Work Quality, not just Quantity:

Work-Related Predictors of Psychological Distress, Work-Family Interaction and Alcohol Consumption.

Jill Dorrian, Natalie Skinner and Sandra Pisaniello

This study was undertaken as a collaboration between the **University of South Australia Centre for Work + Life** unisa.edu.au/hawkeinstitute/cwl and **Centre for Sleep Research** unisa.edu.au/sleep, and was funded by **SafeWork SA** safework.sa.gov.au

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Executive summary

This report describes the key findings from a study of the social and employment factors that impact on wellbeing. Three wellbeing outcomes are considered: mental health (psychological distress), work-family interaction and patterns of alcohol consumption.

This report is part of a larger research project 'Developing an Australian evidence-base for policies and interventions on work hours, fatigue and work-family strain', funded through the SafeWork SA 2009 Commissioned Research Grants Program. The project is a collaboration between the University of South Australia's Centre for Work + Life and Centre for Sleep Research.

One of the main aims of this project is to inform the South Australia State Strategic Plan (SASP) target of reducing work-related injuries and illness (SASP target T2.11), and more generally to identify strategies to improve the quality of working life, support mental health and wellbeing inside and outside the workplace. The two psychological wellbeing outcomes align with the SASP targets for psychological wellbeing (T2.7) and work-life balance (T2.12).

Study overview

This study takes a work-life perspective to examining how paid work impacts on wellbeing. Putting paid work in the context of broader social, familial, community and cultural factors is central to a work-life perspective. Specifically, the way in which paid work impacts on health and wellbeing is argued to be a function not only of the particular qualities of that work (e.g. occupation, remuneration, hours, scheduling, psychosocial demands and resources), but also the broader social and economic context in which workers live and work.

In this study we considered the impact of paid work on wellbeing in the contexts of:

- *Gender* – there are substantial gender differences in many aspects of paid work such as work hours (men work longer hours on average), income (men are more likely to be in higher paid jobs) and industry (women are more likely to be employed in service and care industries). Women are also more likely to spend more time and energy in unpaid care and domestic work. These gender differences, in turn, alter the relationship between paid work and wellbeing. For example, there is evidence that women are more likely to experience work-family strains;
- *Age* – age is a broad indicator of life and career stages, which in turn are associated with varying patterns of engagement with paid work and different stages of family formation and development. For example, individuals in their 30s and 40 are often at the peak time of their career development, and also are most likely to have young children as part of their family;
- *Household income* – the income of a household can be used as a basic indicator of socio-economic status. Financial resources can be used to ease work-family strains, for example by purchasing supports, goods and services. On the other hand, higher incomes usually mean longer work hours, which can contribute to work-family strains and pressures.

We also examined the role of four central characteristics of work:

- *Work hours* – time strains and restrictions resulting from long work hours are a well-established source of work-family pressures, and this is particularly the case for long full-time work hours;

- *Work scheduling* – a second major dimension of work time is the scheduling of work. Shift work performed at unsocial hours is a major source of work-family strains for many workers. On the other hand, when shift schedules fit with workers' preferences then non-standard schedules can assist with the "struggle to juggle" work, family and other life activities;
- *Occupation* – work hours and scheduling can vary between occupations, and there are also significant differences in the content of work. Here we compare those in lower and higher status occupational groups. Longer hours and a greater capacity for work to intrude into out-of-hours time (e.g. evenings, weekends) is characteristic of many higher status occupations (managers, professionals), which may account for the common observation of higher work-family strains for these workers;
- *Job demands and resources* – the psychosocial work environment is also an important factor with established links to wellbeing. Here we consider two job characteristics, job demands (workload, intensity) and autonomy (time and task control), that have a well established impact on physical and mental health.

Three wellbeing outcomes were considered in this study, each of which has well established connections with personal and organisational outcomes:

- *Psychological distress* – a widely used measure of general mental health is the K10 measure of psychological distress. A wide range of factors impact on mental health, one of which is the quality of paid work, particularly psychosocial job characteristics such as job demands and autonomy;
- *Work-family interaction* – paid work has the potential to both benefit and impede parenting and family life, and in this study we consider both possibilities. Work-family conflict, in particular, has been shown to impact on a range of individual outcomes (health, wellbeing, family and life satisfaction) and organisational outcomes (turnover intentions, productivity, job satisfaction);
- *Patterns of alcohol consumption* – patterns of alcohol consumption were included in this study as it is a health-related behaviour that has implications for both individual wellbeing and organisational outcomes such as absenteeism, productivity and risk of accidents and injuries.

A more detailed discussion of these factors, including research citations, is provided in the Introduction (Section 1).

Methodology

This study analysed data from the Household and Income Labour Dynamics of Australia (HILDA) survey, Waves 6 (2006) and 7 (2007). HILDA is a longitudinal cohort study, in which households and their members participate in an annual data collection. This makes it possible to track individuals and households over time.

In this study we focused on a sub-set of the HILDA sample, adult full-time (35+ hours per week) employees who were not in full-time study. Analyses of work-family interaction are conducted only with individuals who have a resident child(ren) aged 17 years or younger. These survey items are only completed by individuals with parenting responsibilities. The analyses of psychological distress were conducted with the whole sample, including those with and without children.

Here we describe the key findings from an in-depth longitudinal analysis of that predicts wellbeing outcomes at Wave 7 of the HILDA study from Wave 6 social and employment factors. One of the main strengths of longitudinal analysis, compared to single time point (cross-

sectional) analyses, is that it provides stronger evidence of possible causal relationships between predictors measured at Time 1 and outcomes measured at Time 2. It is important to keep in mind, however, that technically attributions of causality can only be made from experimental studies that manipulate the proposed causal variables. Of course, in social science studies, this is not always possible. Hence longitudinal analysis provides the next best type of evidence on likely causal relationships.

Two aspects of the analysis technique are important to keep in mind when interpreting the findings. First, these analyse are multivariate (multiple variable), which means that the predictive strength of each factor (e.g. demands, gender, work hours) is considered in the context of holding constant (i.e. removing) the influence of all other factors in the analysis. This is particularly useful when factors strongly co-vary (e.g. gender strongly co-varies with hours, as women work shorter hours than men, on average). Multivariate analyses provide stronger evidence of the unique contribution of a particular factor, independent of its association with other variables (e.g. the unique contribution of gender, independent of differences in work hours between men and women). Second, two control variables are included in each analysis – having a long term health condition and experiencing stressful life event in the past three months. Inclusion of these two variables in the multivariate analyses removes (statistically controls) their influence on the wellbeing outcomes, hence we can examine the impact of social and employment factors on wellbeing *over and above* the impact of having a long term health condition or a recent stressful life event.

Key findings

Overall, there was evidence that both the quantity of work (hours and their fit with preferences) and the quality of work (demands, autonomy) impact on wellbeing. Figure 1 shows a summary diagram of predictors (rows) and their influence on the wellbeing outcomes (columns).

	Psychological Distress	Work/Family Gains	Work/Family Strains	Parenting Distress	Alcohol ST Risk	Alcohol ST Risk >=weekly	Alcohol any amount near daily
Work demands	↑		↑	↑	↓	↓	
Work Autonomy	↓	↑	↓				
Wanting to work less	↑	↓	↑	↑	↓		↑
Wanting to work more	↑						
Full v part time			↑	↑			
Income			↑	↑			
Shiftwork					↑	↑	↓
Occ. status	↓		↓				
Health condition	↑		↑				
Life event	↑		↑				
Age	↓				↓	↓	↑
Female	↑	↑		↑	↓	↓	↓
Work hours				↓			
Work/family strains						↑	
Child<17y					↓	↓	

Figure 1 Predictors of psychological distress, work-family gains and strains and patterns of alcohol consumption.

Gender differences in wellbeing are mixed

Overall, work factors were more consistent predictors of wellbeing outcomes than gender. There were some differences between men and women. Women were more likely to report parenting and psychological distress, whereas there were no gender differences on work-family gains or strains. Men were more likely to report daily or near daily alcohol consumption, and to consume alcohol at risky levels.

Job demands and autonomy are key predictors of mental health and work-family interaction

Recommendation 1: Job quality matters, and should be a priority for governments and organisational initiatives and programs related to wellbeing at work

In this study job demands refer to perceptions of time pressures, workload and work intensity. Autonomy refers to control over the scheduling and organisation/conduct of work.

The importance of these two psychosocial job characteristics are emphasised in many psychological theories of wellbeing in the workplace. As described in the Introduction section, demands and autonomy are two of the most well established psychosocial factors that impact on wellbeing in the workplace.

In this study job demands and autonomy emerged as two of the strongest predictors of wellbeing outcomes compared to a range of other social (gender, age, income), employment (occupational status, work hours and scheduling) and personal (long-term illness, recent stressful life event) factors. This provides further evidence for the strength of these relationships.

Specific relationships are as follows:

- Higher work demands were associated with higher psychological distress, work-family strains and parenting distress;
- Higher autonomy was associated with lower psychological distress, increased work-family gains and lower parenting distress.

