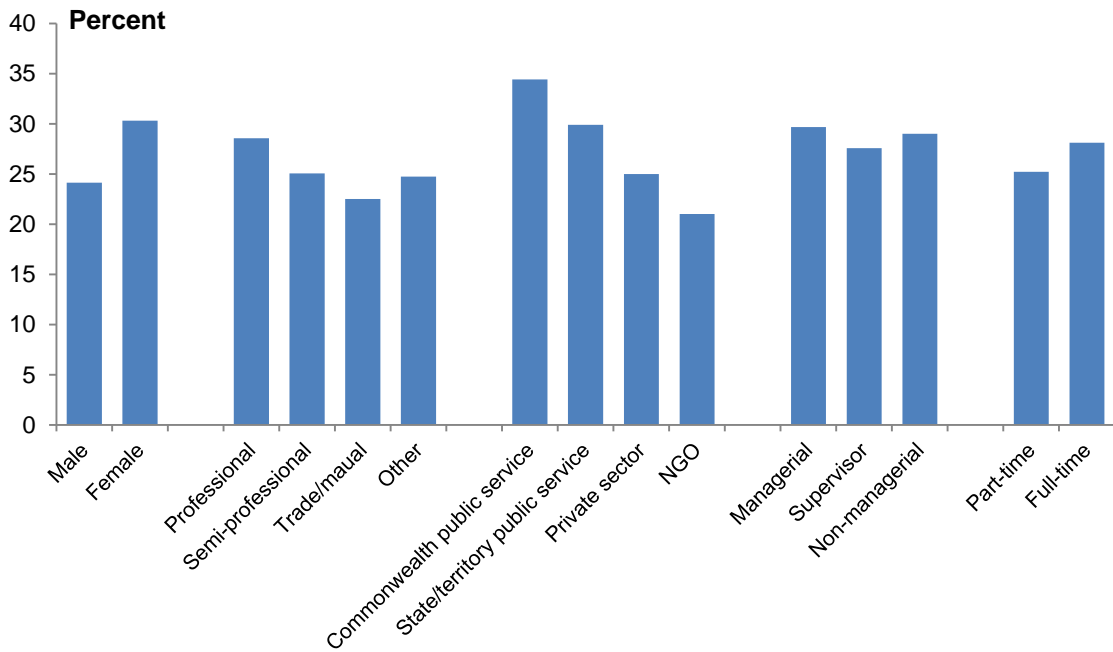
Figure 5.2 shows that women were more likely than men to report using unpaid sick leave, although this difference was not statistically significant [5.4]. Respondents clearly more likely to use unpaid sick leave were those working in the private sector versus Commonwealth Government employment and those in non-managerial positions versus managers. A similarly strong difference was evident for those working part-time compared to those working full-time [5.4].

Figure 5.3 presents data on the number of days of sick leave taken by PATH survey respondents in the past four weeks. Overall the average number of days of sick leave for the total sample of respondents was 0.8, however amongst those who had taken sick leave the average was three days with a range of 1–28 days [5.4].

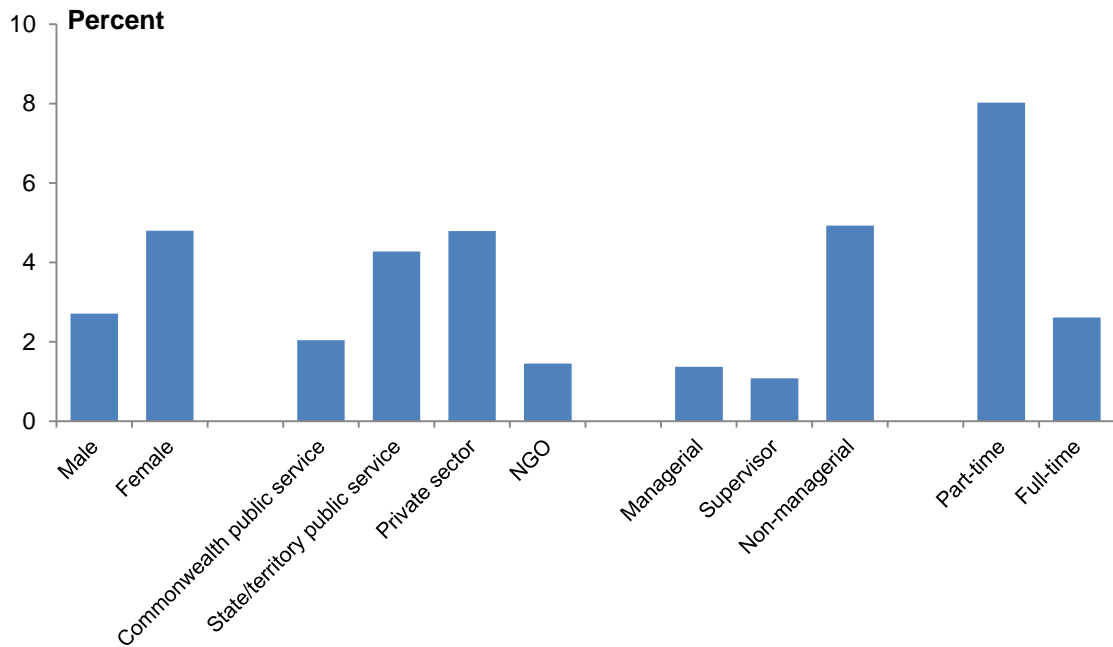
Respondents with symptoms of depression had a doubling of the risk of days off work [5.4]. This was above and beyond the influence of other factors such as part-time work and gender. On the basis of these findings it is estimated that respondents without significant depression symptoms had an average of 0.6 days of sick leave in the past four weeks compared to 1.6 days for those with significant depression symptoms [5.4].

