

**THE IMPACT OF EMPLOYMENT
AND HOURS OF WORK ON
HEALTH STATUS AND
HEALTH SERVICE USE**

Deborah Schofield

**Discussion Paper No. 11
March 1996**

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National Centre for Social and Economic Modelling
• Faculty of Management • University of Canberra •

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Abstract

Over the past 15 years there have been important changes in female labour force participation rates and the hours that both women and men work. With these altered workforce patterns has come an increasing interest in the relationship between work and health, particularly for women who often juggle a variety of traditional and workplace roles. As an increasing number of women are working full-time and their work patterns and pressures are becoming more like those of men, it is useful to compare male and female health and workforce patterns, to anticipate the types of health and work relationships that women might expect to face in the future.

This study uses the results of 1989-90 national health survey to analyse the relationship between employment status, the numbers of hours people spend in paid work, their health status and their use of health services. Also analysed is the relationship between selected health risk indicators and the numbers of hours people spend in paid work.

Author note

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General caveat

NATSEM research findings are generally based on estimated characteristics of the population. Such estimates are usually derived from the application of microsimulation modelling techniques to microdata based on sample surveys.

These estimates may be different from the actual characteristics of the population because of sampling and non-sampling errors in the microdata and because of the assumptions underlying the modelling techniques.

The microdata do not contain any information that enables identification of the individuals or families to which they refer.

Contents

Abstract	.....iii
Author note	.....iv
Acknowledgments	.....iv
General caveat	.....iv
1. Introduction	.....1
2. Health and workforce trends	.....2
2.1 Health and hours of work	..... 2
2.2 Health and unemployment	..... 3
3. Labour force trends in Australia	.....4
3.1 The employed	..... 4
3.2 The unemployed	..... 8
4. Work and health status and use of health services	.....10
4.1 Health status and hours of work	..... 11
4.2 Use of pharmaceuticals and hours of work	..... 15
4.3 Use of doctor services and hours of work	..... 18
4.4 Use of hospital services and hours of work	..... 20
4.5 Health risk factors and hours of work	..... 22
5. Conclusions	.....26
Appendix A: Number of males and females by work status	.....27
Appendix B: Analysis of the total workforce (males and females) by work status	.....28
Appendix C: Analysis of the female workforce by work status	.....50
References	.....69

1. Introduction

Over the past 15 years, the nature of work has undergone almost constant change, and important workforce trends have emerged — an increase in the female labour force participation rate and a decline in the rate for males. The trend for females holds a particular concern for women's health as, not only has the number of women in the labour force been steadily increasing but, for a significant proportion, so has the number of hours they work. Such concern is compounded if the stresses of the paid workforce are exacerbated for many women by the additional responsibilities in their other, unpaid, domestic and community roles.

While there has been considerable research into the relationship between unemployment and the health of the unemployed, there has been much less attention given to the possibility of a similar association between workers' health and the number of hours people work. This is somewhat surprising as it has long been recognised that the nature and intensity of work can have important health consequences.

This study provides a preliminary analysis of the relationship between employment status, the numbers of hours people spend in paid work, and their health status. Cross-sectional health data collected by the Australian Bureau of Statistics in their 1989-90 national health survey (ABS 1990) are used to compare the self-reported health status, health service use and selected health risk indicators of the persons sampled in the survey with the number of hours they spent in paid employment. In doing so, it builds on earlier studies of the relationship between health and hours of work, in particular that of Mathers (1994) which, in addition to comparing the health of those who were working with those who were not, compared the health of persons working part-time with that of those working over 25 hours a week.

In chapter 2 recent findings on health, hours of work and unemployment are briefly outlined. Trends in the Australian labour force are examined in chapter 3. In chapter 4 the relationships between health, the use of health services and work patterns are analysed. Chapter 5 concludes and summarises the study.

2. Health and workforce trends

2.1 Health and hours of work

There is now a substantial body of work claiming that working women experience better health than women who are unemployed or out of the labour force (Coleman, Antonucci and Adelman 1987; Dickinson, Schissel and Andre 1992; Graetz 1993; Hibbard and Pope 1985, 1991; Jennings, Mazaik and McKinlay 1984; Lewin-Epstein 1986; Nathanson 1980; Rushing, Ritter and Burton 1992). Other major benefits, apart from better health, are said to be an increase in income and social support.

There has also been research that suggests that, at least for some women, working (without considering the hours they work) can have some detrimental effects. Working has been portrayed as harmful where women experience stress from the pressure of maintaining the multiple roles of mother, wife and worker¹ (Arber, Gilbert and Dale 1985; Dean 1992; Hibbard and Pope 1987; Sokoloff 1980) and where their work environment is dangerous (Siegrist 1989; Sokoloff 1980; Waldron 1980). While the latter seems self-evident, a number of authors have contested the former, finding no evidence that combining work, marriage and motherhood was harmful to women's health (Verbrugge 1983; Weatherall, Joshi and Macran 1994).

There has been relatively little recently published research on the impact of the number of working hours on health — in particular, on whether a high number of working hours might offset the benefits of employment. Interest in the effects of long hours seems to have waned as the poor working conditions and long working hours of the last century gave way to the improved working environments demanded by unionised labour. However, even before the major workplace reforms took place, the problem of workers harming their health through overwork had been identified. In 1767 Adam Smith, popularly credited with being the father of modern economics, observed that 'mutual emulation and desire of greater gain, frequently prompted [workers] to over-work themselves, and to hurt their health by excessive labour' (Smith 1981, p. 100). He concluded: 'It will be found, I believe, that in every sort of trade, that the man who works so moderately, as to be able to work

¹ This has been described as 'role accumulation' (Arber, Gilbert and Dale 1985).

constantly, not only preserves his health the longest, but, in the course of the year, executes the greatest quantity of work’.

A more recent author, Eyer (1977), found that overwork, particularly long hours of work and overtime, had been associated with higher death rates in periods of prosperity during the twentieth century. In addition, he argued that the stresses associated with overwork affected not only the health of the worker, but that of his or her spouse and children.

Garfield (1980) also found that time pressured jobs and overwork led to significant increases in serum cholesterol, blood coagulation, hypertension and coronary disease. More recently, Arber (1989) reported that women working part-time suffered less longstanding illness than women working full-time.

In Australia, Mathers (1994) published somewhat different findings based on an analysis from the 1989-90 national health survey. He compared people who were not employed with those working 1-14 hours, 15-24 hours and 25 hours or more a week. Mathers found that, after standardising for age, health declined for men as their hours of work decreased, while there was a much weaker gradient for women. He found that people who worked 25 hours or more experienced better health and less chronic and recent illness but were more inactive and had a higher health risk from alcohol consumption than those working fewer hours. Mathers explained some of the poorer health of people who were not employed and of those who worked fewer hours by suggesting that men, in particular, were more likely to work reduced hours because they were ill, and that low hours of work were associated with lower income which, in turn, was associated with ill health.

2.2 Health and unemployment

A large number of studies, both in Australia and overseas, have established a relationship between unemployment and a range of measures of poor health.² In addition to a loss of income, unemployment

² See, for example, Fox, Goldblatt and Jones (1995); Gilbert (1993); Goldblatt (1990); Harris, Merrett and Radford (1986); Hicks (1993); Junankar (1991); Kerr and Taylor (1992); Mackenbach (1992); Marmot, Kogevinas and Elston (1987); Mathers (1992, 1994); Moser, Fox and Jones (1984); Smith (1987); Townsend and Davidson (1992); and Whitehead (1992).

has been found to lead to a breakdown of social relationships and an increase in stress and anxiety (Junankar 1991). Leeflang, Klein-Hesselink and Spruit (1992) added that unemployment led to loneliness and deprivatation of social position and was associated with chronic disease. Unemployment has also been linked to numerous health risk factors, including smoking, obesity, inadequate material living conditions, poor diet and a lack of social support (Mackenbach 1992). One of the most thorough analyses of inequalities in health found that unemployment and low income were linked to a higher mortality rate, long term illness, and exposure to known health risk factors (Townsend and Davidson 1992). A number of authors have now claimed that unemployment in itself is causally related to ill health (Kerr and Taylor 1992; Smith 1987; Townsend and Davidson 1992).

One of the most detailed Australian studies based on the 1989-90 national health survey found that compared with the employed, those who were not employed experienced poorer health, a higher incidence of handicap, chronic illness and recent illness, were more likely to smoke, and tended to be less active (Mathers 1994, pp. 103-10). It also found that the low income of those not employed explained only a small part of the reported health differences between employed and not employed people, suggesting that unemployment of itself contributes to ill health.

