

Lisa is a 34-year-old New Zealand Māori woman who was employed as payments officer in a large multinational company. While employed there she developed an occupational overuse syndrome.

"It was pains in fingers, in the wrist and in the forearms. It was getting a lot tighter. It was no longer just [the elbow], it was more the whole arm right through the fingers".

The main impact for Lisa was the effect of the pain. She chose not to let this interfere with her day-to-day life, her studies or social activities. Lisa had to come to terms with her condition and accept that it would be ongoing. She was putting in a lot of effort at work to do her exercises, take her breaks (as prompted by a software programme) to make sure that the problem did not recur.

"I'm trying to get this in a manageable state because I know that it's not going to clear up in a few months. It's going to take longer... The problem was that [I thought] okay, I'm healed, and I stopped doing all of that. I slowed down and I didn't realise that that was the worst thing to do. So I've had to kind of come back again and start doing that..."

Source: excerpt from Adams M, Burton J, Butcher F, Graham S, McLeod A, Rajan R, Whatman R, Bridge M, Hill R & Johri R. 2002. *Aftermath: The social and economic consequence of workplace injury and illness*. Wellington: Department of Labour & Accident Compensation Corporation. p.95-97.

## 14 OCCUPATIONAL SAFETY AND HEALTH

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Full-time paid employment can take up more than a third of each working day and this is not counting the additional hours that many people put in outside a 'normal' working day caring for whānau, keeping house, and tending to tasks in our communities. Those in part-time paid employment and people not in officially recognised employment also often spend many hours each day doing work of one kind or another. The conditions under which work is carried out are, therefore, important for people's health and wellbeing.

Occupational safety and health (OSH) is a topic as wide as there are different occupations. Essentially OSH is about keeping people safe and healthy within their (paid and voluntary) work environment. Or, more formally, "OSH is identified as the discipline dealing with the prevention of work-related diseases and injuries as well as the protection and promotion of the health of workers" (Kendall 2005, p. 125). This is an important issue for Māori because Māori workers make up around 10% of this country's paid workforce (Department of Labour 2004), with them and many others also doing unpaid work for their whānau, hapū, iwi, marae and/or their community. These workers have a right to expect that the workplaces they go to, the work they do, and the people they work with and for, are not compromising their health.

Some work and occupations are hazardous because of the materials used, the tasks undertaken, and/or the work environment. Workers can be exposed to these hazards when they do not comply with safety regulations (e.g., wearing safety equipment and following recommended procedures), and/or employers are remiss in attending to safety issues (e.g., not supplying equipment, not monitoring procedures). Employers may also not provide employees with training in identifying and managing workplace hazards. Workers' health and safety can also be compromised when, for example, their lack of collective bargaining power and/or their need for paid employment mean that they have little choice but to work in hazardous conditions.

For this last reason, in particular, Iunes (2002) calls for the recognition that OSH issues both cause and are affected by social and economic development. In other words, OSH issues extend beyond workplace illness, injury, and death "to other areas such as the labour market and labour productivity, household income and poverty, the social security system, international trade, and even the environment" (Iunes 2002, p. 2). While this is too wide a brief for this chapter to attempt to capture, it is important to keep these broader issues in mind, and some of Iunes' work has been used to frame the present discussion of OSH issues for Māori workers in Aotearoa New Zealand by looking at workplace 'risks' such as shift work, precarious work, and occupational segregation. These risks arise because of social and economic development and, for Māori, a history of colonisation and racialisation within their own land.

It is noted that, like Iunes' critique of OSH issues in Latin America and the Caribbean, the awareness and monitoring of OSH issues for Māori in this country is sorely lacking (Driscoll et al 2004). Even so, this chapter examines Māori OSH because when Māori

enter the workforce they are legally entitled to be kept healthy and safe. When this does not happen Māori workers can end up injured, diseased, ill, or even killed because of the work they do. This, in turn, impacts on their lives and the lives of their whānau; sometimes severely and irreconcilably (Adams et al 2002). In addition, there are costs to the health system and the country as a whole through the loss of worker potential and the costs of supporting that person and their whānau in the health and welfare system. So aside from the monitoring of OSH, a context for discussing OSH issues is needed to inform the interpretation of the numbers and rates in a way that gives voice to what it is to be a Māori worker.