Depression was also strongly associated with the use of unpaid sick leave. Respondents with significant depression symptoms were over 11 times more likely to take days of unpaid sick leave than were those without depression symptoms [5.4], with predictions of those with depression taking on average 0.5 days of unpaid sick leave versus 0.05 days for those without depression [5.4].

**Figure 5.1: Proportion of respondents reporting any sick leave in the past 30 days by respondent characteristics**

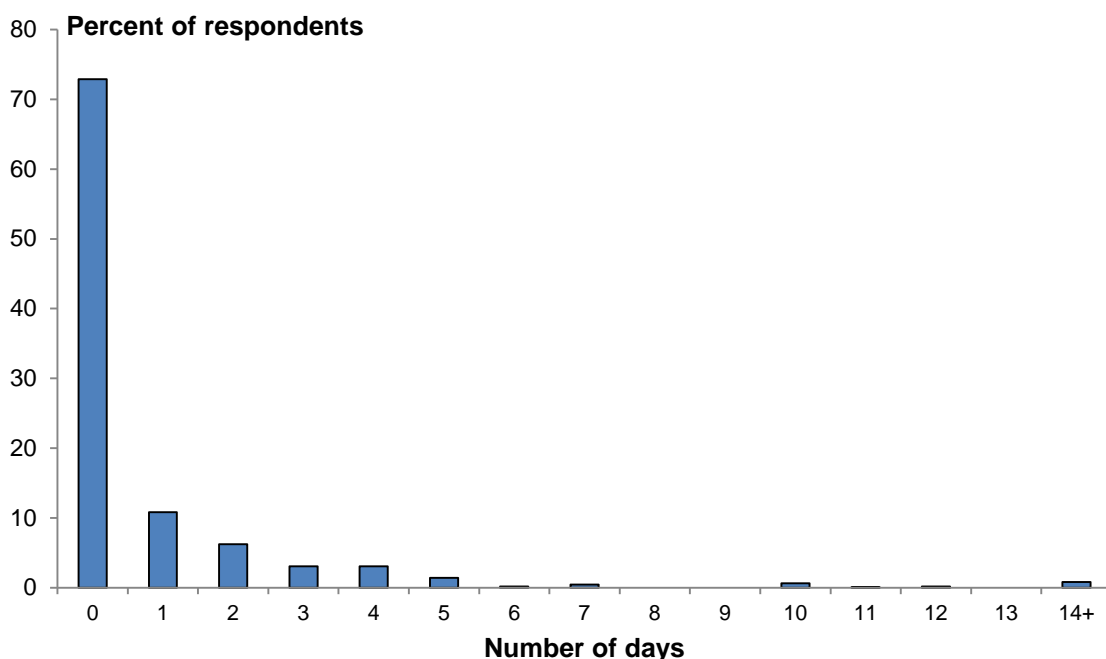


**Figure 5.2: Proportion of respondents reporting any unpaid sick leave in the past 30 days by respondent characteristics**





**Figure 5.3: Number of days of sick leave in past 30 days**



## Work factors associated with depression

Respondents identified with major, minor or sub-clinical depression according to the scoring protocols of the Patient Health Questionnaire (PHQ) depression scale were classified with significant depression symptoms for the analyses presented in this report [2.2.7]. Based on answers to the PHQ it is estimated that 21% of 32–36 year old respondents to the PATH wave 4 survey experienced some level of depression symptoms: 11.7% at the sub-clinical level, 4.5% with minor depression, and 4.7% with major depression.

