ALCOHOL USE in the Australian workforce:

Prevalence, patterns, & implications

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NCETA
Australia's National Research Centre on AOD Workforce Development

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TABLE OF CONTENTS

TABLE OF CONTENTS (CONT.)

LIST OF TABLES

LIST OF TABLES (CONT.)

LIST OF TABLES (CONT.)

LIST OF FIGURES

EXECUTIVE SUMMARY

This report presents findings from a secondary analysis of the 2004 National Drug Strategy Household Survey (NDSHS) undertaken by the National Centre for Education and Training on Addiction (NCETA). It represents the most comprehensive examination of the prevalence and patterns of alcohol use among the Australian workforce to-date and is a companion report to secondary analyses of 2004 NDSHS data on drug use by the Australian workforce. The report also includes a comparison of the 2004 and 2001 NDSHS data for alcohol-related absenteeism.

The report forms part of a wider program of work by NCETA examining various aspects of alcohol and drug (AOD) use by the Australian workforce and the identification of strategies for addressing AOD-related problems.

The NDSHS

The NDSHS is conducted every three years. The data analysed here was obtained from the 2004 NDSHS. The national sample for the 2004 survey was 29,445. The NDSHS utilises a stratified sampling procedure that allows for national representativeness, and weighted numbers are provided in this report that correspond to the national equivalent in the survey samples.

Data derived from the NDSHS may underestimate the actual level of alcohol use in the community. This notwithstanding, the findings presented here are the most detailed currently available on alcohol use by the Australian workforce.

Previous research concerning the alcohol use of Australian workers has largely been restricted to a small number of studies that have focused on specific industries and occupations. This secondary data analysis of a large scale national survey provides unique insight into levels and patterns of alcohol use among the Australian workforce as a whole, and by specific industry and occupational groups, and it allows for assessment of potential risks to workplace safety and productivity and worker-wellbeing from a national perspective. The report also contains data that can be used to inform appropriate policies and interventions at national and local levels.

Alcohol Risk Levels

Respondents' alcohol consumption was classified according to short- and long-term risk levels determined by the 2001 NHMRC guidelines (see Table 2.1), using a method identical to the original analysis of the NDSHS (Australian Institute of Health and Welfare, 2005). The focus of this report is on levels and patterns of drinking that are likely to contribute to harm. Data are mainly presented for drinking categories associated with harm in the short-and long-term (i.e., risky and high risk). For ease of presentation, short-term risky and high risk categories are combined.

Demographic Profile

- 51.2% (14,851) of NDSHS respondents were employed
- 50.2% of employed respondents were female and the largest proportion of workers (26%) was aged 40-49 years
- the majority of employed respondents were Australian born (77.9%), non-Indigenous (98.7%), city residents (64.6%), had no dependent children (57.4%), spoke English at home (96%), and were married or lived with a partner (65%)
- the largest proportion of employed respondents resided in New South Wales (26.8%)
- one in four (24.7%) had a university education
- nearly one in three (30.1%) employed respondents reported an income of $60,000-$99,999.

Key Findings

Alcohol use and alcohol consumption patterns associated with risk of harm in the short- and long-term were significantly ($p = 0.000$) more prevalent among those in the paid workforce compared to those not in the paid workforce (with the exception of the unemployed, who report the highest prevalence of risky alcohol use).

Percentage of 2004 NDSHS respondents who were abstainers or drank at short- or long-term risk levels by employment status

	% Employed (95% CI)	% Not in the paid workforce* (95% CI)	% All (95% CI)
Abstainer	9.3 (8.7-9.9)	25.0 (24.0-26.1)	16.2 (15.7-16.8)
Short-term risky/high risk (at least weekly)	9.3 (8.7-9.9)	5.8 (5.3-6.3)	7.7 (7.3-8.2)
Long-term high risk	3.1 (2.7-3.4)	2.5 (2.2-2.9)	2.8 (2.6-3.1)

* Note: The category 'not in the paid workforce' includes respondents who were unemployed and looking for work, unable to work, retired, students, those engaged in home duties and any others who were not self-employed or employed for wages or a salary.

Among those in the paid workforce, self-employed workers were less likely to drink alcohol at levels associated with risk of harm in the short-term than workers employed for wages or a salary.

Age and Gender

- in general, male workers were significantly ($p = 0.000$) more likely than female workers to engage in consumption patterns associated with short- and long-term harm (the only exception to this was long-term risky drinking which was more prevalent among females)
- male workers residing in the country were significantly ($p = 0.000$) more likely than city workers and female workers residing in the country to drink at risky and high risk levels
- younger workers were significantly ($p = 0.000$) more likely than older workers to use alcohol at levels associated with risk of harm in the short- and long-term
- risky and high risk alcohol use was most prevalent among workers aged 14-19 years.

Workers who were more likely to use alcohol at risky and high risk levels were:

- resident in the Northern Territory
- Indigenous
- born in Australia
- mainly spoke English at home
- single
- had no dependent children
- had a high school education or less
- had a household income of $140,000 or more.[1]

Industry and occupation differences

There were significant industry ($p = 0.000$) and occupation ($p = 0.000$) differences in both the prevalence and patterns of alcohol use among the workforce:

- the hospitality industry had the largest proportion of workers (16.0%) who frequently (at least weekly) drank at levels associated with harm in the short-term
- hospitality industry workers were also more likely to drink at levels associated with long-term harm compared to workers employed in other industries
- tradespersons were more likely than workers in other occupations to drink alcohol at levels associated with short- and long-term harm
- gender differences in alcohol consumption patterns were evident within specific industries.

In general, males were more likely to drink at levels associated with short- and long term harm, however, there were some exceptions:

  - in the manufacturing industry long-term risky drinking was more prevalent among female workers, while long-term high risk drinking was more prevalent among male workers
  - in the retail and finance industries long-term risky drinking was more prevalent among female workers than male workers
  - in the hospitality industry infrequent (at least monthly) drinking was more prevalent among female workers compared to male workers.
- across all occupations, males were more likely to drink at short-term risky/high risk levels compared to females. The only exception was for professionals where there were no significant gender differences and for skilled workers where infrequent (at least monthly) short-term risky/high drinking was more prevalent among females.

[1] With the exception of long-term high risk drinking, which was most prevalent among workers with a household income of $20,000 or less.

Absenteeism

- approximately 3.7% of the workforce reported alcohol-related absenteeism
- alcohol-related absenteeism was significantly more prevalent among younger workers ($p = 0.000$) with alcohol-related absenteeism being most prevalent among workers aged 14-19 years
- in general, male workers were significantly ($p = 0.001$) more likely to report alcohol-related absenteeism than female workers, however for workers aged 14-19 years there were no gender differences in alcohol-related absenteeism
- there were significant industry differences with alcohol-related absenteeism being most prevalent among workers employed in the hospitality industry
- workers who drank frequently (at least weekly) at short-term risky/high risk levels were 14 times more likely to report alcohol-related absenteeism than low risk drinkers
- workers who drank at long-term high risk levels were 5.6 times more likely to report alcohol-related absenteeism than low risk drinkers
- workers drinking at short- or long-term low risk levels were 1.5 and 1.7 times respectively more likely to report illness/injury absenteeism than abstainers
- workers who drank frequently (at least weekly) at short-term risky/high risk levels were 2.1 times more likely to report illness/injury absenteeism than abstainers
- workers who drank at long-term high risk levels were 2.6 times more likely to report illness/injury absenteeism than abstainers
- there was little difference in the overall percentage of workers reporting illness/injury absenteeism compared to 2001 NDSHS data
- there was a slight increase in the proportion of workers taking a day off due to their use of alcohol in 2004 compared to 2001 NDSHS data.

Alcohol-related risk to workplace safety and productivity

- 18.6% reported driving a motor vehicle under the influence of alcohol
- 0.9% reported operating hazardous machinery under the influence of alcohol
- 6.0% reported attending work while under the influence of alcohol
- 9.3% reported usually drinking alcohol at work.

- male workers were more likely than female workers to report engaging in the above activities under the influence of alcohol and to drink alcohol at work
- driving a motor vehicle or attending work under the influence and usually using alcohol at work was most prevalent among workers aged 20-29 years, while operating hazardous machinery under the influence was most prevalent among workers aged 14-19 years
- driving a motor vehicle, attending work under the influence, and usually drinking at work were most prevalent in the hospitality industry, while operating hazardous machinery under the influence was most prevalent in the agriculture industry
- there was an overall trend for the prevalence of these activities to increase with the frequency and level of risky/high risk drinking.

The data provided in this report provide a comprehensive basis upon which to develop prevention and intervention policies and strategies. As noted, these data are conservative and likely to underestimate the overall prevalence of risky alcohol use by the Australian workforce. The key findings are that prevalence of risky alcohol use is highest among young male workers and increasingly very young female workers and is especially concentrated among workers in the hospitality industry.

REPORT OUTLINE

The structure of this report is as follows:

Chapter 1: Introduction

describes the rationale for, and background to, the report including an overview of existing literature and data concerning alcohol use among the Australian workforce.

Chapter 2: Methodology

describes 2004 National Drug Strategy Household Survey (NDSHS) measures and methods used in the secondary analysis of the 2004 NDSHS.

Chapter 3: Demographic characteristics of survey respondents

examines the employment status of all 2004 NDSHS respondents and provides a demographic profile of those respondents who are part of the paid workforce.

Chapter 4: Prevalence and patterns of alcohol use among the workforce

examines the prevalence and patterns of alcohol use among the Australian workforce. It provides profiles of employed drinkers utilising a range of demographic variables including: gender, age groups, marital status, country of birth, dependent children, main language spoken at home, annual household income, employment status, highest educational attainment, and area of residence.

Chapter 5: Differences in alcohol use by industry and occupation

examines the prevalence and patterns of alcohol use among different occupational and industry groups.

Chapter 6: Alcohol use and absenteeism

provides a demographic profile of workers who report alcohol-related and/or illness/injury absenteeism and examines the relationship between alcohol use and absenteeism. A comparison of the 2001 and 2004 NDSHS data on alcohol-related absenteeism is also provided.

Chapter 7: Alcohol use and risk to workplace safety and productivity

describes the prevalence of four alcohol-related activities that have potentially negative workplace outcomes: attending work under the influence of alcohol, driving a motor vehicle under the influence of alcohol, operating hazardous machinery under the influence of alcohol, and usually drinking alcohol at work. The chapter also provides an examination of these activities according to demographic, workplace, and alcohol consumption patterns.

CHAPTER 1

INTRODUCTION

1.1 BACKGROUND

Substantial data exists on the alcohol consumption patterns of the Australian population in general. However, data on the alcohol consumption patterns of the Australian workforce is scarce. Understanding the alcohol consumption patterns of the workforce is important for several reasons. The workforce comprises a large proportion of the population and concentrated within the workforce sub-populations are the demographic groups most likely to engage in potentially harmful alcohol use. Alcohol use is more prevalent among Australians in the paid workforce compared to those not in the paid workforce (Berry, Pidd, Roche, & Harrison, 2007). In addition, workers' alcohol use has important implications for the health, safety and welfare of individual workers, the wider workforce, and members of the public with whom they may have contact.

Risky alcohol use is strongly associated with morbidity and mortality among the Australian population at large (Begg et al., 2007), and it also plays a role in workplace fatalities and traumatic injuries (Phillips, 2001). There is increasing evidence of the impact of alcohol use on workplace productivity, in particular the high prevalence and cost of alcohol-related absenteeism (Collins & Lapsley, 1996; Pidd, Berry, Roche, & Harrison, 2006; Roche, Pidd, Berry, & Harrison, 2008).

The workplace offers unique opportunities for cost-effective intervention and prevention strategies to address risky drinking and alcohol-related harm. Employers have substantial influence over employee's work-related behaviours, particularly those that are relevant to workplace safety and productivity. In addition, industrial relations and occupational health and safety legislation and frameworks exist that can incorporate alcohol-related issues that impact the workplace.

Identification of workforce consumption patterns would enable development and implementation of targeted strategies to address these issues. Moreover, social contagion theory (e.g., Skog, 1985) and other social influence theories (e.g., Bandura, 1977) suggest that improvements to an individual worker's consumption patterns would positively impact on their immediate family and the wider community. However, to-date, the potential of the Australian workplace as an intervention and prevention setting has been largely under-utilised (Pidd & Roche, 2008).

The under-utilisation of the workplace as an AOD prevention and intervention setting may be due in part to the dearth of Australian research in this area. Until very recently there had been relatively little Australian data on alcohol use by the workforce (Phillips, 2001) and even less was known concerning the relationship between the workplace environment and patterns of consumption (Allsop & Pidd, 2001). Early Australian research on workers' consumption patterns mostly involved relatively small sample sizes and/or focused on workforce sub-populations within specific occupations or industries (e.g., Davey, Obst, & Sheehan, 2001; Midford, Marsden, Phillips, & Lake, 1997; Pidd, Boeckmann, & Morris, 2006; Webb, Redman, Hennrikus, Rostas, & et al., 1990).

Prior to 2006, there had only been one study that utilised a national data set to examine Australian worker's alcohol consumption patterns. Hagen et al. (1992) examined National Health Survey data from 1989–90 and found occupational and industry differences in consumption patterns; however, that study is now dated and remains problematic in several respects. First, while the data analysed

by Hagen et al. was collected in a national survey involving approximately 56,000 respondents, it is unclear how many respondents were employed. Second, while percentages of alcohol users were classified according to occupational and industry groups, there was no indication of occupation and industry sample sizes. Finally, it is unclear if the data were weighted in order to ensure national representativeness.

To address the lack of data concerning the alcohol consumption patterns of the Australian workforce, NCETA previously undertook a comprehensive secondary analysis of data collected as part of the 2001 National Drug Strategy Household Survey (Pidd, Berry, Harrison et al., 2006). That analysis found a substantial proportion of the Australian workforce (8.7%) drank at levels associated with risk of harm regularly, while nearly half (47.8%) drank at these levels at least occasionally. There were significant differences in consumption patterns between different occupation/industry groups even when controlling for socio-demographic variables such as age, gender, marital status, and annual income (Berry et al., 2007). For example, while only 4.4% of workers employed in the education industry and 6.1% of professionals regularly drank at levels associated with risk of harm in the short-term, 16.5% of those employed in the hospitality industry and 14% of tradespersons regularly drank at these levels.

Workers' consumption patterns were also found to be associated with substantial negative outcomes for the workplace (Pidd et al., 2006). Compared to those who drank at low risk levels, workers who reported drinking at risky and high risk levels were more likely to report alcohol-related absenteeism and illness/injury absenteeism (Roche et al., 2008), to attend work under the influence, and to consume alcohol at work (Pidd, Berry, Harrison et al., 2006). These outcomes may have substantial negative consequences for the wellbeing of individual workers and the safety and productivity of the workplace in general. For example, the extent of alcohol-related absenteeism in 2001 was estimated to be 2.7 million work days lost at a cost of AUD $437M (Pidd, Berry, Roche et al., 2006). At the time of publication, this estimate was approximately 12 times greater than previous estimates of the economic cost of alcohol-related absenteeism among the Australian workforce (Collins & Lapsley, 1996).

1.2 Aim

The aim of the current report is to extend previous secondary analysis undertaken on the 2001 NDSHS by conducting a similar secondary analysis of data collected as part of the 2004 NDSHS.

The present study was conducted to provide detailed data on:

- the prevalence and patterns of alcohol use among the Australian workforce
- the prevalence and patterns of alcohol use among the workforce according to demographic factors such as age, gender and location
- the prevalence and patterns of alcohol use among occupational and industry groups
- the relationship between worker's alcohol use and negative consequences for the workplace including the absenteeism and risk to safety and productivity, including a comparison of the 2004 and 2001 NDSHS data sets.

Data on the prevalence, patterns, and nature of alcohol use among the Australian workforce will also allow for the identification of alcohol-related risks to safety and productivity and the identification of 'at risk' workforce groups. This in turn would allow for the development of cost-effective and targeted interventions that aim to reduce or minimise harmful alcohol use and risk to safety and productivity, and provide some direction for future research that aims to gain a more comprehensive understanding of the relationship between alcohol use and the Australian workplace.

CHAPTER 2

METHODOLOGY

2.1 BACKGROUND

The National Drug Strategy Household Survey (NDSHS) is a national survey conducted every three years in order to examine Australians' awareness, attitudes and behaviour relating to alcohol, tobacco, and illicit drugs. The current study involved secondary analyses of selected data from the 2004 NDSHS to determine the prevalence and patterns of alcohol use among the Australian workforce and to identify demographic, individual, and occupational factors associated with use. As most questions in this survey did not specifically relate to alcohol consumption that occurs *in* the workplace, an accurate assessment of workplace prevalence could not be determined. The analyses conducted allowed only approximate inferences to be made about potential links between alcohol use and selected demographic, individual, and occupational factors.

2.2 SCOPE

A total of 29,445 Australians aged 12 years and older from all Australian States and Territories responded to the 2004 NDSHS. The analyses reported here focus on employed respondents who were aged 14 years and older.

2.3 SURVEY DESIGN

The 2004 NDSHS used two data collection methods, each of which had a different sample design: drop and collect questionnaires (n=24,109) and computer-assisted telephone interviews (CATI) (n=5,336). The corresponding response rates for these two methods were 47.8% and 37.8%, respectively. A multi-stage stratified sampling methodology was utilised and data were weighted by age, gender, and geographical region to be representative of the total Australian population.

2.4 MEASURES USED

Data obtained from items in the 2004 NDSHS that were relevant to alcohol use and the workplace, were included in the analyses. The numbering of each item reported below is consistent with that used in the survey. A copy of the survey instrument is available as an appendix to the 2004 National Drug Strategy Household Survey: First results, Appendix 5 (Australian Institute of Health and Welfare, 2005). The measures used in this report were asked of all 29,445 NDSHS respondents and are outlined below:

2.4.1 Demographic measures

- ZZ1: Gender (Male, Female)
- ZZ2: Age (years)
- ZZ3: Marital status (Never married, Widowed, Divorced, Separated, Married/defacto/living with life partner)

- ZZ4: Aboriginal/Torres Strait Islander status
- ZZ5a: Country of birth
- ZZ6: Language spoken at home
- ZZ12a: Highest year of primary/secondary school completed
- ZZ14: Highest qualification obtained
- ZZ15: Annual household income
- ZZ17c: Number of dependent children (number of financially dependent children aged 0-14 years)
- ZZ23: Location (postcode/suburb/town).

2.4.2 Alcohol consumption measures

Respondents to the 2004 NDSHS were asked several questions that were used to determine their drinking status and alcohol consumption patterns:

- F2, F3 & F6a: Drinking status.
  Respondents were asked if they had ever tried alcohol (F2), if they had ever had a full serve of alcohol (F3) and if they had an alcoholic drink of any kind in the last 12 months (F6a).
- F15: Frequency and quantity of consumption.
  Respondents were asked to complete a graduated quantity frequency matrix to describe the frequency with which they consumed different numbers of standard drinks over the past 12 months.
- F17: Previous day's consumption.
  Respondents were asked to record the number of standard drinks they had yesterday.

A drinker was defined as a person who consumed a full serve of alcohol in the last 12 months, while an abstainer was one who had never had a full serve of alcohol, or a person who had consumed a full serve of alcohol, but not in the 12 months prior to the survey. Respondents' alcohol consumption was classified according to patterns associated with risk of harm in the short- and long-term as determined by the 2001 NHMRC guidelines (Table 2.1), using a method identical to the original analysis of the NDSHS (Australian Institute of Health and Welfare, 2005).

The NHMRC guidelines detail patterns of consumption associated with risk of harm in the long-term (chronic harm) and short-term (acute harm). Guidelines for risk of harm in the long-term focus on mean levels of consumption associated with chronic harms (e.g., heart disease, liver cirrhosis, dementia, etc.) that result from regular heavy use over extended periods of time. As regular average consumption increases, so does risk of chronic harms. Guidelines for risk of harm in the short-term focus on levels of consumption during single drinking occasions associated with acute harms (e.g., injury, accidents, raised blood pressure, stroke, etc.). As the level of consumption on a single drinking occasion increases, so does risk of acute harms. There is evidence to indicate that drinking at, or above, the short-term risky or high risk levels outlined in Table 2.1 increases the probability of acute health and social problems including injury or death (NHMRC, 2001; Rehm et al., 2003). Short-term risk levels (i.e., low risk, risky, and high risk) for male and female drinkers were derived from the graduated quantity frequency matrix (F15). Long-term low, risky, and high risk levels for male and female drinkers were determined using the same graduated frequency matrix in combination with the question which asked the respondent to record the number of alcoholic drinks they had on the previous day.