From a work-family perspective, these findings reflect two well-established domains of work-family conflicts or pressures, that is time strains due to a poor fit of work hours or scheduling to other life commitments (e.g. school or childcare, social events, family routines), and emotional or psychological strains (e.g. burnout, stress, exhaustion) resulting from the energy and effort required to manage work tasks and responsibilities.

Much of the public discussion and debate around work focuses on working time, particularly around the length of work hours. Although it is well established that working very long hours increases the risk of a range of negative outcomes (see below), the current findings indicate that much more attention needs to be paid to the quality of work.

The current findings add further evidence to an already substantial research literature that shows that failing to address job quality – reasonable hours and workloads, workers' capacity to have input into work scheduling and tasks – is false economy. Workers in good quality jobs are healthier, happier and safer, which in turn leads to improved productivity and retention (see Introduction section for a more detailed discussion of research evidence).

Important progress has been made towards providing some workers (those with children under school age or children with a disability) with greater access to flexible work arrangements with the *Fair Work Act 2009* and the new National Employment Standards. There is substantial scope to widen access to this entitlement. This study adds to a large research literature demonstrating that *all* workers, regardless of their carer status, benefit from increased control over their work schedules.

While legislation is important and necessary, it is also well established that workplace culture has a major influence over workload/work intensity, work hours and access to flexibility. Although workplace culture was not a part of this study, it is important to acknowledge its importance. Organisational culture reflects both implicit and explicit expectations held by supervisors, managers and colleagues around what is considered normal, reasonable or necessary to 'get the job done', and what behaviours demonstrate loyalty, dedication and suitability for promotion. These factors are powerful drivers of longer work hours and higher workloads (Eaton, 2003; Lewis, 2001; van Echtelt, Glebbeek, Wielers, & Lindenberg, 2007).

Preferences matter – whether hours fit with preferences impacts on mental health and work-family interaction

Recommendation 2: Reasonable hours that fit with workers' preferences should be made central to initiatives and programs addressing occupational health and safety (OHS), wellbeing and work-life balance in organisations.

In this study work hours were considered in three different ways: length of work hours, part-time compared to full-time hours, and the extent to which work hours fit with preferences, with a good fit defined as a gap of four hours or less between actual hours and preferred hours (taking into account the effect on income).

Again we find evidence that quality is important, this time with regard to the subjective quality of work hours. Rather than the absolute length of work hours, the stronger predictor of psychological distress was the extent to which work hours fit with preferences.

A preference to work more hours (4+) was associated with a substantive increase in psychological distress. This indicates that under-employment is a risk to mental health.

Preferring fewer hours was also associated with poorer work-family outcomes on all three measures (strains, gains, parenting distress), however the size of this effect was small.

These findings are consistent with a number of studies in the research literature which observe that the extent to which work hours fit with preferences is a significant predictor of wellbeing (Barnett, 2006; Pocock, Skinner, & Pisaniello, 2010; Wooden, Warren, & Drago, 2009). It can be argued that considering the length of work hours from a 'fit' perspective more accurately captures the subjective meaning and experience of work hours, which in turn is likely to be influenced by a range of factors such as job quality (e.g. autonomy, interesting work), workers' preferences and their personal/family circumstances (Barnett, 2006). For example, Drago et al (2006) distinguish between long hours "volunteers" and "conscripts", and link compulsion to work long hours to a range of factors including bargaining power (union membership, self employment, public sector employment), workplace norms and high levels of personal debt.

A caveat – very long hours do matter and are potentially harmful

Recommendation 3: Strategies and initiatives developed by governments, unions, employers and other stakeholders that address work hours should focus on the risks and harms associated with working too many or too few hours.

It is important to note that these findings on the impact of job demands, autonomy and work hours fit with preferences do not indicate that long work hours are not problematic.

In this study work hours demonstrated modest associations with work-family interaction. Work-family strains and parenting distress were both higher in full-time compared to part-time work.

It is well established that long full-time hours, often defined as around 45 to 48+ hours, significantly increase the risk of mental and physical health detriments (Caruso, 2006; Michie & Williams, 2003; Spurgeon, 2003) and also injuries in the workplace (Dembe, Erickson, Delbos, & Banks, 2005). There is also evidence that long hours increase work-life interference and sleep issues (Pocock, et al., 2010; Skinner, Pisaniello, & Dorrian, 2010). Perhaps most compelling, a

Swedish study found that regularly working overtime of more than 5 hours a week is associated with an increased risk of mortality particularly for women (Nylén, Voss, & Floderus, 2001). The current study indicates that the quality of those hours, whether they fit with preferences and whether they are worked in a job with a reasonable workload and control over time and tasks, is also important for wellbeing. Indeed, the International Labour Office's concept of 'decent working time' includes both the hours worked and their fit with workers' preferences (i.e. whether too few or too many hours are worked) (Boulin, Lallement, Messenger, & Michon, 2006).

The National Employment Standards address the length of work hours, establishing 38 hours as the maximum with the exception of 'reasonable' requests to work longer hours. Criteria for judging the 'reasonableness' of requests include risks to health and safety, employee personal circumstances (including family responsibilities) and the needs of the workplace/enterprise.

Whilst this legislative benchmark is important, in the daily reality of most workers' lives the number of hours the work is much more likely to be influenced by factors such as organisational culture and norms, implicit or explicit expectations from supervisors and managers, workload and concerns over job security. Therefore, organisations, employers, industry groups and workers representative bodies such as unions have an important role in addressing issues related to work hours.

Not having enough work (too few hours) is also harmful

Much of the research and public discussion on what constitutes 'reasonable hours' focuses on hours that are considered too long or excessive. An important finding of this study is that working too few hours was a significant predictor of higher psychological distress. In this study we considered preferences to make a substantive change to work hours, of four or more hours which is equivalent to at least half a day of paid work.

Overall, 10.7 per cent of the study sample indicated they would prefer to work more hours. When we further investigate the characteristics of this group it is not surprising that this preference was most prevalent for those with the lowest household incomes (< $30,000) (28.8 per cent). A preference to work at least four additional hours (i.e. around half a day) was also more likely for:

- Women (12.0 per cent; 9.5 per cent of men);
- Part-time workers (27.2 per cent; 5.3 per cent of full-timers), particularly men working part-time (32.9 per cent; 25.7 per cent of women part-timers);
- Workers employed on a casual basis (24.0 per cent);
- Workers in community and personal service (18.7 per cent), sales (20.8 per cent) and labouring (24.1 per cent) occupations;
- Those employed in retail trade (19.9 per cent) and accommodation and food services (28.5 per cent) industries.

These characteristics, of course, intersect. Women are more likely to be employed part-time or casually, and with the exception of labouring, the occupations and industries listed above are female-dominated, and are also occupations and industries characterised by low remuneration.

This study highlights that an important component of good quality jobs and reasonable hours is the opportunity to work sufficient hours to meet one's needs. Common challenges and strains of working in low paid jobs are well documented, including a lack of control over work hours and scheduling, lack of dignity, powerlessness, exposure to health hazards and poor occupational health and safety (Masterman-Smith & Pocock, 2008). The current study adds to this research by documenting clear and significant implications for mental health for workers who cannot access a sufficient amount of paid work to meet their needs.

Work factors predict patterns of alcohol consumption

Recommendation 4: OHS training and initiatives for managers, supervisors and workers should address (i) the link between work-related stressors and unhealthy or risky patterns of alcohol consumption, and (ii) implications of risky patterns of alcohol consumption for individuals, families, communities and organisations.

Keeping in mind that a range of socio-demographic and employment variables were included in the analyses (income, age, gender, occupational status, work hours), it is notable that four factors emerged as the main predictors of alcohol consumption patterns: gender, shiftwork, work hours fit with preferences and work-family strain.

Overall, men were far more likely than women to report increased alcohol consumption at levels that increase short-term risk (5+ drinks), according to the alcohol consumption guidelines at the time of the data collection (NHMRC, 2001)[1]. Men were more likely to do this at least weekly, and were also more likely to consume alcohol in any amount near daily.

Working more hours than preferred was associated with near daily alcohol consumption. Whereas higher work-family strain was associated with increased odds of consuming alcohol at levels indicative of short-term risk. It is possible that these patterns of alcohol consumption may reflect workers' attempts to relieve work-related stress, particularly for men (who are more likely to consume alcohol in these patterns). This is consistent with other studies indicating stress relief as a motivation for alcohol consumption (Frone, 2008a). Work by Pidd and colleagues (Pidd, et al., 2006a) has also highlighted the central role of workplace culture and norms around alcohol consumption in determining individual workers' attitudes and consumption behaviours.

Interestingly, while shift workers were more likely to consume alcohol at short-term risk levels, they were less likely to report near daily alcohol consumption. One explanation is that this pattern reflects the logistics of shiftwork, where shift schedules such as combining afternoon shifts with morning shifts leave very little time for rest, recovery and other activities. Hence alcohol consumption may be avoided or reduced during shift cycles, but may increase to bingeing levels during longer breaks in shift schedules (e.g. 3-4 non-work days between shift cycles).