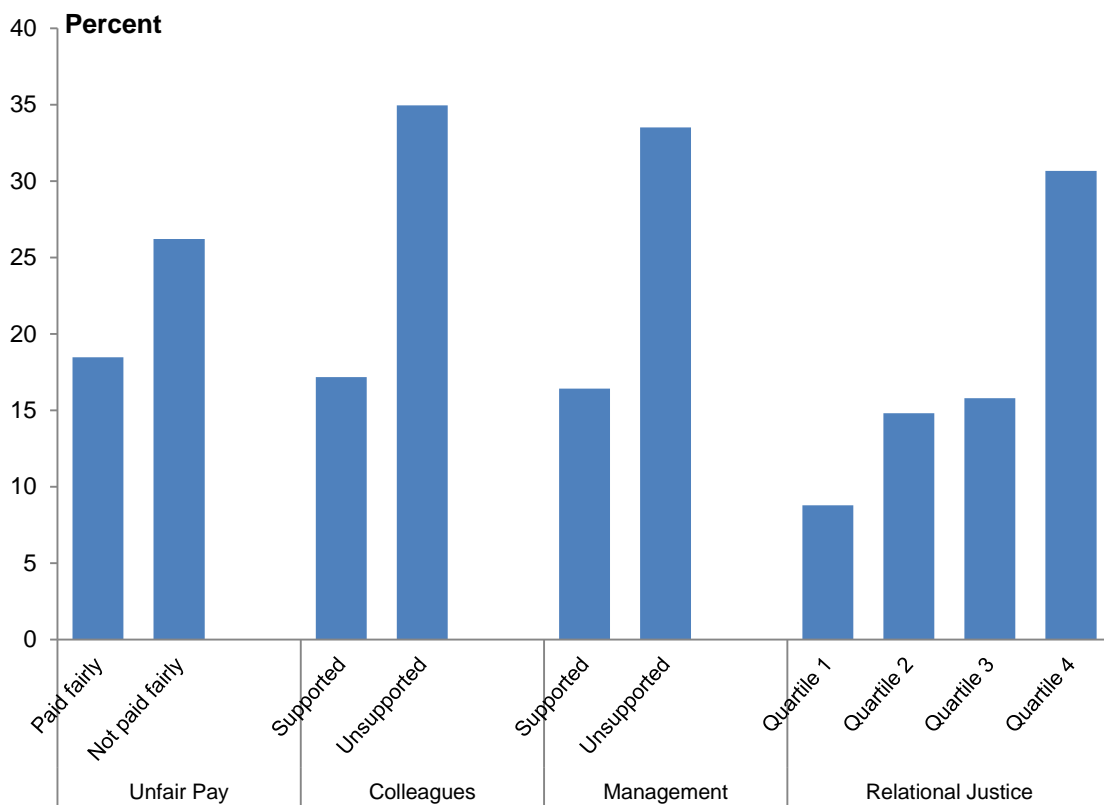
Figure 5.5 presents the prevalence of depression symptoms for the different psychosocial characteristics examined. This figure shows that the perception of unfair pay is associated with increased risk of depression [5.5].

Two items were included in the wave 4 survey assessing reported support from work colleagues and from managers [2.2.3]. Overall 86.7% of working respondents reported receiving help and support from their colleagues and 79.5% reported receiving help and support from their manager. There was evidence that those respondents in semi-professional and trade/manual occupations reported lower levels of support from colleagues compared to those in professional occupations [5.5]. There was little difference across the respondent characteristics in the reported level of support from managers. Those employed in the Commonwealth public sector reported lower levels of support from managers compared to those employed in the state/territory public service and in comparison to those employed in NGOs [5.5].

Figure 5.5 shows that respondents who reported low levels of support from colleagues had twice the likelihood of having significant depression symptoms compared to those who report having support. Consistent with the association between support from colleagues and depression, low levels of support from one's manager was also associated with significantly higher risk of depression symptoms [5.5].

The wave 4 survey included five items assessing aspects of organisational culture, namely 'relational justice': superiors providing consistent and sufficient information, being willing to listen to problems, providing criticism or praise [2.2.3]. There was some evidence that those working in NGOs rated the organisational culture of their employer more favourably than employees from other sectors [5.5]. Figure 5.5 shows a pattern of increasing risk of depression with declining levels of relational justice, with those reporting the poorest organisational culture showing significantly greater risk of depression compared to those reporting the best organisational culture [5.5].