In addition, the alcohol consumption measures used in the 2004 NDSHS allowed respondents to be further classified into mutually exclusive groups according to frequent (at least weekly), infrequent (at least monthly), or occasional (at least yearly) consumption at levels associated with risk of harm in the short-term. Frequency of short-term risk consumption was included in this report as this measure provides a detailed indicator of consumption patterns and risk associated with alcohol use.

Research has clearly demonstrated that risk of injury increases as the level of alcohol consumption increases (e.g., Cherpitel, Tam, Midanik, Caetano, & Greenfield, 1995). Evidence also indicates that risk increases more for individuals whose consumption patterns vary substantially and is highest for individuals who on occasion drink much more than usual (Gruenewald, Mitchell, & Treno, 1996; Treno, Gruenewald, & Ponicki, 1995; Treno & Holder, 1997).

Table 2.1 National Health and Medical Research Council Australian Alcohol Guidelines 2001

Risk of short-term (acute) harm	Low risk	Risky	High risk
	No of standard drinks		
Males	Up to 6 (on any one day, no more than 3 days per week)	7 to 10 (on any one day)	11 or more (on any one day)
Females	Up to 4 (on any one day, no more than 3 days per week)	5 to 6 (on any one day)	7 or more (on any one day)
Risk of long-term (chronic) harm	**Low risk**	**Risky**	**High risk**
	No of standard drinks		
Males (on average day)	Up to 4 (per day)	5 to 6 (per day)	7 or more (per day)
(overall weekly level)	Up to 28 (per week)	29 to 42 (per week)	43 or more (per week)
Females (on average day)	Up to 2 (per day)	3 to 4 (per day)	5 or more (per day)
(overall weekly level)	Up to 14 (per week)	15 to 28 (per week)	29 or more (per week)

While the NHMRC guidelines outlined in Table 2.1 include categories of low risk of harm in the short-term and low risk of harm in the long-term, the focus of this report is on those drinking at risky and high risk levels. Thus, throughout this report, only statistics concerning the proportions of 2004 NDSHS respondents who were abstainers or drank at risky or high risk levels are provided. In addition, proportions of respondents who drank at short-term risky and high risk levels are combined.

2.4.3 Employment-related measures

- ZZ8: Current employment status
  (Self-employed, Employed for wages, Salary, or payment in kind, Unemployed and looking for work, Home duties, Student, Retired or on a pension, Unable to work, Other).
- ZZ10: Industry employed in.
  Respondents were asked to describe the industry in which they were employed. Responses were then coded using two-digit Australian and New Zealand Standard Industrial Classification (ANZSIC) codes. These codes were grouped as follows:
    - Agriculture (codes 1–4)
    - Mining (codes 11–15)
    - Manufacturing (codes 21–29)
    - Construction (codes 36–42)
    - Wholesale (codes 45–47)

- Retail (codes 51–53)
- Hospitality (code 57)
- Transport (codes 61–67)
- Financial services (codes 73–78)
- Administration (codes 81–82)
- Education (code 84)
- Services (codes 71, 86–96).

- ZZ11: Occupation.
  Respondents were asked to describe the kind of work they did and their main work duties/tasks. Responses were then coded using two-digit Australian Standard Classification of Occupation (ASCO) codes. These codes were grouped as follows:
  - Managers (codes 11, 12, 13, 33)
  - Professionals (codes 21–32, 34, 39)
  - Tradespersons (codes 41–45)
  - Skilled workers (codes 46–73)
  - Unskilled workers (codes 79–99).

2.4.4 Absenteeism & safety/productivity risk measures

- Y10: Alcohol-related activities.
  Respondents were asked to report the activities they undertook in the last 12 months while under the influence of alcohol. Respondents could choose from 10 activities, however, for the purpose of the current analyses only data concerning the following were used:
  - Attended work
  - Drove a motor vehicle
  - Operated hazardous machinery.
- F9: Alcohol use at work.
  Respondents were asked where they usually drank alcohol and allowed to select one or more of 11 different locations. Only data concerning alcohol consumption at the workplace were analysed.
- Z2: Alcohol-related absenteeism.
  Respondents were asked to report the number of days missed (in the past 3 months) from work, school, Technical and Further Education (TAFE), or university due to their personal use of alcohol.
- Z3: Illness/injury absenteeism.
  Respondents were asked to report the number of days they had missed (in the past 3 months) from work, school, TAFE, or university due to any illness or injury.

2.5 STATISTICAL ANALYSIS

Data presented in this report were analysed using Stata version 10.0. Descriptive analyses were used to determine the proportion of respondents that fell into categories of interest. Significance levels of at least .05 were used to examine differences between categories and 95% confidence intervals (CI) are provided for all reported estimates. Univariate odds ratios were produced using logistic regression analyses.

2.5.1 Statistical terms used in this report

A brief description of the statistical terms used in this report is provided in Table 2.2.

Table 2.2 Statistical terms used in this report

Term	Description
N	Sample size (the total number of respondents)
Survey n	The number of respondents to the survey
Weighted n	The number of respondents to the survey weighted to be representative of the total Australian population
%	The estimated percentage
Mean	The mean, or arithmetic mean, refers to the average. It is the sum of a set of values divided by the number of values in that set.
Confidence Intervals (CI)	A confidence interval provides a range of plausible values for the unknown population prevalence on the basis of sample data. It conveys a degree of uncertainty about the precision of the estimated values. A 95% confidence interval means that 95 times out of 100, the estimate will fall between the range (confidence interval) indicated. A wide confidence interval will indicate that the estimated percentages are imprecise and should be treated with caution. 95% confidence intervals are reported around estimates.
Pearson chi-square statistic (*F* statistic)	The Pearson chi-square statistic is the test of independence used in this report. In Stata, the Rao-Scott second-order correction is applied to the chi-square statistic and then it is converted to the *F* statistic to determine the *p*-value. The size of the *F* statistic determines the *p*-value. For example a large *F* statistic (e.g., 300) is much more likely to represent a significant difference compared to a small *F* statistic (e.g., 3).
p-value	The *p*-value is the probability that an estimate is accurate and not due to random chance. For example a *p*-value of .01 means that there is a 99% chance that any difference in alcohol use between populations is a true difference.

2.5.2 Data Interpretation

Caution should be exercised when interpreting some of the results in this report. In some of the tables presented, small cell sizes are apparent and confidence intervals around the estimates could be large. Caution is especially necessary when interpreting results presented for very small cell sizes (e.g., n ≤ 5) and when confidence intervals are wide.

In addition, there are some concerns regarding the representativeness of the 2004 NDSHS sample population. In particular, the data may be a conservative estimate of alcohol consumption. The response rate for the 2004 NDSHS is relatively low (47.8% and 37.8% for the two data collection methods) and it is feasible that those who are more likely to drink heavily were less likely to complete the survey. Similarly, the 2004 NDSHS sample of employed Australians may not be representative of the Australian workforce in general. Of the employed respondents to the 2004 NDSHS, just over 50% were female and nearly 25% had a university education. According to Australian Bureau of Statistics data, in 2004 only 45% of the workforce were female (ABS, 2004b) and only 19% had a university education (ABS, 2004a). As gender and education level are both negatively associated with alcohol and drug use (females and those with higher levels of education are generally less likely to use at risky levels), the 2004 NDSHS data may underestimate the prevalence of alcohol use among the workforce.

CHAPTER 3

DEMOGRAPHIC CHARACTERISTICS OF SURVEY RESPONDENTS

KEY POINTS

1. 51.2% (14,851) of respondents were employed
2. 50.2% of employed respondents were female and the largest proportion of workers (26%) was aged 40-49 years
3. The majority of employed respondents were Australian born (77.9%), non-Indigenous (98.7%), city residents (64.6%), had no children (57.4%), spoke English at home (96%), and were married or lived with a partner (65%)
4. The largest proportion of employed respondents resided in New South Wales (26.8%)
5. One in four (24.7%) had a university education
6. Nearly one in three (30.1%) employed respondents reported an income of $60,000-$99,999.

3.1 INTRODUCTION

This chapter reports on the employment status of all respondents to the 2004 NDSHS and the following demographic characteristics of employed respondents only:

- Gender
- Age
- Marital status
- Aboriginal/Torres Strait Islander status
- Country of birth
- Language spoken at home
- Highest educational level obtained
- Annual household income
- Number of dependent children
- Location of residence.

3.2 EMPLOYMENT STATUS

Of the 29,445 Australians who responded to the 2004 NDSHS, just over half (51.2%; n = 14,851) of those aged 14 years and over were self-employed or employed for wages, salary, or payment in kind (Table 3.1).

Table 3.1 Employment status of respondents to the 2004 NDSHS

Employment status	%	Survey n	Weighted n
Self employed	9.9	2,875	1,800,160
Employed for wages, salary or payment in kind	41.3	11,976	7,248,830
Unemployed and looking for work	2.3	675	401,151
Engaged in home duties	8.3	2,411	1,272,652
Student	12.1	3,516	2,339,112
Retired or on a pension	23.0	6,676	3,210,493
Unable to work	1.6	460	246,372
Other	1.5	411	232,015
Total N	100.00	29,000	16,750,785

3.3 LOCATION

Employed respondents were categorised according to location of residence by State/Territory (Table 3.2) and city/country location. The largest proportion of employed respondents resided in NSW. The majority of employed respondents (64.6%, n = 9,582, weighted n = 5,907,762) resided in capital cities, while 35.4% (n = 5,261, weighted n = 3,136,762) resided in country locations.

Table 3.2 Employed respondents to 2004 NDSHS by location of residence

Location by State/Territory	%	Survey n	Weighted n
NSW	26.8	3,979	2,954,953
Sydney	17.2	2,549	1,957,391
NSW Country (excl. ACT)	9.6	1,430	997,562
VIC	21.9	3,249	2,281,242
Melbourne	15.9	2,355	1,678,204
VIC Country	6.0	894	603,038
QLD	19.6	2,904	1,743,814
Brisbane	9.2	1,367	798,138
QLD Country	10.4	1,537	945,676
WA	10.5	1,557	917,762
Perth	7.8	1,151	671,584
WA Country	2.7	406	246,178
SA	7.9	1,176	686,990
Adelaide	5.9	874	507,254
SA Country	2.0	302	179,736
NT	5.3	782	108,610
Darwin	2.6	390	56,911
NT Country	2.6	392	51,699
ACT	4.5	673	156,530
TAS	3.5	523	194,623
Hobart	1.5	223	81,749
TAS Country	2.0	300	112,874
Total N	100.0	14,843	9,044,524

3.4 GENDER AND AGE OF RESPONDENTS

There were slightly more employed female than male respondents and just over half of all employed respondents (50.4%) were aged between 30-59 years (Table 3.3). This contrasts with 2004 Australian Bureau of Statistics data that indicated 44.8% of the workforce were female (ABS, 2004b).

Table 3.3 Age and gender of employed respondents to the NDSHS

	%	Survey n	Weighted n
Gender			
Male	49.8	7,396	5,157,398
Female	50.2	7,447	3,887,126
Age			
14 to 19 years	4.0	585	400,681
20 to 29 years	17.8	2,646	1,843,870
30 to 39 years	24.4	3,623	2,173,697
40 to 49 years	26.0	3,863	2,366,052
50 to 59 years	20.9	3,100	1,699,802
60 years and over	6.9	1,026	560,421
Total N	**100.0**	**14,843**	**9,044,524**

3.5 COUNTRY OF BIRTH, INDIGENOUS STATUS AND LANGUAGE SPOKEN AT HOME

The majority of employed respondents to the 2004 NDSHS were born in Australia, non-Indigenous and English was the main language spoken at home (Table 3.4).

Table 3.4 Country of birth, Indigenous status and main language spoken at home of employed respondents to the 2004 NDSHS

	%	Survey n	Weighted n
Country of birth			
Australia	77.9	11,523	6,921,083
Other	22.1	3,263	2,080,025
Total N*	**100.0**	**14,786**	**9,001,108**
Indigenous status			
Aboriginal	1.1	157	83,195
Torres Strait Islander	0.1	14	10,360
Aboriginal and Torres Strait Islander	0.1	15	6,234
Non-Indigenous	98.7	14,596	8,908,643
Total N*	**100.0**	**14,782**	**9,008,431**
Main language spoken at home			
Non-English	4.0	587	507,903
English	96.0	14,242	8,524,895
Total N*	**100.0**	**14,843**	**9,032,799**

* Note: Total Ns vary due to differences in response rates for each survey item

3.6 EDUCATION LEVEL AND HOUSEHOLD INCOME

Employed respondents were categorised according to highest level of educational attainment and gross annual household income. One in four (24.7%) were university educated and the most frequently reported income range (mode) was $60,000-$99,999 (Table 3.5).

Table 3.5 Highest educational level and gross annual household income of employed respondents to the 2004 NDSHS

	%	Survey n	Weighted n
Education level			
High School or less	32.7	4,826	2,921,670
Certificate/Diploma	40.4	5,960	3,754,146
Bachelor Degree	17.0	2,502	1,506,267
Master's Degree or PhD	10.0	1,477	814,460
Total N*	**100.0**	**14,765**	**8,996,544**
Household income			
$140,000 or above	8.8	1,286	916,877
$100,000 to $139,999	14.0	2,040	1,309,145
$60,000 to $99,999	30.1	4,381	2,687,235
$40,000 to $59,999	19.1	2,780	1,555,479
$20,000 to $39,999	12.3	1,785	926,739
Less than $20,000	2.8	411	192,918
No income provided	13.0	1,890	1,291,414
Total N*	**100.0**	**14,572**	**8,879,806**

* Note: Total Ns vary due to differences in response rates for each survey item

3.7 MARITAL STATUS AND NUMBER OF DEPENDENT CHILDREN

The majority of employed respondents to the 2004 NDSHS were married (or living with a partner) and just over half had no dependent children (Table 3.6).

Table 3.6 Marital status and number of dependent children of employed respondents to the 2004 NDSHS

	%	Survey n	Weighted n
Marital status			
Married (including de facto/partner)	65.0	9,614	6,172,284
Single	22.6	3,350	2,104,112
Divorced	7.3	1,080	427,564
Separated but not divorced	3.7	543	225,342
Widowed	1.4	203	84,629
Total N*	**100.0**	**14,790**	**9,013,930**
Dependent children			
No	57.4	8,463	4,626,115
Yes	42.7	6,295	4,366,790
Total N*	**100.0**	**14,758**	**8,992,905**

* Note: Total Ns vary due to differences in response rates for each survey item

CHAPTER 4

PREVALENCE & PATTERNS OF ALCOHOL USE AMONG THE WORKFORCE

KEY POINTS

1. Alcohol consumption patterns associated with short- and long-term harm are more prevalent among those in the paid workforce compared to those not in the paid workforce. However, frequent (at least weekly) consumption at short-term risky/high risk levels and consumption at long-term risky or high risk levels is most prevalent among the unemployed
2. Drinking at short-term risky/high risk levels was more prevalent among respondents working for wages or salary compared to self-employed respondents
3. For the overall workforce, consumption patterns associated with short- and long-term harm were more prevalent among male workers. The exception to this was long-term risky drinking which was more prevalent among females
4. Younger workers were significantly more likely than older workers to drink at short- ($p = 0.000$) and long-term ($p = 0.000$) risky or high risk levels
5. Frequent (at least weekly) short-term risky/high risk drinking and long-term risky or high risk drinking was most prevalent among workers aged 14-19 years
6. Infrequently (at least monthly) and occasionally (at least yearly) drinking at short-term risky/high risk levels was most prevalent among workers aged 20–29 years and 30-39 years respectively
7. There were significant differences between the States and Territories ($p = 0.01$) in the proportion of workers drinking at short-term risky and high risk levels:
    - The largest proportions of workers reporting infrequent (at least monthly) or frequent (at least weekly) short-term risky/high risk drinking and long-term risky or high risk drinking resided in the Northern Territory
    - The largest proportions reporting occasional (at least yearly) short-term risky/high risk drinking resided in Tasmania and Western Australia.
8. Significant gender differences were observed between workers residing in country or capital city locations:
    - Male workers residing in the country were more likely to drink at short- and long-term risky or high risk levels compared to male workers residing in capital cities
    - Female workers residing in capital cities were more likely than female workers residing in the country to frequently (at least weekly) drink at short-term risky/high risk levels or drink at long-term risky or high risk levels. Conversely, female workers residing in the country were more likely than female workers residing in cities to infrequently (at least monthly) or occasionally (at least yearly) to drink at short-term risky/high risk levels.
9. Consumption patterns associated with short- and long-term harm were most prevalent among workers born in Australia, Indigenous workers, and workers who mainly spoke English at home. The only exception was for non-Indigenous workers who were more likely than Indigenous workers to occasionally drink at short-term risky/high risk levels

10. Consumption patterns associated with short- or long-term risk were more prevalent among workers with no dependent children compared to workers with dependent children. The only exception was for occasionally drinking at short-term risky/high risk levels, which was more prevalent among workers with dependent children
11. In general, consumption patterns associated with short- or long-term risk were more prevalent among workers with a high school education or less and those with a certificate or diploma compared to workers with higher levels of education. However, drinking infrequently (at least monthly) at short-term risk levels was more prevalent among workers with an undergraduate education and drinking occasionally (at least yearly) at short-term risky/high risk levels was more prevalent among workers with a postgraduate education
12. In general, consumption patterns associated with short- or long-term risk were more prevalent among workers with a household income of $140,000 or above compared to workers with lower levels of household income. The only exception was for occasionally drinking at short-term risky/high risk levels which was more prevalent among workers with a household income of $100,000-$139,000 and long-term high risk drinking which was more prevalent among workers with a household income of less than $20,000.

4.1 INTRODUCTION

This chapter reports the prevalence and patterns of alcohol use among employed respondents to the 2004 NDSHS who were aged 14 years and over. The socio-demographic profiles of those who used alcohol in the last 12 months are also provided in order to identify workforce sub-populations who may be at higher risk of harmful alcohol use. This in turn may provide useful data for informing policy, planning and interventions.

4.2 DIFFERENCES IN ALCOHOL PREVALENCE AND PATTERNS BY EMPLOYMENT STATUS

The proportions of 2004 NDSHS respondents aged 14 years and over who were employed or not in the paid workforce[2], grouped according to alcohol consumption patterns associated with risk of harm in the short- and long-term are shown in Table 4.1. A significantly larger proportion of employed 2004 NDSHS respondents drank at short- and long-term harm levels compared to respondents not in the paid workforce ($F_{4, 7195} = 312.0$, $p = 0.000$ and $F_{3, 5459} = 295.0$, $p = 0.000$ respectively).

Table 4.1 Alcohol consumption risk categories for employed Australians and those not in the paid workforce (aged 14 years and over)

	% Short-term harm (risky and high risk combined)				% Long-term harm	
Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Employed						
14,834 (9,038,005)	9.3 (8.7-9.9)	19.0 (17.6-20.5)	16.3 (15.7-17.1)	9.3 (8.7-9.9)	8.4 (7.8-9.0)	3.1 (2.7-3.4)
Not in the paid workforce						
13,271 (7,133,063)	25.0 (24.0-26.1)	9.6 (8.8-10.6)	8.9 (8.3-9.5)	5.8 (5.3-6.3)	5.4 (5.0-5.9)	2.5 (2.2-2.9)

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table. Categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.

[2] The category 'not in the paid workforce' includes respondents who were unemployed and looking for work, unable to work, retired, students, those engaged in home duties and any others who were not self-employed or employed for wages or a salary.

The proportions of respondents who drank at levels associated with short- and long-term harm also varied significantly according to employment status ($F_{24, 43823} = 73.9$, $p = 0.000$ and $F_{19, 34906} = 46.4$, $p = 0.000$ respectively). The largest proportion of respondents who reported drinking frequently (at least weekly) at short-term risky levels, and drinking at long-term risky and high risk levels, was the unemployed (Table 4.2). Significant differences in consumption patterns associated with short-term harm were observed between self-employed respondents and those employed for wages or salary ($F_{3.7, 6777} = 11.3$, $p = 0.000$). Drinking at short-term risky/high risk levels was more prevalent among those working for wages or a salary, compared to workers who were self-employed. Differences in consumption patterns associated with long-term harm were not significantly different between self-employed respondents and those working for wages or salary.