3. Labour force trends in Australia

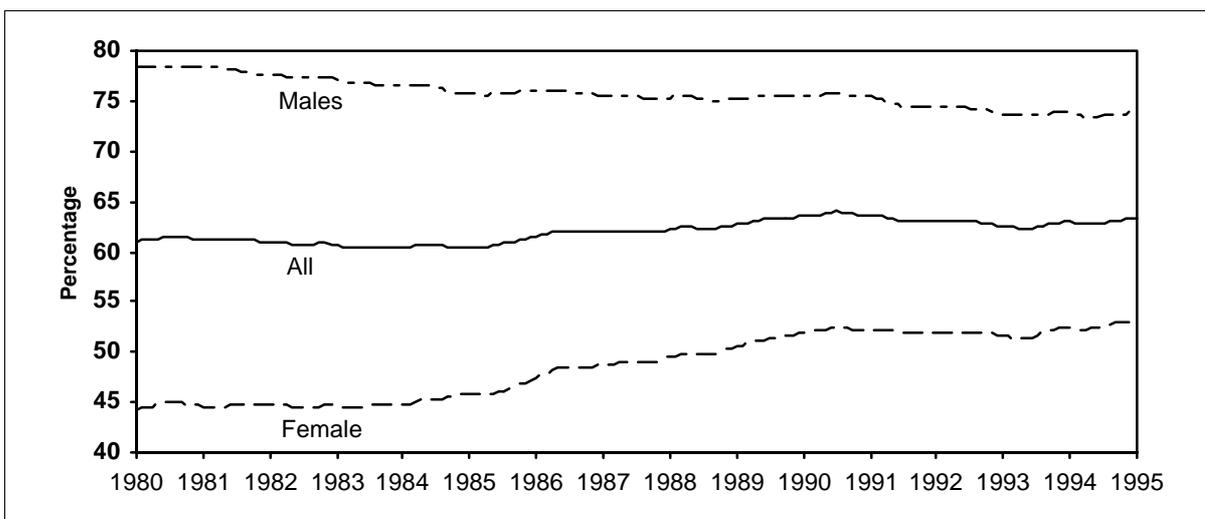
3.1 The employed

Over the past 15 years there has been a notable increase in the participation rate of women in the paid labour force and a decline in the participation rate of men (figure 1). Between 1980 and 1995, the female labour force participation rate increased from 44.8 per cent to 52.6 per cent (ABS 1993, p. 120). Over the same period male participation declined from 78.3 per cent to 73.6 per cent. Labour force participation projections suggest that about 60.3 per cent of women will be in the workforce by 2005 (ABS 1993, p. 120).

The growth in the female workforce has been primarily in part-time work (working fewer than 35 hours a week), with the proportion of civilian women working full-time (35 or more hours a week) remaining fairly steady (figure 2).

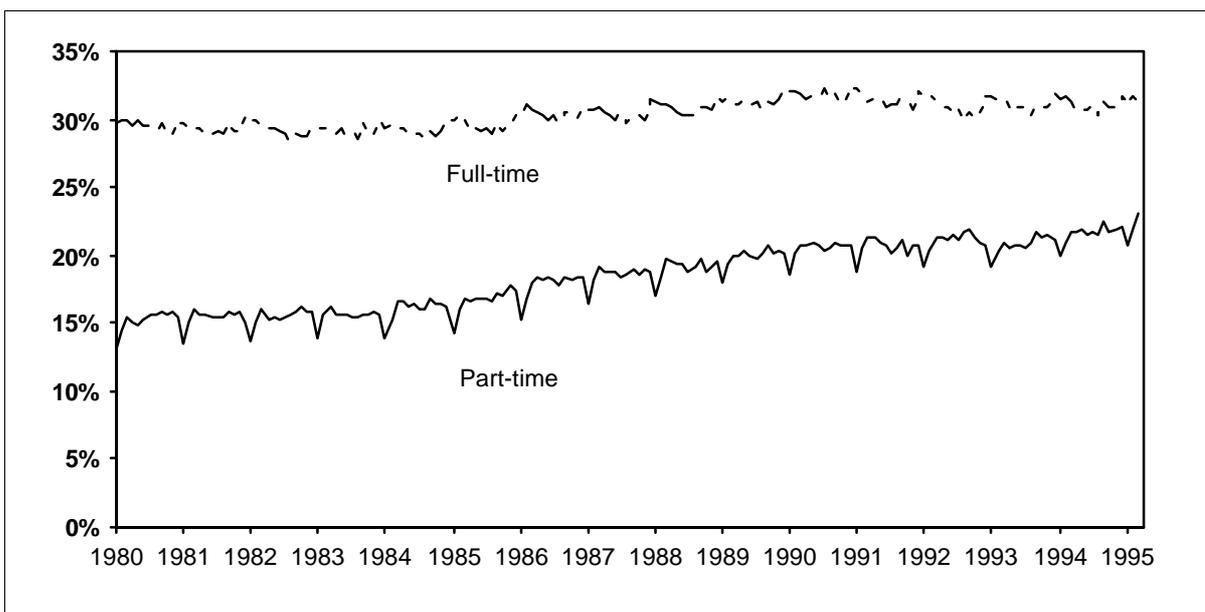
While there has been little growth in the proportion of women working

Figure 1: Labour force participation rates of all persons aged 15–64 years, Australia



Source: Schofield, Polette and Hardin (1996, p. 4).

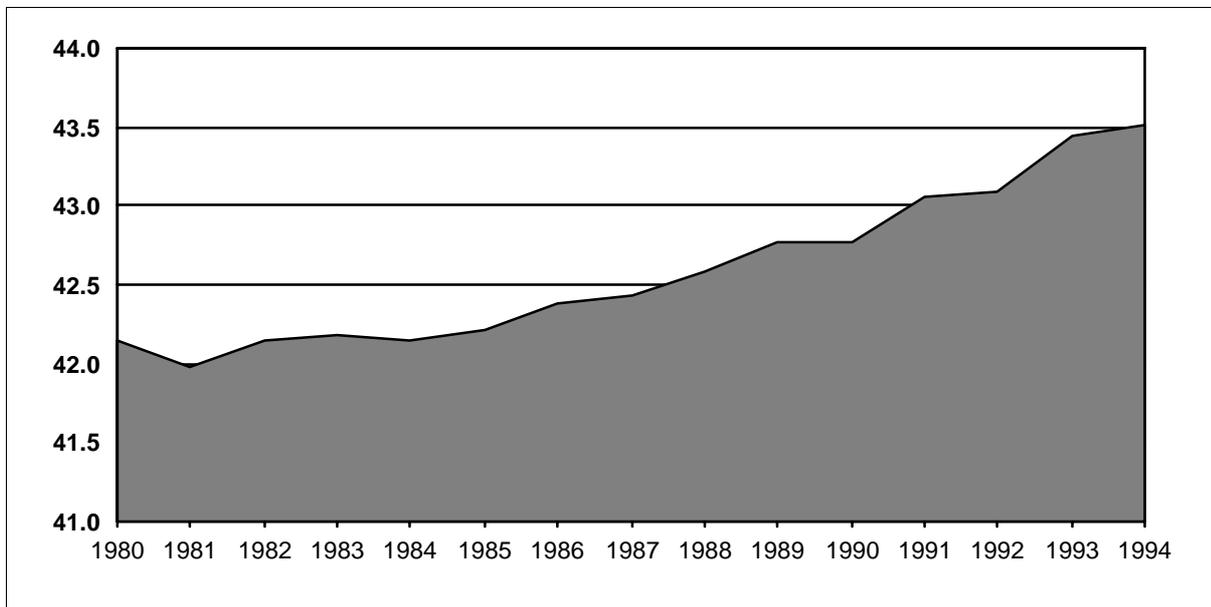
Figure 2: Percentage of the female civilian population working full-time and part-time, Australia, 1980–94



Data source: ABS (1995).

full-time since 1980, the average number of hours of work for women working full-time has increased — from about 42 hours a week in 1980 to about 43.5 hours in 1994 (figure 3). The average number of working hours for the total male workforce (that is, both full-time and part-time³) has also risen sharply — from 35 hours in 1980 to 40.6 hours in 1994 (ABS 1995). The trend towards longer working hours has occurred even though the proportion of workers employed part-time in the total workforce has risen rapidly — from 12 per cent in 1973 to 24 per cent in 1993 (ABS 1994a).

Figure 3: Average number of hours of work for women working full-time, Australia



Data source: ABS (1995).