This chapter therefore begins with a brief overview of Māori and work, including unpaid work. This gives some insight into Māori workforce participation. The three workplace 'risks' are then canvassed, each linked to OSH: occupational segregation, shift work, and precarious employment. Māori are particularly affected by each of these risks and this, in turn, means that Māori workers are more vulnerable to workplace injury and disease. An overview of these risks helps set the context for the next section on occupational injury and disease. This is followed by a brief discussion.

## **Māori and work**

This section provides an overview of Māori participation in both unpaid and paid work. Unpaid work, especially domestic work, has been described as women's 'second shift', as women have entered the paid workforce in increasing numbers and yet retained childcare and housework responsibilities (Baker 2001). However, when men's and women's 'productive hours' are added up (i.e., unpaid work both inside and outside the household, self education, and paid employment), men and women, Māori and non-Māori, come out very similarly at an average of between 52 and 56 productive hours per week (Ministry of Women's Affairs 2001).

### **Unpaid work**

Unpaid work includes both the formal and informal work that people undertake both inside and outside their home (Statistics New Zealand and Ministry of Women's Affairs 2001). The New Zealand Time Use Survey 1998-99 identified four categories of unpaid work: household work, care-giving for household members, purchasing goods or services for one's own household, and unpaid work for people outside the home. Both Māori and non-Māori women spend more hours per day doing unpaid work than their male counterparts. On average women spend 4.8 hours a day on unpaid work compared to men's average of 2.8 hours a day. This only decreases for women when they are in full-time paid employment.

### **Paid work**

Over the past 20 years the participation rate of Māori in paid employment (i.e., at least one hour of paid employment per week) has fluctuated in response to market reforms (Hui Taumata 2005). According to the Department of Labour, participation rates dipped in 1992 and then steadily rose to 66.8% in 2005 (Table 14.1). Participation rates in the general population were similar in 2005 (66.8%). The Māori unemployment rate

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of 8.6% in 2005 was also the lowest it had been in over 10 years, although still not as low as the 2005 non-Māori unemployment rate of 2.6%.<sup>1</sup>

**Table 14.1: Māori labour market outcomes, 1986–2005**

Calendar years	1986	1992	1999	2005
Employment <sup>a</sup>	134,400	108,900	144,100	186,500
Participation rate <sup>b</sup>	67.0	59.6	62.4	66.8
Unemployment rate <sup>c</sup>	11.3	25.4	16.6	8.6

Notes:

- a Number of people employed, annual average.
- b Percentage of the working age population, annual average.
- c Unemployed as a percentage of labour force, annual average.

Source: Department of Labour 2005

Over the period 1999–2005 the number of Māori unemployed dropped by 38%, from 28,500 to 17,500. A similar drop (39%) was experienced by non-Māori over the same time period. However, compared with the Māori share of the labour force (9%) and of the working age population (10%), the Māori share of total unemployment in 2005 (22%) remained disproportionately high. Māori continue to be disadvantaged in this respect. The Department of Labour relates this disadvantage to “standard indicators of unemployment likelihood such as age, experience, education and location” (Department of Labour 2006).

The differences between Māori and non-Māori ‘productivity characteristics’ (e.g., education, experience, etc) might also explain the income disparity experienced by Māori. In 2003 the average weekly income from paid employment in this country was \$702. For Māori the average was \$599 compared to the European/Pākehā average of \$726. This average varied across age groups and, on the whole, men earned more than women (Statistics New Zealand 2007). As Alexander et al (2001) have found, however, the disadvantages that non-European ethnic groups in Aotearoa/New Zealand face in getting employment, as well as wage discrimination, cannot be accounted for by productivity characteristics.