Table 4.2 Proportions of 2004 NDSHS respondents by alcohol consumption risk category and employment status

	% Short-term harm (risky and high risk combined)				% Long-term harm	
Survey n (weighted n)	Abstainers (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Self-employed						
2,869 (1,795,966)	9.8 (8.6-11.2)	17.1 (15.2-19.2)	13.1 (11.8-14.5)	8.3 (7.2-9.5)	8.0 (6.9-9.3)	3.3 (2.7-4.2)
Employed						
11,965 (7,242,038)	9.2 (8.5-9.9)	19.5 (18.0-21.0)	17.1 (16.4-18.0)	9.5 (8.9-10.3)	8.5 (7.9-9.1)	3.0 (2.6-3.4)
Unemployed						
674 (400,760)	15.5 (12.6-18.9)	14.9 (11.2-19.5)	17.0 (13.9-20.5)	12.4 (9.5-16.0)	10.2 (7.6-13.7)	6.1 (4.1-8.9)
Home duties						
2,406 (1,270,095)	22.5 (20.4-24.6)	12.5 (11.1-14.1)	8.1 (7.0-9.4)	4.4 (3.6-5.4)	5.9 (4.8-7.1)	1.7 (1.2-2.4)
Student						
2,674 (1,793,754)	28.2 (26.0-30.5)	13.9 (12.1-16.1)	17.4 (15.7-19.2)	8.0 (6.8-9.4)	5.7 (4.7-6.8)	2.5 (1.8-3.4)
Retired/pension						
6,659 (3,199,516)	25.5 (24.2-26.8)	5.8 (5.1-6.6)	2.9 (2.4-3.4)	3.6 (3.1-4.2)	4.4 (3.9-5.0)	2.1 (1.8-2.6)
Unable to work						
458 (244,891)	25.9 (20.9-31.7)	7.0 (4.7-10.3)	12.7 (9.3-17.2)	11.3 (8.0-15.9)	6.3 (3.9-10.2)	5.1 (3.2-8.0)
Other						
400 (224,048)	23.7 (19.0-29.1)	6.9 (4.8-9.9)	11.4 (7.4-17.4)	9.0 (6.1-13.3)	5.9 (3.9-9.1)	4.2 (2.2-7.8)
All persons						
28,105 (16,171,068)	16.2 (15.7-16.8)	14.9 (13.7-16.1)	13.0 (12.6-13.5)	7.7 (7.3-8.2)	7.1 (6.7-7.5)	2.8 (2.6-3.1)

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table. Categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes groups with the highest proportions drinking at NHMRC risk levels.

Differences in consumption patterns associated with short- and long-term harm by respondents' employment status are illustrated in Figure 4.1.

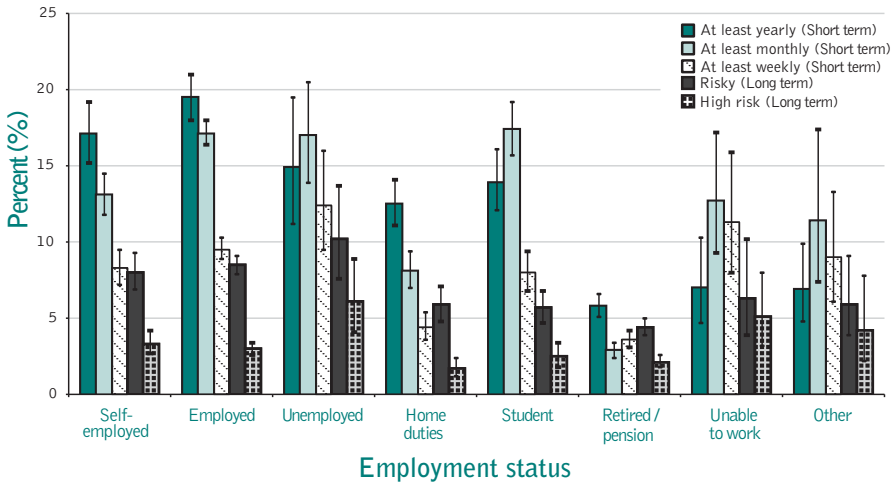

Figure 4.1 Proportions of 2004 NDSHS respondents by employment status and alcohol consumption at long-term levels of harm and frequency of drinking at short-term levels of harm (risky and high risk combined)

4.3 AGE AND GENDER DIFFERENCES IN ALCOHOL USE

There were significant age differences in the proportions of employed respondents who drank at short-term ($F_{17.2,\ 31332} = 60.8$, $p = 0.000$) and long-term ($F_{12.8,\ 23354} = 9.4$, $p = 0.000$) harm levels. In general, young workers aged 14-19 years were more likely than older workers to report drinking at risky and high risk levels (Table 4.3). However, drinking infrequently (at least monthly) and occasionally (at least yearly) at short-term risky/high risk levels was most prevalent among employed respondents aged 20–29 years and 30-39 years, respectively. In general, the proportion of employees who drank at risky or high risk levels tended to decrease with age (Figures 4.2 and 4.3).

Table 4.3 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category and age

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Age	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
14–19	585 (400,681)	13.0 (9.8-17.1)	13.1 (9.8-17.2	25.4 (21.3-30.0)	20.0 (16.2-24.5)	12.2 (9.3-15.9)	5.6 (3.5-8.8)
20–29	2,644 (1,841,613)	7.5 (6.3-8.8)	22.0 (20.0-24.2)	27.9 (25.9-30.0)	16.2 (14.5-18.1)	11.7 (10.0-13.6)	4.9 (3.9-6.1)
30–39	3,622 (2,172,852)	8.7 (7.5-10.0)	24.9 (23.0-27.0)	17.9 (16.6-19.3)	8.0 (7.1-9.0)	8.0 (7.0-9.1)	2.3 (1.8-2.8)
40–49	3,861 (2,364,572)	8.4 (7.4-9.5)	19.3 (17.3-21.4)	12.3 (11.2-13.5)	7.9 (7.0-9.0)	7.4 (6.6-8.3)	2.7 (2.2-3.4)
50–59	3,097 (1,698,280)	10.7 (9.4-12.1)	12.6 (10.9-14.4)	9.2 (7.8-10.8)	4.9 (4.0-5.8)	6.6 (5.8-7.7)	2.2 (1.7-2.9)
60+	1,025 (560,007)	14.7 (12.4-17.4)	8.6 (6.7-10.8)	4.5 (3.2-6.3)	3.0 (2.2-4.2)	5.8 (4.2-8.0)	2.2 (1.4-3.4)
All	**14,834 (9,038,005)**	**9.3 (8.7-9.9)**	**19.0 (17.6-20.5)**	**16.3 (15.7-17.1)**	**9.3 (8.7-9.9)**	**8.4 (7.8-9.0)**	**3.1 (2.7-3.4)**

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes age groups with the highest proportions of workers drinking at NHMRC risk levels.

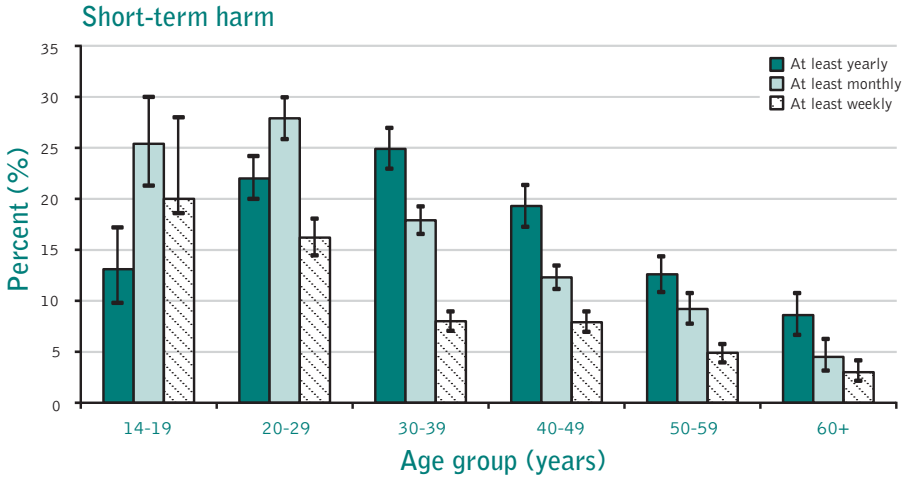

Figure 4.2 Proportions of employed 2004 NDSHS respondents by age and frequency of drinking alcohol at short-term levels of harm (risky and high risk combined)

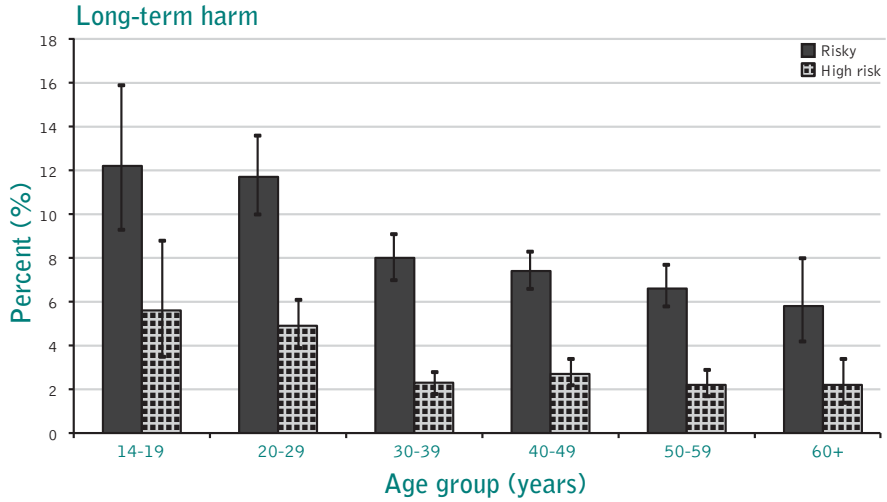

Figure 4.3 Proportions of employed 2004 NDSHS respondents by age and alcohol consumption at long-term levels of harm

Gender differences were observed in alcohol consumption patterns associated with short-term harm ($F_{3.8,\ 6939} = 19.7$, $p = 0.000$) and long-term harm ($F_{2.9,\ 5289} = 21.8$, $p = 0.000$). In general, consumption at risky and high risk levels was more prevalent among male workers (Table 4.4). The only exception to this was for drinking at long-term risky levels which was more prevalent among female workers (Table 4.4).

Significant age differences in the proportions of male employed respondents who drank at short-term ($F_{16.9,\ 30821} = 28.8$, $p = 0.000$) and long-term ($F_{12.5,\ 22803} = 4.7$, $p = 0.000$) harm levels were observed. Young male workers aged 14-19 years were more likely than older male workers to report drinking at risky levels (Table 4.4). However, drinking infrequently (at least monthly) and drinking at long-term high risk levels was most prevalent among male workers aged 20–29 years, while drinking occasionally (at least yearly) at short-term risky/high risk levels was most prevalent among male workers age 30-39 years.

Similarly, significant age differences in the proportions of employed female respondents who drank at short-term ($F_{15.7,\ 28617} = 37.5$, $p = 0.000$) and long-term ($F_{12.7,\ 23119} = 7.5$, $p = 0.000$) harm levels were observed. Young females aged 14-19 years were more likely than older female workers to report drinking at risky levels (Table 4.4). The only exception to this was for drinking occasionally (at least yearly) at short-term risky/high risk levels which was most prevalent among female workers aged 30-39 years.

Table 4.4 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category, age and gender

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Age	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Males							
14–19	298 (236,084)	14.7 (10.0-21.1)	14.7 (10.3-20.7)	21.9 (16.7-28.1)	21.1 (15.5-28.1)	9.5 (5.9-15.0)	4.8 (2.1-10.4)
20–29	1,257 (1,045,480)	6.4 (5.0-8.2)	21.6 (18.9-24.5)	27.6 (24.7-30.7)	18.6 (16.1-21.4)	9.0 (7.3-11.2)	6.1 (4.6-8.1)
30–39	1,797 (1,284,500)	7.8 (6.4-9.5)	25.9 (23.3-28.6)	19.2 (17.3-21.2)	9.5 (8.2-11.1)	7.4 (6.1-8.9)	2.4 (1.8-3.2)
40–49	1,879 (1,303,513)	7.1 (5.8-8.6)	20.1 (17.6-23.0)	12.8 (11.2-14.5)	9.6 (8.1-11.4)	5.9 (4.8-7.1)	3.2 (2.3-4.3)
50–59	1,522 (949,200)	7.9 (6.4-9.8)	13.6 (11.5-16.0)	12.0 (9.9-14.5)	6.3 (5.0-7.9)	6.4 (5.2-7.8)	3.1 (2.3-4.1)
60+	638 (334,541)	12.7 (10.1-15.9)	8.5 (6.2-11.5)	6.0 (4.2-8.4)	3.8 (2.5-5.5)	6.5 (4.6-9.0)	2.6 (1.5-4.3)
All	**7,391 (5,153,319)**	**8.0 (7.3-8.8)**	**19.6 (17.9-21.5)**	**17.2 (16.2-18.2)**	**11.0 (10.1-11.9)**	**7.2 (6.6-7.9)**	**3.6 (3.1-4.2)**
Females							
14–19	287 (164,597)	10.6 (6.9-16.0)	10.7 (7.6-14.9)	30.5 (24.8-36.8)	18.5 (13.6-24.6)	16.0 (11.6-21.9)	6.8 (4.1-11.1)
20–29	1,387 (796,133)	8.9 (7.1-11.1)	22.5 (20.1-25.2)	28.3 (25.4-31.4)	13.1 (10.9-15.6)	15.2 (12.5-18.2)	3.1 (2.2-4.4)
30–39	1,825 (888,352)	9.9 (8.3-11.7)	23.6 (20.9-26.6)	16.1 (14.3-18.0)	5.8 (4.7-7.0)	8.8 (7.4-10.5)	2.1 (1.5-2.9)
40–49	1,982 (1,061,058)	9.9 (8.5-11.6)	18.3 (16.2-20.6)	11.8 (10.4-13.4)	5.9 (4.8-7.1)	9.2 (8.0-10.6)	2.2 (1.6-3.1)
50–59	1,575 (749,080)	14.1 (12.2-16.3)	11.2 (9.5-13.2)	5.6 (4.3-7.3)	3.0 (2.3-4.0)	7.0 (5.6-8.7)	1.2 (0.8-1.9)
60+	387 (225,465)	17.7 (13.7-22.6)	8.7 (5.9-12.6)	2.2 (1.0-5.0)	2.0 (1.0-4.0)	4.9 (2.4-9.6)	1.7 (0.7-3.7)
All	**7,443 (3,884,686)**	**11.0 (10.2-11.9)**	**18.1 (16.7-19.7)**	**15.2 (14.1-16.4)**	**7.1 (6.4-7.8)**	**10.0 (9.0-11.0)**	**2.3 (2.0-2.8)**

Note: Row percentages do not equal 100% as consumption at low levels of risk is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive
Shading denotes gender age groups with the highest proportions of workers drinking at NHMRC risk levels.

For some age and consumption categories, a larger percentage of employed females drank alcohol at risky or high risk levels compared to males (Table 4.4). However, this does not imply that females drank more alcohol than males. Any observed difference between male and female alcohol consumption needs to be interpreted with caution as the higher percentage of females drinking at risky or high risk levels partly results from the lower number of standard drinks necessary to place females, compared to males, at risk of harm from their drinking.[3] When the actual number of standard drinks male and female employees consume on a day they have an alcoholic drink are compared (Table 4.5 and Figure 4.3), females consume significantly less than males ($F_{4.7, 8511} = 98.2$, $p = 0.000$).

Table 4.5 Proportions of employed 2004 NDSHS respondents by number of standard drinks usually consumed and gender

No standard drinks		% Female	% Male	% All workers
13+	%	0.6	3.4	2.2
	95% CI	(0.5-0.9)	(2.9-3.9)	(1.9-2.6)
	Survey n	44	202	246
	Weighted n	21,697	156,696	178,393
11–12	%	0.9	2.3	1.7
	95% CI	(0.7-1.3)	(1.9-2.8)	(1.4-2.0)
	Survey n	58	141	199
	Weighted n	30,650	106,307	136,957
7–10	%	4.6	8.8	7.0
	95% CI	(4.0-5.3)	(8.0-9.7)	(6.5-7.6)
	Survey n	280	573	853
	Weighted n	153,962	408,299	562,261
5–6	%	9.1	15.0	12.5
	95% CI	(8.2-10.0)	(14.0-16.0)	(11.8-13.3)
	Survey n	575	2,176	3,816
	Weighted n	307,020	695,945	1,002,965
3–4	%	24.2	32.0	28.7
	95% CI	(22.9-25.6)	(30.7-33.2)	(27.8-29.6)
	Survey n	1,640	2,176	3,816
	Weighted n	816,945	1,482,930	2,299,875
1–2	%	60.6	38.6	47.8
	95% CI	(58.9-62.2)	(36.9-40.3)	(46.6-49.0)
	Survey n	3,941	2,560	6,501
	Weighted n	2,043,211	1,790,528	3,833,739
Total	%	100.0	100.0	100.0
	95% CI	–	–	–
	Survey n	6,538	6,698	13,236
	Weighted n	3,373,485	4,640,705	8,014,190

[3] For example, to drink at short-term risky levels, females need to consume 5–6 standard drinks per day, compared to males who need to consume 7–10 standard drinks a day.

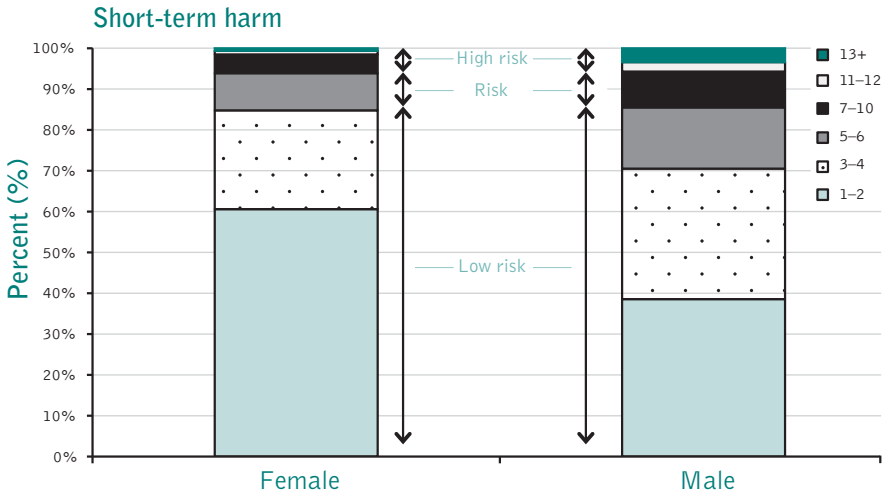

Figure 4.4 Proportions of employed 2004 NDSHS respondents by number of standard drinks usually consumed and gender

4.3.1 Differences in alcohol use among the workforce by location

State/Territory location

The proportions of employed respondents to the 2004 NDSHS reporting consumption patterns associated with risk of harm in the short- and long-term differed significantly between the states and territories ($F_{10.9,19909} = 2.7$, $p = 0.02$ and $F_{16.4,\ 29949} = 3.9$, $p = 0.000$, respectively). The largest proportions of workers who reported drinking frequently (at least weekly) or infrequently (at least monthly) at short-term risky/high risk levels, and drinking at long-term risky or high risk levels, were located in the Northern Territory (Table 4.6). The largest proportions who reported drinking occasionally (at least yearly) at short-term risky/high risk levels were located in Tasmania and Western Australia.

Table 4.6 Proportions of 2004 NDSHS respondents by alcohol consumption risk category and State/Territory location

	% Short-term harm (risky and high risk combined)					% Long-term harm	
State or Territory	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
NSW	3,973 (2,950,255)	11.4 (10.2-12.8)	17.5 (14.3-21.4)	14.1 (12.6-15.8)	8.2 (7.3-9.2)	7.9 (6.7-9.2)	2.5 (2.0-3.2)
Vic	3,248 (2,280,397)	8.8 (7.6-10.2)	18.7 (16.7-20.9)	16.5 (15.2-17.9)	8.8 (7.6-10.2)	7.5 (6.6-8.6)	2.6 (2.1-3.3)
Qld	2,904 (1,743,814)	9.1 (7.8-10.6)	19.7 (16.9-22.8)	17.4 (15.7-19.2)	10.9 (9.6-12.4)	9.1 (8.1-10.3)	4.1 (3.3-5.0)
WA	1,555 (916,785)	6.7 (5.2-8.4)	21.8 (15.4-26.5)	17.3 (15.6-19.0)	10.5 (8.8-12.6)	9.2 (7.8-10.7)	3.9 (2.9-5.2)
SA	1,176 (686,990)	7.5 (5.9-9.5)	20.4 (15.4-26.5)	19.8 (17.1-22.7)	8.9 (7.2-10.8)	9.5 (7.7-11.6)	2.6 (1.8-3.8)
Tas	523 (194,623)	4.5 (3.0-6.8)	22.4 (19.0-26.3)	18.0 (14.7-21.9)	11.3 (8.9-14.4)	9.1 (6.2-13.0)	3.8 (2.3-6.0)
ACT	673 (156,530)	8.0 (5.5-11.5)	18.4 (14.1-23.6)	18.3 (15.1-21.9)	7.0 (5.0-9.7)	8.2 (6.2-10.9)	1.8 (0.7-4.3)
NT	782 (108,610)	8.5 (5.5-11.5)	16.5 (13.5-20.0)	22.5 (19.3-26.0)	14.8 (11.7-18.4)	13.1 (10.5-16.1)	5.7 (4.0-8.1)
All	**14,834 (9,038,005)**	**9.3 (8.7-9.9)**	**19.0 (17.6-20.5)**	**16.3 (15.7-17.1)**	**9.3 (8.7-9.9)**	**8.4 (7.8-9.0)**	**3.1 (2.7-3.4)**

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes states/territories with the highest proportion of workers drinking at NHMRC risk levels.