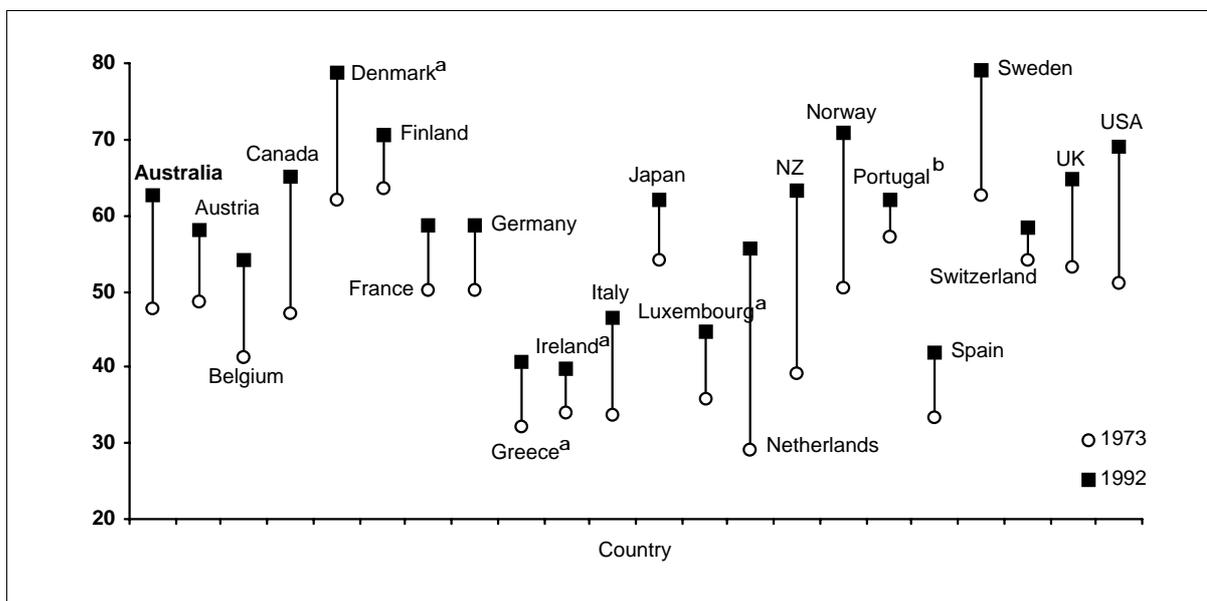
The pressure on workers to work longer hours seems to be driven by different factors during periods of recession and periods of economic growth. During periods of relative prosperity it is likely that workers who are able to derive a larger income from working longer hours will do so (Eyer 1977; Smith 1981). In contrast, during an economic downturn, salaried employees are likely to be under pressure to work longer and harder to ensure the viability of their employers and to secure their jobs. In these circumstances, employees may well work longer hours without the benefit of increased income.

³ In contrast to women, about 27 per cent of whom work part-time, less than 10 per cent of men work part-time.

The pressures for working women to work longer hours are also related to the way the nature of work and family structures have changed. Women have found themselves under increasing pressure to provide a higher proportion of family income, as two wages are required to maintain living standards and, increasingly, to prevent families falling into poverty (Gregory and Hunter 1995; Harding 1994; Landt 1994; Sokoloff 1980). Gregory and Hunter found that women’s incomes were especially important for families where there had been a substantial fall in the men’s incomes, particularly in poorer areas. They also observed that women’s incomes had been largely responsible for the marked real increase in household incomes in higher income areas. In an analysis of families and poverty, Landt suggested that if working wives in 1994 were no longer in paid employment, 243 000 couples would fall below the poverty line — effectively increasing the number of couples in poverty by about 60 per cent.

The steady increase in Australian women’s labour force participation reflects the international trend (figure 4) — most noticeable in countries with publicly supported child care and parental leave provisions. One such country is Finland which, in 1993, had a high percentage of women in full-time employment (Arber and Lahelma 1993). So there could be an acceleration in women’s labour force participation in Australia, given the relatively recent introduction of additional subsidies for working families using child care services (Schofield et al. 1996).

Figure 4: Female labour force participation rates in OECD countries in 1973 and 1992



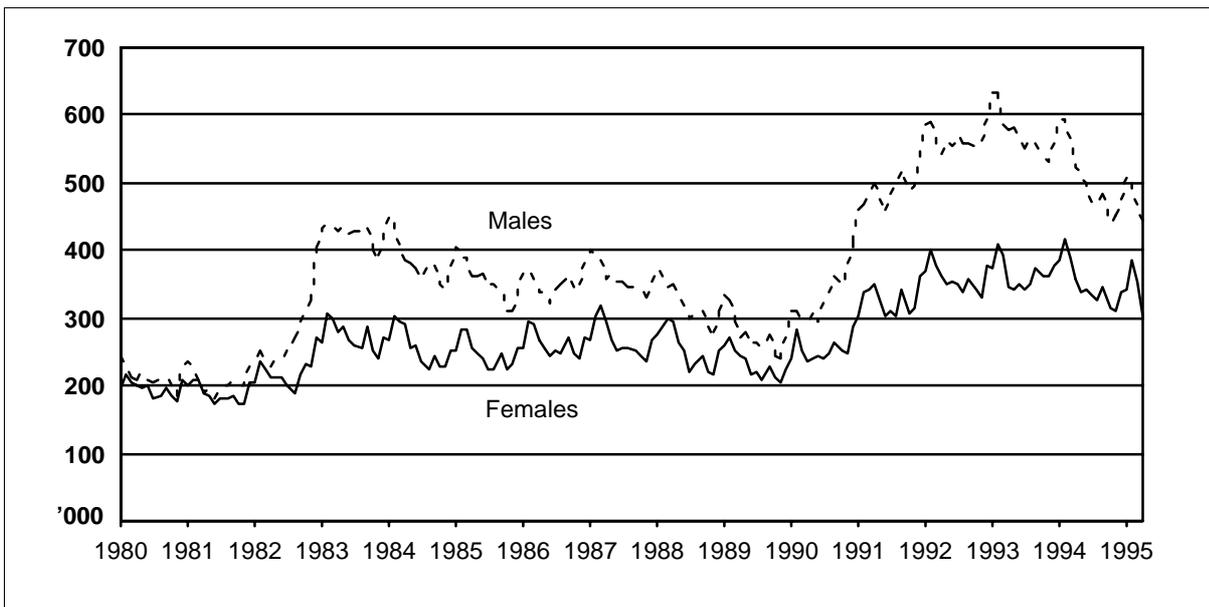
a For 1991 not 1992. b For 1979 not 1973.

Source: Schofield, Polette and Hardin (1996, p. 4).

3.2 The unemployed

The numbers of unemployed men and women have increased dramatically since 1980 (figure 5). This is of particular concern, given the growing body of research linking unemployment with ill health (see section 2.2). While male and female unemployment levels were similar in 1980 and in 1989–90, unemployment seems to have hit men the hardest during periods of recession, with male unemployment escalating in the early 1980s and again in the early 1990s. This is, at least, partly because men were predominant in some of the industries and occupations most affected by structural change (ABS 1994a, p. 128).

Figure 5: Numbers of unemployed males and females, Australia



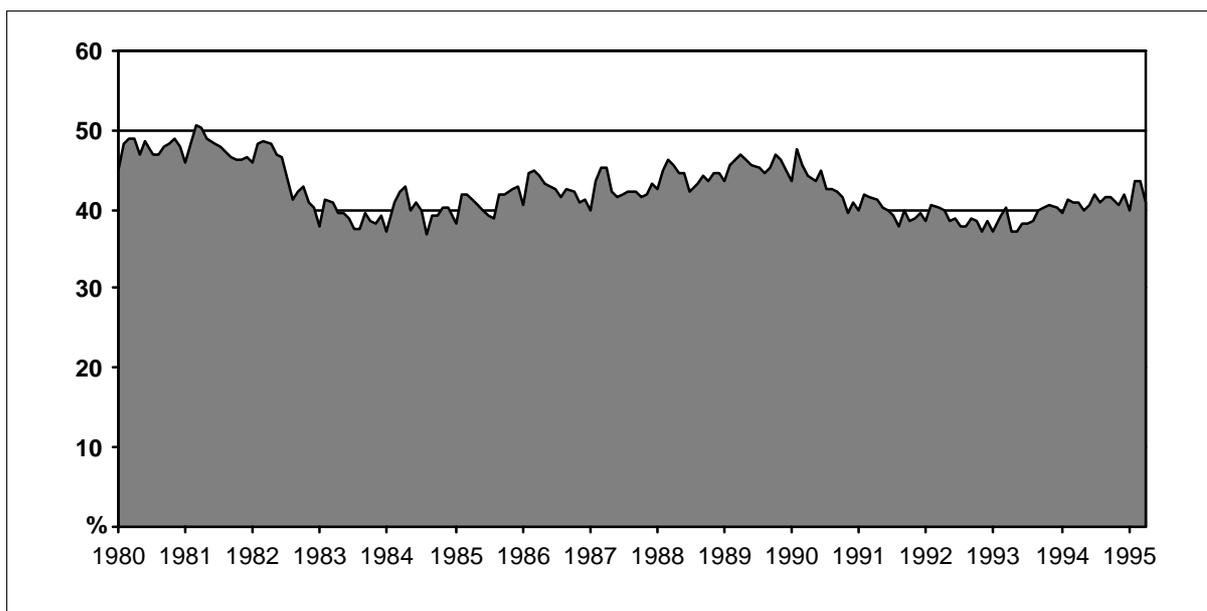
Data source: ABS (1995).