These findings highlight an important link between work-related stressors and patterns of alcohol consumption that may increase the risk of short term or long term harms for health and wellbeing. There are also significant implications for employers. Heavy alcohol consumption has been linked with a range of negative workplace outcomes such as increased absenteeism, higher risk of accidents and injuries and reduced productivity. There is also a substantial economic cost. Pidd et al (2006b) estimated the cost of alcohol-related absenteeism in Australia at 2,682,865 work days lost, at a cost of 437 million dollars. They also observed that more than half of this absenteeism was accounted for by low risk drinkers who engaged in infrequent heavy drinking.

[1] HILDA data on quantity of alcohol consumption collected in Waves 6 and 7 is provided as a set of categories, which do not align precisely with the NHMRC 2001 guidelines for men and women. The cut-offs used represent the closest possible alignment with the guidelines, based on the available data categories.

Section 1 Introduction

Study background

This report is part of a larger research project 'Developing an Australian evidence-base for policies and interventions on work hours, fatigue and work-family strain', funded through the SafeWork SA 2009 Commissioned Research Grants Program. The project is a collaboration between the University of South Australia's Centre for Work + Life and Centre for Sleep Research.

The project examines how the interaction of social and employment factors impacts on wellbeing and safety at work. These relationships are considered through a work-life lens, in which the impact of work on wellbeing is considered in relation to the broader context of workers' lives, including their gender, socio-economic status and caring responsibilities. Paid work is not considered to be a separate domain from other aspects of life. Rather, paid work and other life circumstances and experiences are assumed to be interconnected, and hence to a significant extent the impact of work on wellbeing will differ depending on the wider context and circumstances of a worker's life. The most obvious example is that of parents, particularly parents of young children. Very long hours, or very demanding intensive work, is likely to have a greater impact on the wellbeing (e.g. stress, work-life conflict, mental health) of workers in dual-earner households that contain young children, compared to other individuals without dependents with care needs (Allan, Loudoun, & Peetz, 2005; Pocock, 2003).

This report describes the second major study produced as part of this larger project. The study described in this report analysed data from the Household and Income Dynamics of Australia (HILDA) survey. Here we consider the four wellbeing outcomes of psychological distress, the positive and negative effect of work on family life and parenting, and patterns of alcohol consumption. We examine how these outcomes vary across key employment characteristics and social demographics. The main analyses were conducted with a representative sample of the Australian employee population, across industries and occupations.

We also replicated the main analysis with a sub-sample of workers employed in the health and community services sector. This industry sector can be considered an OHS priority, as shiftwork is common and many workers are exposed to a range psychosocial stressors (e.g. high work intensity, long hours, working with traumatised or injured clients) on a daily basis. Work in these sectors presents many challenges to occupational health and safety, including the need to provide 24/7 services requiring shift-work, and the common experience of long hours and intensive work for many workers in these sectors. From a work-life perspective, the combination of these factors with a highly feminised workforce, increases the likelihood that work-family strains and pressures will be common in these occupations. Indeed, in four years of national data from the Australian Work and Life Index (AWALI), health and community service occupations are consistently identified as occupations with higher than average work-life strains and pressures (Pocock et al 2010). Sample size restrictions prevented analysis of other OHS priority industries (e.g. mining).

In addition to current report, as part of the larger research project 'Developing an Australian evidence-base for policies and interventions on work hours, fatigue and work-family strain' we conducted a study on fatigue and work-life interference, and considered how these wellbeing

outcomes were associated with a range of social and employment demographics. The report 'FLAWS in our lives: Fatigue, Work and Life Strain' (Skinner, et al., 2010) is available from the Centre for Work + Life website http://www.unisa.edu.au/hawkeinstitute/cwl/default.asp.

Report overview

In this Introduction section we provide an overview of research on each of the four wellbeing outcomes, with a focus on the specific social and employment characteristics that we consider in this study.

The main analyses for this study are described in Section 3. The analyses were multivariate (multiple variable) and longitudinal, in which social and employment factors at Wave 6 were used to predict wellbeing at Wave 7 (work-family interaction, psychological distress, risky patterns of alcohol consumption). An additional analysis in Section 3 examined these relationships in the health and community services sector.

The importance of supporting psychological wellbeing in the workplace

In this study we considered psychological wellbeing using a well-established measure of psychological distress (K10 scale), and more indirectly in relation to work-family interaction (work-family strains/gains and parenting distress).

There are good reasons to ensure workers' psychological health is protected and supported in the workplace. Nationally, 4.9 per cent of OHS claims were related to mental disorders in 2006/2007 (National Data Set for Compensation-based Statistics (NDS), 2009).

Nationally, an average of 10.4 work weeks were lost as a result of mental disorder claims in 2006/2007, and represented 4.9 per cent of compensation claims overall (National Data Set for Compensation-based Statistics (NDS), 2009). The median cost of a mental disorder claim was $15,100, which was the third most costly claim in 2006/2007, behind neoplasms ($20,400) and unstated disorders ($18,400).

Worryingly, recent Australian evidence suggests that workers' compensation claims represent only a fraction of the incidence/prevalence of mental health disorders in the working community (LaMontagne, Keegel, Vallance, Ostry, & Wolfe, 2008). This highlights the importance of developing, supporting and evaluating evidence-based policies and practices to support wellbeing and mental health per se, in addition to assessing the prevalence of compensation claims related to mental disorders.

We now turn to a discussion of the specific measures of wellbeing used in the current study, psychological distress and work-family interaction. We also consider a behavioural measure of health, risky alcohol consumption. As discussed below, each of these health and wellbeing issues is also associated with significant outcomes for organisations, individuals, families and communities.

Psychological distress

In this study we used the well established K10 measure of psychological distress (Kessler, et al., 2000) to measure mental health. The K10 assesses symptoms of anxiety and depression, and has been shown to be predictive of diagnoses of anxiety, affective and other mental disorders (Andrews & Slade, 2001).

The K10 is also the measure used to assess the South Australian State Government SASP Target 2.7 - Psychological Wellbeing.

Mental health is affected by a range of factors such as age, socio-economic status, life events and social support (Mirowsky & Ross, 2003). For those in paid employment, there is evidence that work factors also play a significant role.

A range of work factors have been shown to impact on psychological distress. For example, high levels of work demands, long hours, low autonomy, low social support, conflicts and work role ambiguity have been shown to increase psychological distress (Griffin, Greiner, Stansfeld, & Marmot, 2007; Hilton, et al., 2008; Marchand, Demers, & Durand, 2005; Niedhammer, Goldberg, Leclerc, Bugel, & David, 1998).

In a review of the literature, Michie and Williams (2003) observed that poor psychological health (anxiety, depression, general mental health) is associated with long hours, work intensity (overload, pressure), a lack of control, poor social support, a lack of opportunities to participate in decision making and role ambiguity.

As we discuss below, in this study we focused on job demands and autonomy, two well-established predictors of workers' mental health.

Work-family interaction

The second aspect of wellbeing considered in this study is the quality of the work-family relationship, specifically whether work has a positive or negative effect on parenting and family life. The work-*family* focus of the current study reflects the available measures in the HILDA survey.

Negative work-family effects, labelled here as work-family strains, occurs when the activities in the work and family domains are incompatible, in that participation in one role compromises participation in the other role (Greenhaus & Beutell, 1985). Work-family strains are commonly related to time and emotional/psychological strains. Common sources of role pressure and conflict are time strain (insufficient time for work and family commitments) and emotional strain (stress, exhaustion, fatigue) (Greenhaus & Beutell, 1985).

The benefits of paid work for family life are capture by the notion of work-family gains, in which "engagement in one life domain (i.e. work/family) provides gains (i.e. developmental, affective, capital, or efficiency) which contribute to enhanced functioning of another life domain (i.e. family/work)" (Wayne, Grzywacz, Carlson, & Kacmar, 2007, p. 64). These perspectives are not mutually exclusive, many theories of work-family interaction include strains and gains.

Most research on work-family interaction has focused on conflict and interference. A range of outcomes have been linked with work-family strains and pressures, including mental health (depression, stress, burnout), physical health and satisfaction with family, marital relationships and life in general. Organisational outcomes are also affected by work-family strains, including turnover intentions, job satisfaction and engagement, and productivity at the individual and firm level (Allen, Herst, Bruck, & Sutton, 2000; Kelly, et al., 2008; Kossek & Ozeki, 1998; Skinner, et al., 2010).

Widening the lens – investigating the impact of work on alcohol consumption

In this study we extended our consideration of wellbeing outcomes to a behaviour with significant consequences for health and wellbeing at work and outside of work - risky patterns of alcohol consumption. Mental health and work-family interaction are common health outcomes considered in research on the effects of paid work on health. Comparatively less attention has been paid to the relationship between paid work and alcohol consumption.

In this study we focused on risky patterns of alcohol consumption, using 2001 definitions of risk according to the Australian Government Guidelines that were current at the time of data

collection (2006-2007). A full explanation of these measures is provided in the Method section of this report.

There is clear evidence that risky patterns of alcohol consumption are associated with a range of detrimental health, social and community outcomes (Collins & Lapsley, 2008; Klingemann, 2001).