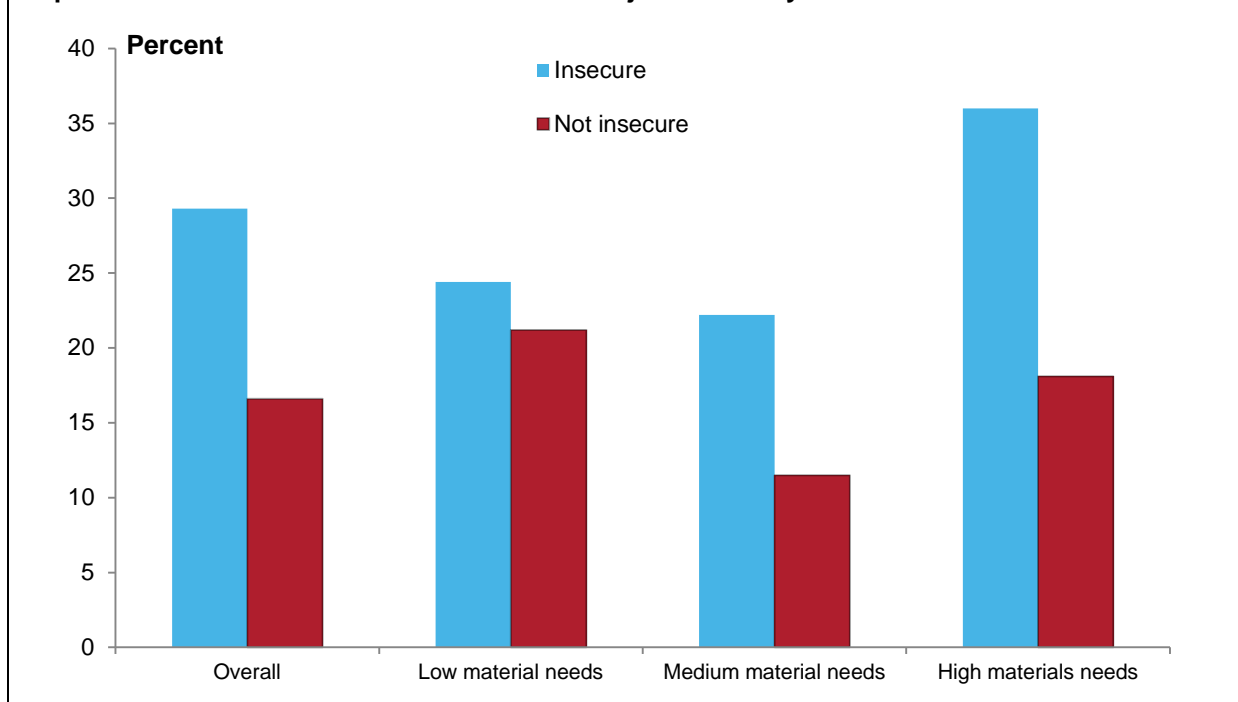
**Figure 5.5: Proportion of respondents reporting significant depression symptoms by psychosocial characteristics**



Notes: 'Relational justice' is an aspect of organisational culture; Quartile 1 = high relational justice, Quartile 4 = low relational justice.

Compared with those in more secure employment, respondents identified as having insecure jobs were more likely to experience significant depression symptoms [5.6]. This effect is largely restricted to those who report that the reason to work is to provide for their material needs (Figure 5.10). That is, job insecurity has no association with depression for those respondents who disagree with statements indicating that they are working to meet their material needs [5.6].

**Figure 5.10: Proportion of respondents reporting significant depression symptoms by reported importance of work to meet material needs and job insecurity**



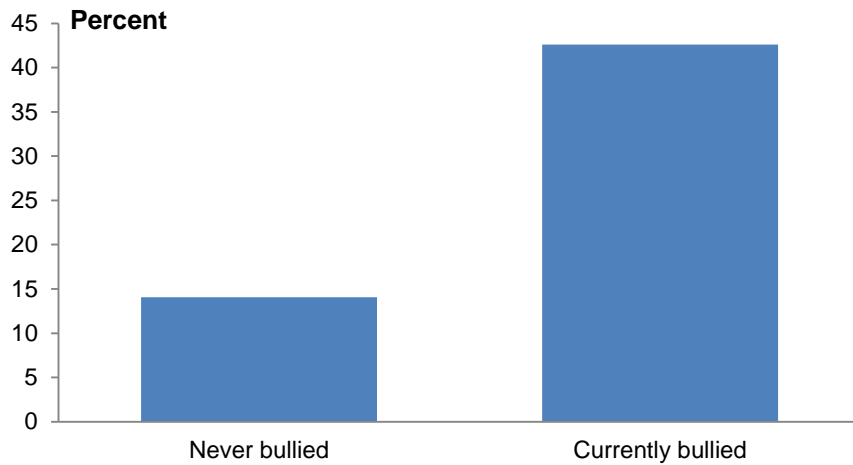
The face-to-face interview component of the PATH 20+ sample wave 4 survey included a battery of 21 questions assessing different bullying behaviours [2.2.5]. Consistent with the literature, we identified three types of workplace bullying from the face-to-face data: person-related bullying (spreading gossip and rumours, persistent attempts to humiliate), work-related bullying (unreasonable pressure to produce work, withholding necessary information, setting impossible deadlines), and violence and intimidation (verbal threats, threats of physical violence) [2.2.5, 6.2].

