

Labour & Immigration
Research Centre

Te Pokapū a Mahi me Te Manene Rangahau

A SERVICE OF THE DEPARTMENT OF LABOUR

In Harm's Way: A case study of Pacific workers in Manukau manufacturing



DOL12047 MAR 12

newzealand.govt.nz

Department
of Labour
TE TARI MAHI



Labour and Immigration Research Centre
Department of Labour

Acknowledgement

The Department of Labour would like to acknowledge the following parties for their support of and time spent on the project:

- The firms and individuals that participated
- Accident Compensation Corporation
- Engineering, Printing and Manufacturing Union
- Ministry of Pacific Island Affairs
- The Puataunofu Manukau Project
- Auckland Council

Disclaimer: The Department of Labour has made every effort to ensure that the information contained in this report is reliable, but makes no guarantee of its accuracy or completeness and does not accept any liability for any errors. The information and opinions contained in this report are not intended to be used as a basis for commercial decisions and the Department accepts no liability for any decisions made in reliance on them. The Department may change, add to, delete from, or otherwise amend the contents of this report at any time without notice.

The material contained in this report is subject to Crown copyright protection unless otherwise indicated. The Crown copyright protected material may be reproduced free of charge in any format or media without requiring specific permission. This is subject to the material being reproduced accurately and not being used in a derogatory manner or in a misleading context. Where the material is being published or issued to others, the source and copyright status should be acknowledged. The permission to reproduce Crown copyright protected material does not extend to any material in this report that is identified as being the copyright of a third party. Authorisation to reproduce such material should be obtained from the copyright holders.

ISBN 978-0-478-39123-7

March 2012

© **Crown copyright 2012**

Department of Labour
PO Box 3705
Wellington
New Zealand
www.dol.govt.nz

Visit the Labour and Immigration Research Centre online at
<http://dol.govt.nz/research> or email research@dol.govt.nz.

EXECUTIVE SUMMARY

Purpose

This report discusses research undertaken to examine injury reporting by Pacific workers in the manufacturing industry in Manukau. In the planning of this research project, the project team built on the work of the Puataunofu Manukau Project (PMP) and discussions with Pacific researchers and stakeholders.

Background

There is an extensive research literature on health and safety in relation to migrants and ethnic minority communities, but there is very little published research specifically addressing factors contributing to the health and safety of Pacific communities in New Zealand. The literature provides a mixed picture of a complex issue, with many interacting factors. Migrants may be at higher risk of occupational injury and disease primarily because of the inherently higher-risk occupations that significant groups of migrants and ethnic minorities work in, some of which are also characterised by low wages and precarious employment relationships. Education, skill levels, and proficiency in the language of the receiving country are major determinants for entering these occupations.

Method

The research has three main data sources: ACC data from the work account, interviews with 40 Pacific workers in six manufacturing firms in Manukau, and interviews with 19 employer representatives within the same firms. Fieldwork was conducted by Department of Labour staff and an external Samoan researcher based in Auckland.

The highest number of ACC claims lodged by Pacific people comes from the manufacturing industry. This sector is a large employer of Pacific workers with over 19.5 percent¹ Pacific employees, compared with 11.0 percent² of the total population nationally in 2006. Manukau was chosen as the research site due to its large population base of Pacific people, who make up 28.1 percent³ of the Manukau manufacturing workforce.

The research's aims were to explore the factors involved in the higher rates of injury reporting by Pacific workers seen in the ACC data and use the findings to inform future work in the area.

Key Findings

Pacific people have consistently had higher injury reporting rates in the manufacturing industry in New Zealand. When looking at Manukau specifically,

¹ 2006 Census data

² *ibid*

³ *ibid*

there is evidence that occupation is an influence on the higher reporting rates, with Pacific people being over-represented in the higher-risk occupations.

However, it is clear that this is not the only factor, with the reporting rates for Pacific people within the labourer occupations being almost twice those of non-Pacific people. Labouring is also the largest occupational group for Pacific people within Manukau manufacturing, suggesting that initiatives should focus on these workers in particular to have a significant impact on reporting rates. Pacific men aged between 41 and 65 years appear to have the highest rates and highest number of claims.

Pacific people are under-represented in fatalities reported to ACC, with New Zealand Europeans being the over-represented group, suggesting that a focus on injuries that cause death may not be the most appropriate for reducing injuries among Pacific people. The injuries that have prior activity and cause recorded suggest that lifting, lowering, loading, and unloading are the most common scenes of the injuries reported—not just for Pacific people but across the manufacturing workforce in Manukau.

The interviews with Pacific workers revealed communication issues that lead to a reluctance to report minor injuries, less accessible training, and poorly understood health and safety messages. These issues stem from differences between how training is conducted and how staff would prefer to learn, language barriers, feelings of disempowerment by staff, formal social structures within ethnic groups, and (potentially) poor literacy.

Literacy and language barriers were two areas that were only hinted at during the interviews with Pacific workers but came out in greater volume during the employer interviews. This could be related to the style of data collection, such that affected individuals may not want to talk about problems in either of these areas because of the stigma attached. The communication issues were reported to affect training uptake, staff relations, and message transmission.

Training in health and safety came out as an issue in relation to both language barriers, but also in the learning style preferences. This was not an area that appeared in the literature but seems to have a significant impact on the worker's uptake of health and safety messages.

Employers and their representatives stated that there had been significant improvements in health and safety practices in the past four to five years. The practices of firms appeared to be influenced by union presence in the workplace. Participants felt that unions had a two-fold positive influence on health and safety: through being a vehicle of information dissemination and through pushing for stronger practices from employers.

Although employers were aware of the above issues, there was a diverse range of responses. Some did not address the issues at all, while others employed informal procedures such as having a Samoan member of staff translate health and safety messages for those who did not speak English fluently. There was little evidence of a systematic approach to any of the issues, although some

employers tried to conduct periodic training sessions in smaller groups to create a more accessible environment for Pacific workers. This type of training was viewed as rewarding for both employers and staff.

Employer interviewees discussed their perceptions of Pacific workers as hard-working people who are also self-effacing and strongly religious. These beliefs were viewed as affecting the workers' reporting of both minor injuries and near misses and dangerous situations, as well as their willingness to perform duties outside their normal roles, which could lead to injury.

Although the situation is complex, there are some initiatives the Department of Labour could undertake to improve the situation seen in Manukau, which is likely to be indicative of the manufacturing industry as a whole, and potentially of workplaces that employ a number of different ethnic groups.

This study has illustrated the need for health and safety training to be regularly administered, and tailored to the needs of the particular audience. Across all businesses interviewed in Manukau manufacturing, and across a number of Pacific ethnicities, both staff and management pointed to language barriers and differences in learning leading to poor uptake of health and safety messages.

Much of the future work suggested could be accommodated within the framework of an expanded Puataunofu project, the basis of which is already in place.

Recommendations

Following consultation with a number of stakeholders in the research, the following recommendations have been formulated. These recommendations relate to the next steps for this area of work, and are designed to be introductory, allowing for fine-tuning as the steps progress.

Efforts to reduce injury rates for Pacific workers need to focus on:

1. Training:

- i. frequency of training for all staff
- ii. training for staff who transfer jobs
- iii. translation of training resources into the first languages of staff
- iv. pictorial signage (as opposed to words)
- v. method of delivery, particularly using smaller groups in hands-on settings

2. Workforce awareness:

- i. resources/approaches to further employers' understanding of any specific needs of their workforce
- ii. resources/approaches and training for health and safety trainers on cross-cultural communication

3. *Pacific learning style preferences:*

- i. further research into this area to ascertain the dominant learning style preferred in workplace learning by Pacific workers

4. *Engagement with unions:*

- i. greater collaboration with unions on health and safety, who are seen as having a positive impact on health and safety practice

5. *Target areas:*

- i. men aged 41–65 years – the group with the highest claim rates and number of claims
- ii. Labourers – the occupation with the highest claim rates and number of claims
- iii. 'Lifting, lowering, loading, or unloading' was the most common activity workers were undertaking prior to the injuries recorded across the ethnic spectrum, and the most common cause of injury was 'lifting, carrying or strain'.