The proportion of the unemployed who are women has remained at about 50 per cent except during periods of economic downturn, when women comprised a little under 40 per cent of the unemployed (figure 6).

In addition to the unemployed who appear in the official statistics, there is a large pool of hidden unemployed. In 1992, 24 per cent of the women and 42 per cent of the men working part-time were underemployed

(ABS 1993, p. 129). Also 18.0 per cent of the women and 15.3 per cent of the men that were out of the labour force were discouraged job seekers, while 5.0 per cent of women and 11.9 per cent of men reportedly out of the labour force were actively looking for paid work (ABS 1993, p. 145).

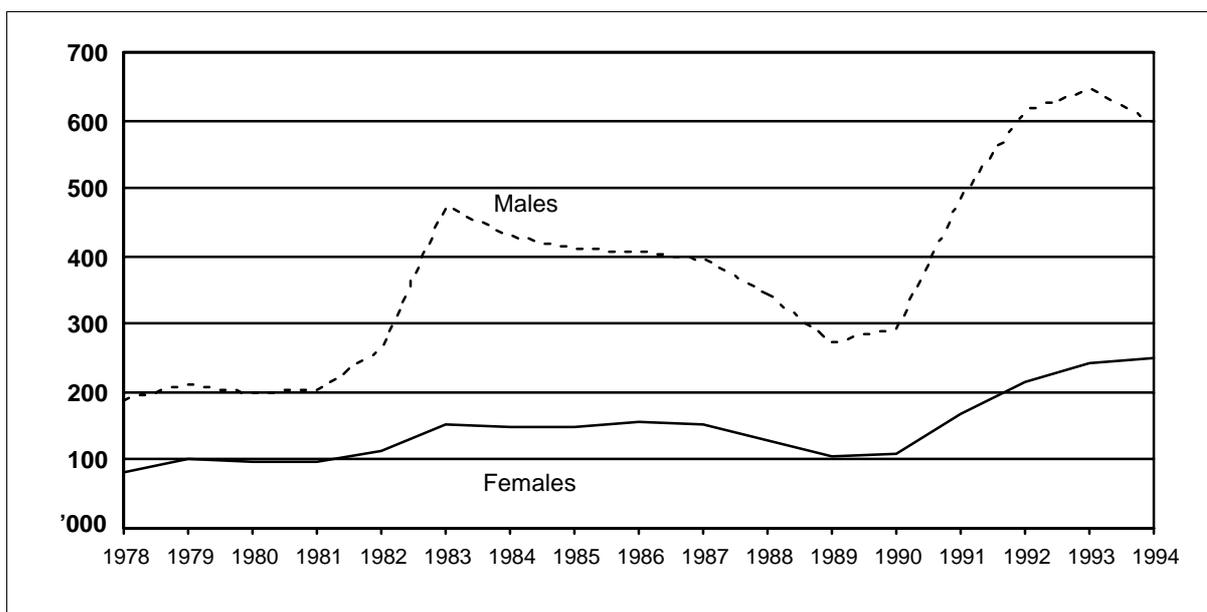
Figure 6: **Unemployed females as a percentage of the total number of unemployed, Australia**



Data source: ABS (1995).

Another measure of unemployment and economic hardship is the

Figure 7: **Number of unemployment beneficiaries, by sex, Australia**



Data source: Department of Social Security (1993, p. 271; 1994, p. 127).

number of people receiving unemployment benefits. Again, the number of male beneficiaries rose sharply during periods of recession, compared with the number of female beneficiaries (figure 7). However, statistics on unemployment beneficiaries can be misleading because they tend to hide the number of females unemployed. While the numbers of males and females unemployed were about the same in 1980, there appears to be about twice as many male unemployment beneficiaries as there were females beneficiaries in that year — a ratio that grew significantly during the recessions of the 1980s and 1990s. There are two reasons for this phenomenon. First, married people seeking work are not entitled to unemployment benefits if their and their spouse's incomes together exceed a certain level. Second, for most unemployed couples, until recently unemployment benefits were recorded only for the men (and paid at the married rate) unless the women applied for the benefit in their own right. (This policy was changed in September 1994.)

4. Work and health status and use of health services

The analysis in this section focuses on the relationship between work patterns and a number of key health measures such as self-assessed health status, use of pharmaceuticals, use of doctor services and hospital admittance. In addition, the relationship between workforce patterns and a number of major health risk factors — smoking, alcohol consumption and exercise — is briefly explored.

Work status was defined for national health survey respondents in paid employment according to their hours of work (as grouped in the survey) and for respondents who were either unemployed or out of the labour force. These definitions applied *only* to people who were considered to be of working age — that is, aged 15–64 years.

The *employed* were individuals spending at least one hour a week in paid employment (working hours did not include time spent on unpaid labour). The hours of work of people in the paid workforce were grouped as follows: 1–14 hours, 15–19 hours, 20–24 hours, 25–29 hours, 30–34 hours, 35–39 hours, 40–49 hours and 50 or more hours. The paid workforce, as recorded in the national health survey, was composed

predominantly of men working at least 35 hours a week, with more women than men working shorter hours⁴ (see appendix A).

Individuals *out of the labour force* were neither working nor seeking work. Those out of the labour force were primarily women (77 per cent). About 40 per cent of these women were aged between 50 and 64 years.

The *unemployed* were people who were seeking work, but who were not working. The number of unemployed in the national health survey⁵ was approximately equally divided between men and women.

4.1 Health status and hours of work

The measure of health status used in this study is *self-reported health status* from the national health survey for individuals aged 18 years and over. This measure ranges from poor to excellent (1 = poor, 2 = fair, 3 = good and 4 = excellent). Self-assessed health status was used, as it has been found to be a particularly reliable measure of health rating (McCallum, Shaddock and Dong Wang 1994).

An analysis of health status and the hours that individuals work indicated that the health status of those out of the labour force (2.84) was significantly poorer than that of any other group, with the unemployed having the second worst health status (2.98)⁶ (figure 8). The poorer health status of those out of the labour force was at least partly explained by their being, on average, nine years older than those who were working. The poorer health status of the unemployed, however,

⁴ More recent labour force statistics show that women are working longer hours than they were when the 1989-90 national health survey was undertaken (see section 3.1).

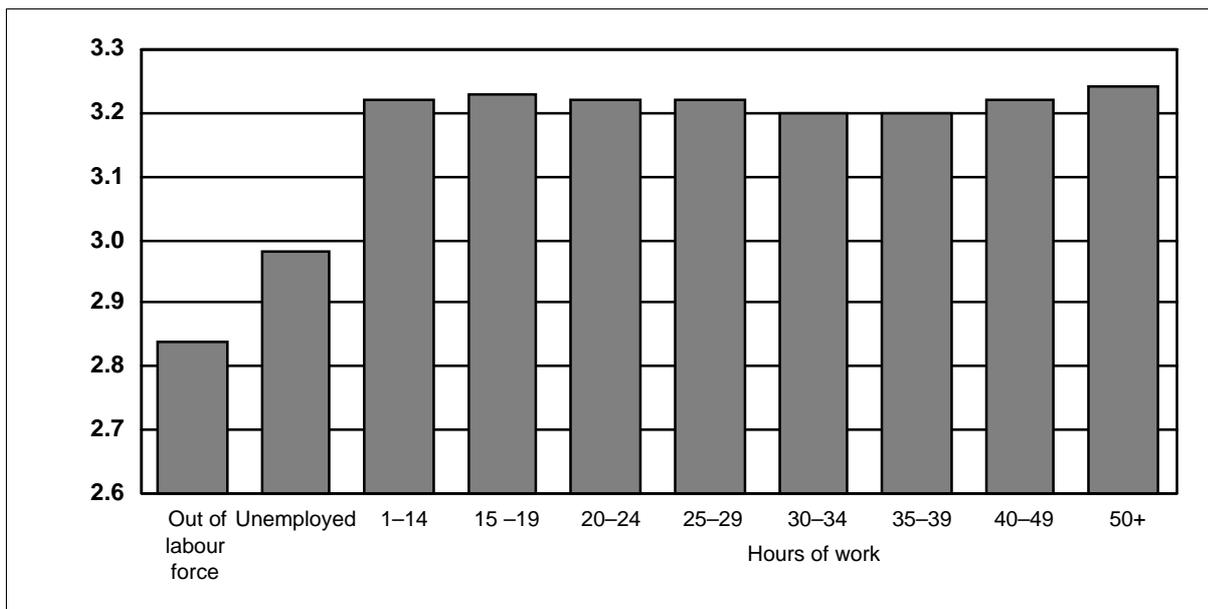
⁵ It should be noted that the definition of unemployment in the national health survey is not the same as that used by the Department of Social Security for determining eligibility for unemployment benefits. Therefore, while women accounted for only about 30 per cent of unemployment beneficiaries in 1989-90 (see section 3.2), they accounted for about half the unemployed in the survey.