Respondents who reported that they were subject to current workplace bullying were more likely to have significant depression symptoms compared with those with no history of workplace bullying [6.2.3]. All other respondents with a history but not current bullying experience also reported elevated likelihood of depression relative to those who had never been bullied, though the effects were much weaker than for those currently bullied. Importantly, the relationship between current bullying experiences and depression was attenuated but remained significant after considering the influence of the following factors: sex, partner status, children, occupational skill level, part-time status, ruminative style, neuroticism, negative affect, mastery, resilience, social network size, and experience of adverse life events [6.2.3].

Over 40% of respondents who identify that they were currently experiencing workplace bullying were identified with significant depression symptoms compared with around 14% of those who report they have never been bullied in the workplace (Figure 6.10).

It is not just the experience of depression symptoms that is seen to be elevated among those who experience workplace bullying. Figure 6.11 presents data on respondents' report of suicidal thoughts in the past 12 months by current bullying status.

**Figure 6.10: Proportion of respondents reporting significant depression symptoms by whether experienced workplace bullying never or currently**



**Figure 6.11: Proportion of respondents reporting suicidal thoughts by type of suicidal thought and whether experienced workplace bullying never or currently**

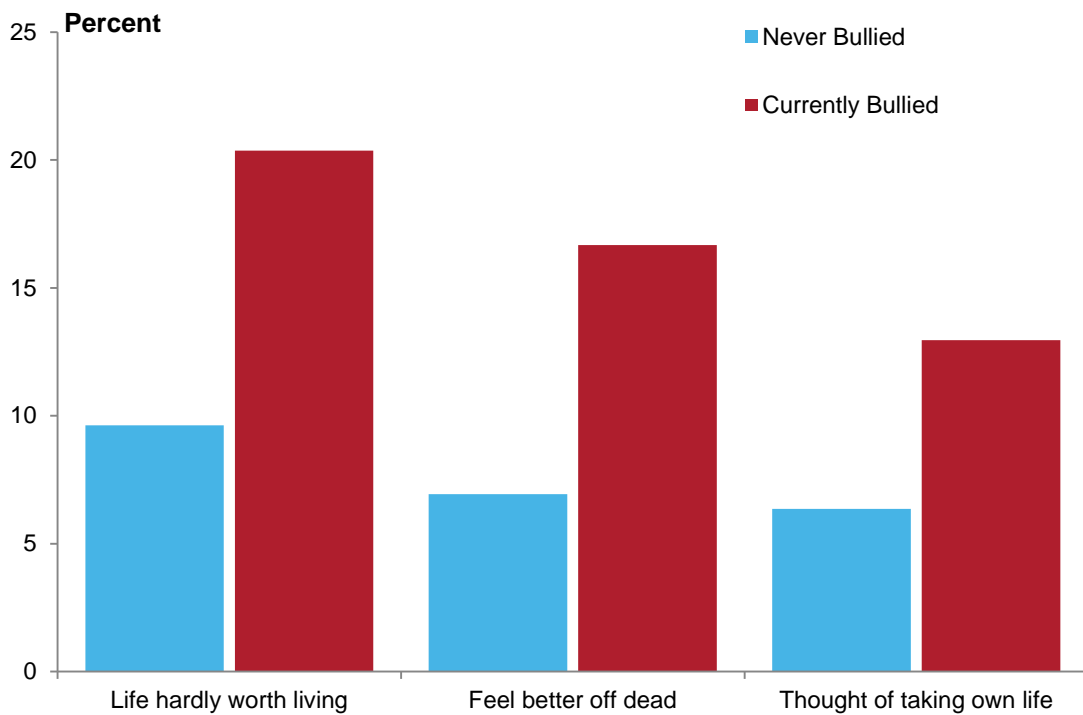


Figure 6.11 shows that those who are currently bullied at work are about twice as likely as those never bullied to report feeling that their life is hardly worth living, report feeling that they would be better off dead, and report that they had thought of taking their own life. These findings clearly demonstrate the potential personal costs and consequences of workplace bullying.

## **Work factors associated with workplace bullying**

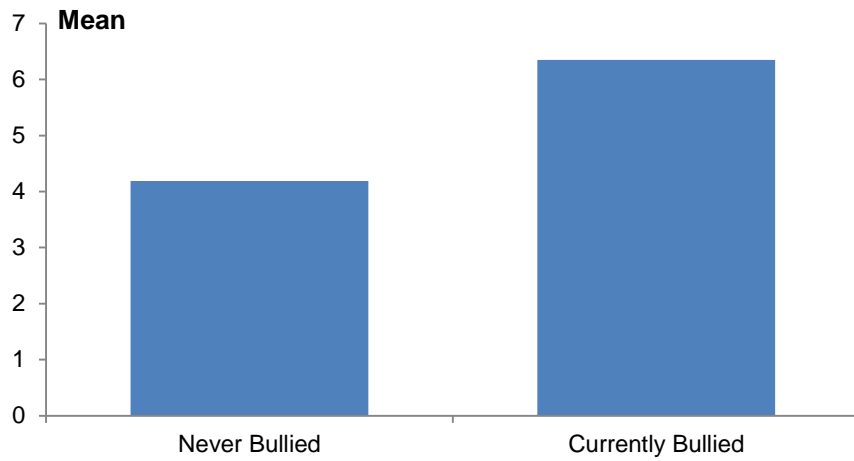
Several negative work characteristics – high job demands, low job control, unfair pay for effort, job insecurity, lack of support from manager, lack of support from colleagues, poor organisational culture – were associated with increased experience of person-related and work-related bullying [6.2.1]. However, there was little evidence that these psychosocial aspects of work, apart from lack of support from colleagues and poor organisational culture, were associated with reported experience of violent or intimidating bullying [6.2.1].