There are also a number of unfavourable organisational outcomes. Alcohol consumption immediately prior or whilst at work has been linked with increased absenteeism, reduced productivity, and increased risk of accidents and injury (Frone, 2008b). Dale and Livingston (2010) estimate that one third of Australian workers report that their work has been negatively affected (productivity, safety, longer hours) by a coworker's heavy drinking.

The frequency of heavy episodic drinking in general has been shown to increase absenteeism from work (Bacharach, Bamberger, & Biron, 2010). For example in Australian study Pidd et al (2006b) estimated the cost of alcohol-related absenteeism at 2,682,865 work days lost, at a cost of 437 million dollars. Furthermore, Pidd et al found that more than half of this absenteeism was accounted for by low risk drinkers who engaged in infrequent heavy drinking.

Explanations for work-related alcohol consumption commonly focus on stress, with alcohol consumption suggested to be motivated by a desire to reduce stress prior to work, or relieve stress after work (Frone, 2008a). Consistent with this explanation, work overload and job insecurity have been linked with more frequent alcohol consumption before and during the work day (Frone, 2008a). Moving beyond a focus on the individual, Pidd and colleagues have shown that workplace cultural norms around alcohol consumption, particularly patterns of risky consumption, have a significant influence on individual attitudes and behaviours (Pidd, et al., 2006a).

In this study we further widen the lens on the factors that may impact on alcohol consumption. Building on a stress perspective, we consider work-family interaction, to investigate if work-family strains and poor job quality contributes to increased alcohol consumption, and whether this differs for men and women.

Predictors of wellbeing – work factors

In this study we considered two dimensions of work, structural factors related to the length and scheduling of work hours and occupation status, and psychosocial factors related to the perceived quality of work with regard to job demands, autonomy and the fit between actual and preferred work hours. As we discuss below, these work factors are well-established predictors of work-family interaction and other wellbeing outcomes.

Work hours

Time strains and restrictions are one of the major sources of work-family strains, as time spent at work reduces the time and opportunity available for family activities and commitments. In general, longer work hours are associated with worse work-family strains (Byron, 2005). On the other hand, most studies have not found an association between the length of work hours and work-family gains (e.g. Demerouti, Geurts, & Kompier, 2004; Grzywacz & Marks, 2000; Marshall & Barnett, 1993; Voydanoff, 2004).

Beyond consideration of the actual length of work hours per se, it has been argued that the subjective experience of work hours as too long (or inconvenient in other ways such as scheduling) is likely to influence the strength of the relationship between work hours and wellbeing, particularly in regard to the extent to which long hours have a negative impact on health or wellbeing (Barnett, 1998; Thornthwaite, 2004; Tucker & Rutherford, 2005). Studies across a range of occupations have found that working longer hours than preferred predicts

wellbeing outcomes such as job and life satisfaction, burnout, psychological health, marital and parental relationship difficulties and work-life interference (Barnett, 2006; Pocock, et al., 2010; Wooden, et al., 2009). In Australia an estimated thirty to forty per cent of workers would prefer to work fewer hours (Martin & Pixley, 2005; Pocock, et al., 2010).

Work scheduling – shiftwork

In addition to the length of work hours, a second important dimension of work time is the scheduling of these hours. In this study we compare workers on shiftwork schedules (early mornings, afternoons, nights or variable shifts) with those who work during standard daytime hours.

The relationship between shiftwork and work-family interaction is not straightforward. In general, working non-standard schedules such as evening/nights, weekends or other types of shifts outside a 9-5 Monday-Friday week is associated with higher work-life interference (Allan, et al., 2005; Skinner, et al., 2010).

Shift work does not inevitably lead to work-family strains and pressures. If shift schedules fit with workers' preferences, and they have some control over scheduling, this can minimise negative work-family impacts, and enable the effective management work and family responsibilities (Perrucci, et al., 2007; Pocock, 2003; Tausig & Fenwick, 2001). For example, in an in-depth study of Australian nurses and their families, Maher et al. (2010) observed that shift work assisted many participants to organise their households to meet child care needs. On the other hand, managing shift and household schedules resulted in an "intensified attentiveness to clock time as part of family life" (p. 277) that contributed to experiences of time pressure, complicated and tightly managed scheduling for all household members, and very little free time for parents or their children.

Whilst there is strong evidence that shiftwork increases the risk of a range of physical health detriments, many of which are linked to sleep restrictions and fatigue, the relationship between shiftwork and psychological wellbeing is less clear (Perrucci, et al., 2007). Shift work can be considered as a general stressor, which may or may not result in stress reactions that are associated with psychological health symptoms (Perrucci et al., 2007). There is evidence that shiftwork may increase the risk of psychological distress, as difficulty in responding to stressors due to poor sleep quality and poor work-life balance may contribute to psychological distress (Bear, Ernst, Nachreiner, & Schay, 1981; Bohle & Tilley, 1989; Haines III, Marchand, Rousseau, & Demers, 2008; Healy, Minors, & Waterhouse, 1993; Jamal, 2004). Other studies have not found a difference between shift workers and non shift workers in depressive symptoms (Goodrich & Weaver, 1998).

Occupation

Occupation is a broad indicator of a range of differences in the content, status, complexity and potential stressors and rewards of work. AWALI analyses (Pocock, et al., 2010; Skinner & Pocock, 2008b), for example, have observed consistent differences in work hours and work-life interference, both of which are higher, for managers and professionals compared to other occupations. Managers and professionals are also more likely to report being too busy to take paid holiday leave, and are also least likely to report a good fit between their work hours and their preferences. Other research has also observed that work hours, and the desire to decrease work hours, vary by occupational status. Those in white-collar managerial and professional roles are more likely to work long hours (Boisard, Gollac, Valeyre, & Cartron, 2003; Grosch, Caruso, Rosa, & Sauter, 2006), which is often linked to aspects of organisational culture such as professional norms/expectations, requirements to demonstrate commitment via 'face time', and career/promotional goals (Brett & Stroh, 2003; Perlow, 1998). Those in other occupations may be less inclined to desire a reduction in work hours due to the factors such as overtime pay

loadings which are often not available to those in managerial and professional occupations (Lee, 2004; Stier & Lewin-epstein, 2003).

Psychosocial job characteristics – demands and autonomy

In this study we focus on two psychosocial job characteristics which are prominent in theory and research on physical and psychological health in the workplace: demands and autonomy. Autonomy, particularly related to control over the length and scheduling of work hours, features prominently in the work-family literature (Eby, Casper, Lockwood, Bordeaux, & Brinley, 2005). A lack of schedule flexibility is likely to create time-strain (Greenhaus & Beutell, 1985), where time commitments in paid work create difficulties in engaging in family commitments and activities. There is also evidence that job autonomy enhances work-family gains (Carlson, Kacmar, Wayne, & Grywacz, 2006; Grzywacz & Butler, 2005; Hill, 2005), an observation consistent with the well established benefits of control in general for wellbeing (Jones & Fletcher, 2002).

There is also a clear relationship between demands and work-family conflict. This most likely reflects what Greenhaus & Beutell (1985) identify as strain-based conflict related to feelings of anxiety, depression, fatigue and irritability resulting from work demands that interfere with the capacity to function well in non-work domains. The relationship between work demands and work-family gains is less clear. In most studies work demands have not been found to predict work-family gains (Grzywacz & Marks, 2000; Hill, 2005; Voydanoff, 2004). There are exceptions, but the evidence is mixed on whether work-family gains increase (Demerouti, et al., 2004; Grzywacz & Butler, 2005) or decrease (Butler, Grzywacz, Bass, & Linney, 2005) with higher job demands.

Demands and control have also demonstrated consistent relationships with a range of indicators of psychological wellbeing in the workplace including burnout, general psychological wellbeing, and depression (Netterstrøm, et al., 2008; Siegrist, 2008; van der Doef & Maes, 1999).

Predictors of wellbeing – socio-demographic factors

Central to a work-life perspective is taking into account the broader social, household, community and personal context within which an individual undertakes paid work. Here we focus on three major socio-demographic variables: gender, age and socio-economic status.

Gender

Gender is an important consideration as it plays a significant role in the dynamics of work-family interaction, the length of work hours and preferences to reduce hours. In most countries, including Australia, women are more likely to work shorter hours than men (Maume, 2006; Tomlinson, 2007), and are more likely to desire shorter work hours (Thornthwaite, 2004). There is also evidence that working longer hours than preferred has the strongest effect on women's work-life conflict (Skinner & Pocock, 2008a). These patterns are often attributed to gender imbalances in caring and domestic work (Fuwa, 2004; MacDonald, Phipps, & Lethbridge, 2005).

Four years of research on Australian men and women from the Australian Work and Life Index (AWALI) has found consistent patterns of gender differences in work-life strains.

Australians in paid work, especially women, are reporting that they lead very busy lives. In the 2010 AWALI survey (Pocock, et al., 2010) it was clear that feeling busy, rushed and time pressured is a daily reality for the majority of working Australians:

- 55.3 per cent of full-time employees report frequently (often/almost always) being rushed or pressed for time;

- This increases to 64.8 per cent of women working full-time, compared to 50.1 of men in full-time work;
- Part-time work does little to ease women's time strain; 56.4 per cent of women in part-time work frequently feel rushed for time (33.5 per cent of men);
- Thirty per cent of full-time workers, men and women, feel that work often or almost restricts their time with family or friends.