⁶ A multivariate general linear model was used to establish that work patterns, age, sex, family type, state and occupation were all significant predictors of health status, pharmaceutical use and doctor use. All tests of significance of the difference between means were based on an analysis of variance and paired t-tests.

was not a function of age, as their average age was about 31 years, two years less than the average age of persons who were employed.

There was little difference in the health status of people in the workforce (figure 8). One explanation of this result may be that the benefits of higher income associated with longer hours of work may offset health problems potentially associated with working long hours. As hours of work increase, so does income, such that people who work 50 or more hours a week earn four times that of people working 1–14 hours a week (table 1). However, it might also be that health problems associated with longer working hours may not appear until later in life and are not necessarily evident in a cross-sectional survey such as the national health survey.

Figure 8: Average health status of all persons of workforce age, Australia, 1989-90, by hours of work per week



Data source: ABS (1990).

Table 1: Annual gross income by hours of work, Australia, 1989-90

Labour force status	Hours of work per week	Average annual gross income
	hr	\$
Out of the labour force	0	6 000
Unemployed	0	5 500
Employed	1-14	7 000
	15-19	10 000

20-24	13 000
24-29	15 000
30-34	18 000
35-39	21 500
40-49	24 000
50 +	29 500

Note: Gross income includes regular income from any source including wages and earnings, investments, compensation payments and cash benefits such as social security payments.

Source: ABS (1990).

Health status declined with age for all work groups (see appendix B, table 2). The unemployed had the poorest health status for those aged 15-39 years but from 40 years onwards the health status of those out of the workforce tended to be the poorest. This seems to be a result of a concentration of men in this group, who were both older (40 per cent of these men being 55 years or older) and who, on average, had poorer health.

People who were working generally reported better health than those who were unemployed or who were out of the labour force from the young through to those of retiring age (see appendix B, table 2). Mathers (1994, pp. 104, 121) suggests that this is because men, in particular, are more likely to involuntarily leave the workforce as a result of ill health.

The health status of working women was, on average, marginally better than that of men for most hours of work (see appendix B, table 3). Women who were unemployed or out of the labour force reported considerably better health than men did. Again, this is because men out of the labour force are, on average, older than women and indicate a poorer health status. Research findings from both Australia and the United States indicate that this is the case for men because they tend to leave the workforce as a result of ill health, whereas for women, child rearing and traditional social roles play a larger part in their decisions not to enter the workforce (ABS 1994b, p. 13; Arber et al. 1985; Chikiros 1993).

There were some interesting differences in the average health status of the labour force by state and territory (see appendix B, table 4). No one state or territory stood out as having workers with consistently better or poorer health, although the Australian Capital Territory most frequently had the highest reported health status, whereas the Northern Territory most frequently had the lowest reported health status. However, data on

low hours of work in the Northern Territory should be regarded with caution as they are based on only a small number of records within the national health survey.

Those out of the labour force in the ACT and Western Australia reported the highest average health status (2.96 and 2.97 respectively), with the Northern Territory again reporting the poorest (2.53).

Interestingly, the unemployed in the Northern Territory, Tasmania and Western Australia reported the best average health (3.09, 3.11 and 3.09 respectively), whereas those in the ACT reported the worst (2.65).

Turning to the occupations of those in the paid workforce, individuals in the armed forces reported the highest average health status (between 3.40 and 3.47), with professionals reporting the next highest level of health (between 3.28 and 3.58) (see appendix B, table 5). The armed forces might be expected to have the highest health status as their selection process would tend to exclude people with poor health and they have the youngest average age of any group — about 27 years. Professionals, on the other hand, had the highest average age — around 39 years. There was also some tendency for professionals and para-professionals and clerks working shorter hours to report better average health status than those working longer hours (see appendix B, table 5). Labourers and plant or machine operators and drivers reported the poorest average health (between 2.80 and 3.16), even though their average age was about five years less than that of professionals.

The poorer health of labourers in this study coincides with the findings of Hasan (1989) that blue collar workers experience poorer health than other workers on a range of health status measures. The poorer health of labourers may be linked to the lower income and working conditions of this group compared with other groups. The reported average annual gross income was about \$16 500 for labourers compared with about \$30 000 for professionals (see table 2). On average, health status varied more between occupations than by the hours individuals worked.

Couples with children tended to have the highest health status — probably because their average age of about 35 years was around 10 years less than the average age of couples without children. Sole parents tended to report poorer health than couples with children (see appendix B, table 6), even though their age was on average two years less than that of couples with children. Hibbard and Pope (1987) reported similar findings of poorer health for working sole parents.

4.2 Use of pharmaceuticals and hours of work

The use of pharmaceuticals⁷ was estimated from the total number of medications reported as used in the two weeks prior to interview for the national health survey. Pharmaceuticals in the survey were categorised as vitamins, cough medicines, medication for allergies, skin treatments,

Table 2: Average gross income by occupation, Australia, 1989-90

Occupation	Average annual gross income
	\$
Out of the labour force	6 000
Unemployed	5 500
Armed forces	29 500
Manager or administrator	28 000
Professional	30 000
Para-professional	25 000
Trades person	22 000
Clerk	19 000
Sales or personal service	21 500
Plant or machine operator, driver	22 000
Labourers	16 500

Note: The unemployed and those out of the labour force may also receive income from government cash benefits such as social security payments.
⁷ For the purposes of this study, pharmaceuticals include both prescription and non-prescription medications.
 Source: ABS (1990).

laxatives, heart medication, sleeping tablets, pain killers, tranquillisers, and other medications. Use of more than one type of medication was recorded for only vitamins, sleeping tablets, pain killers and tranquillisers.

As figure 9 shows, the number of pharmaceuticals used was, on average, significantly higher for individuals out of the labour force (2.79) than for any other group. Again, this seems to be at least in part because this group had the highest average age and the lowest average health status. Interestingly, the unemployed reported a lower average use of medication than some other groups who recorded a higher average health status (these were people who worked 1–14 hours a week and 20–24 hours a week). The lowest average number of medications used was by people in the paid workforce working 50 or more hours a week (1.61).

The use of pharmaceuticals generally increased with age for all work groups (see appendix B, table 8). It is notable that, for those in the paid workforce, the average use of pharmaceuticals tended to decline as the hours of work increased, even for people in the younger age groups. This suggests that there could be a process of self-selection associated with working longer hours, in that those who are healthy may elect to work long hours, while those with poorer health may not.

Figure 9: Average use of pharmaceuticals per fortnight by all persons of workforce age, Australia, 1989-90, by hours of work per week



Data source: ABS (1990).

Women used more pharmaceuticals than men in all workforce groups (see appendix B, table 9). Men out of the labour force were more likely to have a higher average use of pharmaceuticals because half of them were aged 55 years or older, while only about 30 per cent of women out of the labour force were in this age group. (The results in section 4.2 indicated that these men also reported poorer health status than women did.)

Among the states, it appeared that residents of Tasmania used fewer pharmaceuticals on average than residents of other states, while Queensland residents tended to use more (see appendix B, table 10). This trend was also evident when comparing just female state populations (see appendix C, table 8).

Among occupations, people working in the armed forces reported the lowest use of pharmaceuticals. Of the civilian labour force, tradespersons reported the lowest average use of medications, while professionals and para-professionals reported the highest (see appendix B, table 11). This is despite the fact that professionals reported the highest health status of all civilian occupational groups.

Of individuals working 40 hours or more a week, married people with no children reported the highest use of pharmaceuticals, again probably

because they had the highest average age of any family type, while sole parents generally reported the highest use for individuals working less than 40 hours a week (see appendix B, table 12). Among women, those who were married with children generally used fewer medications than other groups (see appendix C, table 10). Again, this is a group with a younger than average age.