CONTENTS

1 INTRODUCTION	1
1.1 Overview	1
1.2 Aims.....	1
1.3 Structure	1
2 BACKGROUND	2
2.1 Puataunofu.....	2
2.2 Department of Labour’s Pacific Strategy.....	3
2.3 Literature Review	3
3 METHOD	16
3.1 Research with Pacific People.....	16
3.2 Project Objectives and Questions	17
3.3 Questionnaire Development and Approach	18
3.4 Sample Selection	19
3.5 Limitations	20
4 STATISTICS.....	22
4.1 Overall Reporting Levels over Time	22
4.2 Claim Rates Over Time	23
4.3 Occupational Risk.....	24
4.4 Fatalities in Manukau.....	26
4.5 ACC Claims in Manukau, by Sex and Age	27
4.6 Activity Prior to Accident in Manukau, by Ethnicity, 2009	27
4.7 Cause of Accident in Manukau, by Ethnicity, 2009	28
4.8 Summary	28
5 EMPLOYEES’ PERSPECTIVES.....	30
5.1 Health and Safety Attitudes.....	30
5.2 Communication.....	34
5.3 Power Distance	39
5.4 Samoan Culture.....	40
5.5 Summary	41
6 EMPLOYERS’ PERSPECTIVES	42
6.1 Company Approaches to Health and Safety	42
6.2 Communication.....	45
6.3 Perceptions of Pacific Workers	51
6.4 Summary	53
7 DISCUSSION	55
7.1 Communication.....	55
7.2 Importance of Management Focus.....	55
7.3 Co-morbidity	56
7.4 Power Distance	57
7.5 Literacy	57
7.6 Cultural Factors	58
7.7 Summary	58
8 CONCLUSION AND RECOMMENDATIONS	60
8.1 Conclusions.....	60
8.2 Pulling it All Together: Contributing Factors Logic Model.....	61
8.3 Recommendations.....	62
REFERENCES	63
APPENDIX A: INTERVIEW SCHEDULES	67
APPENDIX B: LETTER TO EMPLOYERS.....	71

Figures

Figure 1: ACC claims in Manukau manufacturing, by ethnicity, 2002–2009	23
Figure 2: National ACC claim rates in manufacturing industry, by ethnic group, 2002–2009	24
Figure 3: ACC claim rates in manufacturing in Manukau, by occupation, 2009 ..	26
Figure 4: Contributing factors logic model	61

Tables

Table 1: Percentage of adults with literacy and numeracy skills at Level 3 or above, by ethnic group, 1996 and 2006	7
Table 2: Risk factors associated with precarious employment	13
Table 3: Employee characteristics	20
Table 4: Employed in manufacturing in Manukau, by occupation (2009).....	25
Table 5: Fatalities in Manukau manufacturing, by ethnicity, 2002–2009.....	26
Table 6: Activity prior to accident, by ethnicity, 2009	27
Table 7: Cause of accident, by ethnicity, 2009	28

1 INTRODUCTION

1.1 Overview

This report discusses research undertaken to examine injury reporting by Pacific workers in the manufacturing industry in Manukau. Pacific workers experience a high level of workplace accidents compared to other ethnicities. Although there has been a gradual reduction in incidence rates across all ethnic groups since 2005, Pacific incidence rates are still disproportionately higher than those for non-Pacific people.

There are many theories about why this discrepancy exists, but there is a paucity of empirical information to inform them. Theories include increased risk exposure, communication and literacy difficulties, relationships in the workplace between management and workers, and differing attitudes to work (Premji et al 2008, Sargeant & Tucker 2009, Seymen & Bolat 2010, Kosny 2011). This research aims to determine the causal influences on the higher observed injury rate in order to inform the development of appropriate interventions.

The highest number of ACC claims lodged by Pacific people comes from the manufacturing industry. This sector is a large employer of Pacific workers with over 19.5 percent⁴ Pacific employees, compared with 11.0 percent⁵ of the total population nationally in 2006. Manukau was chosen as the research site due to its large population base of Pacific people, who make up 19.5 percent⁶ of the Manukau workforce and 28.1 percent⁷ of the Manukau manufacturing workforce.

1.2 Aims

1. To understand the causal influences on the injury rate experienced by Pacific people in an applied setting.
2. To help enable the informed development of appropriate health and safety interventions to reduce the accident rate experienced by Pacific people.

1.3 Structure

This report summarises the existing literature in the area, before discussing the methods used in the research. The first results section is the quantitative analysis of ACC data. The qualitative data is divided into two sections: first, the employees' perspectives, followed by the employers' perspectives. Finally, the report discusses the findings of the research, before concluding and making recommendations for future work by the Department of Labour.

⁴ 2006 Census

⁵ *ibid*

⁶ *ibid.*

⁷ *ibid.*

2 BACKGROUND

In the planning of this research project, the project team built on the work of the Puataunofu Manukau Project and discussions with Pacific researchers and stakeholders. It had already been established by Puataunofu that the injury reporting for Pacific workers in the manufacturing sector was higher than that of other ethnic groups.

It was clear that it would be necessary in the research to assess whether the nature of the work done by Pacific workers was the primary factor in the high accident rate and to look more widely into a range of factors that may be contributing to the accident rate. A priority in the research would be to look more closely at the available data and establish the reliability of the claim that Pacific workers have a high accident rate.

We decided that the most practical and informative study could be done if we confined our research to a particular sector, and to a relatively confined geographic region which had a high concentration of Pacific workers. Manufacturing was chosen because of the high accident rate in the sector, and Manukau, in South Auckland, was the obvious choice of region. The antecedent work by Puataunofu was relevant, as was the importance of the community for Pacific people.

2.1 Puataunofu

The Puataunofu pilot offered a number of insights into health and safety work with Pacific workers. It demonstrated that the creation of a 'brand identity', which was an outcome of the pilot project, was a significant factor in rallying community support for action on health and safety matters. It also showed the value of working at the community level on matters such as health and safety, which have such a wide impact.

Another feature of Puataunofu that had significance for workplace health and safety, and was a valuable spin-off from the original pilot programme, was the application of the Puataunofu brand to company-wide health and safety activities. Both the Sanitarium Health and Wellbeing Company and Sleepyhead Limited ran a Puataunofu Day devoted to providing all staff with a comprehensive range of health and safety briefings. Observation of the Sanitarium day suggested there were both positive and negative factors in such an approach to health and safety training.

The overall conclusion reached from Puataunofu of relevance to this study was that any decisions on the best way to influence the health and safety behaviour of Pacific workers need to be based on a deeper and broader look at the behaviours of Pacific workers, in an attempt to unravel the factors that contribute to their injuries.

2.2 Department of Labour's Pacific Strategy

A theme of the Department's Pacific Strategy (which was being drafted while this project was being planned and implemented) was that action needs to be taken to reduce the high injury rates experienced by Pacific workers. Recognising that Pacific people are over-represented in low-skilled and low-wage workplaces (where injury rates are often higher than in other, higher-skilled work areas), the Strategy called for the Department to 'Ensure that Pacific workers are engaged in healthier, safer and more productive workplaces'.⁸

A measure to determine whether or not this intermediate Strategy outcome has been achieved is a reduction in the rate of serious workplace injuries. In the 2009 *Pacific Strategy Background Paper*, many points were made that were relevant to this project and the contribution the research could make to addressing the need to reduce serious workplace injuries. These included the following.

- Migration from Pacific states to New Zealand increased after World War II to fill post-war domestic labour shortages.
- A high number of Pacific workers work in low-skilled and declining industries.
- A large proportion of young Pacific school leavers enter the workforce with minimal or no qualifications.
- Pacific people share common values, which underpin their world views and how they engage and interact with others.⁹

2.3 Literature Review

There is an extensive research literature on health and safety related to migrants and ethnic minority communities, but there is very little published research specifically addressing contributing factors to the health and safety of Pacific communities in New Zealand. Overall, the research provides a mixed picture of a complex issue, in which there are many interacting contributing factors. Some of the complexity in assessing the issues arises from the different ways the topics are researched.