Similarly, Sutherland and Alexander (2002) report that, when productivity characteristics (e.g., age, experience, qualifications) were controlled for, Māori were segregated into lower occupational classes to a greater extent than expected from 1997–2000. The authors “estimate that discrimination of some form accounts for between 30% to 48% of the Pākehā /Māori wage differential” (Sutherland and Alexander 2002, p. 1). Results from the 2002/03 New Zealand Health Survey found that Māori were more likely to report having ‘ever’ been treated unfairly at work or been refused a job because of their ethnicity than European New Zealanders (5.6% versus 2.1%) (Harris et al 2006).

Discrimination is therefore impacting upon the ability of Māori to both find work and to earn an equitable income from that work. Another way of looking at this finding is

<sup>1</sup> The Statistics New Zealand *Household Labour Force Survey* defines ‘unemployed’ as ‘all persons in the working-age population who during their reference week were without a paid job and were available for work; and (a) had actively sought work in the past four weeks (a person whose only job search method in the previous four weeks has been to look at job advertisements in newspapers is not considered to be actively seeking work) or (b) had a new job to start within four weeks’.

to ask why whiteness is privileged within the New Zealand labour market, with Pākehā workers finding work in higher occupational classes and receiving higher incomes than Māori. As will be seen below, this privileging also means that Pākehā are safer within the workplace than Māori.

## Occupational risks

In this section three occupational risks are described: occupational segregation, shift work, and precarious employment. They are described as risks as each puts workers at more risk of workplace injury and/or disease.

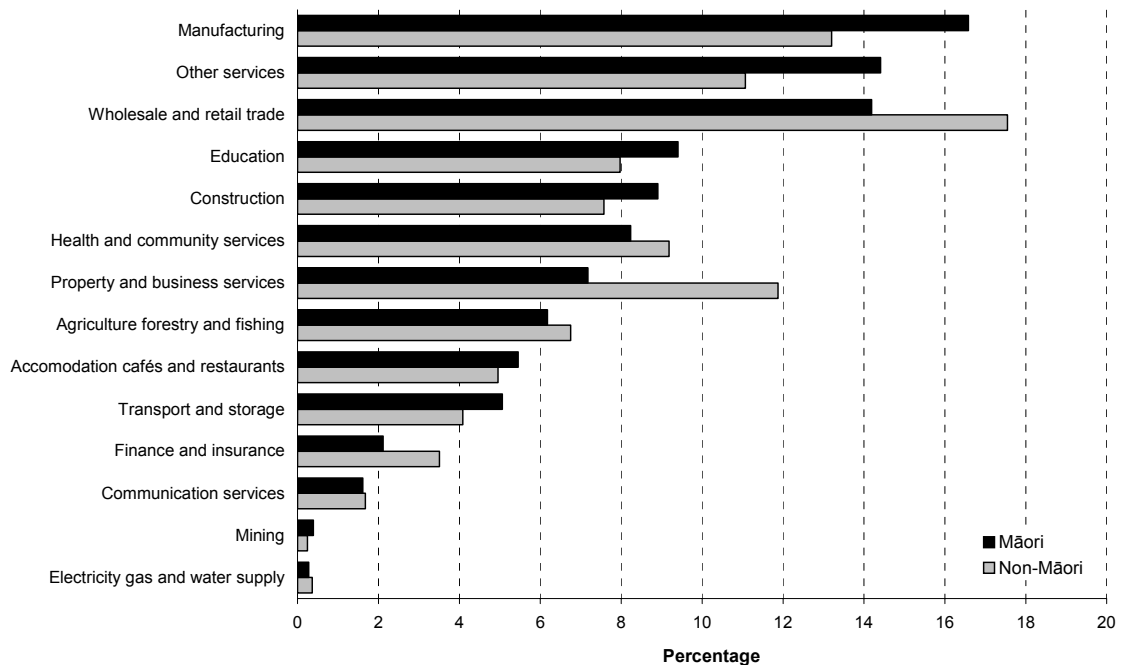
### Occupational segregation

Occupational segregation is a term more commonly used in relation to differences in the occupational and industry distribution of male and female workers. Östlin (2000) also distinguishes between horizontal and vertical segregation. In this chapter the phrase horizontal occupational segregation is used to refer to the majority of Māori and the majority of non-Māori typically working in quite different jobs. Vertical segregation describes the distribution of power within the same occupation whereby non-Māori are more often in higher managerial positions and Māori in lower positions.