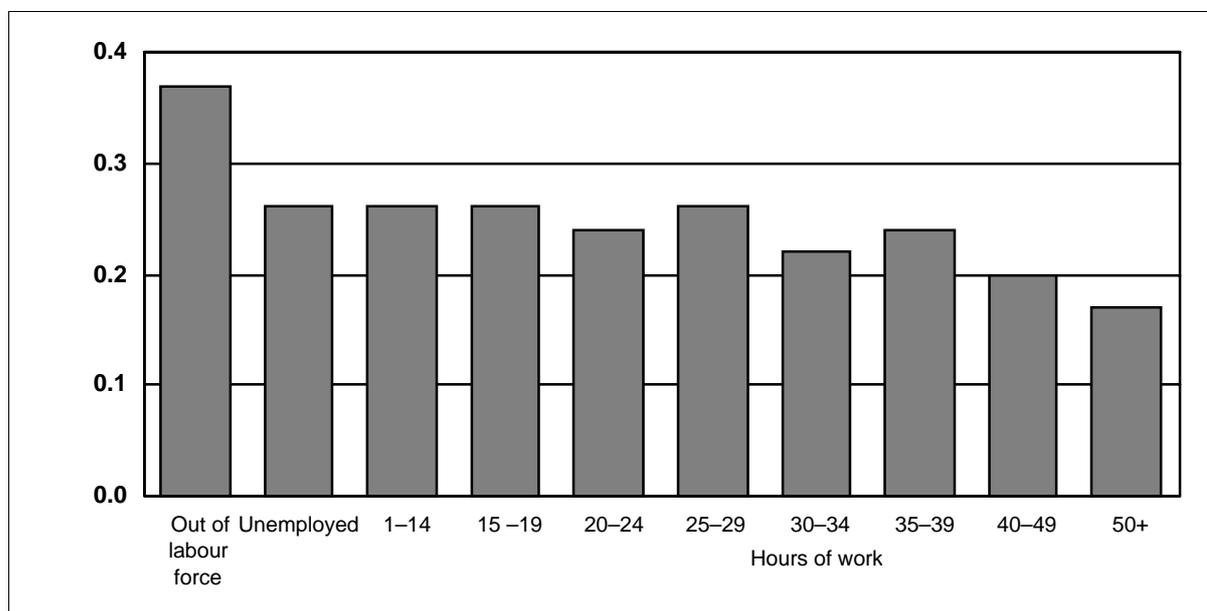
4.3 Use of doctor services and hours of work

The number of doctor visits were based on the number of reported attendances with a general practitioner or medical specialist in the two weeks prior to interview in the national health survey. These do not include doctor services provided in a hospital or in accident and emergency centres.

Individuals out of the labour force used significantly more doctor services than any other group (0.37). The unemployed used significantly more doctor services than those who worked 40 hours or more a week (0.26 compared with between 0.17 and 0.20), but about the same number as those who worked fewer than 40 hours a week. Of the paid workforce, those working 40 hours or more a week used significantly fewer doctor services than any other group (between 0.22 and 0.26). There was no notable difference in the pattern of use by those who worked 1–39 hours a week (figure 10). As there was no notable difference in health status among those in the paid workforce, it may be that those working long hours found it more difficult to take the time to visit the doctor even when they are ill. Men working 40 or more hours a week are only about half as likely to visit a doctor as women working the same hours are (between 0.15 and 0.16, compared with 0.29).

The use of doctor services generally increased with age for all workforce groups (see appendix B, table 14). The average number of doctor visits was higher for women in their mid-twenties to mid-thirties (prime child-bearing years). Doctor visits then declined until about the age of 50 years, from when they again tended to rise (see appendix C, table 12).

Figure 10: Average use of doctor services per fortnight by all persons of workforce age, Australia, 1989-90, by hours of work per week



Data source: ABS (1990).

Women visited doctors more often than men in all workforce groups, but less than men out of the labour force (see appendix B, table 15). Again, this is probably because about half of the men out of the labour force are aged 55 years or more and, on average, are older than women in this group. As working hours increased the use of doctor services increased slightly for women but declined for men.

Generally, there was no consistent pattern of apparent differences in the use of doctor services between the states (see appendix B, table 16) nor between occupations, except for a lower average use of services by full-time tradespersons (see appendix B, table 17). This finding is consistent with research by Lewin-Epstein and Yuchtman-Yaar (1991), who found that self-employed men in Israel faced more health risks but had fewer doctor visits and disability days than other workers.

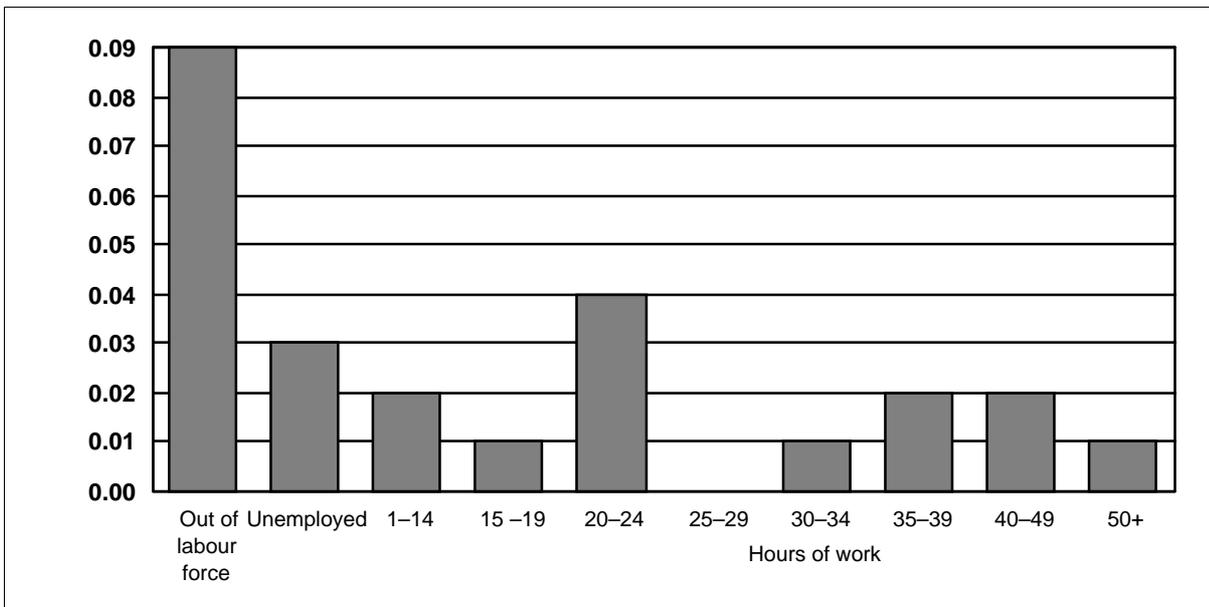
Of the different family types, sole parents generally had the highest use of doctor services, with couples with children reporting the lowest (see appendix B, table 18). Of course, this study does not include doctor visits made by parents accompanying their children. Women working more than 35 hours a week who were married (with or without children) tended to use more doctor services than married women working fewer than 35 hours a week (see appendix C, table 15).

4.4 Use of hospital services and hours of work

The use of hospital services was estimated from the number of days a person spent in hospital in the two weeks prior to interview for the national health survey. The use of hospital services is generally a measure of more acute illness. As only a small proportion of the population spends time in hospital during a year, the rates of hospital attendance over a two week period were very low. As a result, the average number of days spent in hospital for all groups in the study was so low that it was difficult to make meaningful comparisons. (In particular, there were very few records of hospital admittance for part-time workers.) Therefore comparisons were made between only those working, unemployed and out of the labour force⁸.

People out of the labour force had a significantly higher rate of hospital use in the two weeks prior to the national health survey than the other two groups (0.09 compared with 0.03 days). There was no significance difference between the unemployed and those in the paid workforce (between 0 and 0.04) (figure 11).