City/Country location

A significantly larger proportion of employed respondents who resided in the country[4] drank at risky or high risk levels compared to employed respondents who resided in the city (short-term $F_{2.5,\ 4522} = 4.7$, $p = 0.005$; long-term $F_{2.9,\ 5393} = 6.9$, $p = 0.000$) (Table 4.7).

Differences in consumption patterns according to city/country location were restricted to male workers. A significantly larger proportion of male workers who resided in the country drank at risky or high risk levels, compared to male workers who resided in the city (short-term $F_{2.8,\ 5088} = 8.0$, $p = 0.000$; long-term $F_{2.9,\ 5303} = 10.5$, $p = 0.000$). While the proportions of female city and country workers who reported drinking at short- and long-term risk levels differed (Table 4.7), these differences were not significant.

[4] Country is defined as respondents in non-capital city strata (i.e. rest of state or territory).

Table 4.7 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category, gender and capital city/country location

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Location	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Males							
Capital city	4,813 (3,357,183)	8.7 (7.8-9.7)	18.9 (16.9-21.0)	17.0 (15.8-18.3)	9.1 (8.1-10.1)	6.3 (5.6-7.1)	2.9 (2.4-3.5)
Country	2,578 (1,796,136)	6.7 (5.7-7.9)	21.1 (17.9-24.6)	17.5 (15.8-19.4)	14.4 (13.0-16.0)	8.8 (7.7-10.1)	4.9 (4.0-6.1)
All	**7,391 (5,153,319)**	**8.0 (7.3-8.8)**	**19.6 (17.9-21.5)**	**17.2 (16.2-18.2)**	**11.0 (10.1-11.9)**	**7.2 (6.6-7.9)**	**3.6 (3.1-4.2)**
Females							
Capital city	4,765 (2,547,115)	11.7 (10.6-12.8)	18.0 (16.0-20.1)	15.1 (13.7-16.6)	7.3 (6.5-8.2)	10.2 (9.0-11.6)	2.4 (1.9-2.9)
Country	2,678 (1,337,570)	9.8 (8.4-11.3)	18.4 (16.3-20.8)	15.4 (13.9-17.1)	6.6 (5.6-7.9)	9.4 (8.2-10.8)	2.3 (1.7-3.1)
All	**7,443 (3,884,686)**	**11.0 (10.2-11.9)**	**18.1 (16.7-19.7)**	**15.2 (14.1-16.4)**	**7.1 (6.4-7.8)**	**10.0 (9.0-11.0)**	**2.3 (2.0-2.8)**
All workers							
Capital city	9,578 (5,904,298)	10.0 (9.3-10.8)	18.5 (16.7-20.4)	16.2 (15.4-17.1)	8.3 (15.4-17.1)	8.0 (7.3-8.8)	2.7 (2.3-3.1)
Country	5,256 (3,133,706)	8.0 (7.0-9.1)	19.9 (17.5-22.6)	16.6 (15.4-17.9)	11.1 (10.1-12.2)	9.1 (8.2-10.0)	3.8 (3.2-4.4)
All	**14,834 (9,038,005)**	**9.3 (8.7-9.9)**	**19.0 (17.6-20.5)**	**16.3 (15.7-17.1)**	**16.3 (8.7-9.9)**	**8.4 (7.8-9.0)**	**3.1 (2.7-3.4)**

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes locations with the highest proportions of workers drinking at NHMRC risk levels.
Country is defined as regional and rural respondents.

Differences in consumption patterns associated with short- and long-term harm by workers' gender and city/country location are illustrated in Figure 4.5.

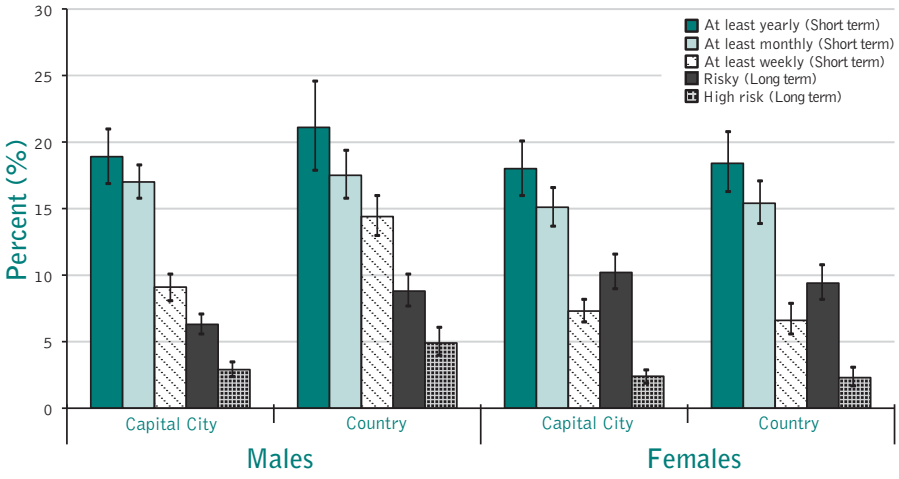

Figure 4.5 Proportions of employed 2004 NDSHS respondents by city/country location, gender and consumption at long-term levels of harm and frequency of drinking at short-term levels of harm (risky and high risk combined)

4.3.2 Differences in alcohol use among the workforce by country of birth, Indigenous status and language spoken at home

Significant differences in alcohol consumption associated with short- and long-term risk of harm were observed among the workforce according to workers' country of birth (short-term $F_{3.8, 6976} = 61.8$, $p = 0.000$; long-term $F_{2.8, 5157} = 48.6$, $p = 0.000$), Indigenous status (short-term $F_{3.9, 7160} = 7.0$, $p = 0.000$; long-term $F_{12.9, 5302} = 5.7$, $p = 0.001$) and the main language they spoke at home (short-term $F_{3.9, 7054} = 77.3$, $p = 0.000$; long-term $F_{2.8, 5006} = 96.4$, $p = 0.000$).

Compared to workers born overseas, a significantly larger proportion of Australian-born workers reported drinking alcohol frequently (at least weekly), infrequently (at least monthly) and occasionally (at least yearly) at short-term risky/high risk levels. A significantly larger proportion of Australian-born workers also reported drinking alcohol at long-term risky and high risk levels (Table 4.8).

A significantly larger proportion of Indigenous workers, compared to non-Indigenous workers, reported frequently and infrequently drinking alcohol at short-term risk levels and drinking at long-term risky and high risk levels. Workers who mainly spoke English at home were significantly more likely, than workers who mainly spoke a language other than English, to report drinking at short- and long-term risk levels (Table 4.8).

Table 4.8 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category, country of birth, Indigenous status, and main language spoken at home

		% Short-term harm (risky and high risk combined)				% Long-term harm	
Variable	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Country of birth							
Aust	11,517 (6,916,843)	7.4 (6.8-8.1)	20.5 (18.9-22.1)	18.0 (17.2-18.9)	10.2 (9.5-10.9)	9.1 (8.5-9.8)	3.3 (2.9-3.8)
Other	3,261 (2,078,176)	15.3 (13.8-17.0)	14.3 (12.7-16.1)	10.7 (9.5-12.1)	6.5 (5.5-7.7)	6.1 (5.2-7.0)	2.2 (1.7-2.9)
Indigenous status							
Indig	186 (99,789)	9.7 (5.6-16.5)	15.2 (9.4-23.7)	22.9 (16.4-31.1)	21.5 (14.7-30.3)	17.5 (11.1-26.6)	5.9 (3.0-11.2)
Non-Indig	14,587 (8,902,123)	9.3 (8.7-9.9)	19.1 (17.6-20.6)	16.3 (15.6-17.0)	9.2 (8.6-9.8)	8.3 (7.7-8.9)	3.0 (2.7-3.4)
Language spoken at home							
English	14,235 (8,520,225)	8.0 (7.4-8.6)	19.8 (18.3-21.3)	17.0 (16.2-17.7)	9.7 (9.1-10.3)	8.8 (8.2-9.4)	3.1 (2.8-3.5)
Other	585 (506,054)	30.3 (26.0-35.1)	6.6 (4.8-9.0)	6.2 (4.2-9.0)	3.0 (1.7-5.0)	1.2 (0.6-2.2)	1.8 (0.9-3.6)

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table. Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.

4.3.3 Marital status

To examine differences in alcohol use by workers' marital status, employed respondents were grouped into three categories: Currently married (married, defacto, or living with life partner), ever married (divorced, separated, or widowed), and single (never married). Significant differences in the proportions of workers drinking at short- and long-term risk levels were observed between groups ($F_{7.3,\ 13229} = 75.7$, $p = 0.000$ and $F_{5.2,\ 9414} = 26.4$, $p = 0.000$ respectively).

The largest proportions of workers who drank at short- and long-term risky and high risk levels were single (Table 4.9). The only exception to this was for occasional (at least yearly) short-term risky/high risk drinking, which was more prevalent among currently married workers (Table 4.9).

Significant differences in alcohol consumption associated with short- and long-term harm were observed according to both male (short-term $F_{7.2,\ 13078} = 35.8$, $p = 0.000$; long-term $F_{5.4,\ 9795} = 15.0$, $p = 0.000$) and female (short-term $F_{7.4,\ 13566} = 49.9$, $p = 0.000$; long-term $F_{5.6,\ 10206} = 15.9$, $p = 0.000$) workers' marital status (Table 4.9).

In general, alcohol consumption at risky and high risk levels was more prevalent among single male and female workers, compared to male and female workers who were married or had been married. Two exceptions to this were for drinking occasionally (at least yearly) at short-term risky/high risk levels which was more prevalent among currently married males and females, and long-term risky drinking which was more prevalent among males who had been married, compared to single and currently married males.

Table 4.9 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category, gender, and marital status

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Gender	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Single							
Male	1,724 (1,247,654)	8.3 (6.7-10.1)	18.0 (15.5-20.9)	24.3 (21.6-27.1)	20.0 (17.5-22.9)	9.5 (7.8-11.5)	6.7 (5.1-8.8)
Female	1,625 (855,453)	11.3 (9.4-13.5)	17.4 (15.2-19.7)	26.1 (23.6-28.9)	15.0 (12.9-17.4)	15.6 (13.0-18.5)	4.6 (3.4-6.2)
All	**3,349 (2,103,107)**	**9.5 (8.2-10.9)**	**17.8 (15.8-19.9)**	25.0 (23.2-27.0)	18.0 (16.3-19.8)	12.0 (10.4-13.8)	5.9 (4.7-7.2)
Ever married							
Male	692 (309,993)	6.7 (4.8-9.2)	15.2 (11.8-19.2)	15.7 (12.5-19.5)	14.5 (11.2-18.5)	10.6 (8.1-13.9)	6.2 (4.4-8.7)
Female	1,133 (427,113)	10.5 (8.4-13.2)	14.0 (11.4-17.1)	12.3 (10.2-14.7)	6.2 (4.7-8.2)	10.1 (8.1-12.6)	3.1 (2.0-4.9)
All	**1,825 (737,106)**	**8.9 (7.3-10.8)**	**14.5 (12.2-17.2)**	**13.7 (12.0-15.7)**	**9.7 (7.9-11.8)**	**10.3 (8.7-12.2)**	**4.4 (3.3-5.9)**
Currently married							
Male	4,944 (3,574,300)	8.0 (7.2-9.0)	20.6 (18.9-22.6)	15.0 (13.9-16.1)	7.5 (6.7-8.4)	6.1 (5.4-6.9)	2.3 (1.9-2.8)
Female	4,663 (2,592,897)	11.0 (10.0-12.1)	19.1 (17.4-21.0)	12.0 (11.0-13.2)	4.6 (4.0-5.3)	8.1 (7.3-9.0)	1.5 (1.1-1.9)
All	**9,607 (6,167,197)**	**9.3 (8.7-9.9)**	20.0 (18.5-21.6)	**13.7 (13.0-14.6)**	**6.3 (5.7-6.9)**	**6.9 (6.4-7.5)**	**1.9 (1.7-2.3)**

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
■ Shading denotes marital status groups with the highest proportions of workers drinking at NHMRC risk levels.

Differences in consumption patterns associated with short- and long-term harm by workers' marital status are illustrated in Figure 4.6.

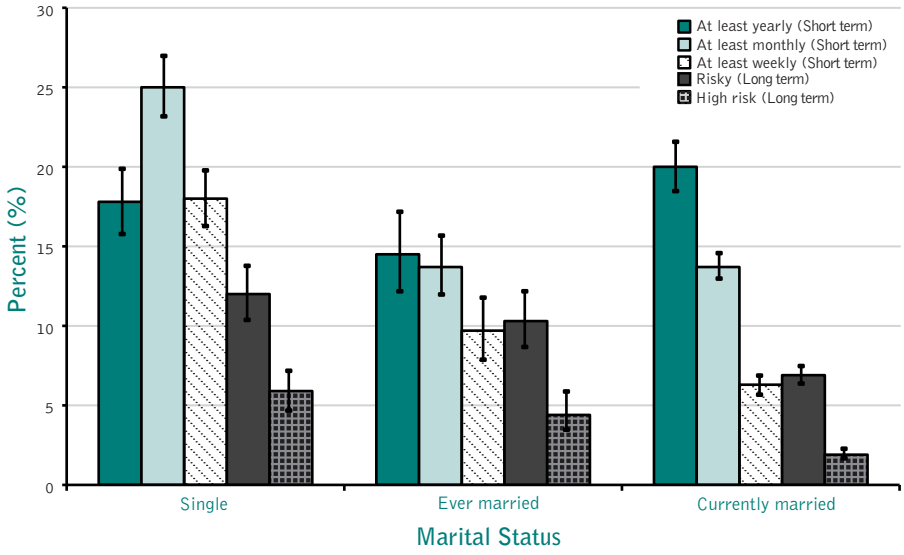

Figure 4.6 Proportions of employed 2004 NDSHS respondents by marital status and alcohol consumption at long-term levels of harm and frequency of drinking at short-term levels of harm (risky and high risk combined)

4.3.4 Dependent children

Compared to employed respondents with dependent children, significantly larger proportions of those without dependent children drank at short- and long-term risk levels (short-term $F_{3.8,\ 5333}$ = 9.6, p = 0.000, long-term $F_{2.9,\ 6866}$ = 13.4, p = 0.000). The only exception to this was for occasional (at least yearly) short-term risky/high risk drinking, which was more prevalent among those with dependent children (Table 4.10).

Significant differences in alcohol consumption, depending on whether workers had dependent children or not, were observed for both males and females. Significantly larger proportions of male and female workers without dependent children drank frequently (at least weekly) or infrequently (at least monthly) at short-term risky/high risk levels compared to male and female workers with dependent children (males $F_{3.8,\ 6968}$ = 10.2, p = 0.000; females $F_{3.7,\ 6824}$ = 4.1, p = 0.003). The only exception to this was for occasional (at least yearly) short-term risky/high risk consumption, which was more prevalent among males and females with dependent children. Significantly larger proportions of male and female workers without dependent children drank at long-term risky or high risk levels compared to male and female workers with dependent children (males $F_{2.9,\ 5217}$ = 5.6, p = 0.001; females $F_{2.9,\ 5314}$ = 4.1, p = 0.01).

Table 4.10 Proportions of employed 2004 NDSHS respondents, with and without dependent children, who report the use of alcohol in the last 12 months by gender

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Gender	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Dependent children							
Male	3,082 (2,494,795)	7.8 (6.8-9.0)	22.6 (20.3-25.1)	15.7 (14.3-17.2)	9.1 (8.1-10.3)	6.2 (5.3-7.2)	2.8 (2.2-3.6)
Female	3,209 (1,868,416)	10.0 (8.8-11.4)	19.5 (17.7-21.4)	14.0 (12.7-15.5)	6.6 (5.6-7.8)	9.1 (7.6-10.7)	2.0 (1.5-2.6)
All	6,291 (4,363,211)	8.8 (7.9-9.7)	21.3 (19.5-23.1)	15.0 (14.1-15.9)	8.0 (7.3-8.9)	7.4 (6.7-8.3)	2.5 (2.1-2.9)
No dependent children							
Male	4,266 (2,629,698)	8.1 (7.1-9.3)	16.9 (15.3-18.8)	18.7 (17.4-20.1)	12.7 (11.3-14.3)	8.2 (7.2-9.3)	4.4 (3.6-5.3)
Female	4,192 (1,993,477)	11.8 (10.7-13.1)	16.9 (15.2-18.8)	16.3 (14.9-17.8)	7.5 (6.6-8.5)	10.7 (9.7-11.8)	2.6 (2.2-3.2)
All	8,458 (4,623,174)	9.7 (8.9-10.6)	16.9 (15.5-18.5)	17.7 (16.7-18.7)	10.5 (9.5-11.4)	9.3 (8.6-10.0)	3.6 (3.1-4.2)

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes the highest proportions of workers drinking at NHMRC risk levels.

4.3.5 Education level

To examine differences in workers' alcohol consumption patterns according to education level, employed respondents were categorised according to four educational levels: high school or less, certificate/diploma, undergraduate degree, and postgraduate degree (including Masters and PhD). Significant education level differences were observed in the proportions of workers who drank at short- and long-term risk levels (short-term $F_{10.9,\ 19740} = 10.6$, $p = 0.000$, long-term $F_{8.6,\ 15563} = 11.4$, $p = 0.000$). The largest proportions of workers who drank at long-term risky and high risk levels, or who drank frequently (at least weekly) at short-term risky/high risk levels, had a high school education or less or a certificate or diploma (Table 4.11). Drinking infrequently (at least monthly) at short-term risky/high risk levels was most prevalent among workers with an undergraduate degree, while occasionally (at least yearly) drinking at short-term risky/high risk levels was most prevalent among workers with an undergraduate or postgraduate degree (Table 4.11).

Significant education level differences in consumption patterns associated with short- and long-term harm were evident for both male (short-term $F_{10.6,\ 19225} = 6.8$, $p = 0.000$, long term $F_{8.3,\ 15140} = 6.9$, $p = 0.000$) and female workers (short-term $F_{10.8,\ 19651} = 4.7$, $p = 0.000$, long-term $F_{8.2,\ 15059} = 5.1$, $p = 0.000$). Drinking frequently at short-term risky/high risk levels and drinking at long-term risky and high risk levels was most prevalent among both male and female workers with a high school education or less and those with a certificate or diploma. The only exception to this was for females with an undergraduate degree where a larger proportion drank at long-term high risk levels, compared to females with a certificate/diploma (Table 4.11). Drinking infrequently (at least monthly) at short-term risky/high risk levels was most prevalent among both males and females with an undergraduate degree, while occasional (at least yearly) drinking was most prevalent among males with a postgraduate degree and females with an undergraduate degree.