Epidemiological studies using administrative data and general population or workforce surveys, while of value, are not always appropriate for minority populations. Studies commonly note under-reporting among migrant and linguistic minority groups associated with such factors as language difficulties, employment in the informal economy, employment in small businesses, and undocumented immigration status.

Sampling methods are required that capture the more inaccessible workers, such as those with informal work arrangements. Qualitative studies are useful for understanding the conditions of particular groups in particular circumstances, but

⁸ Pacific Strategy 2010-2015, Department of Labour, p15.

⁹ These include: Pacific culture and languages; a focus on groups; consensual approaches; spirituality (religious practices and institutions are key considerations); the value of reciprocity as a basis for sustaining relationships; respect for authority; acknowledging status; and high regard for community and social structures (Department of Labour, Pacific Strategy, Background Paper, p7).

they do not show the factors common to migrant or ethnic minority communities that could direct further health and safety work—or research—at a structural level. Multiple methods are therefore useful.¹⁰

There is some research that examines length of residence as a factor in health and safety risk, but overall there is very little research on the impact of migrant factors. Longitudinal studies of health and safety risk for certain groups are also rare, although the studies that do exist show that migrants' health and safety profiles change over time.

There is a considerable body of research on the effect of ethnic, national, occupational, and age-related differences in culture on risk, but much less research on the impact of culture on health and safety. What research there is on this subject does not explicate the causal links between differences in culture and health and safety outcomes. Similarly, literacy and numeracy are noted in numerous studies as contributing factors to health and safety risk, but few studies attempt to show just how these factors affect health and safety outcomes.

Finally, there is limited research on minority groups' attitudes to occupational health and accident treatment. While there is a considerable body of New Zealand research on Pacific communities' access to health care, there is no published research that focuses on attitudes to occupational health or accident treatment. In addition, no studies were found that analyse health and safety incidents to illuminate factors relevant to migrants and ethnic minorities.

Health and safety disparities for migrant and ethnic minority communities

Mixed results

In the international literature on the health and safety of migrant and ethnic minority communities, single case studies generally show, without controlling for other factors, an association between ethnicity or migrant status and heightened risk of workplace injury. However, reviews of such studies and research using administrative and national survey data are more likely to present an inconsistent pattern of ethnic minority and migrant health and safety disparities. In addition, different contributing factors to occupational injury are found depending on the analyses carried out.

Studies analysing administrative and national survey data generally try to compare workplace injury rates between groups (Loomis & Richardson 1998, Nuwayhid et al 2003, Loh & Richardson 2004, Szczepura et al 2004, McKay et al 2006, Strong & Zimmerman 2005, Orrenius & Zavodny 2009, Berdahl & McQuillan 2008, Zhang et al 2009, Smith & Mustard 2010, Eng et al 2010). Some of these studies have found higher rates of injury for ethnic minority groups

¹⁰ Souza et al (2010) provide a useful analysis of various data sources aimed at improving the surveillance of occupational health disparities. T7s covers the use of administrative data, secondary data analysis, and the development of targeted surveillance systems for occupational health surveillance to document occupational health disparities and to provide surveillance data on minority and other underserved communities.

(Loomis & Richardson 1998), while other studies, mainly from the United States, have found migrant/ethnic minority workers are not at higher risk of work-related injuries (Nuwayhid et al 2003, Strong & Zimmerman 2005, Berdahl & McQuillan 2008, Zhang et al 2009).

Reviews of multiple analyses (Szczepura et al 2004, Ahonen et al 2007, Schenker 2010) have found mixed results, with some ethnic minorities experiencing lower rates of workplace injury than the native national population (or the 'white population' in the United States) and others experiencing the same rates. Overall, injury patterns are linked to occupation.

Primary risk factor is occupation

The varying results of these studies suggest that although the primary factor in occupational injury risk is occupation, numerous factors in addition to occupation influence the risk of occupational injury. These additional factors include education, age, work experience, gender, shift work, union membership, risk appetite, duration of residence, and language proficiency. Research in this area over the last decade in particular recognises the multiple influences affecting the health and safety of workers, and the numerous factors contributing to disparities in working conditions among migrant workers and between migrant and non-migrant workers. Over this period, several frameworks for analysing these disparities have been developed (Frumkin et al 1999, Murray 2003, ILO 2004, EMCONET 2007).

Most recently, Sargeant & Tucker (2009) have built on this work by adding political, economic, and institutional influences to the health and safety risks faced by migrant workers. The authors divide these risk factors into three groups: (i) migration factors, (ii) characteristics related to migrants and their country of origin, and (iii) receiving country conditions. Lamm et al (2010) have made use of these frameworks in their ongoing research project investigating the health and safety experiences of Samoan migrant workers to set out the complex issues surrounding the migrant workers' health and safety, along with workers' compensation and rehabilitation.

Migrancy factors

Internationally, the migration status of workers in host countries can be a significant health and safety risk factor by determining workers' legal protection and their willingness to enforce their rights. The way in which migrant workers are recruited can also influence health and safety risk by affecting the willingness of workers to exercise their rights (Geddes et al 2007, Sargeant & Tucker 2009, Dávila et al 2011). Again, research is lacking in the New Zealand context.

However, with respect to current migration to New Zealand from Pacific Island countries, the migrancy factor more likely to affect Pacific workers would seem to be the low level of employment-related skills acquired in their native countries. New Zealand's Samoan Quota scheme and the Pacific Access Category are

policies designed in part to assist the economic development of Pacific Island countries, with most persons entering under these schemes having skill levels too low to allow them to qualify for entry under the skills/business programme (Stahl & Appleyard 2007). While there is no New Zealand research specifically addressing the health and safety outcomes of these workers, it can be assumed that these low-skilled migrants are likely to be in manual work, with attendant health and safety risks.

Health and safety disparities change over time

Migration effects clearly change the health and safety disparities between racial/ethnic (and gender) groups as they are dynamic and change over time (Berdahl & McQuillan 2008). However, longitudinal studies in this area are lacking, both internationally and in New Zealand. The migration factor most studied is duration of residence. Studies analysing the effects of this factor for migrants' health and safety find significant differences for those migrants with less than five years' residence, with rates converging to the national rate of the adoptive country with increasing duration of residence (Corvalan et al 1994, Smith & Mustard 2010).

Although there is no research reflecting on these variables for the health and safety of Pacific people in New Zealand, younger New Zealand-born Pacific people fare better than Pacific migrants, with a smaller proportion in low-skilled occupations and a higher proportion in white collar occupations compared with older Pacific people (Callister & Didham 2007, de Raad & Walton 2008, Stahl & Appleyard 2007, Ministry of Pacific Island Affairs 2010), which presumably has a positive effect on health and safety outcomes.

Characteristics of migrant workers

Relevant characteristics of migrant workers include the socio-economic conditions in their native country, education, and skill levels. A number of researchers have drawn on administrative data collected by the Ministry of Education and Statistics New Zealand to describe the comparative educational and occupational position of Pacific communities in New Zealand relative to other ethnic groups (Callister & Didham 2007, de Raad & Walton 2008, Stahl & Appleyard 2007, Ministry of Pacific Island Affairs MPIA 2010). These analyses show that although tertiary participation rates for Pacific people have been increasing, Pacific people are over-represented among those with no formal educational qualifications.

Less-educated and lower-skilled workers have more limited labour market opportunities in both the sending and the receiving country, and are also less likely to have received any health and safety training to enable them to exercise control over the performance of their work (Sargeant & Tucker 2009, Zhang et al 2009, Lopez-Jacob et al 2010). However, as with much of the research in this area, the causal connections between socio-demographic characteristics and health and safety risk are not made explicit in the research.