Figure 11: Average number of days in hospital per fortnight for all persons of workforce age, Australia, 1989-90, by hours of work per week

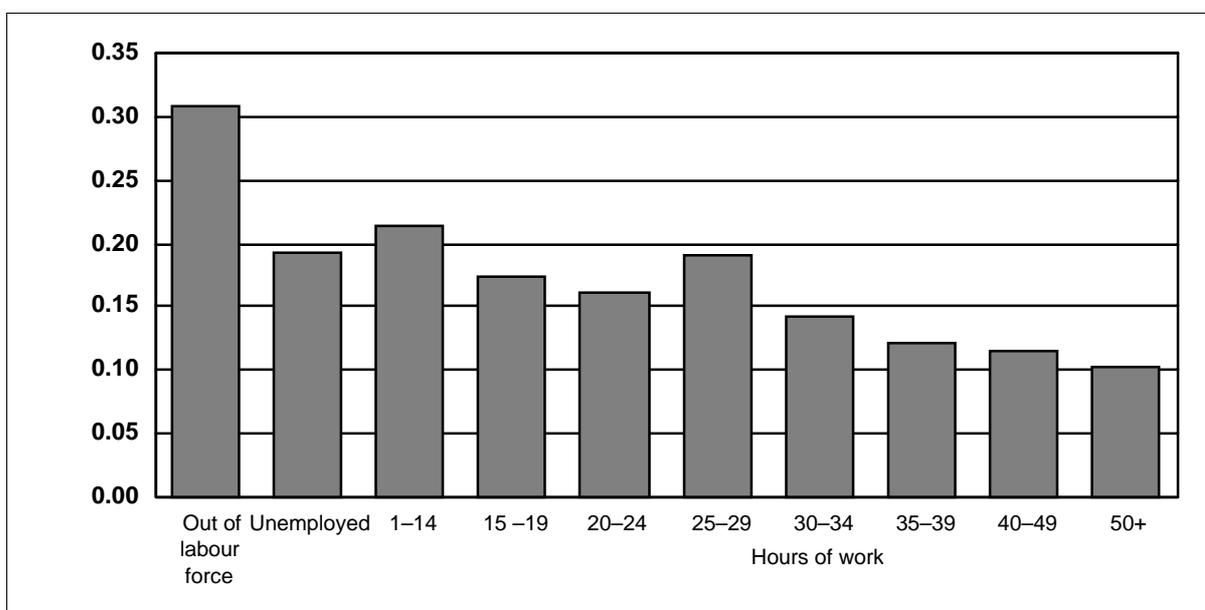


Data source: ABS (1990).

⁸ Analysis of significant differences between workforce groups was based on a logit analysis of hospital admittance.

There was more evidence of a significant difference in the use of hospital services in the year preceding the national health survey by people working different hours. (It should be noted, however, that the national health survey recorded only the number of hospital stays, not their duration.) Again, people out of the labour force were found to have higher rates of hospital admission than other groups (about 0.30). The unemployed and people working low hours were the next most frequently admitted (about 0.20 for the unemployed and between 0.17 and 0.21 for people working fewer than 20 hours a week). People working the most hours were the least likely to be admitted to hospital (0.10) (figure 12).

Figure 12: Probability per year of all persons of workforce age being admitted to hospital, Australia, 1989-90, by hours of work



Data source: ABS (1990).

On average the highest users of hospital services were women, especially those out of the labour force (see appendix B, table 21) and of child-bearing age (the majority of whom were aged between 20 and 34 years) (see appendix C, table 17). There was also a discernible trend for older people to be higher users of hospital services, particularly older persons out of the labour force.

Men out of the labour force entering hospital were on average considerably older than women (49 years for men and 37 years for women). This was largely explained by the considerable number of

younger women entering hospital to give birth. However, single people out of the labour force also had a relatively high use of hospital services, again reflecting the higher average age of this group.

Men and women in the workforce spent on average a similar number of days in hospital (see appendix B, table 21). However, women with children — both married and sole parents — spent on average significantly more days in hospital than did women without children (see appendix C, table 20).

There were few differences in the use of hospital services between the states and territories, except that the number of days in hospital tended to be higher in the Northern Territory (see appendix B, table 22).

4.5 Health risk factors and hours of work

The evidence about the health status of people working generally does not suggest that working longer hours is a cause of poor health. However, it is possible that there are other indications that the health of people working long hours may be at risk in the future.

As a result of earlier findings that suggested that in the long term there may be some link between work and ill health, further analysis of the relationship between working patterns and some of the key factors that influence health⁹ was undertaken. The risk factors used have previously been identified as important indicators of longer term disease, disability and premature death (ABS 1992, p. 79; ABS 1994a, p. 60). These were alcohol consumption, the incidence of smoking and the incidence of exercise.

Alcohol consumption

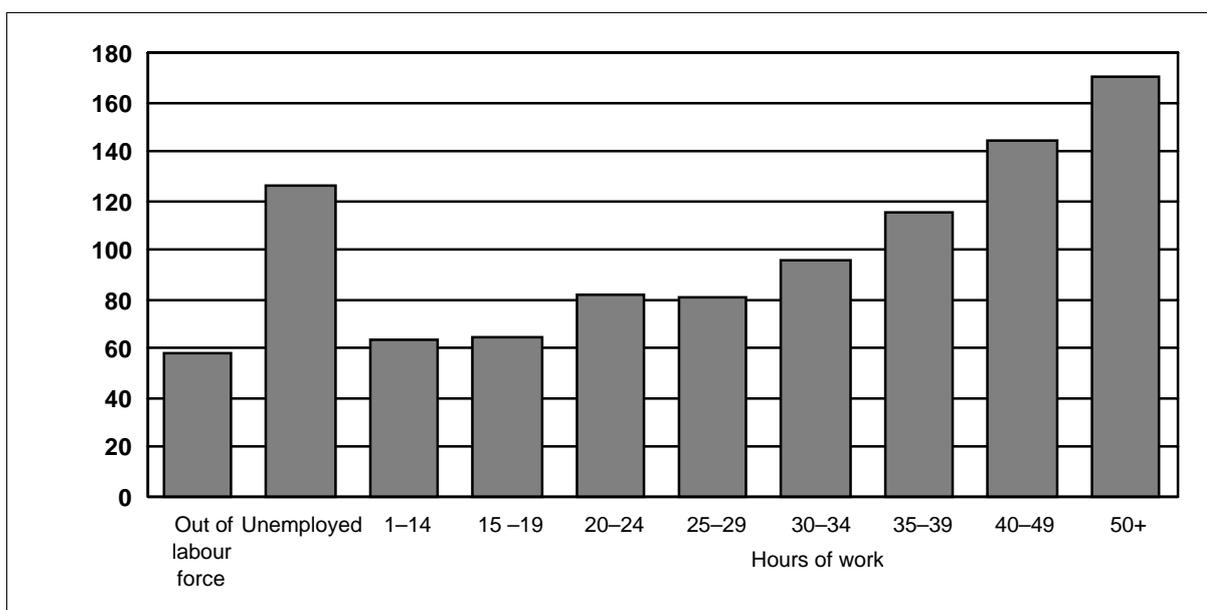
The measure of alcohol consumption was based on the number of millilitres of alcohol consumed in the week prior to the interview for the national health survey.

⁹ As noted, this is a cross-sectional study, which identifies only the current health status of individuals and does not directly capture the long term effect of working hours on health. A longitudinal study would be better able to determine the long term outcomes of various working patterns over a lifetime.

The average consumption of alcohol increased significantly as the hours of work increased, with those working the longest hours consuming almost three times the amount of alcohol consumed by those working far fewer hours (1–19 hours a week) (figure 13). These findings suggest that the amount of alcohol consumed depends on income, except that the level of alcohol consumption of the unemployed was also significantly higher than that of those working up to 39 hours a week. The high intake of alcohol by the unemployed suggests that alcohol consumption is not highly dependent on income, although income might determine the type and cost of alcohol consumed. Individuals out of the labour force had a significantly lower average level of alcohol consumption than the unemployed (58 mL compared with 127 mL) and those who worked more than 19 hours a week (between 82 mL and 170 mL).

Women’s alcohol intake was substantially less than the national average for all labour force groups, with women working more than 50 hours a week and unemployed women consuming less than half the national average (76 and 64 mL respectively) (see appendix C, table 21). However, the trend for alcohol intake to increase as the hours of work increased — and for the unemployed to drink more heavily than those who worked fewer than 39 hours a week — is also clearly evident for women.