In the years 1991-2003 there was a growth in the skill level of the Māori workforce. This has been explained by Māori moving to higher levels of education over this same time period. Even so, Māori with a qualification do not have the same employment prospects as similarly qualified non-Māori and are less likely to work in a highly skilled occupation (Department of Labour 2005). This finding, along with the work of Sutherland and Alexander (2002), suggests that both horizontal and vertical segregation operate to maintain occupational segregation between Māori and non-Māori.

Horizontal occupational segregation can also be seen in the distribution of the Māori paid workforce by industry (Figure 14.1). Māori are over-represented in industries such as manufacturing, construction, transport and storage, and education; and under-represented in other industries such as property and business services, wholesale and retail trade, and finance and insurance. How then does this horizontal segregation impact on occupational safety and health? In 2003 four main industries had high rates of new workplace injury claims (after hunting and fishing, and mining): agriculture, manufacturing, construction, and forestry (Table 14.2). Māori workers are over-represented in two of these industries: manufacturing and construction (Figure 14.1). Only Māori over-representation in education seems to work in their favour, with a low rate of workplace injury claims compared to other occupational groups.

**Figure 14.1: Employed Māori and non-Māori by industry, June 2005 quarter**



Source: Statistics New Zealand 2005

**Table 14.2: New workplace injury claims, by industry, 2003**

Industry	Number of claims	Rate per 1,000 FTE
Hunting and fishing	1,000	257
Mining	1,000	235
Agriculture	24,200	197
Manufacturing	52,100	196
Construction	23,700	181
Forestry	1,800	176
Electricity, gas, and water supply	1,100	136
Transport and storage	9,300	126
Communication services	2,700	94
Wholesale and retail trade	27,400	92
Health and community services	10,700	75
Property and business services	12,400	71
Education	7,700	61
Accommodation, cafes, and restaurants	4,500	60
Finance and insurance	1,600	32

Source: Statistics New Zealand 2004

## Shift work

Many occupations in this country require workers to work shifts. The 1998–99 Time-Use Survey found that Māori and Pacific workers had a higher incidence of night work that did not appear to be related to skill or education (Callister and Dixon 2001). This study discussed the potential benefits of working non-standard hours, including: greater flexibility for combining work and family time, reduced travel time, and higher pay if penal rates are paid. The 2004 National Occupational Health and Safety Advisory Committee (NOHSAC) (Driscoll et al 2004), on the other hand, notes the

range of work-related disorders that are associated with shift work, including: sleep disturbance, peptic ulceration, ischaemic heart disease, obesity, hypertension, diabetes mellitus, female reproductive disorders, disorders of the immune system, as well as psychological and relationship disorders.

One New Zealand study cited in the NOHSAC report provides evidence of a link between shift work and sleep disorders (Paine et al 2004). Paine and colleagues (2004) investigated self-reported symptoms of insomnia and found that “being involved in night work increased the risk of reporting often/always having difficulty falling asleep, having a sleeping problem, and having a chronic sleep problem” (p. 1166). The authors also estimated that more Māori than non-Māori work nights (15.8% versus 10.5%). A recent publication from the Blood Donors’ Health Study also reported that when occupation, lifestyle factors, and excessive sleepiness are controlled for, there is an almost two-fold increase in the risk of work-related injury for workers working rotating shifts (with or without night shift) (Fransen et al 2006). Shift work can, therefore, lead to health issues of its own accord, and/or may result in workplace injury.

### **Precarious employment**

The deregulation of the workplace (e.g., the Employment Contracts Act 1991), and the undermining of the unions may have put some workers at increased risk of workplace injury and disease (Baker 2001). Over the past 10–20 years the nature of paid work has changed from the standard of secure, full-time, long-term employment. Those most likely to have ‘careers’, namely white middle-class men, have the best chance of still experiencing this work standard. Others, who have ‘jobs’, have been impacted dramatically by these changes to the workplace. There is now a polarisation of work in to ‘good’ jobs and ‘bad’, or precarious, jobs (Baker 2001).