Literacy and numeracy

Literacy and numeracy are widely identified as factors in poorer health and safety outcomes (Lashuay & Harrison 2006, Arcury et al 2010, Menzel & Gutierrez 2010). However, the causal evidence linking poor literacy and numeracy to adverse health and safety outcomes is lacking. Although there are no published studies that address this aspect of health and safety risk for ethnic minorities in New Zealand, there is research on Pacific adults' literacy and numeracy levels. Satherley & Laws's (2008) analysis of the Adult Literacy and Life Skills Survey found that Pacific adults have poorer literacy and numeracy skills compared with the total New Zealand population. As shown in Table 1, Pacific people consistently have the smallest proportions with skills at Level 3 or above.¹¹

Notably, between 1996 and 2006, while the proportions of other ethnic groups in New Zealand with higher literacy skills increased, the proportion of Pacific adults with these skills declined.

Table 1: Percentage of adults with literacy and numeracy skills at Level 3 or above, by ethnic group, 1996 and 2006

Ethnic group	Prose literacy		Document literacy		Numeracy
	1996	2006	1996	2006	2006
NZ European	59	64	55	64	56
Māori	35	37	30	36	25
Pacific peoples	28	21	26	24	14
Asian	28	34	33	43	39
Total	53	56	49	57	49

Source: Satherley & Laws 2008

Language

Language skills (or lack of) are also widely noted in the literature as a factor in health and safety risk. The inability to understand, speak, and read the language of the receiving country creates obvious health and safety vulnerabilities, including the inability to understand instructions, read warning signs, communicate concerns, and learn about and access legal protections. New Zealand Immigration research shows that Pacific migrants to New Zealand enter the country with relatively poor English skills compared with other groups (Department of Labour 2009).

The inability to communicate at work may also interfere with the formation of supportive relations at work, which in itself can adversely affect worker health (Premji et al 2008). Dated research from New Zealand (Bossley 1975) and Australia (Corvalan et al 1994) has identified lack of language and poor communication as possible factors in higher workplace injury rates for ethnic minorities or migrant workers, along with poorer treatment outcomes following injury.

¹¹ Level 3 is the minimum for coping with the demands of everyday life and work in a complex, advanced society. It roughly denotes the skill level required for successful secondary school completion and tertiary education entry (Satherley & Laws 2008).

Reviewing the occupational health research on language barriers as a contributory factor in health and safety risk, Premji et al (2008) found that the majority of what research there is on the topic has focused on the communication of health and safety information to workers with language barriers. More specifically, these authors note that the research reveals that non-English-speaking workers in English-speaking work environments report difficulties in understanding oral and written health and safety information.

Fewer studies have looked at communication by workers, but of these, some have suggested that workers with little or no skill in the dominant language may have problems communicating potentially dangerous situations to managers. Others have found that language barriers can result in workers experiencing frustration when interacting with colleagues and managers. Language barriers among colleagues may have an indirect health and safety effect in that individuals who feel ostracised on the basis of language report lower levels of organisational commitment and 'organisational citizenship behaviour' (such as helping colleagues with job-related tasks).

In addition, Smith et al's (2009) analysis of Canada's Longitudinal Survey of Immigrants found that those migrants with a poorer command of the host country language are most likely to be employed in occupations with higher physical demands than they had worked in prior to migration, both two and four years after arrival in Canada, with consequent increased health and safety risks.

Language has also long been considered an obstacle to accessing appropriate health care, although very little has been written on this in a health and safety context. However, language issues have been linked to difficulties with accessing workers' compensation for occupational injury (Kosny et al 2011).

Premji et al's (2008) study of the mechanisms linking language proficiency to occupational health found that language influenced work-related health by affecting workers' ability to understand and communicate information and by supporting relationships that can affect health. In order to address communication barriers, workers enlisted the help of informal interpreters, translators, and informers and made efforts to learn the country's official languages, and these strategies had implications for health. Women had different experiences because of factors such as cultural norms and family responsibilities.

Cultural influences

Although there is an extensive economics and social psychology literature looking at cultural influences (for example, ethnic, national, occupational, and age-related influences), and their effect on risk behaviours generally, there is a more limited number of studies that examine the impacts of culture¹² on organisational safety

¹² Culture is broadly defined as shared practices, mental habits, and norms that shape people's identities and influence their attitudes and behaviours. Culture is generally seen by academic commentators as being subject to change, contestation, and re-formulation over time, rather than being fixed and static (Vickers et al 2003).

and safe or dangerous behaviours. Vickers et al (2003) note a few United States-based studies which have explored the responses of different ethnic groups to environmental health and safety risks,¹³ but not to occupational health and safety risks in particular (see Finucane et al 2000). These studies show significant differences between ethnicities in terms of values and beliefs relating to environmental risk. Findings are generally related to the different distribution of risk, power, and vulnerability in society. This analysis suggests that there is likely to be a complex relationship between cultural/socio-psychological factors and context.

Seymen and Bolat (2010) have looked at whether Hofstede's four cultural dimensions¹⁴ are an effective framework within which to understand employees' perceptions of, and attitudes and behaviours towards, safety. Of interest in relation to Pacific peoples' health and safety is the 'collective/individual' cultural dimension.¹⁵ Seymen and Bolat's analysis found that the collective/individual dimension is closely associated with 'employees' involvement' and 'risk perception' in relation to organisational safety culture, with risk perception being most affected by differing national cultural dimensions. In relation to multicultural workplaces in particular, the authors found that safety risks are not perceived in the same way by all cultures.

However, Mearns and Yule's (2009) analysis of studies in which the relationship between nationality and safety performance has been investigated (not necessarily with reference to cultural values) found no consistent predictors of risk-taking behaviour and safety performance across national groups. Although the authors found that people's underlying views of the world may have some influence on their attitudes to safety, risk taking, and safety performance, and in particular perceptions of management commitment to safety, are more salient influences on 'frontline' behaviours that can cause and prevent accidents.

Mearns and Yule suggest that researchers should investigate whether differences in cultural values between the workforce and management have an impact on how management behaviours are construed, and what influence this has on employees' behaviours and safety performance in high-hazard domains. This finding is supported by Lamm and Pio's (2008) review of the literature on culture and health and safety, which also remarks on the significant amount of research yet to be done in this field.

¹³ For example, the risk of a vehicle traffic-related injury.

¹⁴ Hofstede and other academics have established cultural dimensions (that is, aspects of culture that can be measured relative to other cultures). Hofstede proposed four national cultural dimensions: power distance, uncertainty avoidance, individualism/collectivism, and masculinity/femininity. While details of the constructs vary between researchers, it is generally agreed that they serve to describe general attitudes of societies rather than situation-specific attitudes of individuals (Seymen & Bolat 2010, Hofstede 1984).

¹⁵ Collectivistic cultures are defined as those in which individuals perceive themselves as members of a society before they see themselves as individuals: the group is the main factor determining beliefs and values. In these kinds of cultures, individuals grow up in extended families or socially cooperative groups; their loyalty is to a group, tribe or village; and they protect their group's interests. Individuals' own opinions and beliefs do not differ from the opinions and beliefs of the group they live in (Seymen & Bolat 2010)

Attitudes to health and accident treatment

Specific health concerns held by migrant and ethnic minority workers have not been extensively researched, although a small number of qualitative studies report safety and health concerns (for example, Zhang et al 2009, Arcury et al 2010). Arcury et al's study explores the applicability of the World Health Organisation's 'health belief' model to health and safety (that is, persons must perceive themselves as being susceptible to risk before they will take action¹⁶). This study found that perceived *control*—not perceived risk—leads to action: workers may know they are at risk, but they will not take action to reduce this risk when they feel they have no control over their work situation. The study does not show whether perceived control or risk actually determines behaviour, but the results are consistent with the health belief model of behaviour change (a model shown to be predictive of the associations between beliefs, knowledge, control, and behaviour across multiple health behaviours in numerous populations).

The ILO (2004) notes that there are two inter-related aspects of health issues for migrant workers: (a) occupational safety and health in the workplace, and (b) general health conditions of the workers and their families. While no literature was located specifically on Pacific peoples' health- and safety-related health concerns, there is material on health status and to a lesser extent on health behaviour more generally.