Figure 13: Average alcohol consumption per week of all persons of workforce age, Australia, 1989-90, by hours of work



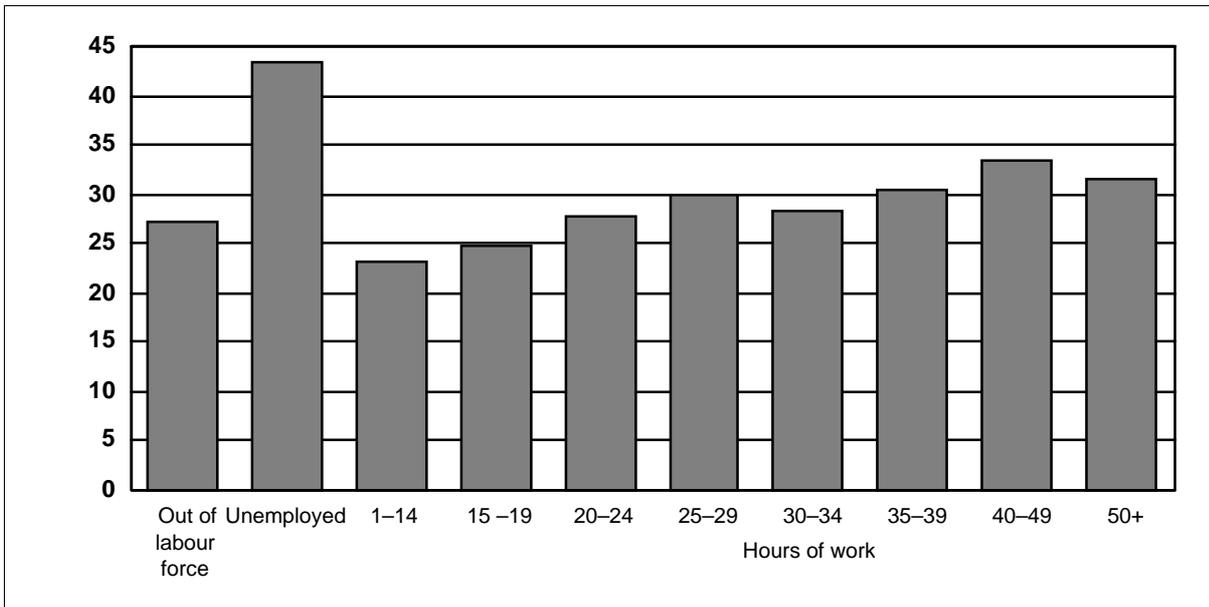
Data source: ABS (1990).

Smoking

The incidence of smoking was based on whether respondents to the national health survey smoked cigarettes, a pipe or a cigar at the time of the survey.

The incidence of smoking among the unemployed was significantly higher than for any other group (43 per cent). Generally, the incidence of smoking increased as hours of work increased. Individuals out of the labour force were less likely to smoke than the unemployed (27 per cent), but were more likely to smoke than groups who worked fewer than 20 hours a week (figure 14).

Figure 14: Proportion of all persons of workforce age who smoked, Australia, 1989-90, by hours of work



Data source: ABS (1990).

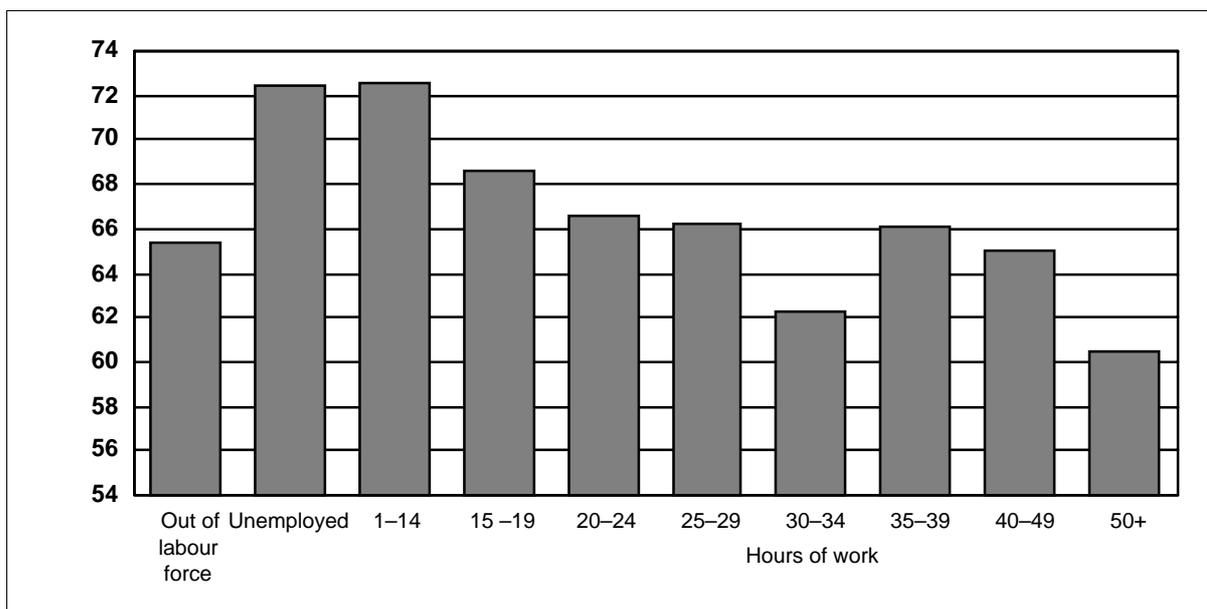
The incidence of smoking among women showed similar trends, although all female labour force groups had a marginally lower incidence of smoking than the average for all persons (see appendix C, table 22).

Exercise

The estimated incidence of exercise was based on respondents to the national health survey who reported exercising vigorously or moderately or had walked for exercise in the week prior to the survey.

The incidence of exercise tended to decline as the hours of work increased (figure 15). Those who worked fewer than 15 hours a week and those who were unemployed were more likely to exercise than any other group (72 per cent). Those who worked over 50 hours a week were less likely to exercise than any other group (60 per cent). There was little difference in the incidence of exercise among those who worked between 15 and 50 hours a week and those who were out of the labour force. The incidence of exercise by women was similar to that for all persons (see appendix C, table 23).

Figure 15: Proportion of all persons of workforce age who exercised, Australia, 1989-90, by hours of work



Data source: ABS (1990).

5. Conclusions

Participation in the workforce is an important part of most people's lives; it provides self-esteem, stimulation and opportunities for social interaction and for improved life circumstances and the avoidance of poverty. Accordingly, the possibility that work itself might undermine good health compels our attention.

This study indicates that a lack of employment is associated with poorer than average health, while working many hours is associated with an increase in risk factors that may lead to health problems in the longer term.

Of people of labour force age, those out of the labour force had, on average, the poorest health, followed by the unemployed. The former were the highest users of health services but exhibited comparatively low health risk behaviour. The unemployed had poorer health, on average, than people in the paid workforce. However, they had about the same level of health service use as the part-time employed, but significantly more than the full-time employed. The unemployed also reported having higher levels of some health risk factors — they were the group most likely to smoke and they had one of the highest levels of alcohol consumption, consuming more than all groups except those who worked 40 or more hours a week.

Individuals who worked long hours indicated that they were as healthy as people who worked fewer hours and that they used no more, and sometimes fewer, health services than other groups. There are several possible inferences that can be drawn from this. First, working long hours is not harmful to health. Second, people who work long hours are self-selecting — that is, people who are healthy enough to work long hours do so. Third, when previously healthy people working long hours become ill, they tend to reduce their working hours.

A full explanation probably includes elements of all three inferences. However, there is empirical evidence that lends some support to the second and third conclusions. For example, in 1993, as noted in section 4.1, almost half of the men over 45 years who retired early did so because of ill health. This was more than twice the proportion of men who retired early because they had decided not to work any longer or

because they sought more leisure time (19.5 per cent in 1993). In addition, the take-up rate of the disability pension among older men not in the full-time labour force has increased from 26 per cent in the early 1980s to 39 per cent in 1993 (ABS 1994a, p. 127).

This pattern of employees involuntarily reducing their working hours or leaving the labour force as they become ill makes it difficult to identify workers who have chosen to work part-time and who might, as a result, be enjoying or sustaining improved health.

If the working patterns of men retiring early were partly responsible for their ill health, it suggests that there should be concern about future working patterns for both men and women, particularly as a growing number are working more hours. Even in recent times, many men who were forced to retire because of ill health might have had a non-working spouse to care for them. However, with more women entering the workforce, fewer people can expect to be cared for by a non-working spouse if they become ill.

Among the more important findings of the study was the significant increase in the use of alcohol and the incidence of smoking as working hours rose. In addition, it was noticeable that people working over 50 hours a week were significantly less likely to exercise. These findings suggest that, in addition to any inherent harmful effects of long working hours, individuals working long hours were also more likely to have life patterns that, in the longer term, were major risk factors for disease, disability and premature death.

The association of health risks with unemployment, low income and long working hours highlights a dilemma for women entering or currently in the workforce — low income, which is associated with a low number of working hours, has been linked to ill health and, yet, so too may a high number of working hours.

The dilemma of balancing working hours with income is of growing concern for females as their workforce participation rises and an increasing number of women are either working more hours or finding themselves unemployed.

The challenge for individuals therefore is to balance the social, economic and health reasons for seeking higher income, while avoiding working the number of hours that are injurious to their health in the long term.

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