Tucker (2002) argues that ‘non-standard’ employment (that is, not full-time and permanent) is more likely to be precarious than standard employment. ‘Precarious’ employment is, in turn, “employment that is low quality and which puts workers at risk of injury, illness, and/or poverty (from low pay and little opportunity for training and career progression)” (Tucker 2002, p. 2). From her review of the literature, Tucker (2002) reports that “precarious workers are more exposed to physical work hazards, may experience stress from insecurity, and may be more difficult to reach to provide OSH services than permanent workers” (p. 9). These workers may also be given the worst (e.g., dirtiest, dangerous, monotonous) work to do. In addition, they are also most likely to be low paid.

Indigenous workers, including Māori, are bearing the brunt of workplace changes that see more workers in precarious employment. According to Baker (2001), compared to non-indigenous workers, indigenous workers experience: higher rates of unemployment (see above); more casual employment; work that requires less training and education; and work that pays less. In Aotearoa/New Zealand those most likely to be involuntary part-time workers (i.e., working more than one and less than 30 hours per week) are women and, in particular, Māori women (Ministry of Women’s Affairs 2001). This kind of underemployment often means that workers are unable to meet their financial needs. Even when work is full-time, workers who have undertaken

unskilled or low status work in the past are finding themselves increasingly marginalised in the current work climate (Baker 2001).

In 1991 and 1995, 11% of the workforce were in casual, temporary, and fixed-term employment (Brosnan and Walsh 1996 as cited in Tucker 2002). A third or more of these workers were in service sector employment. Māori employment in this sector has grown by over 70% in the past 20 years (Department of Labour, 2005). It seems reasonable, therefore, to assume that many Māori workers in the service sector industry are in some form of precarious employment. While employment in the service sector has been described as a buffer against economic downturn (Department of Labour 2005), the risk now is that those in precarious employment within the sector are having their health and safety compromised.

In summary, the occupational segregation of Māori into industries that are more likely to suffer from workplace injury, alongside the larger proportion of the Māori workforce engaging in shift work and in precarious employment, places Māori workers at higher risk of workplace injury and disease. While this jigsaw puzzle has been fitted together to provide a picture of Māori occupational risk, it is still reasonably tentative and in need of further investigation. As Wren (2002) notes, our understanding of OSH in this country needs to gain theoretical traction for a greater understanding of the issues impacting on workers. The next section looks at the data on occupational injury and disease for Māori workers in Aotearoa/New Zealand and looks to the context provided above for possible explanations.

## Occupational injury and disease

A 2004 NOHSAC report on occupational injury and disease in this country highlights the lack of information on Māori work-related mortality and morbidity (Driscoll et al 2004). The authors attribute this to the undercounting and/or small numbers of Māori cases; and the inconsistent classification of ethnicity over time and across government agencies. This overview of occupational injury and disease is largely drawn from the NOHSAC report.

### Injury – mortality

- Each year there are about 100 work-related fatal injuries in this country. Ninety-four percent of those who die are men, with more than one third of all deaths occurring in the agriculture, forestry, and fishing industry (39%) (Anonymous 1999, 2003).
- In the 10-year period 1975-1984 there were 986 work-related fatal injuries. The death rate for Māori workers (12 per 100,000 person years) was higher than the average rate (7.2 deaths per 100,000 person-years) (Cryer and Fleming 1987).
- In the 10-year period 1985-1994 there were 741 work-related fatal injuries, including 89 Māori deaths (12%) (age adjusted relative risk (RR) =1.56, 95% CI 1.22-1.98). The adjustment of the rates for industry (RR=1.19, 95% CI 0.95-1.50) and occupation (RR=1.10, 95% CI 0.86-1.41) reduced the difference between Māori and non-Māori to non-significant levels. However this controlling for



- industry and occupation may hide the impact of occupational segregation on Māori workplace fatalities (MacCracken et al 2001).
- In 2003/04, 101 people died as a result of workplace injuries (Accident Compensation Corporation 2004). Previous research (above) suggests that approximately 12 would have been Māori.