Compared to the total New Zealand population, Pacific people have poorer health, are more exposed to health risks (including those associated with elementary and manual occupations), and have poorer access to health care (Ministry of Health & Ministry of Pacific Island Affairs 2004). As with health and safety, the reasons for these disparities are complex. For example, in a focused study of health inequalities, Garrett et al (1989) discuss reasons for racial differences in accident and emergency attendance rates for asthma in New Zealand. The increased use of these services by Māori and Pacific asthmatics was explained by ethnic, socio-economic, and socio-cultural factors rather than the intrinsic severity of their asthma. Pacific people had fewer self-management skills and, like Māori, were less likely to be on medications, and these factors were considered likely to have contributed to their increased morbidity.

Davis et al (2005) have carried out a nationally representative survey of primary health care providers that describes Pacific patterns of primary health care usage. The authors observe that many features of Pacific people's presentation and treatment in primary care are associated with their communities' youthful population, high urban concentration, and socio-economic disadvantage. Nationally, Pacific patients had a demographic pattern of use not unlike the total population and they seemed to have a well-established relationship with their care provider, but they reported on average fewer visits and their primary care practitioner was less likely to record high levels of rapport. As Barwick (2000) also found, Davis et al noted that Pacific patients were predominant users of third

¹⁶ This relationship is modified by self-efficacy, recognising one's ability to control exposure to harm, and cues to action, such as knowledge and training.

sector (community) health providers, from whom they received high levels of service.

While Davis et al's study found indications that the primary health care system was working positively for Pacific patients (for example, high use of subsidised care, good attachment to practices, and apparent success of community initiatives), other results indicate that more needs to be done. This last point is clearly shown in Tobias & Yeh's (2009) analysis of amenable¹⁷ and all-cause mortality rates by ethnicity and household income. This study found that alone among all ethnic groups there was no reduction in amenable mortality for Pacific people. Thus Pacific people appear to have benefited less from health care than other groups in New Zealand. This reflects a combination of personal and systemic factors, ranging from a higher prevalence of selected risk factors and certain diseases, delays in seeking health care, and inequities in the provision of health care services in New Zealand. However, the social, cultural, and political contexts of the process of Pacific patients seeking and using care, and recovery in primary health care, remain largely unexplored in the research literature.

Health agencies in New Zealand have had a focus on improving access to and outcomes from health care for Pacific people for over a decade. Barwick's (2000) review of strategies that improve Māori and Pacific people's access to primary health care found that delivering services away from traditional settings was effective in engaging underserved populations, but there was a need for mainstream services to develop increased awareness of the culturally determined nature of attitudes and behaviour. These themes have continued in subsequent planning for Pacific health care (Moala 2004, Ministry of Health 2010), and in qualitative work carried out with Pacific communities to inform strategies to increase Pacific people's access to ACC (Tiatia et al 2005). The authors of this latter study note the lack of robust work to support policy in this area, but their research points to active engagement of Pacific people, increased ACC involvement in the development and implementation of ACC programmes, ACC working more closely with churches and families, a greater presence at Pacific community events, and an increased Pacific focus in advertising campaigns. In the Ministry of Health's planning to achieve better health outcomes for Pacific people (Ministry of Health 2010), the growing Pacific working-age population is noted, but the report does not contain any health and safety analyses or targets.

Attitudes to treatment

Attitudes to treatment have seldom been explored among Pacific communities in New Zealand. However, several studies report on the experiences of obtaining treatment for occupational injuries among marginalised groups in low-wage employment (Anthony et al 2010, Lashuay & Harrison 2006, Kosny et al 2011). Workers with occupational injuries reported numerous problems in getting adequate care or compensation benefits for their injuries and illnesses. This situation was related to employers' practices that focused on dissuading workers from seeking medical care or compensation, and workers' lack of knowledge

¹⁷ Amenable mortality means deaths under age 75 from conditions responsive to health care. This was defined using a classification developed for use in Australia and New Zealand.

about compensation benefits, language barriers, and the complexity of the process.

Berdahl and Zodet (2010) found few ethnic differences in actual treatment seeking. Similarly, Zhang et al's (2009) study showed that a lower percentage of foreign-born workers report delays in getting medical attention compared to United States-born workers, and Kosny et al (2011) found that it was barriers to accessing the compensation system rather than workers' fear or lack of initiative that prevented or delayed a claim from being filed. These findings are echoed in research with Pacific communities in New Zealand in relation to access to ACC services (Koloto 2005).

Receiving country conditions

There are a number of receiving country conditions that affect migrants (and other workers). First, there are the characteristics of the employment sector: health and safety risks are not spread evenly across the labour market, and sectors involving manual work are significantly more hazardous than others. Within these sectors, occupational risk factors identified are having a blue-collar occupation, working fulltime, having longer tenure, working one job as opposed to two, and working the late shift. Individual-level education, hours worked per week, and the level of worker insurance benefits have also been identified as factors (Strong & Zimmerman 2005, Berdahl & McQuillan 2008).

Loh and Richardson (2004) found that an upward trend in workplace fatalities among foreign-born workers in the United States over the 1996–2001 period reflected a large influx of foreign-born workers, many of whom were employed in occupations and industries with inherently higher risks of fatal injury. Several factors were relevant to the nature of foreign-born workers' employment, including lower levels of educational attainment among Latin American-born workers, lower levels of English-language skills, and the concentration of the foreign-born population in metropolitan areas. Orrenius and Zavodny's (2009) United States study and Smith et al's (2010) Canadian study both found that immigrants were more likely to work in riskier jobs than non-migrant workers, partly due to differences in average characteristics, such as immigrants' lower English-language ability and educational attainment.

Pacific people in New Zealand are also over-represented in occupations that are projected to have low future growth and are under-represented in occupations with high growth. Even where Pacific people are in industry groups with high future growth, they are more likely to be in the low-skilled, low-paid occupations within them (Callister & Didham 2007, de Raad & Walton 2008, Stahl & Appleyard 2007, Ministry of Pacific Island Affairs 2010).

McKay et al (2006) have studied whether the position that recent migrant workers occupy within the labour market in Britain puts their health and safety at increased risk in comparison with other workers in similar positions. The findings suggest that it is not the case that the risks inherent in a particular type of work only present themselves in relation to migrant workers; however, migrants are

more likely to be working in sectors or occupations where there are existing health and safety concerns, and their status as new workers may place them at added risk due to their relatively short periods of work in Britain and limited knowledge of the health and safety system.

The report also notes that migrants' motivations in coming to Britain, particularly where these are premised on earning as much as possible in the shortest possible time, add to their risk factors. Limited means of communication between migrant workers and indigenous supervisors may also place these workers at greater risk. The experiences of vulnerable migrant (and other) workers in Britain are further reported by the Trades Union Congress's Commission on Vulnerable Employment (TUC 2008).

Employer characteristics

Employer competency and commitment are not randomly distributed either, but rather are associated with certain characteristics, such as business size and commitment to good practice. Nissen's 2007 survey of medium and large construction sites examines safety outcomes for workers in three areas: (1) the degree of safety training they have received; (2) the degree of use of personal protective equipment; and (3) the degree of employer adoption of safe policies and practices. The results strongly support the hypothesis that inferior treatment in terms of safety is clustered in particular employers. This suggests that the sectors, occupations, and characteristics of the firms into which migrant workers are recruited shape their vulnerabilities, and there is evidence that migrant workers are disproportionately recruited into more hazardous employment situations (McKay et al 2006, Loh & Richardson 2004). Quinlan et al (2001) list the risk factors linked to precarious employment that are associated with poorer health and safety outcomes (see Table 2).