Table 4.11 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category, gender, and education level

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Gender	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
High school or less							
Male	2,171 (1,512,899)	9.4 (7.8-11.2)	16.4 (14.9-18.9)	17.5 (15.8-19.5)	13.9 (12.3-15.7)	8.4 (7.1-9.9)	4.3 (3.5-5.4)
Female	2,651 (1,405,506)	13.0 (11.5-14.8)	17.1 (15.1-19.3)	15.4 (13.7-17.1)	8.6 (7.4-10.0)	11.3 (9.8-12.9)	3.2 (2.5-4.1)
All	**4,822 (2,918,405)**	**11.1 (10.0-12.4)**	**16.87 (15.0-18.6)**	**16.5 (15.3-17.8)**	**11.4 (10.4-12.5)**	**9.8 (8.8-10.9)**	**3.7 (3.2-4.4)**
Certificate/Diploma							
Male	3,363 (2,365,178)	6.2 (5.4-7.2)	20.6 (18.3-23.2)	17.2 (15.7-18.8)	11.7 (10.4-13.2)	7.6 (6.7-8.6)	4.4 (3.6-5.4)
Female	2,594 (1,387,121)	10.0 (8.8-11.4)	17.7 (15.6-19.9)	15.3 (13.7-17.1)	7.0 (6.0-8.3)	9.6 (8.3-11.1)	2.2 (1.6-3.0)
All	**5,957 (3,752,299)**	**7.6 (6.9-8.5)**	**19.5 (17.5-21.7)**	**16.5 (15.4-17.6)**	**10.0 (9.1-11.0)**	**8.3 (7.6-9.2)**	**3.6 (3.1-4.2)**
Undergraduate degree							
Male	1,115 (804,021)	9.3 (7.5-11.6)	21.7 (19.0-24.7)	20.4 (17.4-23.8)	6.9 (5.2-9.2)	5.4 (4.2-7.1)	1.5 (0.8-2.7)
Female	1,386 (701,685)	9.5 (7.9-11.4)	21.2 (18.6-24.2)	19.5 (16.8-22.7)	6.9 (5.3-9.1)	10.0 (8.1-12.3)	1.5 (0.9-2.4)
All	**2,501 (1,505,705)**	**9.4 (8.1-10.9)**	**21.1 (19.1-23.1)**	**18.2 (16.5-20.0)**	**6.5 (5.4-7.8)**	**7.6 (5.4-8.9)**	**1.5 (1.0-2.1)**
Postgraduate degree							
Male	701 (442,917)	10.1 (7.7-13.1)	22.6 (19.2-27.3)	12.7 (10.3-15.6)	4.6 (2.7-7.7)	4.2 (2.8-6.2)	0.8 (0.3-2.0)
Female	775 (370,698)	9.2 (7.0-12.0)	19.3 (16.3-26.4)	12.5 (10.3-15.1)	4.3 (2.6-7.2)	6.0 (4.4-8.0)	1.3 (0.6-2.6)
All	**1,476 (813,615)**	**9.7 (8.1-11.6)**	**21.1 (18.8-23.6)**	**11.9 (10.3-13.7)**	**3.9 (2.8-5.5)**	**5.0 (3.9-6.4)**	**1.0 (0.6-1.8)**

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes education levels with the highest proportions of workers drinking at NHMRC risk levels.

Differences in consumption patterns associated with short- and long-term harm by workers' education level are illustrated in Figure 4.7.

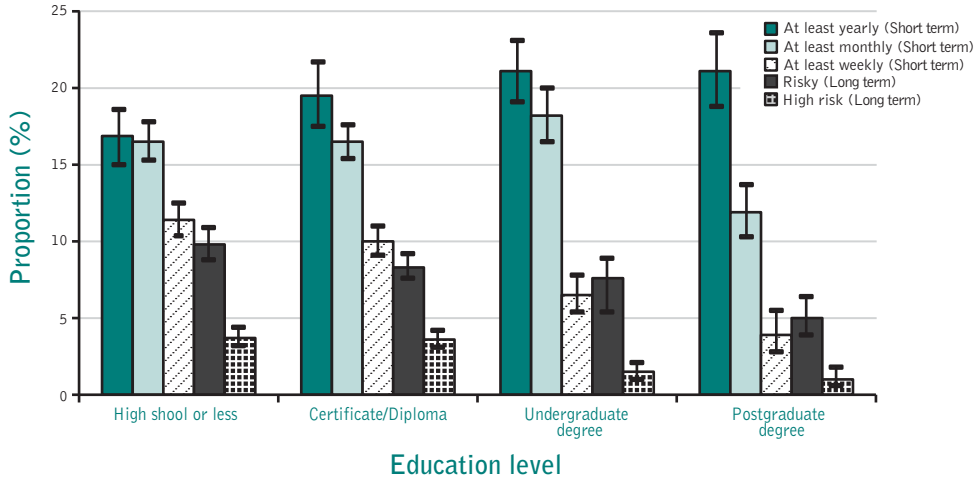

Figure 4.7 Proportions of employed 2004 NDSHS respondents by education level and alcohol consumption at long-term levels of harm and frequency of drinking at short-term levels of harm (risky and high risk combined)

4.3.6 Household income

The proportions of workers who drank at short- and long-term risk levels varied significantly according to level of household income (short-term $F_{17.5,\ 31919} = 10.4$, $p = 0.000$; long-term $F_{12.5,\ 22688} = 8.4$, $p = 0.000$). Drinking at long-term risky levels was most prevalent among workers with a household income of $140,000 and above, while drinking at long-term high risk levels was most prevalent among workers with a household income of $20,000 or less (Table 4.12). The largest proportion of workers drinking frequently (at least weekly) and infrequently (at least monthly) at short-term risk levels were those with a household income of $140,000 or more, while the largest proportion of workers drinking occasionally (at least yearly) at short-term risk levels were those with a household income of $100,000-$139,000 (Table 4.12).

Table 4.12 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category and household income

	% Short-term harm (risky and high risk combined)				% Long-term harm	
Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
$140,000 & above						
1,285 (916,315)	5.9 (4.2-8.1)	22.5 (19.9-25.4)	21.1 (18.5-23.9)	10.9 (9.1-13.0)	11.8 (9.8-14.0)	2.9 (2.1-4.1)
$100,000-$139,000						
2,040 (1,309,145)	5.8 (4.7-7.1)	23.6 (21.0-26.3)	18.1 (16.3-20.0)	9.3 (7.7-11.1)	8.5 (7.2-10.0)	2.9 (2.2-3.9)
$60,000-$99,000						
4,379 (2,684,930)	7.3 (6.3-8.3)	21.4 (19.6-23.4)	17.5 (16.3-18.8)	8.3 (7.4-9.3)	8.7 (7.8-9.7)	2.2 (1.8-2.7)
$40,000-$59,000						
2,779 (1,554,634)	10.3 (8.9-11.8)	18.3 (16.4-20.2)	14.1 (12.8-15.6)	10.0 (8.6-11.5)	7.7 (6.6-8.8)	3.7 (2.9-4.8)
$20,000-$39,000						
1,782 (925,366)	12.5 (10.6-14.6)	12.9 (11.0-15.0)	15.9 (13.9-18.1)	9.2 (7.7-10.9)	8.0 (6.8-9.5)	3.1 (2.3-4.2)
Less than $20,000						
411 (192,918)	18.3 (13.5-24.3)	12.1 (9.1-15.9)	11.8 (8.4-16.4)	10.0 (6.9-14.3)	7.5 (4.8-11.5)	5.0 (3.1-7.8)
No income provided						
1,889 (1,290,410)	14.3 (12.2-16.6)	14.3 (12.2-16.7)	13.1 (11.4-14.9)	9.6 (7.8-11.7)	6.9 (5.2-9.2)	3.9 (2.9-5.3)

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table. Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes income levels with the highest proportions of workers drinking at NHMRC risk levels.

Differences in consumption patterns associated with short- and long-term harm by workers' household income level are illustrated in Figure 4.8.

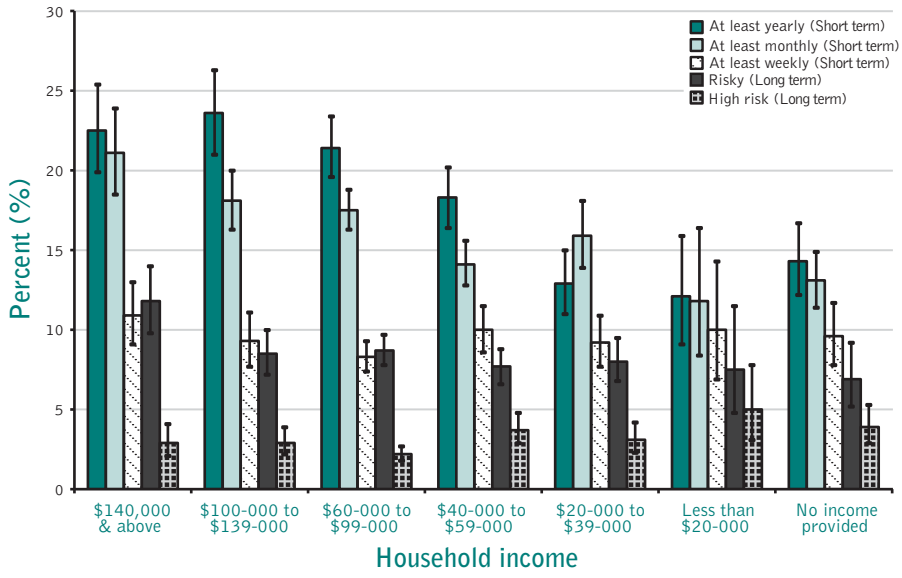

Figure 4.8 Proportions of employed 2004 NDSHS respondents by household income and alcohol consumption at long-term levels of harm and frequency of drinking at short-term levels of harm (risky and high risk combined)

CHAPTER 5

DIFFERENCES IN ALCOHOL USE BY INDUSTRY AND OCCUPATION

KEY POINTS

1. There were significant industry differences in the proportions of workers who reported drinking at levels associated with short- and long-term harm ($p = 0.000$:, $p = 0.000$ respectively)
2. The hospitality industry had the largest proportion of workers who drank frequently (at least weekly) or infrequently (at least monthly) at short-term risky/high risk levels
3. The hospitality industry also had the largest proportions of workers who drank at long-term risky or high risk levels
4. The administration and mining industries had the largest proportions of workers who drank occasionally (at least yearly) at short-term risky/high risk levels
5. The largest proportions of workers who drank frequently (at least weekly) or infrequently (at least monthly) at short-term risky/high risk levels were tradespersons
6. Tradespersons were also the largest proportions of workers who reported drinking at long-term risky and high risk levels
7. The largest proportions of workers who drank occasionally (at least yearly) at short-term risky/high risk levels were professionals
8. Significant gender differences in alcohol consumption patterns varied within specific industries:
    - In the manufacturing industry long-term risky drinking was more prevalent among female workers, while long-term high risk drinking was more prevalent among male workers
    - In the retail and finance industries long-term risky drinking was more prevalent among female workers compared to male workers
    - In the manufacturing, construction and hospitality industries, frequent (at least weekly) drinking at short-term risky/high risk levels was more prevalent among male workers
    - In the hospitality industry infrequent (at least monthly) drinking was more prevalent among female workers compared to male workers.
9. Significant gender differences in alcohol consumption patterns varied within occupations:
    - Across all occupations, males were more likely to drink at short-term risky/high risk levels compared to females. The only exception was for managers where there were no significant gender differences and for skilled workers where infrequent (at least monthly) short-term risky/high drinking was more prevalent among females
10. Across all occupations long-term risky drinking was more prevalent among female workers, while long-term high risk drinking was more prevalent among male workers

5.1 INTRODUCTION

This chapter reports the prevalence and patterns of alcohol use among employed 2004 NDSHS respondents according to industry and occupation. As most questions included in the NDSHS did not specifically relate to alcohol consumption that occurs *in* the workplace, an accurate assessment of workplace prevalence could not be determined.

Data reported here refer to the overall alcohol consumption of workers, regardless of time or place of consumption. Despite the limitations of this type of data for determining the extent of alcohol-related risk to safety and productivity, it does allow for the identification of industry and occupation groups that may be at higher risk than other workplace groups.

5.2 ALCOHOL USE BY INDUSTRY

There were significant industry differences in the proportions of employed respondents who reported consumption patterns associated with short- and long-term harm ($F_{34.2,\ 62336} = 6.0$, $p = 0.000$ and $F_{25.8,\ 47039} = 4.0$, $p = 0.000$ respectively).

The largest proportions of workers who drank frequently (at least weekly) or infrequently (at least monthly) at short-term risky/high risk levels were employed in the hospitality industry, while the largest proportions of workers who drank occasionally (at least yearly) at short-term risky/high risk levels were employed in the administration and mining industries (Table 5.1).

The largest proportions of workers who drank at long-term risky levels were employed in the hospitality industry, while the largest proportion of workers who drank at long-term high risk levels were employed in the construction industry (Table 5.1).

Table 5.1 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category and industry

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Industry	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Agriculture	374 237,005	9.3 (6.2-13.7)	19.5 (14.0-26.4)	16.9 (13.0-21.5)	12.6 (8.8-17.7)	12.5 (8.3-18.2)	4.1 (2.3-7.0)
Mining	218 141,070	4.6 (2.0-10.1)	24.0 (17.3-32.2)	20.3 (15.8-25.7)	9.2 (5.6-14.5)	5.2 (2.7-10.0)	1.4 (0.5-4.4)
Manufact	1,322 911,890	9.2 (7.5-11.1)	19.9 (17.6-22.5)	14.8 (12.8-17.0)	9.9 (8.1-12.1)	7.5 (5.9-9.3)	3.3 (2.3-4.6)
Construct	1,157 803,524	5.0 (3.7-6.6)	18.6 (15.9-21.7)	19.4 (16.8-22.2)	14.3 (12.0-17.0)	8.5 (6.9-10.5)	5.8 (4.3-7.8)
Wholesale	289 186,361	5.7 (3.4-9.4)	22.0 (16.9-28.2)	17.4 (13.1-22.9)	14.4 (9.9-20.4)	12.5 (8.6-17.9)	4.4 (2.1-9.1)
Retail	1,782 1,134,251	10.4 (8.7-12.3)	18.1 (15.4-21.1)	17.8 (15.9-19.8)	11.0 (9.3-13.0)	8.3 (6.8-10.1)	4.2 (3.1-5.7)
Hospitality	611 360,459	8.6 (6.3-11.6)	21.0 (17.1-25.6)	22.1 (18.4-26.3)	16.0 (12.7-20.1)	13.8 (11.1-17.0)	5.1 (3.3-7.8)
Transport	647 414,359	8.0 (5.8-10.8)	14.9 (12.0-18.3)	17.4 (14.5-20.7)	9.5 (7.2-12.6)	9.9 (7.3-13.2)	2.0 (1.1-3.4)
Finance	2,287 1,416,661	8.3 (7.0-9.7)	20.4 (18.5-22.5)	19.0 (16.9-21.1)	7.9 (6.6-9.4)	8.6 (7.1-10.3)	2.4 (1.8-3.2)
Admin	913 423,405	7.6 (5.7-10.1)	23.8 (20.2-27.8)	18.4 (15.8-21.3)	7.4 (5.5-9.9)	7.4 (5.6-9.8)	2.1 (1.3-3.5)
Education	1,388 762,457	9.9 (8.1-12.1)	17.3 (15.1-19.7)	11.2 (9.5-13.2)	3.2 (2.4-4.4)	5.7 (4.4-7.2)	1.5 (0.9-2.4)
Services	3,123 1,783,352	10.4 (9.2-11.7)	18.6 (16.7-20.7)	13.7 (12.4-15.2)	8.0 (6.9-9.2)	8.4 (7.3-9.7)	2.1 (1.5-2.8)
All	**14,111 (8,574,795)**	**8.8 (8.2-9.4)**	**19.2 (17.8-20.7)**	**16.6 (15.9-17.3)**	**9.4 (8.8-10.0)**	**8.5 (7.9-9.1)**	**3.1 (2.7-3.4)**

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes industries with the highest proportions of workers drinking at NHMRC risk levels.

Differences in consumption patterns associated with short- and long-term harm by workers' household income level are illustrated in Figure 5.1.

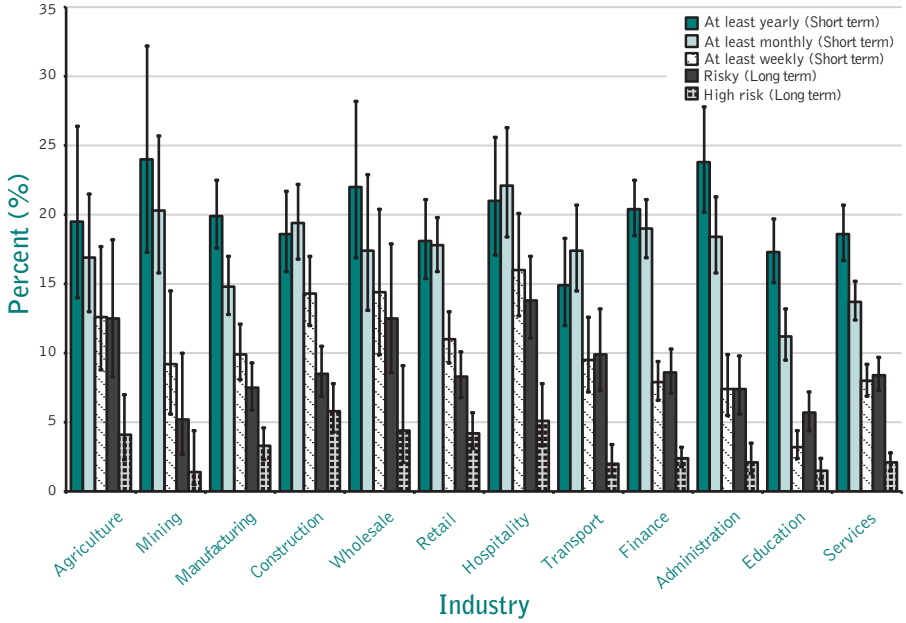

Figure 5.1 Proportions of employed 2004 NDSHS respondents by industry and alcohol consumption at long-term levels of harm and frequency of drinking at short-term levels of harm (risky and high risk combined)

Gender differences by industry

Industry differences in the proportions of employed respondents drinking at levels associated with short- and long-term harm were evident for both male (short-term $F_{35.0,\ 63832} = 2.5$, $p = 0.000$; long-term $F_{27.0,\ 49504} = 2.6$, $p = 0.000$) and female workers (short-term $F_{28.4,\ 51658} = 4.3$, $p = 0.000$; long-term $F_{19.5,\ 35462} = 2.6$, $p = 0.000$). Gender differences in alcohol consumption patterns varied within industries. In some industries, significantly larger proportions of male workers drank at risky or high risk levels compared to female workers.

In other industries, significantly larger proportions of female workers drank at risky or high risk levels compared to male workers and in some industries there were no significant gender differences in consumption patterns. For example in the manufacturing industry there were significant gender differences for long-term risk drinking ($F_{2.7,\ 4861} = 10.9$, $p = 0.000$) with a larger proportion of females (9.3%, 95% CI 6.6%-13.3%) compared to males (6.8% 95% CI 5.1%-9.1%) who drank at long-term risky levels. In contrast, a larger proportion of male (4.1 95% CI 2.8%-5.8%) compared to female (0.9%, 95% CI 0.4%-2.0%) manufacturing industry workers drank at long-term high risk levels.

Similarly, significant gender differences for long-term risk drinking were observed in the retail and finance industries ($F_{2.9,\ 5340} = 4.7$, $p = 0.003$ and $F_{2.9,\ 5361} = 7.4$, $p = 0.000$ respectively). A larger proportion of female (10.5%, 95% CI 8.2%-13.3%) compared to male (6.5%, 95% CI 4.9%-8.7%) retail industry workers and a larger proportion of female (11.5%, 95% CI 8.6%-15.2%) compared to male (6.4%, 95% CI 5.2%-7.9%) finance industry workers drank at long-term risky levels. There were no significant gender differences for long-term risk consumption in other industries.

Significant gender differences within industries were also observed for consumption patterns associated with short-term harm. In the manufacturing, construction and hospitality industries, there were significant gender differences in the proportions of workers who drank at short-term risk levels ($F_{3.7, 6747} = 6.9$, $p = 0.000$, $F_{3.7, 6652} = 2.8$, $p = 0.03$ and $F_{4, 7260} = 2.6$, $p = 0.03$ respectively). In the manufacturing industry, a larger proportion of males (11.6%, 95% CI 9.4%-14.3%), compared to females (5.0%, 95% CI 2.9%-8.6%), drank at short-term risky/high risk levels frequently (at least weekly).

Similarly in the construction industry larger proportions of males drank at short-term risky/high risk levels frequently (15.0%, 95% CI 12.4%-18.0%) or infrequently (20.4%, 95% CI 17.7%-23.5%) compared to the proportions of females drinking at short-term risk levels frequently (9.7%, 95% CI 6.4%-14.2%) or infrequently (12.3%, 95% CI 8.0%-18.4%). In the hospitality industry a larger proportion of male workers (18.9%, 95% CI 13.6%-25.6%), compared to female workers (13.7%, 95% CI 9.9%-18.7%), drank frequently at short-term risky/high risk levels; while a larger proportion of female workers (27.3%, 95% CI 22.2%-33.1%), compared to male workers (15.7%, 95% CI 11.0%-22.0%), drank infrequently at these levels.