In the AWALI research gender differences in work-life interference are examined in the context of significant disparities in work hours. Women are more likely to work part-time, and when they are in full-time work women are less likely to work long full-time hours (Pocock, et al., 2010). Comparing men and women working similar hours, AWALI research finds that women have higher work-life interference in part-time work compared to their male counterparts, and in full-time work compared to men working these hours. This is an important observation, as when disparities in work hours are not taken into account, men's overall levels of work-life interference is higher than women's. AWALI research indicates that rather than reflecting a true gender difference, this pattern is more a function of differences in work hours between men and women.

Age

Age is a broad indicator of important life and career stages, which are in turn associated with broad patterns in work-family interaction and likelihood of mental health issues.

In this study we focus on employed individuals aged 18 to 64 years. From a life stage perspective, workers in their younger years (late teens, 20s) are at the early stages of career choice and formation, including for many younger people combining study with paid work. Those in their 30s and 40s are often at the peak time of their career development, and combining work with parenting of younger children is common. The intensity of child-rearing and family commitments tends to decline through the 50s and 60s. This does not necessarily mean a decline in care work, as caring for grandchildren and elderly parents is increasingly common for workers in this age bracket.

Of course, there is much individual variation in these patterns. There are general trends in work-family interaction and mental health that reflect these broad life stages. For example, work-life pressures and strains tend to be most intense for those in their 30s and 40s, compared to older and younger workers (Pocock, et al., 2010). In general, moderate and high levels of psychological distress are more prevalent for younger individuals (18 to 34 years) (Australian Bureau of Statistics, 2009).

Household income

Household income is one indication of socio-economic status, as well as the availability of financial resources to assist workers to meet their work and family commitments.

Household income is a resource that can be used to ease work-family pressures and strains. Additional income can be used to purchase supports (e.g. child-care, house cleaning, gardening), and time saving goods (e.g. pre-prepared foods) and is likely to be more available to higher income individuals and households. On the other hand, higher levels of household income are usually associated with longer work hours and employment in managerial or professional occupations where high levels of work-life interference are common.

Those on lower incomes must manage work and family commitments without time-saving resources, and they are more likely to experience time strains and negative stress related to reliance on public transport and longer commutes from suburbs located at a distance from their jobs (Masterman-Smith & Pocock, 2008).

Section 2 Survey sample and measures

This study analysed data from the Household Income and Labour Dynamics Survey of Australia (HILDA) household panel study, Waves 6 (2006) and 7 (2007). The HILDA sample is representative of the Australian population (Wooden & Watson, 2007). HILDA is a longitudinal cohort study, in which households and their members participate in an annual data collection. This makes it possible to track individuals and households over time.

Sample

In this study we focused on a sub-set of the HILDA sample; adult full-time (35+ hours per week) employees who were not in full-time study and who were employed in a single job. Note that the analyses of work-family interaction were conducted only with individuals who have a resident child(ren) aged 17 years or younger, as this is the group that were requested to complete the work-family items in the HILDA survey. The analyses of psychological distress were conducted with the whole sample, including those with or without children.

The analyses in Section 3 provide an in-depth examination of the relationship between social and employment factors and wellbeing outcomes over two time points. The sample comprised 2570 participants (1400 men and 1170 women). The majority of participants were aged between 35-54 years (58.7 percent), and were in married or de facto relationships (73.3 per cent).

Participants were removed from the analysis if they did not provide information on key measures at both time points, or if they substantially changed their employment status from Wave 7 to Wave 7 (e.g. change from full-time to part-time work; changed occupation or industry). Wave 6 had a 69.9 per cent household response rate. Wave 7 had a 74.3 per cent household response rate (The Melbourne Institute, 2008).

In this report we describe the main findings from the data analysis, with a particular focus on contrasts that are both statistically significant and meaningful (i.e. reflect a substantive difference or change). Detailed tables are provided in the Appendix, which is available to download with the main report from the Centre for Work + Life website (http://www.unisa.edu.au/hawkeinstitute/cwl/default.asp).

Measures

Work hours

Weekly work hours were measured by a single question on the number of hours usually worked, including paid and unpaid overtime. Full time work was defined as 35 or more weekly hours, and long full time work defined as 45+ hours.

Work hours fit with preference

The extent to which work hours fit with preferences was assessed by subtracting actual work hours from participants' stated preferred work hours. Participants were instructed to take into account any affect a change in work hours would have on their income when stating their preferred hours. We used a benchmark of four hours gap between actual and preferred hours to define work hours fit with preference, as this represents a desire for a substantial change in hours of around half a day's full-time work. For instance, respondents were classified as preferring to work fewer hours if their preferred hours were four or more less than their actual hours (e.g. work 40 hours but prefer 36).

Work schedule

Work schedule was measured by a single question addressing participants' work schedule in their main job. Small sample sizes of participants restricted the analysis of different types of shiftwork work schedules. Here we differentiated between those on a 'a regular daytime schedule' compared to shiftwork schedules which comprised evening or night shifts, rotating or split shifts, on call or irregularly scheduled work.

Occupational status

Occupational status was assessed using the Australian Socioeconomic Index 2006 (AUSEI06). The AUSEI06 scale converts ANZSCO occupational codes into a continuous measure of occupational status with scores ranging from 0 (low status) to 100 (high status).

Work demands and control

Seven items assessed work demands and control. The three work demands items addressed perceived time pressures, workload and work intensity (e.g. 'I have to work very intensely in my job') (Cronbach's $\alpha = .71$). The four work control items addressed the extent to which respondents have control or input into the scheduling of work and the conduct of tasks (time and task control) (e.g. 'I have a lot of freedom to decide when I do my work') (Cronbach's $\alpha = .87$). A seven-point response scale (strongly disagree to strongly agree) was used for both measures.

Work-family gains

Work-family gains were measured using Marshall and Barnett's (1993) four-item measure. This scale addressed the perceived positive effect of work on children, and workers' capacity to be a good parent (e.g. 'the fact that I am working makes me a better parent') (Cronbach's $\alpha = .80$).

Work-family strains

Work-family strains were assessed by four of the six items from Marshall and Barnett's (1993) scale that were available in the HILDA data. This measure addressed the extent to which work reduced capacity to engage in parenting (e.g. 'working leaves me with too little time or energy to be the kind of parent I want to be') (Cronbach's $\alpha = .71$).

An additional measure of work-family strains, 'parenting distress' was also included. This measure directly addressed parenting difficulties, rather than a reduced capacity to be a 'good parent'.

Parenting distress

Parenting distress was measured by four items sourced from the University of Michigan Population Studies Center's Panel Study of Income Dynamics, which assessed the extent to which parenting was experienced as difficult, hard work and tiring (e.g. 'I often feel tired, worn out or exhausted from meeting the needs of my children') (Cronbach's $\alpha = .78$).

Psychological distress

Psychological distress was assessed using the 10-item Kessler Psychological Distress Scale (e.g. 'about how often did you feel so nervous that nothing could calm you down?'). The K10 assesses symptoms of anxiety and depression (Kessler, et al., 2000). The K10 scale has four standard categories of risk: low, medium, high and very high. In this study the high/very high categories were combined to create three levels of risk. In the Australian population an estimated 67 per cent of individuals have low psychological distress, 21 per cent have moderate levels, 9 per cent have high levels and 4 per cent have very high levels of distress (Australian Bureau of Statistics, 2009).

Patterns of alcohol consumption

Working with the available measures of alcohol consumption in the HILDA dataset, we constructed four measures of patterns of alcohol consumption.

The two items available in Wave 6 and Wave 7 HILDA data collections are as follows:

1. Do you drink alcohol (8 response categories ranging from 'everyday' to 'rarely', including two abstinence options (have never consumed alcohol or no longer drink alcohol).
2. On a day that you have an alcoholic drink, how many standard drinks do you usually have? (7 response categories ranging from 1-2 standard drinks to 13 or more standard drinks);

Our first derived measure was based our classification of risky consumption on the 2001 Australian Government guidelines on alcohol consumption (NHMRC, 2001) that pertained to the time of data collection (2006, 2007). Using the available HILDA measures, we were able to consider the frequency of alcohol consumption at high risk levels for short-term harm (7+ for men and 5+ for women), according to the 2001 alcohol guidelines. In addition we considered those who drink alcohol at such risky levels at least weekly (this includes responses of 'drink alcohol daily', 'drink alcohol 5 or 6 days per week', 3 to 4 days per week or 1 to 2 days per week) compared to those who do so 1 to 2 times per month/rarely (combined response options). Finally, we considered the frequency of alcohol consumption per se, focusing on the consumption of alcohol in any amount daily or near daily. Those who do not consume alcohol were excluded from the analysis.

Experience of a stressful live event

The HILDA survey contains measures of a range of stressful or negative life events, such as being made redundant or being fired from one's job, divorce or separation, death of a family member, experiencing physical violence and having a major financial crisis. For the purposes of this study a variable was created that indicated whether respondents had experienced at least one of these negative life events in the past three months, or not. This variable was used as a control measure, as experience of a stressful life event in the previous three months was strongly associated with higher levels of psychological distress.