Table 2: Risk factors associated with precarious employment

Economic and reward factors
• Competition/under-bidding of tenders
• Task work / payment by results
• Long hours
• Under-qualification and lack of resources (ie, small businesses)
• Off-loading high-risk activities
Disorganisation
• Ambiguity in rules, work practices, and procedures
• Inter-group/inter-worker communication
• More complicated lines of management control
• Splintering of health and safety management system
• Inability of outsourced workers to organise/protect themselves
Increased likelihood of regulatory failure
• Health and safety laws focus on employees in large enterprises

• Health and safety agencies fail to develop adequate support materials
• Health and safety agencies fail to pursue appropriate compliance strategies
• Problematic coverage by labour minimum standards laws
• Problematic coverage by workers' compensation

Source: Quinlan et al 2001

Employers may also experience a variety of barriers to implementing health and safety programmes for their workforces. In a case study of contract cleaning, Lashuay and Harrison (2006) cited time limitations, high worker turnover (which made cohesive training difficult), language barriers, difficulty getting workers to follow instructions provided by training, no space available for training (since many of these employers have no offices), not being aware that health and safety problems exist, not having financial resources, and not knowing where to go for help.

Differences in injury rates within high-risk industries

Differences in injury rates have been reported even within high-risk industries (Loh & Richardson 2004) and occupations (Quinn et al 2007, Eng et al 2010). This finding suggests that other factors are also at work. In the United States, inequalities in access to the labour market, unequal distribution of risk within jobs, and explicit discrimination have been suggested as potential explanations for racial disparities in occupational injury mortality (Loomis & Richardson 1998, Shannon et al 2009). In New Zealand, Eng et al (2010) found that within the same occupation, Māori were more likely to report exposure to physical strain when compared to non-Māori in the same job. Although Eng et al's study cannot offer causes for this disparity, the authors canvass possibilities from the literature, including racial discrimination (which may not be overt). Racial harassment and discrimination have been examined in surveys of workers in the United States (Shannon et al 2009), which found that Hispanic respondents were more likely than whites to experience work-related illness, injury or assault, and these associations were mediated by experiences of racial harassment or discrimination.

Conclusion

This overview of the literature shows that complex interrelated factors are involved in migrant and ethnic minority communities' health and safety. Migrants may be at higher risk of occupational injury and disease primarily because of the inherently higher-risk occupations that significant groups of migrants and ethnic minorities work in, some of which are also characterised by low wages and precarious employment relationships. Education, skill levels, and proficiency in the language of the receiving country are major determinants of these occupations. This is true of the situation for Pacific communities in New Zealand.

Cultural influences on health and safety, while present, appear to be less influential on workplace injury risk than factors associated with the workplace. Attitudes to health and accident treatment, which may be determined both culturally and by factors associated with precarious employment, have not been a

focus of the health and safety literature, but it would appear from a limited amount of research that barriers to treatment stem from the inability to access care and compensation rather than attitudes. While there is a dearth of literature examining health and safety for Pacific communities in New Zealand in relation to all of these factors, the frameworks for analysis referenced in this review do offer models of analysis for this kind of health and safety research.

3 METHOD

The research utilised a mixed-method approach. In summary, the key research activities included:

- qualitative interviewing of Pacific workers, which involved interviewing 40 staff members of major manufacturing companies in the Manukau area
- qualitative interviewing of a range of employers (generally from the companies that provided staff members for the research)
- a literature review, covering occupational health for migrant and ethnic minority communities
- thematic analysis of the responses to the qualitative interviewing; nVivo software was used where possible, and coding for the analysis was based on the question structure
- statistical analysis of injury claims using ACC data and denominated by Household Labour Force Survey data, which was used to establish claim rates for Pacific people and other ethnic comparator groups.

3.1 Research with Pacific People

Given the focus of the research, engagement with Pacific communities was considered key in this project. The majority of Pacific representatives in the research were from Samoa, and this influenced the method and structure of the data collection. Worker interviews were conducted by a Samoan researcher, which meant the 30 Samoan workers were able, if they chose, to conduct their interview in Samoan. Ideally, a researcher from each country would have been employed, but given the limited resourcing for the study this was not possible. The Samoan researcher was expected to ensure that his practices with the remaining 10 workers interviewed were culturally appropriate and sensitive to any applicable protocols.

The research was developed in collaboration with Pacific researchers and other stakeholders. This involved:

- Pacific representation on the project management team
- the establishment of a reference group to provide the project team with advice and guidance; the Reference Group¹⁸ consisted of Pacific and non-Pacific researchers, health and safety field staff, and union representatives (Pacific worker representatives also contributed to the Reference Group)
- consultation with Department of Labour internal stakeholders, the Labour Pacific Advisory Group, ACC, and Engineering, Printing & Manufacturing Union (EPMU) operational staff and their management
- consultation with the Clinical Director, Pacific (Ministry of Health); health professionals in Manukau; and Pacific and non-Pacific academics
- contracting an emerging Pacific researcher (Moses Faleolo, a PhD candidate at the time of the research) to carry out and analyse the worker

¹⁸ The Reference Group included research staff from the Ministry of Pacific Island Affairs, operational staff representatives from ACC and the Department of Labour, and representatives from the EPMU. Meetings were attended by project team members from the Department. Two of the Pacific interviewees provided guidance to the Group when the content and findings in the project report were reviewed.

- interviews (some emphasis was placed on the researcher's ability to understand or speak a Pacific language)
- incorporation of the guidelines for research with Pacific peoples published by Ministry of Social Development's Social Policy Evaluation and Research Committee into the research process, which cover respect, integrity, responsiveness, competency, and reciprocity.

3.2 Project Objectives and Questions

Aims

The project was established to develop an understanding of the causal influences on the injury rate experienced by Pacific workers in the manufacturing sector. It did this by considering such variables as:

- the attitudes of Pacific workers to health and safety
- relationships with employers
- power differentials
- cultural values
- literacy proficiency
- migration influences on health and safety.

The findings from the research were intended to better inform operational policies and the development of health and safety interventions, including:

- recommendations that could assist in the development of a best practice model of working with Pacific people in health and safety
- information that would better inform health and safety policies and workplace practices as they applied to Pacific people.

Key objectives

To provide a framework for the development of specific questions, two key objectives were established. They are oriented towards building an evidence-based understanding of the factors that influence Pacific worker workplace behaviour and, with an awareness of those factors, gaining information that will contribute to injury-reduction policies and interventions. The objectives and specific research questions are set out below.

Key objective 1: To understand the causal influences on the injury rate experienced by Pacific people in an applied setting

Specific research questions

- Do Pacific people experience a higher rate of injury than their exposure to risk would indicate? How does claiming behaviour affect the estimate of harm?
- Is the injury profile of Pacific people (in terms of seriousness) different from other ethnicities?
- What are the influences of English-language proficiency and literacy on health and safety practices in the workplace?

- How do power differentials affect positive health and safety behaviours in the workplace?
- To what extent do Pacific cultural values and attitudes (for example, respect for authority/hierarchy) contribute to their likelihood of being injured at work?
- What is the attitude of Pacific workers to health and safety practices? Why are they how they are?
- What can other research with Pacific people tell us about the cultural and behavioural overlays that may affect health and safety practices?
- How does the style of communication between employers and employees affect health and safety behaviours?
- Does the union membership status of a work site affect health and safety practice? If so, how?
- Do recent migrants show different patterns of health and safety behaviours and beliefs?

Key objective 2: To help enable the informed development of appropriate health and safety interventions to reduce the accident rate experienced by Pacific people

Specific research questions

- What channels are likely to be the most effective to communicate with Pacific workers?
- What messages are most likely to be the most effective?
- What changes, if any, would workplaces need to incorporate into their workplace practices in order to reduce the likelihood of Pacific people being injured at work?
- What type of information provision has been effective in working with Pacific people in other sectors?

3.3 Questionnaire Development and Approach

A preliminary exercise was undertaken to map research questions against the major research areas. The major areas of interest in relation to employees were:

- demographic information
- the nature of the Pacific worker's job
- workplace and worker culture
- company organisation of health and safety
- transmission of health and safety messages.

The employer categories were similar to the employee categories set out above. They included:

- company demographics
- health and safety climate
- health and safety organisation
- the Pacific worker
- transmission of messages to Pacific workers

A questionnaire checklist was drawn up containing the items of information that would need to be covered in the interviewing. A first run of the detailed questions was made, which formed the basis for the development of the interview

questions. These were subjected to a critical review. The final questions (see Appendix A) were used in a semi-structured way in the worker and employer interviews.