5.3 ALCOHOL USE BY OCCUPATION

There were significant occupation differences in the proportion of employed respondents who reported consumption patterns associated with short- and long-term harm ($F_{13.7, 24891} = 11.4$, $p = 0.000$ and $F_{10.6, 19303} = 8.0$, $p = 0.000$ respectively). The largest proportions of workers who drank frequently (at least weekly) or infrequently (at least monthly) at short-term risky/high risk levels were tradespersons (Table 5.2). The largest proportions of workers who drank occasionally (at least yearly) drank at short-term risky/high risk levels were managers. Drinking at long-term risky and high risk levels was most prevalent among tradespersons (Table 5.2).

Table 5.2 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category and occupation

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Occupation	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Managers	1,668 (1,050,320)	6.5 (5.1-8.2)	24.4 (21.4-27.7)	15.7 (13.6-18.2)	8.9 (7.3-10.8)	8.8 (7.3-10.7)	3.0 (2.2-4.2)
Professionals	4,699 (2,720,699)	8.3 (7.4-9.3)	21.3 (19.6-23.1)	16.0 (14.9-17.2)	5.8 (5.0-6.6)	6.9 (6.1-7.8)	1.6 (1.1-2.0)
Trades-persons	1,165 (793,310)	7.2 (5.6-9.2)	18.0 (15.6-20.8)	18.9 (16.6-21.5)	16.3 (13.8-19.2)	11.1 (9.2-13.4)	5.2 (3.9-7.0)
Skilled worker	4,221 (2,499,759)	9.7 (8.6-11.0)	17.8 (16.1-19.6)	16.4 (15.1-17.7)	9.8 (8.8-11.0)	9.2 (8.2-10.2)	3.2 (2.6-4.0)
Unskilled worker	2,170 (1,407,655)	11.3 (9.7-13.1)	15.0 (13.2-17.0)	17.5 (15.7-19.6)	12.4 (10.6-14.4)	8.7 (7.5-10.2)	4.5 (3.4-5.9)
All	**11,259 (8,471,753)**	**8.9 (8.3-9.5)**	**19.3 (17.9-20.8)**	**16.6 (15.9-17.3)**	**9.4 (8.8-10.1)**	**8.5 (7.9-9.1)**	**3.1 (2.7-3.5)**

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
Shading denotes occupations with the highest proportions of workers drinking at NHMRC risk levels.

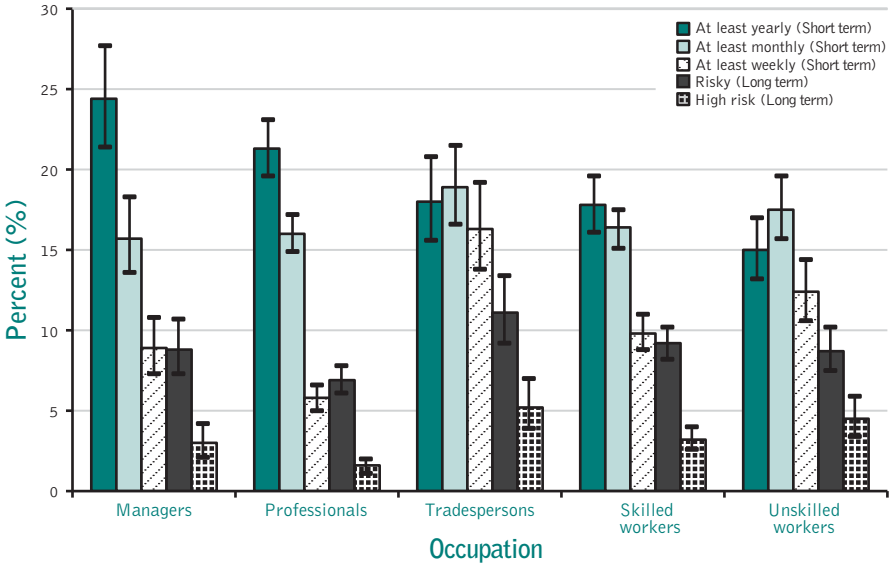

Figure 5.2 Proportions of employed 2004 NDSHS respondents by occupation and alcohol consumption at long-term levels of harm and frequency of drinking at short-term levels of harm (risky and high risk combined)

Gender differences by occupation

Occupation differences in the proportions of employed respondents drinking at levels associated with short- and long-term harm were evident for both male (short-term $F_{14.1,\ 25722} = 6.2$, $p = 0.000$; long-term $F_{10.6,\ 19389} = 5.6$, $p = 0.000$) and female (short-term $F_{13.4,\ 24447} = 4.7$, $p = 0.000$; long-term $F_{9.7,\ 17622} = 4.5$, $p = 0.000$) workers. Significant gender differences in short-term risky/high risk consumption patterns were observed for professionals ($F_{3.9,\ 7028} = 4.7$, $p = 0.001$), tradespersons ($F_{3.7,\ 6782} = 2.6$, $p = 0.04$), skilled workers ($F_{3.8,\ 6937} = 5.7$, $p = 0.000$), and unskilled workers ($F_{3.9,\ 7130} = 5.7$, $p = 0.000$).

Across most occupations there was a trend for larger proportions of males to report drinking at short-term risky/high risk levels (Table 5.3). The only exceptions were for managers where gender differences in short-term risky/high risk consumption were not significant, and for skilled workers where drinking infrequently (at least monthly) at short-term risky/high risk levels was more prevalent among females (Table 5.3).

Significant gender differences in consumption patterns associated with long-term harm were observed for managers ($F_{2.9,\ 5220} = 7.3$, $p = 0.000$), professionals ($F_{2.9,\ 5272} = 12.5$, $p = 0.000$), tradespersons ($F_{2.3,\ 4163} = 4.1$, $p = 0.01$), skilled workers ($F_{3.8,\ 6936} = 5.7$, $p = 0.02$, and unskilled workers ($F_{2.9,\ 5238} = 7.0$, $p = 0.000$). Across all occupations, long-term risky drinking was more prevalent among female workers, while long-term high risk drinking was more prevalent among male workers (Table 5.3).

Table 5.3 Proportions of employed 2004 NDSHS respondents by alcohol consumption risk category, occupation and gender

	% Short-term harm (risky and high risk combined)					% Long-term harm	
Gender	Survey n (weighted n)	Abstainer (95%CI)	At least yearly (95%CI)	At least monthly (95%CI)	At least weekly (95%CI)	Risky (95%CI)	High risk (95%CI)
Managers							
Male	1,093 748,806	5.7 (4.3-7.5)	25.0 (21.4-29.0)	16.4 (13.7-19.4)	9.6 (7.7-11.9)	7.1 (5.5-9.0)	3.6 (2.5-5.1)
Female	575 301,514	8.4 (6.1-11.5)	23.0 (19.3-27.2)	14.2 (11.3-17.7)	7.0 (4.7-10.4)	13.2 (9.9-17.3)	1.7 (0.9-3.2)
Professionals							
Male	2,074 1,419,288	7.3 (6.1-8.7)	22.1 (19.7-24.7)	17.9 (16.2-19.8)	6.3 (5.2-7.6)	4.7 (3.8-5.9)	1.8 (1.3-2.5)
Female	2,625 1,301,411	9.4 (8.0-10.9)	20.4 (18.5-22.4)	13.9 (12.4-15.7)	5.2 (4.3-6.2)	9.3 (8.1-10.6)	1.4 (1.0-2.0)
Tradespersons							
Male	1,071 (742,386)	6.6 (5.1-8.5)	18.3 (15.8-21.2)	19.5 (17.1-22.2)	16.3 (13.8-19.3)	10.8 (8.9-13.0)	5.5 (4.1-7.3)
Female	97 (51,853)	16.0 (9.2-26.3)	14.7 (8.0-25.3)	10.4 (4.9-20.6)	15.3 (7.5-28.6)	15.9 (7.6-30.2)	1.6 (0.5-5.0)
Skilled workers							
Male	1,542 (1,052,663)	8.7 (7.1-10.6)	18.3 (16.0-20.9)	16.1 (14.1-18.2)	12.9 (10.9-15.2)	8.1 (6.7-9.7)	4.0 (2.9-5.5)
Female	2,679 (1,447,096)	10.4 (9.1-12.0)	17.4 (15.4-19.7)	16.6 (14.9-18.4)	7.6 (6.4-9.0)	10.0 (8.7-11.5)	2.6 (2.0-3.5)
Unskilled workers							
Male	1,091 (819,507)	8.3 (6.4-10.8)	15.7 (13.4-18.3)	18.4 (15.7-21.3)	14.2 (11.7-17.2)	7.7 (6.2-9.5)	4.9 (3.3-7.2)
Female	1,079 (588,158)	15.4 (12.8-18.3)	13.9 (11.6-16.7)	16.4 (13.9-19.2)	9.8 (7.7-12.4)	10.1 (8.2-12.4)	3.9 (2.7-5.6)

Note: Row percentages do not equal 100% as consumption at low risk levels is not included in the table.
Short-term risk categories (at least yearly, at least monthly, at least weekly) are mutually exclusive.
■ Shading denotes occupations with the highest proportions of workers drinking at NHMRC risk levels.

CHAPTER 6

ALCOHOL USE AND ABSENTEEISM

KEY POINTS

1. Overall, 3.7% of the workforce reported taking at least one day off work in the past three months due to their use of alcohol
2. The most common duration of alcohol-related absenteeism was one day
3. Alcohol-related absenteeism was significantly ($p = 0.001$) more prevalent among males compared to females and significantly ($p = 0.000$) more prevalent among younger workers compared to older workers
4. Alcohol-related absenteeism was most prevalent among workers aged 20-29 years and among unskilled workers
5. There were significant industry differences ($p = 0.01$), with alcohol-related absenteeism being most prevalent among those employed in the hospitality industry
6. There was a clear trend for the prevalence of alcohol-related absenteeism to increase with alcohol consumption risk levels and the frequency of drinking at risky/high risk levels
7. Workers who drank frequently (at least weekly) at short-term risky/high risk levels were 14.2 times more likely to report alcohol-related absenteeism than low risk drinkers
8. Workers who drank at long-term high risk levels were 5.6 times more likely to report alcohol-related absenteeism than low risk drinkers
9. 39.6% of workers reported at least one day off work in the past three months due to any illness or injury
10. The most common total number of work days missed due to illness/injury in the three months prior to the survey was three or more days
11. There were significant age ($p = 0.000$) and gender ($p = 0.001$) differences with illness/injury related absenteeism being most prevalent among workers age 14-19 years and females
12. The proportions of employed respondents who reported missing a work day in the last three months due to any illness/injury varied significantly according to short- and long-term alcohol consumption risk categories ($p = 0.000$ and $p = 0.001$ respectively)
13. Workers drinking at short- or long-term low risk levels were 1.5 and 1.7 times respectively more likely to report illness/injury absenteeism than abstainers
14. Workers who drank frequently (at least weekly) at short-term risky/high risk levels were 2.1 times more likely to report illness/injury absenteeism than abstainers
15. Workers who drank at long-term high risk levels were 2.6 times more likely to report illness/injury absenteeism than abstainers
16. There was a slight decrease in the overall percentage of workers reporting illness/injury absenteeism compared to 2001 NDSHS data
17. There was a slight increase in the proportion of workers taking a day off due to their use of alcohol in 2004 compared to 2001 NDSHS data

6.1 INTRODUCTION

This chapter identifies the extent of alcohol-related absenteeism among the Australian workforce and develops a demographic profile of workers who report alcohol-related absenteeism. It begins with an examination of the extent of self-reported absenteeism due to personal alcohol use and identifies age, gender, industry and occupation differences. The relationship between consumption patterns and alcohol-related absenteeism is also examined. This is followed by an examination of the extent of self-reported absenteeism due to any illness/injury and a comparison of illness/injury absenteeism rates for abstainers and drinkers categorised according to short- and long-term risk levels of consumption.

6.2 DAYS OFF WORK DUE TO ALCOHOL USE

6.2.1 Proportion of workers missing work days due to their alcohol use

A minority (3.7%) of employed respondents to the 2004 NDSHS reported missing at least one work day in the last three months due to their alcohol use (Table 6.1). The largest proportion of workers missed only one day in the three month period (Table 6.1).

Table 6.1 Proportions of respondents to the 2004 NDSHS who reported days missed from work in the last 3 months due to their alcohol use by gender

Gender		1 day	2 days	≥ 3 days	Any days
Female	%	1.6	0.8	0.6	2.9
	95% CI	(1.2-2.0)	(0.5-1.1)	(0.4-1.0)	(2.5-3.5)
	Survey n	90	38	30	158
	Weighted n	55,092	27,103	21,779	103,973
Male	%	2.5	0.9	0.9	4.3
	95% CI	(2.0-3.0)	(0.6-1.3)	(0.7-1.3)	(3.7-5.0)
	Survey n	141	50	56	247
	Weighted n	115,259	43,027	44,207	202,492
All workers	%	2.1	0.9	0.8	3.7
	95% CI	(1.8-2.4)	(0.7-1.1)	(0.6-1.0)	(3.3-4.2)
	Survey n	231	88	86	405
	Weighted n	170,350	70,130	65,986	306,466

Note: Shading denotes occupations with the highest proportions of workers drinking at NHMRC risk levels.

6.2.2 Gender and age differences in alcohol-related absenteeism

A significantly larger proportion of male workers, compared to female workers, reported being absent from work in the three months prior to the survey due to their alcohol use ($F_{1, 1807} = 10.3$, $p = 0.001$) (Table 6.1).

Significant differences in alcohol-related absenteeism among age groups were also observed ($F_{4.8, 8701} = 45.0$, $p = 0.000$), with a larger proportion of workers aged 20-29 years reporting alcohol-related absenteeism compared to older workers (Table 6.2). Age differences in alcohol-related absenteeism were significant for both male ($F_{4.6, 8232} = 24.6$, $p = 0.000$) and female ($F_{4.9, 8919} = 20.1$, $p = 0.000$) workers (Table 6.2).

Table 6.2 Proportions of respondents to the 2004 NDSHS who reported days missed from work in the last 3 months due to their alcohol use by age and gender

Age (years)		Male	Female	All
14-19	%	7.6	7.6	7.6
	95% CI	(4.1-13.6)	(4.3-13.2)	(4.9-11.5)
	Survey n	12	16	28
	Weighted n	15,954	10,614	26,568
20-29	%	10.4	7.6	9.2
	95% CI	(8.2-13.1)	(4.3-13.2)	(7.7-10.9)
	Survey n	100	76	176
	Weighted n	100,499	56,035	156,534
30-39	%	4.2	2.1	3.4
	95% CI	(3.2-5.5)	(1.5-3.2)	(2.7-4.2)
	Survey n	72	33	105
	Weighted n	50,476	17,540	68,015
40-49	%	2.1	1.3	1.7
	95% CI	(1.5-2.9)	(0.8-2.2)	(1.3-2.3)
	Survey n	44	23	67
	Weighted n	25,067	12,872	37,940
50-59	%	1.2	0.8	1.1
	95% CI	(0.7-2.1)	(0.4-2.0)	(0.7-1.7)
	Survey n	19	8	27
	Weighted n	10,497	5,480	15,976
60+	%	0.0	0.8	0.3
	95% CI	–	(0.2-3.5)	(0.1-1.4)
	Survey n	0	2	2
	Weighted n	–	1,432	1,432
Total	%	4.3	2.9	3.7
	95% CI	(3.7-5.0)	(2.5-3.5)	(3.3-4.2)
	Survey n	247	158	405
	Weighted n	202,492	10,3973	306,466

Note: The proportion of all workers reporting absenteeism is less than in Table 6.1 due to non-responses for the industry variable.
Caution should be applied when interpreting statistics associated with small cell sizes.
■ Shading denotes age group with the highest proportion of workers drinking at NHMRC risk levels.

Differences in alcohol-related absenteeism according to workers' age are illustrated in Figure 6.1.

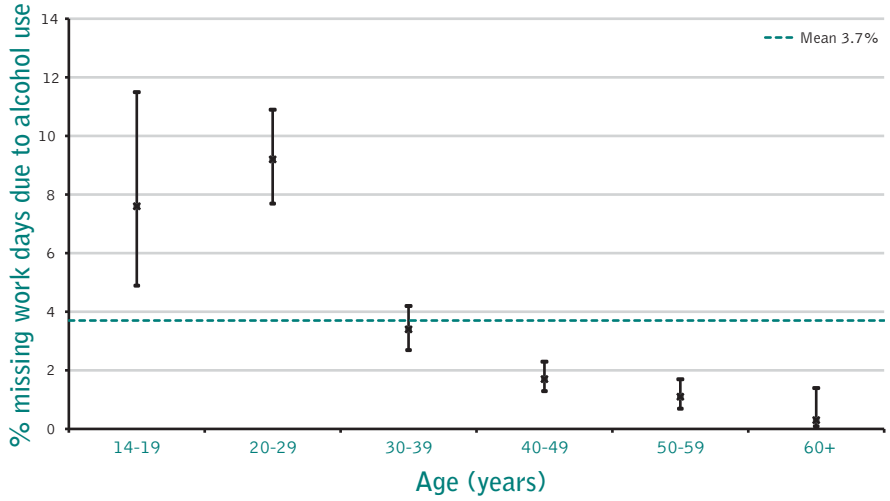

Figure 6.1 Proportions of respondents to the 2004 NDSHS who reported days missed from work in the last 3 months due to their alcohol use by age

6.2.3 Alcohol-related absenteeism by industry

Significant industry differences were observed in the proportions of respondents to the 2004 NDSHS who reported alcohol-related absenteeism ($F_{10.3,\ 18582} = 2.2$, $p = 0.01$). The largest proportion reporting that they missed one or more workdays in the last three months due to their alcohol use was employed in the hospitality industry (Table 6.3).

Table 6.3 Proportions of employed respondents to the 2004 NDSHS who reported absenteeism in the last 3 months due to their alcohol use by industry

Industry	%	95% CI	Survey n	Weighted n
Agriculture	2.7	(1.3-5.7)	9	5,603
Mining	1.0	(0.2-3.9)	2	1,202
Manufacturing	3.6	(2.4-5.4)	32	29,859
Construction	4.5	(3.1-6.4)	44	31,640
Wholesale	4.8	(2.1-10.7)	10	8,218
Retail	4.5	(3.3-6.1)	55	44,987
Hospitality	6.0	(3.9-9.2)	31	21,537
Transport	3.6	(2.1-6.2)	18	14,082
Finance	4.1	(3.0-5.6)	64	53,272
Administration	4.2	(2.8-6.2)	31	15,357
Education	1.1	(0.5-2.2)	12	7,457
Services	3.6	(2.7-4.6)	79	59,690
All workers	3.7	(3.3-4.2)	387	292,904

Note: The proportion of all workers reporting absenteeism is less than in Table 6.1 due to non-responses for the industry variable.
Caution should be applied when interpreting statistics associated with small cell sizes
Shading denotes industry with the highest proportions of workers reporting alcohol-related absenteeism.

Industry differences in the proportions of workers missing one or more work days in the last three months due to their alcohol use are illustrated in Figure 6.2.

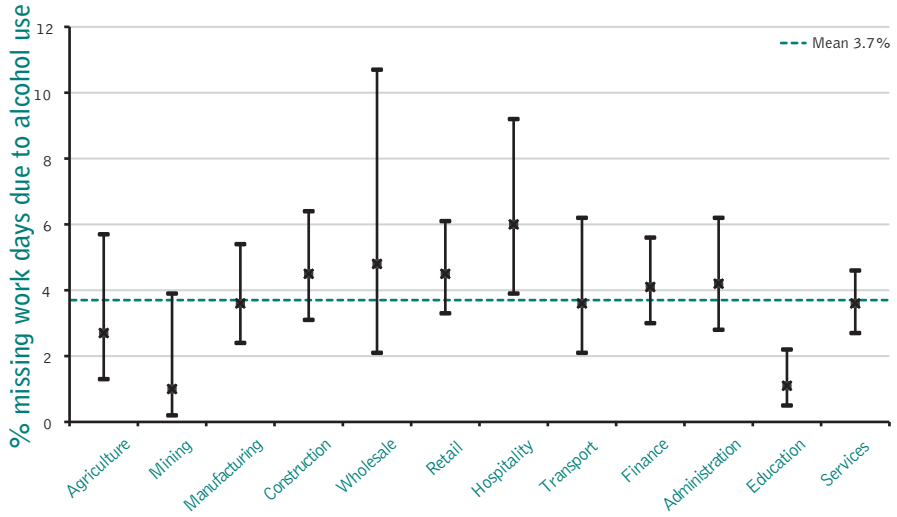

Figure 6.2 Proportions of employed respondents to the 2004 NDSHS who reported absenteeism in the last 3 months due to their alcohol use by industry

6.2.4 Alcohol-related absenteeism by occupation

Differences among occupations in the proportions of workers reporting alcohol-related absenteeism were marginally significant ($F_{4.0,\ 7123} = 2.4$, $p = 0.05$). The largest proportion of workers who reported missing one or more work days in the last three months due to their alcohol use was unskilled workers (Table 6.4).