**Injury – morbidity**

- In 2003 Māori workers had the highest workplace injury claim rate (190 per 1,000 FTEs) (Table 14.3) (Statistics New Zealand 2004). This was attributed to the high representation of Māori workers in industries and occupations that have high injury rates (for example, manufacturing). Occupational segregation, therefore, places Māori at more risk of workplace injury and death. In addition the ACC acknowledges that Māori injury claims in 2003–04 were significantly lower than for the general population, so the rate for Māori in Table 14.3 is likely to be an underestimate (Accident Compensation Corporation 2005).

**Table 14.3: New workplace injury claims, by ethnicity, 2003**

Ethnic group	Number of claims	Rate per 1,000 FTE
Māori	31,200	190
Pacific	12,300	157
European	177,700	134
Other (including Asian)	13,900	112
Total	247,500	146

Source: Statistics New Zealand 2004

- Working on data from the 2001/02 financial year, the NOHSAC report shows that the crude relative risk rate for Māori (1.37) was reduced when occupational distribution was controlled for (1.11). The authors concluded that differences in occupation explained more than 70% of the Māori/non-Māori disparity in non-fatal injury rates.

**Disease**

There is limited data on Māori workplace-related disease. Overall, NOHSAC estimates that 700–1,000 New Zealanders die each year as a result of work-related disease. They also estimate that each year there are “17,000–20,000 new cases of work-related disease and 2,500–5,500 new severe cases of work-related disease” (Driscoll et al 2004, p. 154). These diseases mostly occur in men, with the most common thought to be musculoskeletal disease. Again, occupational segregation may mean Māori workers are at more risk of work-related disease than non-Māori workers.

**Discussion**

This chapter has presented a brief overview of Māori and OSH. Three workplace risks—occupational segregation, shift work, and precarious employment— were described to set a context for the discussion of workplace injury and disease. While the links

between shift work and workplace disease were clear, those between precarious employment and workplace injury and disease have received little research attention. At the 2005 Hui Taumata, the increase of Māori working in the service industries was seen as in some way 'future proofing' Māori employment from the type of economic downturn in the late 1980s that saw Māori employment in primary industries so drastically curtailed. However, is this 'future proofing' putting the Māori workforce at risk because workers are now heavily engaged in service industries and most likely precarious, non-standard employment? More research is needed to find out about the experiences of Māori workers, including the hazards they are facing in their workplace because of their work circumstances.

Within OSH research the disparities between Māori and non-Māori workplace injuries have been attributed to occupational segregation. However, it is argued here that research that controls for occupational segregation, and then finds no disparity, is somehow missing the point of Māori being segregated into more risky occupations. Perhaps the 'commonsense' of Māori being segregated because of productivity characteristics drives this type of OSH research. The challenging of this commonsense by Sutherland and colleagues now signals the need for a finer examination of the underlying causes of segregation in order to understand Māori workplace risk. Occupational segregation signals that Māori workers are less valued than non-Māori workers. OSH in this country has therefore become a case of what Bhattacharya (2002) describes as 'differential fates for different bodies'; that is, the experience of Pākehā workers in this country is fundamentally different from the experience of Māori workers. What is needed to counter this is a policy response that reduces discrimination in the labour market and advocates for Māori workers (cf. Iunes 2002).

There is also ample rationale within the data on workplace injury and disease for workplaces to be made safer for workers. Wren (2002), however, argues that as a general rule employer organisations around the world oppose the introduction of OSH legislation that contains statements about workers' rights. The bottom-line for employers is invariably the economic viability of their business and this may result in less protection for workers if this protection is seen as 'unaffordable' in economic terms. This ignores the fact that no-one should be injured, let alone die, because of work they do. Bhattacharya (2002) describes such death as legally sanctioned murder. So while the disparity between Māori and non-Māori can be discussed in academic terms, it needs to be remembered that each person injured, made sick, or killed because of the work they do is an individual with a family or whānau that is left without a breadwinner, and sometimes without a loved one altogether. Any such loss should therefore be seen as unacceptable.

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