3.4 Sample Selection

After getting recommendations from health and safety staff in the Manukau offices of the Department of Labour, ACC, and the EPMU about suitable companies to contact to seek approval to interview staff and managers about Pacific worker health and safety matters, we approached five companies (a sixth was added later), all of which agreed to become involved in the project.

A letter from the Reference Group was sent to each company (see Appendix B), which explained that the reasons for the relatively high Pacific worker injury rate were not well understood and that we were carrying out a programme of research to try to shed some light on 'this very serious issue'. It also stressed that the findings from the research would not only be of benefit to policy makers but, importantly, to the companies that employed Pacific workers and the workers themselves.

The letter indicated that we wanted to interview around six employees and at least two managers from each company. A team member also visited each of the companies and explained the purpose of the research. It was stressed that the interviews with Pacific staff would be undertaken by a Samoan researcher (Moses Faleolo) and that we were looking for a range of characteristics in the workers to be interviewed. These characteristics included:

- a range of English proficiencies (interviews would be carried out in the worker's first language where possible)
- workers with different length-of-service records and with different relations with managers
- good and poor health and safety knowledge and practice
- a range of ages.

For the management interviewees, we were interested in talking to a supervisory-level (of Pacific workers) manager and a health and safety manager.

A separate letter was included with the company letter, addressed to Pacific workers and stressing the significance of the research. We also indicated that we would give each interviewee a \$20 voucher in appreciation of the worker's time. The letter was translated into Samoan.

Employer characteristics

Six firms were approached in total, all in the manufacturing industry in Manukau. The type of manufacturing varied to try to incorporate as many product types as possible.

The firms that agreed to participate in the research were a mix of private and public companies and were involved in both manufacturing and distribution. They

were, in general, international companies and would be classified as large employers, all employing over 100 staff.

Employer interviews were conducted with managers or health and safety officers within each business. Interviewees were from different ethnic backgrounds, and included male and female representatives.

Employee characteristics

A total of 40 Pacific workers participated in the research project, of whom 31 were male and 9 were female.

Table 3: Employee characteristics

Age range	
21–65 years	
Ethnicity	
Samoan	30
Cook Island	5
Tongan	1
Rotuman	1
Indian	1
Mixed ethnicity	2
Place of birth	
New Zealand	5
Pacific Island nation	35
Arrival in New Zealand	
1960–1969	1
1970–1979	7
1980–1989	11
1990–1999	7
2000–2009	9
Highest educational achievement	
Form 4	12
School Certificate	19
Tertiary	9

3.5 Limitations

This research had very specific research questions, which limit its application to the wider population. Although it gives an in-depth understanding of the situation for Pacific workers in Manukau manufacturing, there are three key limitations of the study, which are discussed below.

In particular, the research does not include data on any other ethnic groups, so it cannot be said whether any findings are specific to Pacific workers in the manufacturing industry in Manukau or can be applied more generally. It does, however, provide information on what Pacific workers and their employers have reported as being the situation with health and safety practices in Manukau manufacturing.

A second limitation of the method is that the businesses interviewed were selected by the panel as being those more willing to participate, and they probably had some of the better health and safety practices within the manufacturing industry. This means that any potential issues that Pacific workers face working in businesses that are not as proactive with health and safety have not been included in this study. This is another future research direction that would benefit this area of knowledge.

Finally, this research was undertaken in Manukau, an area that has an established higher proportion of Pacific workers than other areas in New Zealand. This limits the generalisability of the findings because it is not known whether injury rates and health and safety behaviour are the same in other areas with fewer Pacific workers employed.

4 STATISTICS

International literature has shown that occupation is the number one risk factor that increases the risk of workplace injuries. In New Zealand, the manufacturing industry accounted for 16.9 percent¹⁹ of the total workplace claims to ACC in the second quarter of 2010, the largest proportion of all industries. The manufacturing industry is a large employer of the Pacific workforce in New Zealand, with 20.0 percent²⁰ of the Pacific workforce working in the industry in the second quarter in 2010. Therefore, the manufacturing industry provided a good site for exploring whether there were differences between ethnic groups within a particular industry.

This data presents a discussion of the reporting patterns of ACC injury claims in manufacturing in both New Zealand generally and Manukau in particular. There is data from the qualitative interviews in section 5 that suggests ACC reporting is an under-representation of the number of accidents that occur within workplaces, and so the rates and number of claims presented here may not be totally accurate in terms of scale. There is also the suggestion that migrant workers are less likely to report injury than other ethnic groups in New Zealand, due to language barriers and other marginalising issues (Premji et al 2008). However, even in this context, Pacific workers have higher rates of reporting than most ethnic groups in New Zealand, and this comparative position requires further examination.

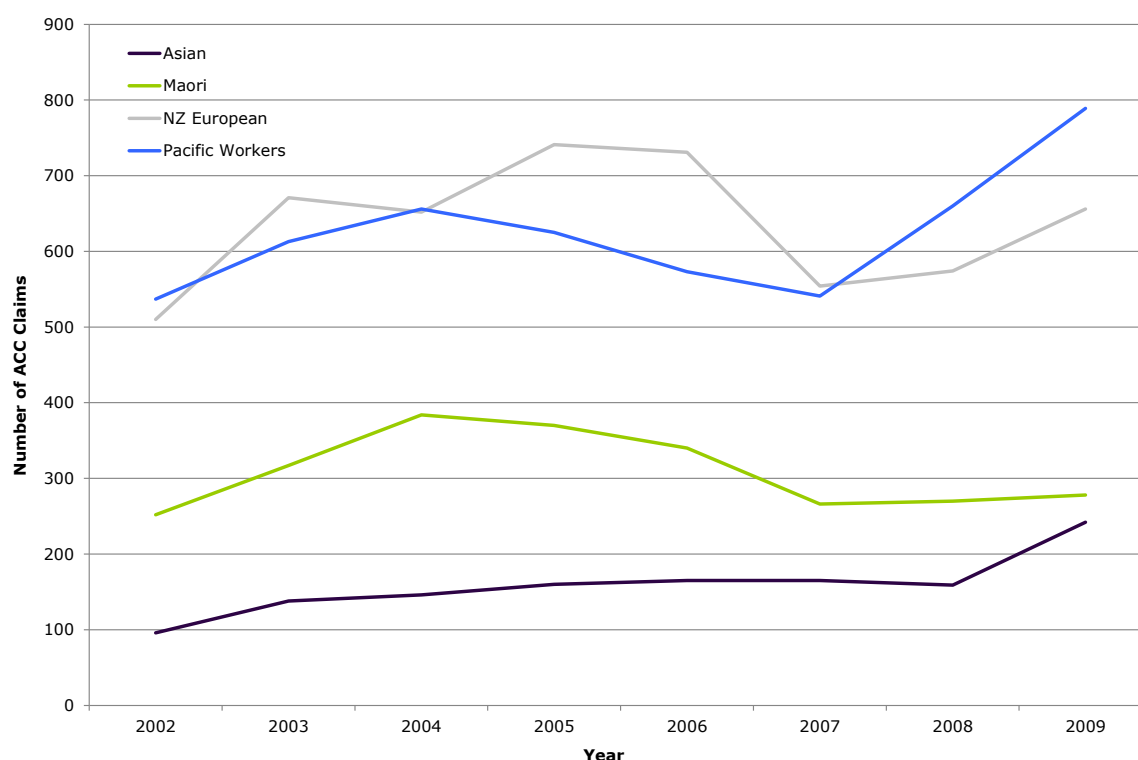
4.1 Overall Reporting Levels over Time

ACC claims were examined by ethnicity from 2002 to 2009 to look at long-term claim patterns (see Figure 1). This was to address any impact from recent marketing to Pacific workers in Manukau through the Puataunofu Manukau Project and other associated campaigns aimed at increasing Pacific people's access to ACC, which would be likely to have an effect on reporting behaviour.