Table 6.4 Proportions of employed respondents to the 2004 NDSHS who reported absenteeism in the last 3 months due to their alcohol use by occupation

Occupation	%	95% CI	Survey n	Weighted n
Managers	3.2	(2.1-4.8)	35	29,033
Professionals	3.0	(2.4-3.7)	104	70,952
Tradespersons	4.5	(3.1-6.4)	39	32,549
Skilled workers	3.8	(3.1-4.7)	120	89,404
Unskilled workers	4.9	(3.8-6.4)	86	65,642
Total	**3.7**	**(3.3-4.2)**	**384**	**287,580**

Note: Total proportion of workers reporting absenteeism is less than in Table 6.1 due to non-responses for the industry variable.
Shading denotes occupation group with the highest proportions of workers reporting alcohol-related absenteeism.

Occupation differences in the proportions of workers missing one or more work days in the last three months due to their alcohol use are illustrated in Figure 6.3.

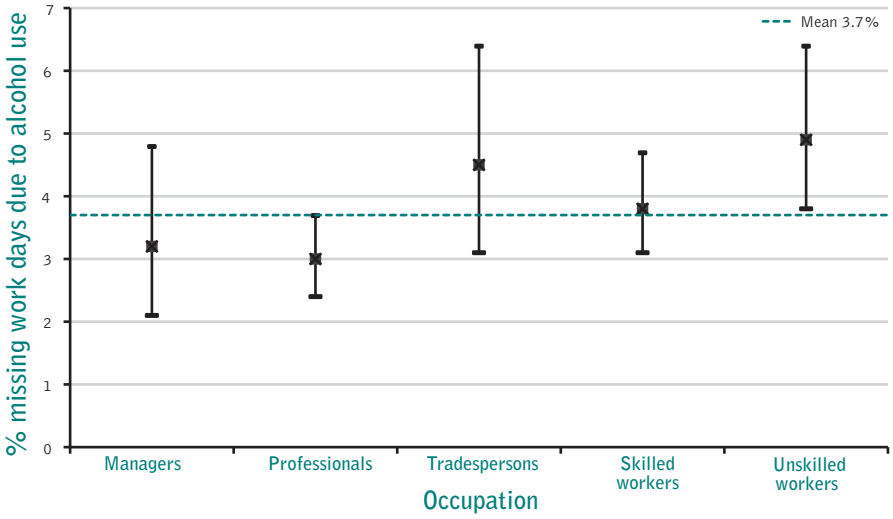

Figure 6.3 Proportions of employed respondents to the 2004 NDSHS who reported absenteeism in the last 3 months due to their alcohol use by occupation

6.2.5 The relationship between alcohol consumption patterns and alcohol-related absenteeism

The proportions of employed respondents who reported missing any work days in the last three months due to their alcohol use varied significantly according to consumption patterns associated with short- and long-term harm ($F_{6.9,\ 12510} = 64.1$, $p = 0.000$ and $F_{6.9,\ 5405} = 66.2$, $p = 0.000$ respectively). For short-term harm, there was a trend for the proportion of workers who reported alcohol-related absenteeism to increase as the frequency of risky/high risk consumption increased (Table 6.5). For long-term harm, there was a trend for the proportion of workers who reported alcohol-related absenteeism to increase as the risk level of consumption increased (Table 6.5).

Table 6.5 Proportions of employed respondents to the 2004 NDSHS who reported alcohol-related absenteeism in the past 3 months by alcohol consumption pattern

Risk category		1 day	2 days	≥ 3 days	Any days
Short-term harm					
Low risk	%	0.4	0.1	0.3	0.8
	95% CI	(0.2-0.7)	(0.1-0.3)	(0.2-0.6)	(0.6-1.2)
	Survey n	21	8	13	42
	Weighted n	15,066	4,567	12,929	32,561
Yearly risky/ high risk	%	1.8	0.4	0.2	2.9
	95% CI	(1.3-2.7)	(0.2-1.0)	(0.1-0.6)	(1.8-4.8)
	Survey n	32	5	5	20
	Weighted n	25,466	5,716	3,355	16,377
Monthly risky/ high risk	%	5.2	2.4	1.4	12.8
	95% CI	(4.2-6.5)	(1.5-3.6)	(0.9-2.3)	(10.1-16.0)
	Survey n	107	41	23	96
	Weighted n	71,208	32,319	19,067	65,922
Weekly risky/ high risk	%	7.6	3.6	4.0	20.0
	95% CI	(5.8-10.0)	(2.5-5.2)	(2.7-5.8)	(15.3-25.6)
	Survey n	71	34	45	73
	Weighted n	58,610	27,528	30,636	58,810
Long-term harm					
Low risk	%	1.7	0.7	0.5	2.9
	95% CI	(1.4-2.1)	(0.5-1.0)	(0.4-0.8)	(2.5-3.4)
	Survey n	141	56	41	238
	Weighted n	110,564	45,292	34,113	189,970
Risky	%	6.8	1.6	2.9	11.3
	95% CI	(5.1-9.0)	(1.0-2.8)	(1.8-4.6)	(9.1-13.9)
	Survey n	68	16	25	109
	Weighted n	45,060	10,939	18,977	74,976
High risk	%	5.9	5.6	5.2	16.8
	95% CI	(3.7-9.4)	(3.3-9.5)	(2.8-9.5)	(12.5-22.1)
	Survey n	22	16	20	58
	Weighted n	14,726	13,899	12,895	41,520

The proportions of workers who reported missing one, two and three or more work days in the last three months due to their alcohol use also varied significantly according to consumption patterns associated with risk of harm in the short- and long-term ($F_{11.6,\ 20865} = 39.2$, $p = 0.000$ and $F_{8.7,\ 15758} = 30.1$, $p = 0.000$ respectively). For short-term harm, there was a trend for the proportion of workers who reported taking one, two, and three or more days off due to their alcohol use to increase as the frequency of risky/high risk consumption increased (Table 6.5). For long-term harm, there was a trend for the proportion of workers who reported taking one, two, and three or more days off due to their alcohol use to increase as the risk level of consumption increased (Table 6.5).

After adjusting for age and gender differences in alcohol-related absenteeism, the likelihood of missing a work day due to alcohol use was significantly associated with alcohol consumption at risky and high risk levels (Table 6.6). Those who drank frequently (at least weekly) at short-term risky/high risk levels were 14.2 times more likely to report alcohol-related absenteeism compared to short-term low risk drinkers, while those drinking at long-term high risk levels were 5.6 times more likely to report alcohol-related absenteeism compared to long-term low risk drinkers (Table 6.6).

Table 6.6 Odds Ratios (OR) of taking one or more days off in the last 3 months due to alcohol use by risk category (adjusted for age and gender differences in absenteeism)

Risk category	OR	95% CI
Short-term low risk	1.0	–
Yearly risky/high risk	2.3*	(1.4-3.8)
Monthly risky/high risk	7.6*	(4.9-11.8)
Weekly risky/high risk	14.2*	(9.1-22.3)
Long-term low risk	1.0	–
Long-term risky	4.0*	(3.0-5.4)
Long-term high risk	5.6*	(3.7-8.5)

Note: The reference group for short-term risk is short-term low risk and the reference group for long-term risk is long-term low risk.
* Sig < 0.001

6.3 DAYS OFF WORK DUE TO ILLNESS OR INJURY

6.3.1 Proportion of persons reporting days off work due to illness/injury

Nearly 40% of employed respondents to the 2004 NDSHS reported missing at least one work day in the last three months due any illness/injury (Table 6.7). The largest proportion of workers missed three or more work days in this period (Table 6.7).

Table 6.7 Proportions of respondents to the 2004 NDSHS who reported days missed from work in the last 3 months due to any illness or injury by gender

Gender		1 day	2 days	≥ 3 days	Any days
Female	%	13.2	11.4	17.7	42.3
	95% CI	(12.2-14.3)	(10.5-12.4)	(16.6-19.0)	(40.8-43.9)
	Survey n	715	621	943	2,279
	Weighted n	433,428	375,625	583,534	1,392,587
Male	%	12.1	10.3	15.1	37.5
	95% CI	(11.1-13.1)	(9.4-11.4)	(14.0-16.2)	(36.0-39.0)
	Survey n	617	531	827	1,975
	Weighted n	529,961	454,428	664,169	1,648,559
All workers	%	12.5	10.8	16.2	39.6
	95% CI	(11.8-13.3)	(10.1-11.5)	(15.4-17.1)	(38.5-40.7)
	Survey n	1,332	1,152	1,770	4,254
	Weighted n	963,389	830,053	1,247,703	3,041,146

6.3.2 Gender and age differences

There were significant gender differences ($F_{1.0.\ 1807} = 10.3$, $p = 0.001$) with females being more likely to miss one or more work days due to illness or injury compared to males (Table 6.7). Significant gender differences ($F_{3.0,\ 5404} = 6.5$, $p = 0.000$) were also observed for the length of illness/injury absenteeism with a larger proportion of female workers missing three or more days (Table 6.7). Significant differences in illness/injury absenteeism among age groups were also observed ($F_{4.8,\ 8722} = 41.6$, $p = 0.000$), with a larger proportion of workers aged 20-29 years reporting illness/injury absenteeism compared to older workers (Table 6.8). Age differences in illness/injury absenteeism were significant for both male ($F_{4.6,\ 8370} = 20.6$, $p = 0.000$) and female ($F_{4.9,\ 8807} = 23.4$, $p = 0.000$), workers (Table 6.8).

Table 6.8 Proportions of employed respondents to the 2004 NDSHS who reported absenteeism in the past 3 months due to illness/injury

Age (years)		Male	Female	All
14-19	%	58.9	64.9	61.3
	95% CI	(49.6-67.6)	(56.5-72.5)	(54.9-67.4)
	Survey n	96	117	213
	Weighted n	117,091	87,676	204,767
20-29	%	45.1	54	49.0
	95% CI	(41.3-49.0)	(56.5-72.5)	(46.3-51.6)
	Survey n	454	591	1,045
	Weighted n	414,788	383,117	797,905
30-39	%	40.7	42.8	41.5
	95% CI	(37.7-43.7)	(39.8-45.9)	(39.4-43.7)
	Survey n	559	606	1,165
	Weighted n	459,343	328,587	787,931
40-49	%	33.1	38.3	35.4
	95% CI	(30.2-36.1)	(35.4-41.3)	(33.3-37.6)
	Survey n	457	571	1,028
	Weighted n	376,635	354,582	731,217
50-59	%	30.0	33.0	31.3
	95% CI	(27.0-33.2)	(29.7-36.5)	(29.1-33.6)
	Survey n	330	337	667
	Weighted n	232,239	198,147	430,385
60+	%	20.6	26.6	22.9
	95% CI	(16.3-25.5)	(19.8-34.8)	(19.0-27.4)
	Survey n	79	57	136
	Weighted n	48,463	40,478	88,941
Total	%	37.5	42.3	39.6
	95% CI	(36.0-39.0)	(40.8-43.9)	(38.5-40.7)
	Survey n	1,975	2,279	4,254
	Weighted n	1,648,559	1,392,587	3,041,146

6.3.3 The relationship between alcohol consumption patterns and illness/injury absenteeism

The proportions of employed respondents who reported missing a work day in the last three months due to any illness/injury varied significantly according to alcohol consumption patterns associated with short- and long-term harm ($F_{6.8,\ 12362} = 12.6$, $p = 0.000$ and $F_{2.9,\ 5232} = 5.8$, $p = 0.001$ respectively). Overall, illness/injury absenteeism was more prevalent among workers who drank compared to abstainers. For short-term risk, illness/injury absenteeism was more prevalent among workers who drank at risky/high risk levels compared to those who drank at low risk levels (Table 6.9). For long-term risk, there was an overall trend for the prevalence of illness/injury absenteeism to increase with consumption risk levels (Table 6.9).

Table 6.9 Proportions of employed respondents to the 2004 NDSHS who reported illness/injury absenteeism in the past 3 months by alcohol consumption pattern

Risk category		1 day	2 days	≥ 3 days	Any days
Abstainers					
Abstainers	%	7.5	6.7	14.3	30.5
	95% CI	(5.6-9.9)	(5.0-9.0)	(11.4-17.7)	(15.6-51.1)
	Survey n	68	56	107	14
	Weighted n	44,803	40,257	85,941	10,861
Short-term harm					
Low risk	%	11.2	9.8	14.5	35.5
	95% CI	(10.2-12.2)	(8.9-10.9)	(13.4-15.7)	(34.0-37.0)
	Survey n	581	484	783	1,839
	Weighted n	412,949	364,614	537,098	1,308,519
Yearly risky/ high risk	%	15.2	12.0	18.3	44.2
	95% CI	(13.3-17.2)	(10.4-13.8)	(16.3-20.5)	(40.7-47.7)
	Survey n	286	236	342	492
	Weighted n	201,375	159,568	242,729	351,711
Monthly risky/ high risk	%	14.0	13.2	18.5	43.3
	95% CI	(12.2-16.0)	(11.4-15.1)	(16.4-20.7)	(39.8-47.0)
	Survey n	252	251	348	492
	Weighted n	183,272	172,438	242,045	350,558
Weekly risky/ high risk	%	16.3	12.6	18.8	44.2
	95% CI	(13.6-19.4)	(10.1-15.5)	(16.0-22.0)	(39.5-48.9)
	Survey n	145	125	190	267
	Weighted n	120,990	93,177	139,891	200,770
Long-term harm					
Low risk	%	12.8	11.0	15.8	39.6
	95% CI	(12.0-13.6)	(10.3-11.8)	(15.0-16.8)	(38.4-40.9)
	Survey n	1,096	943	1,398	3,428
	Weighted n	792,021	684,108	982,166	2,452,154
Risky	%	13.3	11.4	20.8	44.9
	95% CI	(12.7-23.0)	(9.5-18.7)	(15.7-27.0)	(41.1-48.7)
	Survey n	116	110	200	426
	Weighted n	86,157	74,138	130,873	291,168
High risk	%	17.2	13.5	20.8	51.4
	95% CI	(12.7-23.0)	(9.5-18.7)	(15.7-27.0)	(44.9-57.9)
	Survey n	52	43	65	160
	Weighted n	40,408	31,551	48,723	120,682

After adjusting for age and gender differences in illness/injury absenteeism, the likelihood of missing a work day due to any illness or injury was significantly associated with alcohol consumption.

Those workers who drank at short-term low risk levels were 1.5 times more likely, while those who drank frequently (at least weekly) at short-term risky/high risk levels were more than twice as likely to report illness/injury absenteeism compared to abstainers (Table 6.10). Those drinking at long-term low risk levels were 1.7 times more likely, and those who drank at long-term high risk levels were 2.6 times likely to report illness/injury absenteeism compared to abstainers (Table 6.10).

Table 6.10 Odds Ratios (OR) of taking one or more days off in the last 3 months due to illness/injury by alcohol consumption risk category (adjusted for age and gender differences in absenteeism)

Risk category	OR	95% CI
Abstainers	1.0	–
Short-term harm		
Low risk	1.5*	(1.2-1.8)
Yearly risky/high risk	2.1*	(1.7-2.6)
Monthly risky/high risk	1.9*	(1.5-2.3)
Weekly risky/high risk	2.1*	(1.6-2.7)
Long-term harm		
Low risk	1.7*	(1.4-2.0)
Risky	1.9*	(1.5-2.4)
High risk	2.6*	(1.9-3.5)

Note: The reference group for both short-term and long-term risk is abstainers.
* Sig = 0.000.

6.4 2001 & 2004 NDSHS DATA COMPARISON

6.4.1 Alcohol-related absenteeism 2001 and 2004

In 2001, 3.9% of employed NDSHS respondents reported missing at least one work day due to their alcohol use (Table 6.11). This involved a total of 670,716 (95%CI: 510,363-831,070) work days lost in a three month period. In 2004, 4.1% of employed NDSHS respondents reported missing at least one work day due to their alcohol use (Table 6.11). This involved a total of 730,481 (95% CI 570,120 – 890,843) workdays lost in a three month period. The proportions of workers who reported alcohol-related absenteeism (categorised according alcohol consumption risk level) were similar for 2001 and 2004 NDSHS data (Table 6.11).

Table 6.11 Proportions of employed 2001 and 2004 NDSHS respondents who reported missing one or more work days in the last 3 months due to their alcohol use by alcohol consumption risk category

Risk category		2001	2004
Short-term risk			
Low risk	%	0.8%	0.8%
	95% CI	(0.6%–1.1%)	(0.6%-1.2%)
	Survey n	50	42
	Weighted n	27,338	32,561
Yearly risky	%	2.5%	2.2%
	95% CI	(1.5%–4.2%)	(1.4%-3.4%)
	Survey n	20	22
	Weighted n	19,565	18,160
Yearly high risk	%	3.5%	2.9%
	95% CI	(2.3%–5.3%)	(1.8%-4.8%)
	Survey n	32	20
	Weighted n	18,515	16,377
Monthly risky	%	5.9%	6.7%
	95% CI	(4.4%–7.7%)	(5.1%-8.8%)
	Survey n	78	75
	Weighted n	46,318	56,672
Monthly high risk	%	10.0%	12.8%
	95% CI	(7.7%–12.9%)	(10.1%-16.0%)
	Survey n	79	96
	Weighted n	47,064	65,922
Weekly risky	%	12.6%	12.3%
	95% CI	(9.4%–16.7%)	(9.4%-15.8%)
	Survey n	72	77
	Weighted n	45,511	57,965
Weekly high risk	%	24.3%	20.0%
	95% CI	(18.9%–30.5%)	(15.3%-25.6%)
	Survey n	84	73
	Weighted n	58,162	58,810
Long-term risk			
Low risk	%	2.6%	2.9%
	95% CI	(2.2%–3.0%)	(2.5%-3.4%)
	Survey n	225	238
	Weighted n	147,020	189,970
Risky	%	11.5%	11.3%
	95% CI	(9.3%–14.2%)	(9.1%-13.9%)
	Survey n	119	109
	Weighted n	72,448	74,976
High risk	%	18.4%	16.8%
	95% CI	(13.5%–24.5%)	(12.5%-22.1%)
	Survey n	65	58
	Weighted n	40,464	41,520
Total	%	3.9%	4.1 %
	95% CI	(3.5%–4.5%)	(3.6%-4.6%)
	Survey n	415	405
	Weighted n	262,474	306,466

6.4.2 Illness/injury absenteeism 2001 and 2004

In 2001, 40.5% of employed NDSHS respondents reported missing at least one work day due to illness or injury. This involved a total of 11,433,923 (95%CI: 10,650,190-12,212,660) work days lost in a three month period. In 2004, 39.6% of employed NDSHS respondents reported missing at least one work day due to illness or injury. This involved a total of 12,802,975 (95% CI 11,856,788 – 13,749,161) workdays lost in a three month period. The proportions of workers reporting illness/injury absenteeism (grouped according to alcohol consumption risk level) were similar for 2001 and 2004 NDSHS data (Table 6.12).