The online questionnaire of the PATH 20+ sample wave 4 survey presented a definition of bullying and asked respondents to report if they had been subject to such behaviours in the workplace over a specific time frame or ever [2.2.5]. This type of self-labelling item can produce a general estimate of prevalence which can be compared across studies, countries and workplaces. A series of analyses were conducted to consider the relationship between several workplace characteristics and the self-labelling measure of bullying in the current workplace. There was no difference in the prevalence of bullying reported by respondents in professional, semi-professional, trades or manual occupations and other occupations [6.2.1]. Similarly, managers and supervisors reported a similar level of bullying to those respondents in non-managerial positions. Interestingly, respondents in fixed-term and casual contracts were less likely to report bullying than respondents in permanent positions [6.2.1]. There was also no difference in the level of bullying reported by respondents employed in the Commonwealth public service, state/territory public service, NGO and private sectors. In addition, hours worked and reported household income were not associated with current bullying [6.2.1].

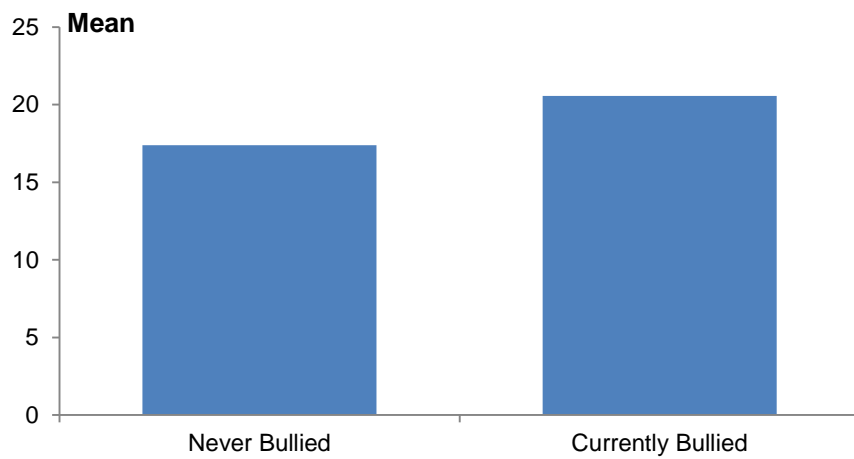
A series of analyses were conducted to consider the association between personality characteristics, personal characteristics and current workplace bullying experiences (Figures 6.4 to 6.9). Compared to those respondents who reported no experience of bullying, those who reported that they were currently being bullied demonstrated higher scores on measures of personality factors including neuroticism (e.g. worrying), negative affect (feelings) and ruminative style, and lower scores on measures of mastery (personal control) [6.2.2]. In terms of personal resources, those reporting current bullying also reported a smaller network of family and friends and a greater number of adverse life events in the past six months [6.2.2].

It is important to recognise the potential role of mental health problems in increasing individual vulnerability and risk of workplace bullying, with some research demonstrating that those who experience depression or psychological distress are at increased risk of subsequent experience of workplace bullying [6.2.3]. With the four waves of PATH data, we were able to test this hypothesis by investigating whether high levels of depression symptoms at wave 1 of the study were associated with reported experiences of workplace bullying 12 years later (Figure 6.12).

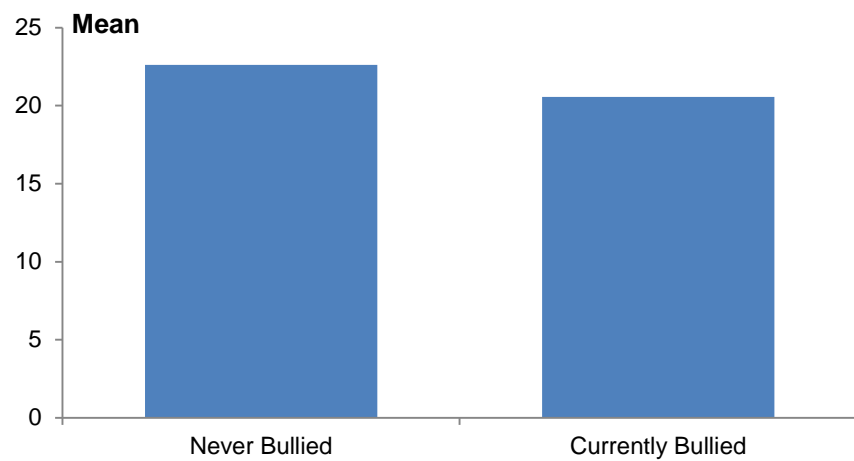
**Figure 6.4: Mean score on neuroticism scale by whether experienced workplace bullying never or currently**