Long-term health condition

Similar to the experience of a stressful life event, having a long term health condition (physical or cognitive incapacity, mental illness) also increases the risk of higher psychological distress. Therefore, having a long term health condition was also included as a control variable in the analyses.

Section 3 Longitudinal analysis of work-family interaction, psychological distress and alcohol consumption

In this analysis we considered two aspects of paid work: structural factors related to work time (hours) and scheduling (daytime versus shiftwork), and psychosocial factors, specifically two key psychosocial job characteristics that have well-established relationships with health and wellbeing: job demands and autonomy.

Four indicators of wellbeing were considered. As described in previously, we consideed three measures of work-family interaction (work-family strains and gains, parenting distress) and a measure of mental health (psychological distress). In addition to these indicators of psychological wellbeing, we also considered patterns of alcohol consumption, as a key health-related behaviour with consequences for individual health and workplace health, safety and productivity. It should be noted that the choice of predictor and outcome variables was restricted to the available variables in the HILDA dataset in Waves 6 and 7.

One of the strengths and advantages of longitudinal analysis is that it provides stronger evidence of possible causal relationships between factors measured at Time 1 and the outcomes measured at Time 2. Technically, attributions of causality can only be made from well designed experiments that manipulate the causal factors. This type of evidence is not possible for many social science investigations, therefore longitudinal analyses provide the next best type of analysis to provide insight into possible causal relationships.

The analyses in this section are multivariate (multiple variable). Essentially this involves considering multiple factors at the same time in a single analysis, to identify the unique contribution of each individual factor when all other factors included in the analysis are held constant (i.e. their influence is removed). It is often the case that a set of predictive factors are related (i.e. correlated) for example those who work long hours are also more likely to report high work demands. In a multivariate analysis that includes work hours and work demands we can identify the unique association of work demands with an outcome (e.g. work-family strain), independent of any effects that work hours may have on work-family strains.

The main analyses presented here were conducted on employees in the HILDA sample, across the full spectrum of occupations and industries. An additional analysis focused exclusively on employees in the health and community services sectors.

Overview of the analyses

The following findings are from an analysis of HILDA Wave 6 (2006) and Wave 7 (2007) data. Part I of this analysis included all workers, excluding people who were full-time students, had more than one job or who were under the age of 18 years (n=2570). Participants were removed from the sample if they did not provide full data on the measures across the two time points, or changed their status on a significant work variables during the two-year period (i.e. occupation, industry, work hours, shiftwork/day work, employment status). Full analysis details are contained in the Appendix.

Part II of this analysis focuses on a sub-group of employees, those in the Health and Assistance Industries (n=345). Full analysis details for this sub-group are also presented in the Appendix.

Five socio-demographic variables were included in this analysis: gender, age, parenting status and two indicators of socio-economic status (household income, occupational status). Two employment structural variables were considered: work hours (as a continuous variable, and as a full-time versus part-time comparison) and work schedule (standard daytime scheduling versus shift or variable scheduling). Three psychosocial job characteristics were included: autonomy

(control over work time and tasks), demands (time pressure, intensity of work) and the extent to which work hours fit with preference (prefer to work fewer or more hours). The Introduction section to this report discusses the rationale for including these factors in the analyses, and relevant previous research.

Two control variables were also included in this analysis; having a long term health condition and experiencing a stressful life event in the past three months. These two variables were included in the analyses as both are significantly correlated with the wellbeing outcomes, particularly psychological distress. By including these two variables in the analyses we can examine the strength of the relationship between the employment factors (e.g. work hours, scheduling) and social factors (e.g. gender, parenting status) of central interest in the current study, *over and above* the impact of having a long term health condition or a recent stressful life event.

Part I: Findings across the whole sample

Higher work demands were associated with increased psychological distress, work-family strains and parenting distress

Higher work demands were predictive of meaningful increases in psychological distress. The odds of having moderate or high psychological distress (compared to low levels) were increased by approximately 14 to 20 per cent for every 1-point increase on the 7-point work demands scale (Figure 2).

Higher work demands were also meaningfully related to work-family strains and distress. Every 1-point increase on the 7-point demands scale was associated with a 16 per cent increase in work-family strains, and an 11 per cent increase in parenting distress (Figure 3).

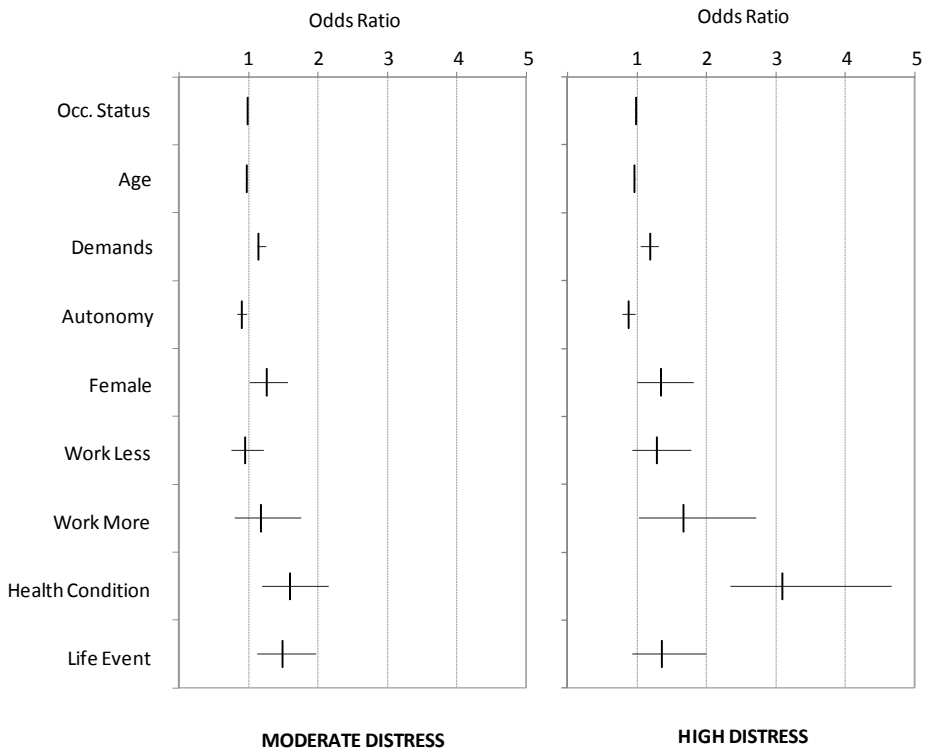

Figure 2 Summary of significant predictors of reporting moderate (left panel) or high (right panel) levels of psychological distress (compared to low levels).

Note: Vertical lines indicate odds ratios, such that values less than one are associated with reduced odds, and those greater than one with increased odds. Horizontal lines indicate 95 per cent confidence intervals for odds ratios (longer lines indicate increased variability).

Higher work autonomy was associated with lower psychological distress, higher work-family gains and lower work-family strains

Whereas high work demands predicted increased psychological distress and negative work-family outcomes, high work autonomy was a protective factor. The odds of having moderate or high psychological distress (compared to low levels) was reduced by approximately 10 per cent for every 1-point increase on the 7-point autonomy scale (Figure 2).

Similarly, every 1-point increase on the 7-point autonomy scale was associated with an 11 per cent increase in work-family gains, and an 11 per cent decrease in work-family strains (Figure 3).