Table 6.12 Proportions of employed 2001 and 2004 NDSHS respondents who reported missing one or more work days in the last 3 months due to illness/injury by alcohol consumption risk category

Risk category		2001	2004
Short-term risk			
Low risk	%	35.1%	35.5%
	95% CI	(33.5%–36.7%)	(34.0%-37.0%)
	Survey n	1,806	1,839
	Weighted n	1,142,034	1,308,519
Yearly risky	%	40.9%	44.2%
	95% CI	(37.6%–44.3%)	(40.7%-47.7%)
	Survey n	486	492
	Weighted n	307,901	351,711
Yearly high risk	%	48.1%	47.4%
	95% CI	(43.9%–52.3%)	(43.3%-51.6%)
	Survey n	389	372
	Weighted n	244,230	251,960
Monthly risky	%	46.5%	43.3%
	95% CI	(43.0%–50.0%)	(39.8%-47.0%)
	Survey n	545	492
	Weighted n	352,990	350,558
Monthly high risk	%	50.8%	49.2%
	95% CI	(46.3%–55.3%)	(44.9%-53.6%)
	Survey n	374	359
	Weighted n	232,337	247,198
Weekly risky	%	44.0%	44.2%
	95% CI	(39.0%–49.2%)	(39.5%-48.9%)
	Survey n	245	267
	Weighted n	151,959	200,770
Weekly high risk	%	54.6%	53.3%
	95% CI	(47.7%–61.3%)	(46.8%-59.7%)
	Survey n	176	193
	Weighted n	124,853	153,288
Long-term risk			
Low risk	%	39.9%	39.6%
	95% CI	(38.7%–41.2%)	(38.4%-40.9%)
	Survey n	3,300	3,428
	Weighted n	2,106,084	2,452,154
Risky	%	44.7%	44.9%
	95% CI	(40.9%–48.6%)	(41.1%-48.7%)
	Survey n	443	426
	Weighted n	267,441	291,168
High risk	%	43.3%	51.4%
	95% CI	(36.5%–50.3%)	(44.9%-57.9%)
	Survey n	148	160
	Weighted n	89,835	120,682
Total	%	40.6%	39.6%
	95% CI	(39.3%–41.7%)	(38.5%-40.7%)
	Survey n	4,060	4,028
	Weighted n	2,582,517	2,874,865

CHAPTER 7

ALCOHOL USE AND RISK TO WORKPLACE SAFETY AND PRODUCTIVITY

KEY POINTS

1. The most prevalent activity undertaken in the last 12 months while under the influence of alcohol was driving a motor vehicle, with 18.6% of employed respondents reporting this activity
2. Less than 1.0% reported operating hazardous machinery
3. 6.0% reported attending work under the influence and 9.3% usually used alcohol at work
4. Compared to female workers a significantly larger proportion of male workers reported attending work ($p = 0.000$), driving a motor vehicle ($p = 0.000$), and operating hazardous machinery ($p = 0.000$) under the influence of alcohol and usually drinking alcohol at work ($p = 0.000$)
5. Significant age differences were observed for having attended work ($p = 0.000$), drove a motor vehicle ($p = 0.000$) and operated hazardous machinery ($p = 0.000$) while under the influence of alcohol, and usually drank alcohol at work ($p = 0.000$). Usually drinking at work, attending work and driving under the influence were most prevalent among 20-29 year old workers, while operating hazardous machinery under the influence of alcohol was most prevalent among 14-19 year old workers
6. There were significant industry differences in all four activities ($p = 0.000$) with driving a motor vehicle under the influence, attending work under the influence and usually drinking at work most prevalent in the hospitality industry and operating hazardous machinery under the influence most prevalent in the agriculture industry
7. There were significant differences in all four activities ($p = 0.000$) among occupations with driving a motor vehicle under the influence, attending work under the influence and operating hazardous machinery most prevalent among tradespersons, while usually drinking at work was most prevalent among managers
8. There was an overall trend for the prevalence of these activities to increase with the frequency and level of risky/high risk drinking.

7.1 INTRODUCTION

Potential alcohol-related risks to safety and productivity are highlighted in this chapter through identification of activities workers reported engaging in while under the influence of alcohol and prevalence of alcohol use at work. Employed respondents to the 2004 NDSHS were asked questions concerning three activities they had undertaken in the past 12 months while under the influence of alcohol that were relevant to the workplace: attending work, driving a motor vehicle and operating hazardous machinery. Of these questions, attending work while under the influence of alcohol has the most direct relationship with workplace safety and productivity. The remaining two activities - driving a motor vehicle and operating hazardous machinery - may or may not have been undertaken by workers during work hours, however, these two activities may provide an indication of the probability of a worker undertaking work-related behaviours while under the influence of alcohol.

In addition to activities undertaken while under the influence of alcohol, employed respondents to the 2004 NDSHS were also asked if the workplace was one location where they usually drank alcohol. However, while this measure provides an indication of the extent of alcohol use that occurs at work, it is limited for at least two reasons. First, this question was not given to the 5,336 randomly selected CATI respondents and as such is not representative of the total NDSHS sample. Second, the proportion of respondents who use alcohol in the workplace may be underestimated or overestimated by this measure due to ambiguity in the wording of the question.[5]

7.2 ACTIVITIES WHILE UNDER INFLUENCE OF ALCOHOL

The most prevalent activity undertaken in the last 12 months while under the influence of alcohol was driving a motor vehicle, with 18.6% of employed respondents to the 2004 NDSHS reporting this activity (Table 7.1). Less than 1.0 % reported operating hazardous machinery, while 6.0% reported attending work under the influence and 9.3% usually drank alcohol at work (Table 7.1).

7.2.1 Gender differences

Significant gender differences were observed for attending work under the influence ($F_{1, 1823} = 98.3$, $p = 0.000$), driving a motor vehicle under the influence, ($F_{1, 1823} = 196.4$, $p = 0.000$), operating hazardous machinery under the influence ($F_{1, 1823} = 74.6$, $p = 0.000$) and usually drinking alcohol at work ($F_{1, 1803} = 75.0$, $p = 0.000$). Compared to female workers, a larger proportion of male workers reported these activities (Table 7.1).

Table 7.1 Proportions of employed 2004 NDSHS respondents who, in the last 12 months, had attended work, drove a vehicle, or operated hazardous machinery under the influence of alcohol, or usually drink alcohol at work by gender

Gender		Went to work	Drove a vehicle	Operate haz/ mach	Usually drink at work
Females	%	3.0	12.3	0.0	6.2
	95% CI	(2.4-3.6)	(11.4-13.2)	(0.0-0.2)	(5.5-6.9)
	Survey n	220	981	4	361
	Weighted n	114,944	473,999	1,896	203,452
Males	%	8.3	23.4	1.6	11.6
	95% CI	(7.6-9.0)	(22.2-24.6)	(1.3-2.0	(10.6-12.6)
	Survey n	635	1,794	120	638
	Weighted n	422,182	1,196,085	82,242	523,348
All workers	%	6.0	18.6	0.9	9.3
	95% CI	(5.5-6.5)	(17.9-19.4)	(0.8-1.2)	(8.6-10.0)
	Survey n	855	2,775	124	999
	Weighted n	537,125	1,670,084	84,137	726,800

Note: Caution should be applied when interpreting statistics associated with small cell sizes.

[5] Respondents were asked to nominate, from 11 different options, locations where they usually drank alcohol. The question could be interpreted as 'where do you most frequently drink alcohol?' or alternatively 'what are the settings where you usually drink alcohol?' The former interpretation may prompt respondents to choose only one location (e.g. home) instead of a number of applicable locations (e.g. home, hotel, workplace etc).

7.2.2 Age differences

Significant age differences were observed in the proportions of employed respondents to the 2004 NDSHS who reported attending work ($F_{4.7, 8547} = 44.9$, $p = 0.000$), driving a motor vehicle ($F_{4.6, 8420} = 28.5$, $p = 0.000$), operating hazardous machinery under the influence of alcohol ($F_{4.5, 8218} = 6.6$, $p = 0.000$), and usually drinking alcohol at work ($F_{4.9, 8847} = 19.1$, $p = 0.000$). The largest proportions of workers who reported attending work or driving under the influence and usually drinking alcohol at work were those aged 20-29 years, while the largest proportion operating hazardous machinery under the influence were those aged 14-19 years (Table 7.2).

Table 7.2 Proportions of workers who, in the last 12 months, had attended work, drove a vehicle, or operated hazardous machinery under the influence of alcohol, or usually drank alcohol at work by age

Age (years)		Went to work	Drove a vehicle	Operate haz/ mach	Usually drink at work
14-19	%	10.6	15.4	2.3	5.6
	95% CI	(8.0-14.0)	(11.8-20.0)	(1.0-5.1)	(3.3-9.2)
	Survey n	61	80	8	20
	Weighted n	41,630	60,245	8,848	17,430
20-29	%	11.8	24.7	1.7	13.5
	95% CI	(10.3-13.5)	(22.7-26.8)	(1.2-2.6)	(11.8-15.4)
	Survey n	302	666	40	271
	Weighted n	216,557	452,249	31,856	217,854
30-39	%	5.9	21.1	1.0	12.2
	95% CI	(5.1-6.9)	(19.6-22.7)	(0.7-1.5)	(10.9-13.7)
	Survey n	213	784	37	337
	Weighted n	128,256	456,579	22,469	233,421
40-49	%	4.1	18.3	0.6	7.2
	95% CI	(3.4-5.0)	(17.1-19.7)	(0.4-1.0)	(6.1-8.5)
	Survey n	177	735	27	202
	Weighted n	97,627	431,511	14,989	150,590
50-59	%	2.8	13.2	0.4	6.0
	95% CI	(2.1-3.6)	(11.9-14.8)	(0.2-0.7)	(5.0-7.3)
	Survey n	88	414	12	30
	Weighted n	46,952	223,247	5,976	87,338
60+	%	1.1	8.4	0.0	4.5
	95% CI	(0.6-2.0)	(6.7-10.6)	–	(3.0-6.7)
	Survey n	14	96	0	30
	Weighted n	6,103	46,254	–	20,166
All workers	%	6.0	18.6	0.9	9.3
	95% CI	(5.5-6.5)	(17.9-19.4)	(0.8-1.2)	(8.6-10.0)
	Survey n	855	2,775	124	999
	Weighted n	537,125	1,670,084	84,137	726,800

Note: ■ Shading denotes activity with highest proportion of workers.
Caution should be applied when interpreting statistics associated with small cell sizes.

7.2.3 Differences by industry

Significant industry differences were observed in the proportions of workers who attended work ($F_{9.4, 17080} = 10.4$, $p = 0.000$), drove a motor vehicle ($F_{10.3, 18778} = 7.8$, $p = 0.000$), or operated hazardous machinery ($F_{9.6, 17516} = 13.3$, $p = 0.000$) under the influence of alcohol, and usually drank at work ($F_{10.7, 19162} = 13.3$, $p = 0.000$) (Table 7.3).

Table 7.3 Proportions of workers who, in the last 12 months, had attended work, drove a vehicle, or operated hazardous machinery under the influence of alcohol, or usually drink alcohol at work by industry

Industry		Went to work	Drove a vehicle	Operate haz/mach	Usually drink at work
Agriculture	%	11.7	27.3	3.1	7.4
	95% CI	(8.0-16.8)	(22.3-33.0)	(1.5-6.3)	(4.2-12.8)
	Survey n	32	88	9	19
	Weighted n	27,324	63,979	7,182	15,402
Mining	%	6.1	23.8	0.4	8.8
	95% CI	(3.6-10.4)	(18.2-30.5)	(0.1-1.5)	(5.2-14.5)
	Survey n	18	54	3	15
	Weighted n	8,658	33,517	617	10,761
Manufacturing	%	8.7	20.1	2.0	7.1
	95% CI	(6.9-10.9)	(17.7-22.7)	(1.2-3.2)	(5.4-9.3)
	Survey n	102	267	22	66
	Weighted n	78,439	182,053	17,575	56,816
Construction	%	8.4	24.2	3.5	9.1
	95% CI	(6.6-10.6)	(21.1-27.5)	(2.4-5.0)	(7.2-11.5)
	Survey n	97	273	37	84
	Weighted n	66,522	193,370	27,525	63,293
Wholesale	%	6.0	22.9	1.0	10.1
	95% CI	(3.5-10.0)	(17.5-29.3)	(0.3-3.5)	(6.4-15.5)
	Survey n	18	65	3	21
	Weighted n	11,058	42,369	1,899	17,186
Retail	%	6.0	17.5	0.8	7.5
	95% CI	(4.7-7.5)	(15.6-19.6)	(0.4-1.3)	(6.0-9.4)
	Survey n	103	314	16	92
	Weighted n	66,865	196,842	8,437	70,829
Hospitality	%	12.8	25.8	0.3	17.5
	95% CI	(9.8-16.7)	(21.8-30.1)	(0.1-1.5)	(13.6-22.2)
	Survey n	71	149	2	74
	Weighted n	45,447	90,503	1,058	60,946
Transport	%	6.8	17.2	1.8	6.1
	95% CI	(4.9-9.4)	(14.2-20.7)	(0.9-3.5)	(4.2-8.9)
	Survey n	44	118	12	33
	Weighted n	28,283	71,063	7,483	23,555
Finance	%	6.1	19.8	0.2	16.5
	95% CI	(4.7-7.8)	(18.0-21.7)	(0.1-0.5)	(14.4-18.7)
	Survey n	127	462	7	271
	Weighted n	85,369	279,715	3,216	206,160
Administration	%	5.4	19.9	0.4	11.5
	95% CI	(4.0-7.4)	(16.9-23.3)	(0.1-2.1)	(8.8-14.8)
	Survey n	63	181	2.0	85
	Weighted n	22,972	83,983	1,723	41,063
Education	%	1.3	14.9	0.1	7.8
	95% CI	(0.8-2.1)	(13.0-17.1)	(0.0-0.5)	(6.1-10.0)
	Survey n	21	226	1	84
	Weighted n	9,907	112,826	584	49,814
Services	%	3.8	14.9	0.2	5.5
	95% CI	(3.1-4.8)	(13.6-16.5)	(0.1-0.5)	(4.5-6.7)
	Survey n	127	493	6	119
	Weighted n	68,080	265,455	3,737	84,365
Total	%	6.1	19.0	1.0	9.4
	95% CI	(5.6-6.6)	(18.2-19.8)	(0.8-1.2)	(8.7-10.1)
	Survey n	823	2,690	120	963
	Weighted n	518,925	1,615,674	81,037	700,190

Note: Shading denotes activity with highest proportion of workers.
Caution should be applied when interpreting statistics associated with small cell sizes.

The hospitality industry had the largest proportion who reported attending work or driving a motor vehicle while under the influence and usually drinking alcohol at work (Table 7.3). The agriculture industry had the largest proportion who reported operating hazardous machinery while under the influence of alcohol (Table 7.3).

7.2.4 Differences by occupation

Significant occupation differences were observed in the proportions of employed respondents to the 2004 NDSHS who reported attending work under the influence ($F_{3.8,\ 6863} = 6.0$, $p = 0.000$), driving a motor vehicle under the influence ($F_{3.9,\ 7176} = 14.7$, $p = 0.000$), operating hazardous machinery under the influence ($F_{4,\ 7217} = 9.8$, $p = 0.000$), and usually drinking alcohol at work ($F_{4,\ 7101} = 14.4$, $p = 0.000$). The largest proportions of workers reporting they attended work, drove a motor vehicle or operated hazardous machinery under the influence were employed as tradespersons (Table 7.4). The largest proportion of workers who reported that they usually drank alcohol at work was managers (Table 7.4).

Table 7.4 Proportions of workers who, in the last 12 months, had attended work, drove a vehicle, or operated hazardous machinery under the influence of alcohol, or usually drink alcohol at work by occupation

Occupation		Went to work	Drove a vehicle	Operate haz/ mach	Usually drink at work
Managers	%	7.3	23.1	0.8	12.6
	95% CI	(5.8-9.2)	(20.8-25.5)	(0.4-1.5)	(10.5-15.0)
	Survey n	111	385	11	148
	Weighted n	76,458	240,972	7,932	115,183
Professionals	%	4.8	19.8	0.3	11.6
	95% CI	(4.0-5.8)	(18.5-21.2)	(0.2-0.6)	(10.3-13.0)
	Survey n	111	931	13	375
	Weighted n	129,680	536,075	8,719	261,939
Tradespersons	%	8.6	24.3	2.6	11.3
	95% CI	(6.9-10.6)	(21.5-27.3)	(1.8-4.0)	(9.0-14.2)
	Survey n	105	278	34	92
	Weighted n	66,780	190,052	20,627	80,871
Skilled workers	%	5.4	15.6	0.9	7.5
	95% CI	(4.6-6.3)	(14.4-16.9)	(0.6-1.4)	(6.5-8.7)
	Survey n	226	679	38	253
	Weighted n	133,738	387,682	23,219	167,924
Unskilled workers	%	7.2	16.8	1.2	4.9
	95% CI	(5.9-8.6)	(15.0-18.9)	(0.7-2.0)	(3.7-6.5)
	Survey n	141	365	20	76
	Weighted n	99,775	235,090	16,571	59,741
Total	%	6.0	18.9	0.9	9.4
	95% CI	(5.5-6.6)	(18.1-19.7)	(0.7-1.2)	(8.7-10.1)
	Survey n	803	2,638	116	944
	Weighted n	506,431	1,589,871	77,067	685,658

Note: Shading denotes activity with highest proportion of workers.

7.2.5 Differences by alcohol consumption pattern

Table 7.5 outlines the proportions of employed respondents who reported they attended work under the influence, drove a motor vehicle under the influence, operated hazardous machinery under the influence, or usually used alcohol at work by alcohol consumption risk category. Differences in the proportions of workers reporting these activities varied significantly according to short-term risk category (attended work $F_{3.2,\ 5832} = 220.7$, $p = 0.000$; drove a motor vehicle $F_{3.2,\ 5909} = 338.0$, $p = 0.000$; operated hazardous machinery $F_{3.2,\ 5806} = 30.2$, $p = 0.000$; usually drank at work $F_{4,\ 7155} = 22.5$ $p = 0.000$) and long-term risk category (attended work $F_{2.3,\ 4147} = 168.9$, $p = 0.000$; drove a motor vehicle $F_{2.3,\ 4122} = 278.9$, $p = 0.000$; operated hazardous machinery $F_{2.3,\ 4144} = 23.5$, $p = 0.000$; usually drank at work $F_{3,\ 5327} = 9.5$, $p = 0.000$).

There was a trend for the proportion of workers who reported engaging in activities while under the influence of alcohol and usually drinking at work to increase as the frequency of risky/high risk drinking associated with short-term harm increased (Table 7.5). For long-term risk, there was a trend for the proportion of workers who reported engaging in activities while under the influence of alcohol and usually drinking at work to increase as risk level increased (Table 7.5).

Table 7.5 Proportions of workers who attended work, drove a vehicle, or operated hazardous machinery under the influence of alcohol, or usually used alcohol at work by consumption pattern

	Went to work		Drove a motor vehicle		Operated haz/machinery		Usually drink at work	
Risk category	Survey n (weighted n)	% (95%CI)	Survey n (weighted n)	% (95%CI)	Survey n (weighted n)	% (95%CI)	Survey n (weighted n)	% (95%CI)
Short-term risk								
Low risk	148 (88,843)	2.2 (1.8-2.6)	737 (432,365)	10.5 (9.7-11.3)	17 (10,664)	0.3 (0.2-0.4)	362 (265,502)	6.4 (5.6-7.2)
Yearly risky/ high risk	147 (88,856)	5.2 (4.2-6.4)	660 (387,977)	22.7 (20.8-24.7)	25 (17,644)	1.0 (0.7-1.6)	244 (167,708)	11.7 (10.2-13.4)
Monthly risky/ high risk	279 (175,426)	12.0 (10.5-13.7)	821 (494,022)	33.6 (31.3-36.0)	35 (29,804)	2.0 (1.3-3.1)	248 (183,005)	12.9 (11.2-14.8)
Weekly risky/ high risk	280 (183,868)	22.2 (19.5-25.2)	556 (355,588)	42.9 (39.6-46.3)	46 (25,893)	3.2 (2.3-4.4)	145 (110,586)	13.9 (11.5-16.8)
Total	**855 (537,125)**	**6.0 (5.5-6.5)**	**2,775 (1,670,084)**	**18.6 (17.9-19.4)**	**124 (84,137)**	**0.9 (0.8-1.2)**	**999 (726,800)**	**9.3 (8.6-10.0)**
Long-term risk								
Low risk	543 (345,781)	4.9 (4.4-5.4)	2,090 (1,260,154)	17.7 (16.9-18.6)	77 (57,847)	0.8 (0.6-1.1)	810 (596,346)	8.7 (8.0-9.4)
Risky	187 (117,901)	15.8 (13.4-18.5)	471 (276,812)	37.0 (33.7-40.5)	25 (15,398)	2.1 (1.3-3.3)	133 (85,137)	12.0 (10.0-14.5)
High risk	124 (73,311)	27.0 (22.3-32.3)	213 (132,986)	48.9 (43.6-54.2)	21 (10,760)	4.0 (2.3-6.9)	56 (45,318)	17.6 (12.9-23.5)
Total	**855 (537,125)**	**6.0 (5.5-6.5)**	**2,775 (1,670,084)**	**18.6 (17.9-19.4)**	**124 (84,137)**	**0.9 (0.8-1.2)**	**999 (726,800)**	**9.3 (8.6-10.0)**

CHAPTER 8

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