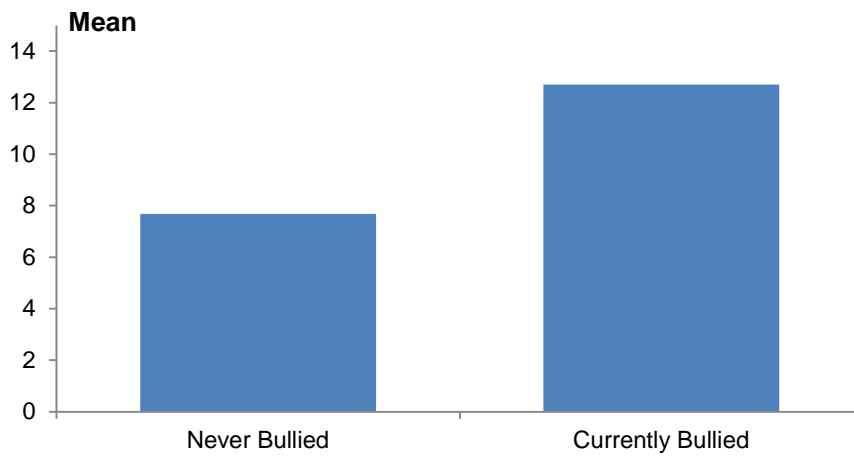
**Figure 6.5: Mean score on negative affect scale by whether experienced workplace bullying never or currently**



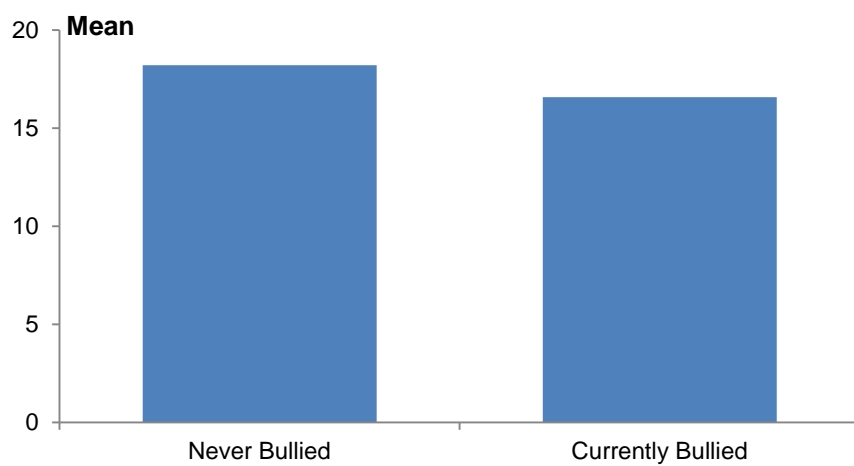
**Figure 6.6: Mean score on mastery scale by whether experienced workplace bullying never or currently**



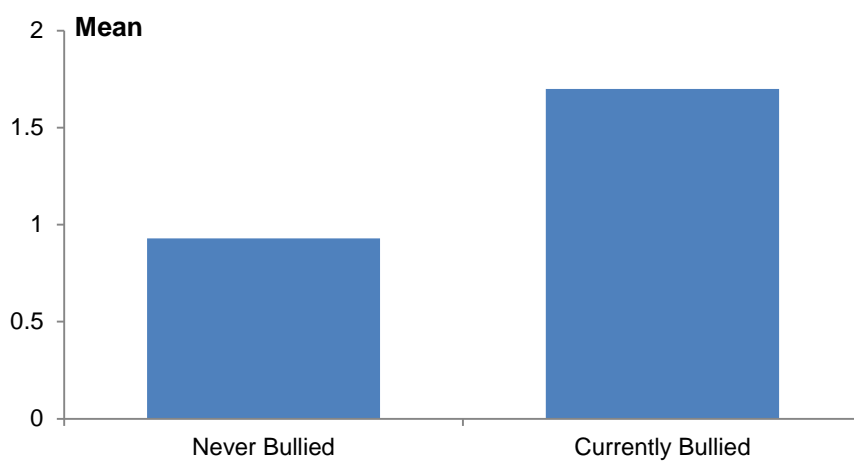
**Figure 6.7: Mean score on ruminative style scale by whether experienced workplace bullying never or currently**