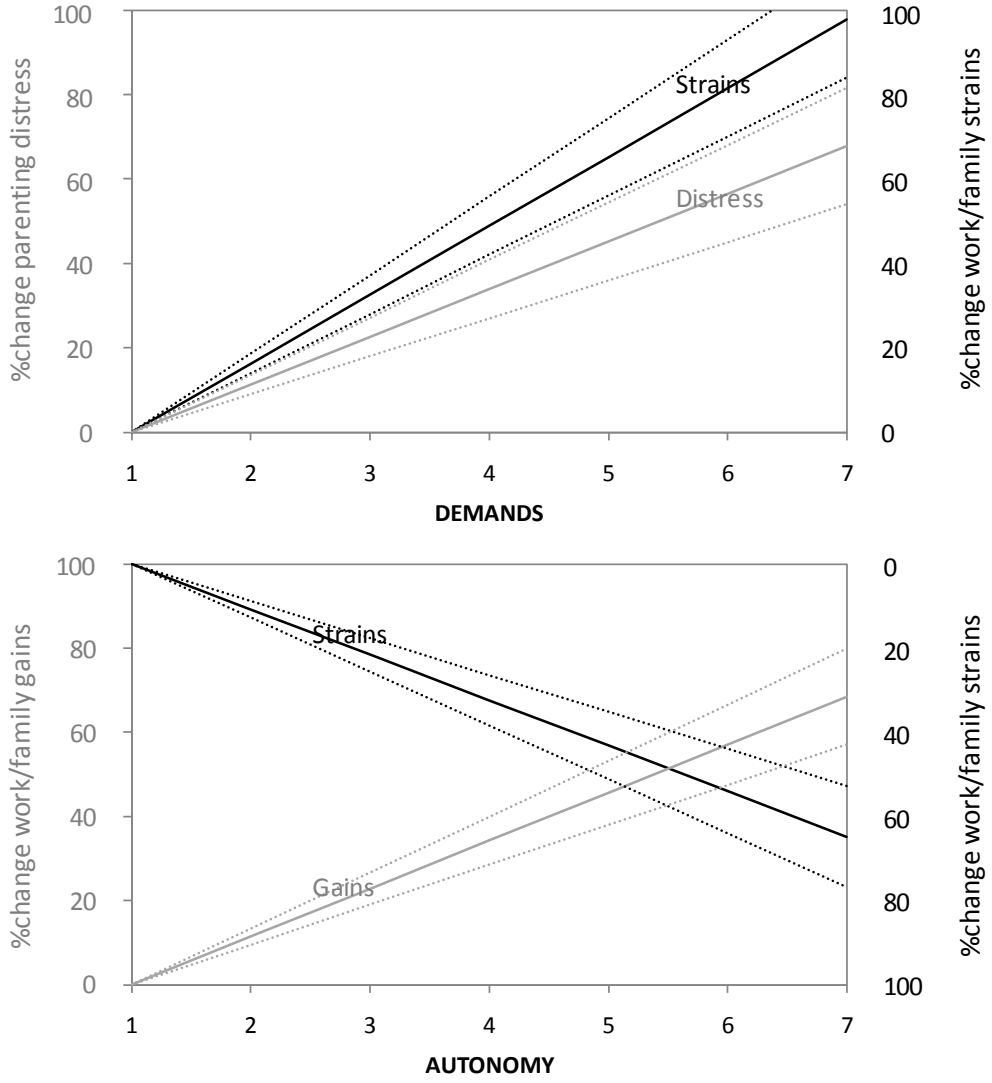

Figure 3 Summary of the impact of work demands (upper panel) and autonomy (lower panel) on work-family gains, strains and parenting distress.

Note: Solid lines indicate changes in gains, strains and distress by demands and autonomy. Dotted lines indicate the standard error around these estimates.

Working fewer hours than preferred was associated with higher psychological distress

Those who wanted to work more hours (at least four) had a 67 per cent increase in the odds of having high psychological distress (compared to a low level). However, the wide confidence intervals on this estimate (3-170 per cent) indicate that it should be interpreted with caution.

Preferring fewer hours was also associated with poorer work-family outcomes on all three measures (strains, gains, parenting distress), however the size of this effect is small.

Working longer hours than preferred is associated with higher work-family strains

Although employees who work more hours than preferred reported significantly worse outcomes on the work-family measures, the strength of this effect was modest. On average, the difference between those who work longer than preferred compared to those with a good hours-preferences fit was less than half a point on the 7-point work-family scales (Figure 5).

Those with a long-term health condition or who had experienced a stressful life event in the past three months reported higher psychological distress

Not surprisingly, having a long-term health condition or experiencing a recent stressful life event impacted on psychological distress. Employees with a long-term health condition had approximately a 60 per cent increase in the odds of reporting moderate psychological distress (confidence intervals 20 to 115 per cent), and a 200 per cent increase in reporting high psychological distress (confidence intervals 135-366 per cent, Figure 2).

Those experiencing a recent stressful life event had a 49 per cent increase in the odds of moderate psychological distress (confidence intervals 13 to 97 per cent, Figure 2).

Having a health condition or experiencing a stressful life event in the previous three months were also associated with increased work-family strains. However, the impact was modest, accounting for less than half a point on the 7-point work-family strains scale (Figure 5).

Shift workers have higher odds of binge drinking, but lower odds of drinking alcohol nearly every day

Compared to day workers, people on shiftwork schedules had more than twice the odds of drinking alcohol at levels indicative of short-term risk (5+for women, 7+for men) (confidence intervals 1.18 to 3.57) and of doing so at least weekly (confidence intervals 1.64 to 4.39), but had a 65 per cent reduction in the odds of drinking alcohol, in any amount, near daily or daily (confidence intervals 40 to 80 per cent) (Figure 4).

Work-family strains were also associated with increased odds of consuming alcohol in short-term risky levels at least weekly. This translates to a 33 per cent increase in the odds of binge drinking with every 1-point increase on the 7-point work-family strains scale. However, this estimate should be interpreted with caution as the confidence intervals for this estimate are wide, ranging from 11 to 60 per cent (Figure 4).

Those working longer than preferred have lower odds of binge drinking but higher odds of drinking alcohol daily or near daily

Employees who preferred to work fewer hours had a 40 per cent reduction in odds of drinking alcohol at levels associated with short-term risk (confidence intervals 5-74), but a 64 per cent increase in the odds of reporting alcohol consumption at near daily levels (10-144).(Figure 4).

Women have reduced odds of alcohol consumption , and had slightly higher work-family gains and parenting distress

Overall, women had half the odds of drinking alcohol at short-term risky levels (confidence intervals 19 to 83), and a 70 per cent reduction in the odds of doing so at least weekly (confidence intervals 46 to 84). Women also had a 78 per cent reduction in the odds of consuming alcohol in any amount near daily (Figure 4).

Women were also more likely to report work-family gains and parenting distress, however the contrast with men is less than half a point on the 7-point scale (Figure 5).

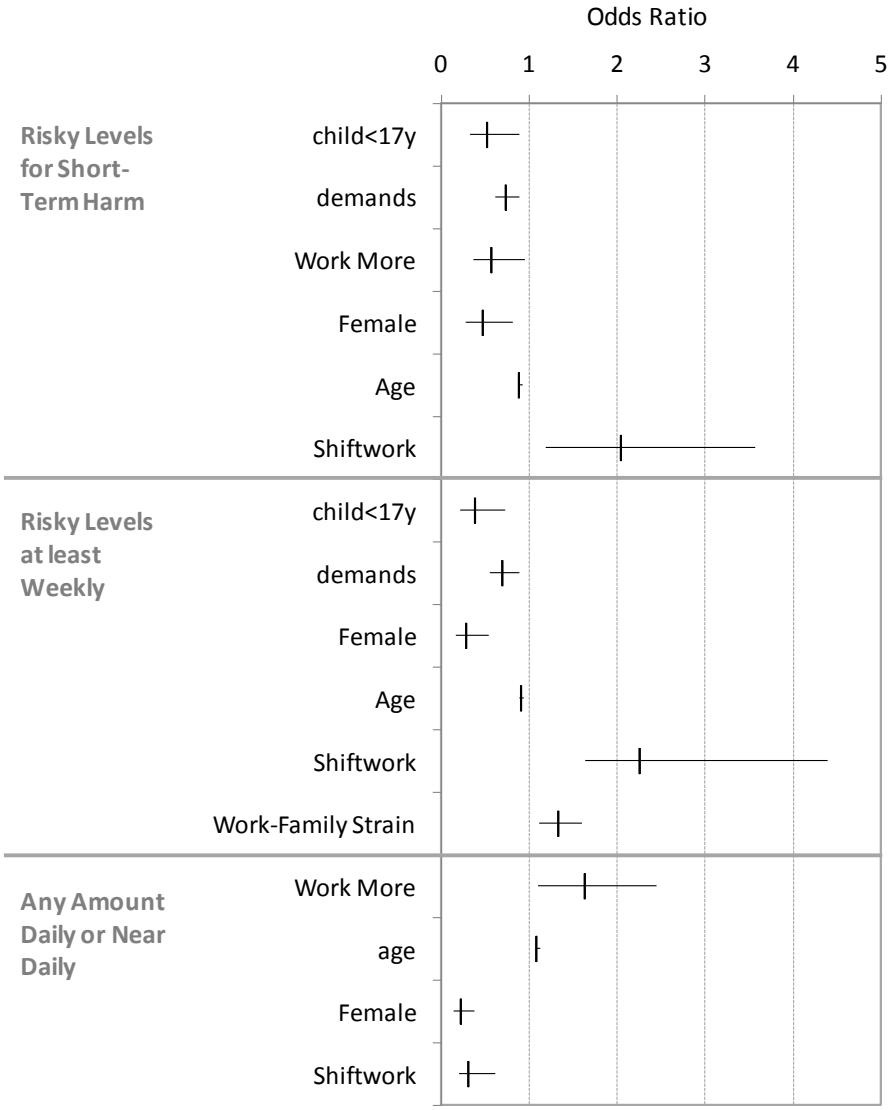

Figure 4 Summary of significant predictors of reporting alcohol consumption at risky levels for short term harm (upper panel), reporting consumption at short-term risky levels at least weekly (middle panel) and consumption in any amount daily or near daily (lower panel).

Note: Vertical lines indicate odds ratios, such that values less than one are associated with reduced odds, and those greater than one with increased odds. Horizontal lines indicate 95 per cent confidence intervals for odds ratios (longer lines indicate increased variability).

Age was associated with psychological distress and drinking behaviour

Age was protective for psychological distress and binge drinking, however older adults were more likely to consume alcohol daily or near daily. Every year increase in age was associated with a 2 to 3 per cent reduction in the odds of moderate or high psychological distress (compared to low, Figure 2), and an 8 to 23 per cent decrease in the odds of consuming alcohol at short-term risky levels (Figure 4). Every year increase in age was associated with a 7 to 12 per cent increase in the odds of drinking near daily or near daily (Figure 4).

Work demands and having a child less than 17years old were associated with reduced odds of risky drinking

Every 1-point increase on the 7-point work demands scale was associated with an 11 to 49 per cent reduction in the odds of drinking at short-term risky levels, and a 12 to 45 per cent reduction in the odds of doing so at least weekly (Figure 4).

Having a child less than 17years reduced the odds of drinking at short term risky levels by 50 per cent (confidence intervals 12 to 68) and the odds of doing so at least weekly by 60 per cent (confidence intervals 28 to 79).

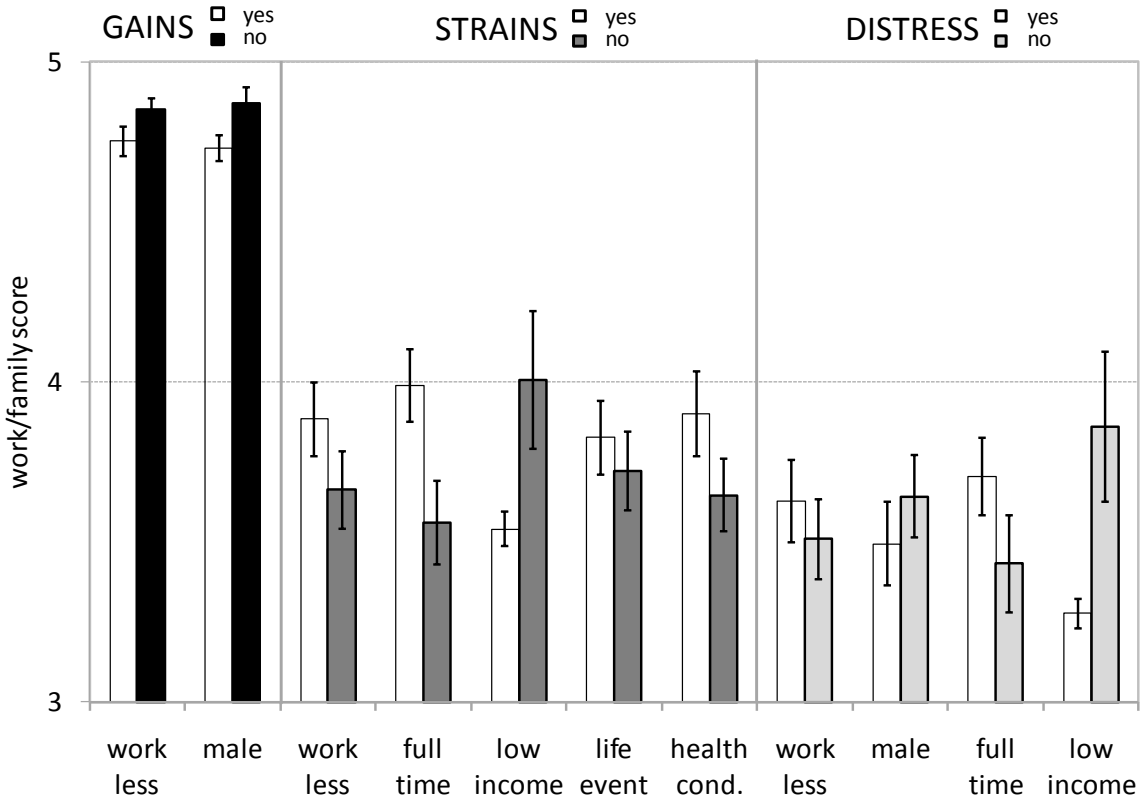

Figure 5 Summary of the impact of categorical variables (wanting to work less, gender, full v part-time, income, life event, health condition) on work-family gains (left panel), strains (middle panel) and parenting distress (right panel).

Note: The y-axis range from three to five points only. Therefore the difference between nearly all groups is less than half a point. The exception to this is the difference in parenting distress for income categories (1 versus 2+), which is more than half a point. The differences in work-family strains by full-time v part-time and income category are nearly half a point.

Work hours, income and occupational status have a modest impact on psychosocial outcomes

Although full-time employees and those with a higher income reported significantly worse outcomes on the work-family strains and parenting distress scales, the strength of this relationship was modest. On average, the difference between groups was less than half a point on the 7-point scales (Figure 5).

Those with longer weekly work hours reported lower parenting distress, with a 2 per cent reduction for every increased hour. This may reflect gender differences in work hours (women had slightly higher parenting distress, and also work fewer hours on average).

Higher occupational status was associated with decreased psychological distress and work-family strains. Every 1-point increase on the 100-point occupational status scale was associated with a 1-2 per cent reduction in the odds of reporting moderate or high levels of psychological distress (compared to low) (Figure 2), and a 1 per cent reduction in work-family strains.

While there were significant differences in work-family gains, strains and parenting distress by a number of variables, nearly all result in differences of less than half a point (Figure 5). The only exception to this was the difference in parenting distress by income category, such that those reported higher income had an 0.6 point increase in parenting distress.

Part II: Findings for health and community workers

In this section we replicate the previous analyses just with employees in the health and community services sectors. Here we examined whether the nature and extent of the relationships observed previously in the general sample of workers, differ in the specific context of health and community service work.

It should be noted that the dataset is relatively small for health and community workers (n=345), therefore these findings should be considered preliminary. Figure 6 displays a summary of predictors and their influence on psychological distress, work-family gains, strains, parenting distress and patterns of alcohol consumption. The most important predictors of poorer psychosocial outcomes for health and community workers were higher work demands and wanting to work more hours.

	Psychological Distress	Work/Family Gains	Work/Family Strains	Parenting Distress	Alcohol near daily
Work demands			↑	↑	
Wanting to work less		↓			
Wanting to work more	↑				
Shiftwork					↓
Age					
Female					

Figure 6 Predictors of psychological distress, work-family gains and strains and patterns of alcohol consumption in the health and community workers sample.

Wanting to work more hours than scheduled was associated with increased psychological distress

The odds of reporting moderate or high levels of psychological distress, compared to low levels, was nearly two and a half times higher for health and community services workers who wanted to work more hours (note the wide confidence intervals 1.032 to 5.914).

Higher work demands were associated with increased work-family strains and parenting distress

Higher work demands were also related to work-family strains and parenting distress. Every 1-point increase on the 7-point demands scale was associated with a 17 per cent increase in work-family strains, and an 18 per cent increase in parenting distress for health and community services workers (Figure 7).

While significant, preferring to work fewer hours was only associated with 0.3 point decrease in work-family gains. In addition, while work hours were significant predictors of work-family strains, the increase was only approximately 3 per cent per hour.

Drinking behaviour was related shiftwork schedule

Among health and community workers, 6 per cent reported consuming at levels considered risky for short-term harm and 4 per cent reported doing this at least weekly. Approximately 17 per cent reported consuming alcohol in any amount daily or near daily. The odds of doing so were

significantly reduced for those on shiftwork schedules (Odds Ratio=0.354, confidence intervals 0.129 to 0.973).

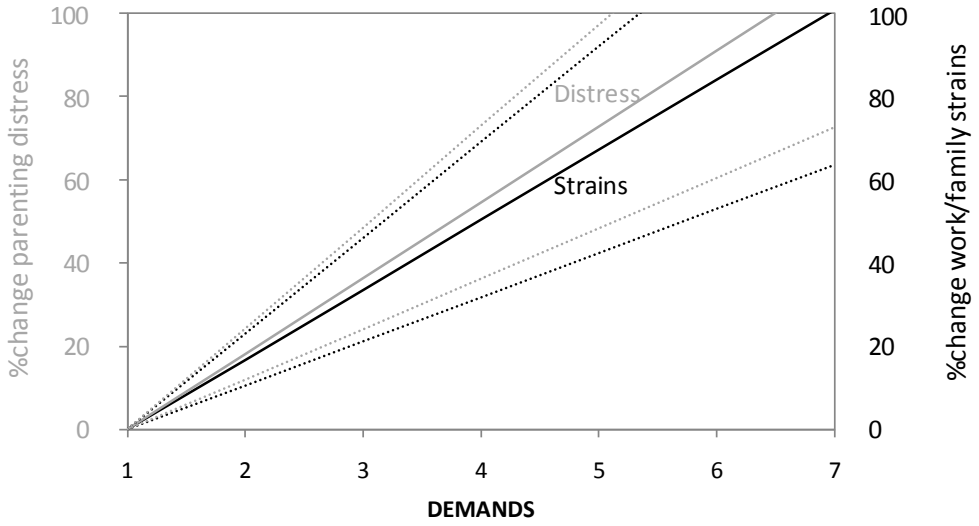

Figure 7 Summary of the impact of work demands on work-family strains and parenting distress.
Note: Solid lines indicate changes in strains and distress by demands. Dotted lines indicate the standard error around these estimates.

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