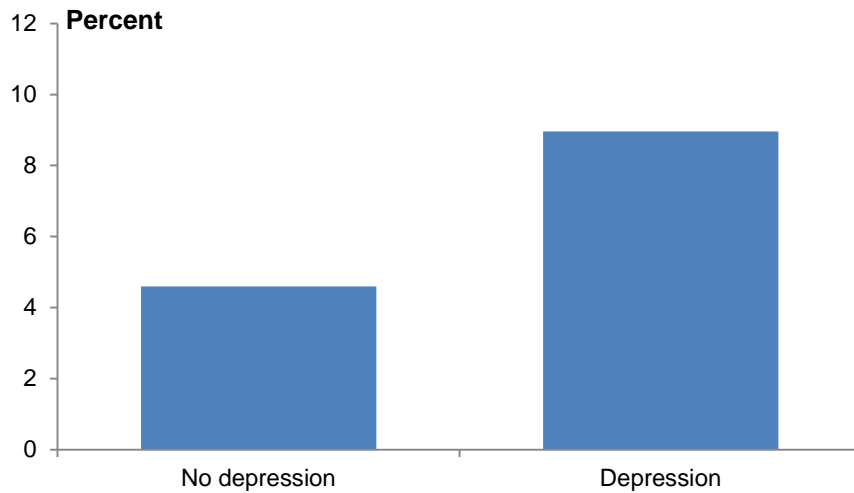
**Figure 6.8: Mean social network size by whether experienced workplace bullying never or currently**



**Figure 6.9: Mean number of significant life events in past 6 months by whether experienced workplace bullying never or currently**



**Figure 6.12: Proportion of respondents reporting current workplace bullying by depression status at wave 1 (1999)**



Somewhat surprisingly, whereas the rate of reported current workplace bullying among those who reported no depression at wave 1 was just under 5% (a little below the overall level in the sample), those respondents who were identified with high levels of depression 12 years earlier have almost double the likelihood of currently experiencing workplace bullying. While these results could reflect a sustained response bias, with enduring personality characteristics influencing the responses to survey items, the results could also point to a cycle of vulnerability with the experience of depression increasing an individual's vulnerability to workplace bullying which in turn reinforces the despair and hopelessness experienced by the individuals.



## **WORK HEALTH AND SAFETY POLICY IMPLICATIONS**

The scope of the Work Wellbeing Project was broad. The findings presented briefly in this summary and described in more detail in the technical report were focussed on enhancing the evidence base for the interrelationship between work characteristics and depression. We also give examples of how the focus in the PATH study on personal characteristics and longitudinal data provides an opportunity to identify risk and protective factors and characteristics that may increase an individuals' vulnerability to later workplace adversity. Although preliminary, these findings have implications for work health and safety policy in the form of ongoing concerns and options for the way ahead.

### **Concerns**

The early findings from this study further demonstrate the relationship between personal characteristics, work characteristics, workplace bullying, depression and other adverse outcomes. For example, the longitudinal data from the PATH study showed how factors such as depression and impulsivity were associated with later risk of work-related injury. This finding is likely to generalise across populations [5.2].

The preliminary analysis of the PATH study's 20+ sample wave 4 data also shows how workplace bullying may be an important determinant of mental health problems and highlights the significant personal consequences of bullying experiences. Although the analyses identified the strong correlation between workplace bullying and other psychosocial work hazards the results suggest that workplace bullying is an independent predictor of depression over and above the contribution of these other factors [6.2.3]. Further, while organisations such as the Productivity Commission have documented the costs to employers of workplace bullying, the adverse personal consequences for the bullied person was demonstrated in the present study by the more than doubling of the risk of depression and thoughts of suicide. However, the inter-relationship between depression and bullying is complex, with evidence showing that those with depression from 12 years earlier reported almost double the risk of experiencing workplace bullying as those who did not report prior depression [6.2.3].

### **Options for the way ahead**

Individual differences in personality and personal resources may contribute to the observed differences in the prevalence of bullying and may explain differences in the health and wellbeing of those who report having experienced bullying. For example, deep-rooted vulnerabilities may exacerbate the effects of acute incidents and complicate intervention efforts. Alternatively, resilient personality factors and resources such as support from social and workplace networks and fair reward for effort may reduce the impact that exposure to workplace bullying has on one's mental health, productivity, time away from work and likelihood of changing jobs or leaving the workforce [6.2.2]. Therefore, a potential practical implication of these findings is that awareness of the consequences of adverse work characteristics and promotion of personal resources may help to prevent the occurrence or minimise the consequences of workplace bullying and depression.

Further analysis of new Work Wellbeing data and existing PATH study data, particularly incorporating data from previous survey waves, can aid in better understanding these complex associations and improve the evidence base for future policy development.