¹⁹ Household Labour Force Survey Data

²⁰ *ibid.*

Figure 1: ACC claims in Manukau manufacturing, by ethnicity, 2002–2009



Source: ACC

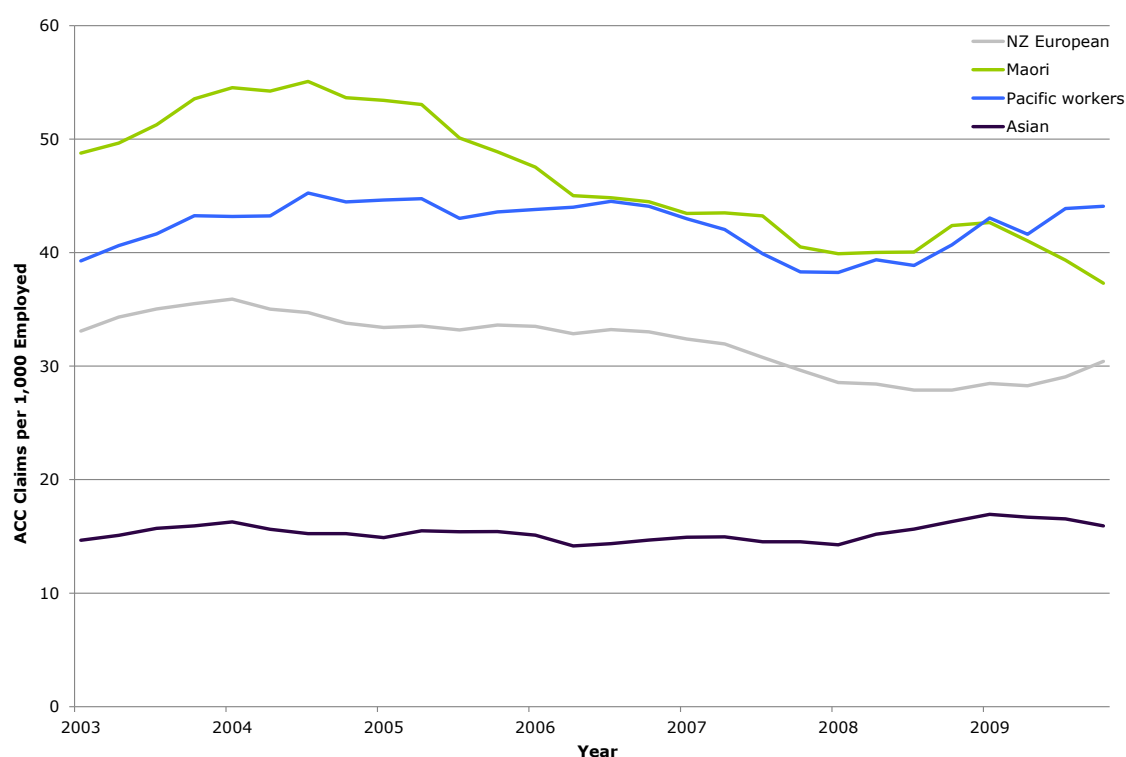
The graph shows that the number of claims from Pacific workers markedly increased in 2008 and 2009, to a greater degree than for any of the other ethnic groups. However, this could be due to a combination of reasons, including an increase in the number of staff employed within this industry or the various campaigns that have been run.

To eliminate the bias created by changes in employment levels, claim rates were calculated for each ethnic group. Claim rates were calculated by taking the number of ACC claims in the manufacturing industry by ethnic group each quarter, and dividing this figure by the number employed in the manufacturing industry by ethnicity each quarter (taken from the Household Labour Force Survey).

4.2 Claim Rates Over Time

Employment data for the manufacturing industry in Manukau is not available on a regular basis, so claim rates are presented below as national rates for manufacturing. As can be seen in Figure 2, Pacific people and Māori people had the highest reporting rates from 2002 to 2009 in the manufacturing industry. In the December 2008 quarter, Pacific people had a higher rate than Māori, and this rate remained higher throughout 2009. This could stem from the awareness-raising campaigns, but this is unclear. However, of interest to this research, overall the rate for Pacific people remained higher than those for NZ European or Asian groups from 2002 to 2009.

Figure 2: National ACC claim rates in manufacturing industry, by ethnic group, 2002–2009



Source: ACC & Statistics New Zealand, annual average data

This suggests that it is worth investigating why Pacific people have higher injury reporting within the same industry.

4.3 Occupational Risk

One of the findings of the international literature was that occupation is the largest risk factor in increased injury rates. To understand the influence occupation has on injury rates, the claims and employment data from Manukau manufacturing in 2009 was grouped by ANZSCO²¹ skill level.

Table 4 shows that when compared with non-Pacific people, Pacific people in Manukau manufacturing are more likely to be employed in the lower-skilled occupations, and in occupations that involve operating machinery and driving. These occupations present a higher risk of injury than occupations in management, so it is possible that the increased reporting is largely due to increased exposure to risk.

²¹ Australia and New Zealand Standard Classification of Occupations

Table 4: Employed in manufacturing in Manukau, by occupation (2009)

	% Pacific workers	% Non-Pacific workers
Managers	5.5	16.3
Professionals	8.2	17.9
Technicians and trades workers	11.5	13.1
Community and personal service workers	8.2	6.5
Clerical and administrative workers	11.4	14.8
Sales workers	7.8	11.2
Machinery operators and drivers	16.4	7.1
Labourers	17.4	7.5
Not elsewhere included	13.7	5.6
Total employed (N)	29,208	112,833

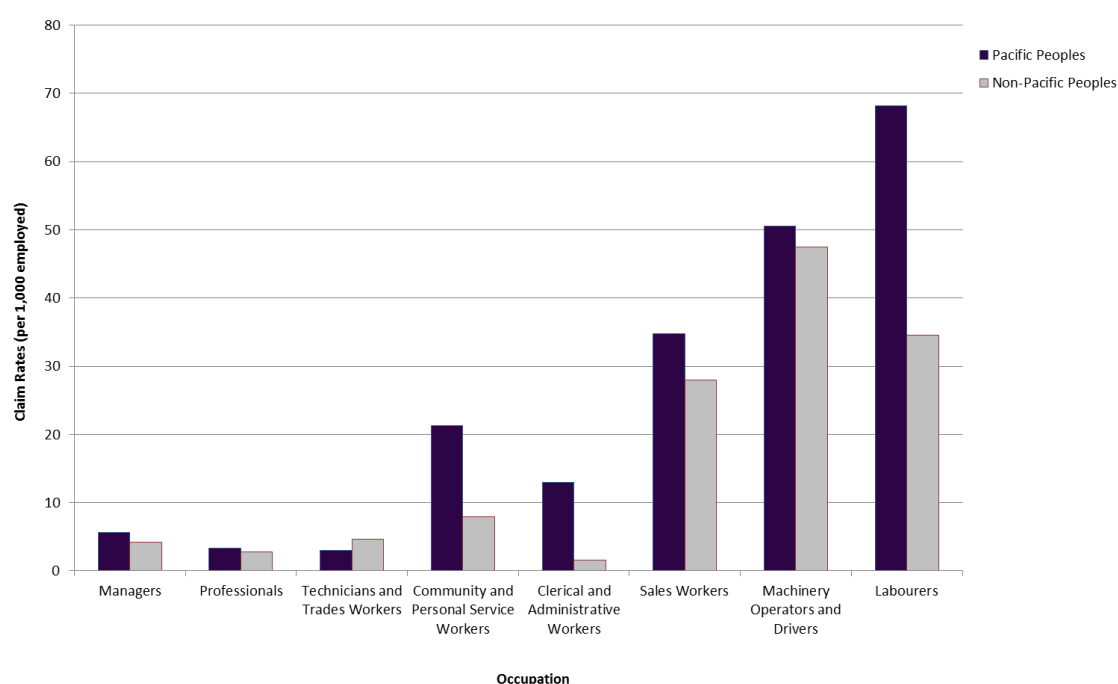
Source: ACC & Statistics New Zealand (2009)

Although Table 4 shows that Pacific people are over-represented in the occupations with higher risk of injury rates in Manukau manufacturing, the data can also show whether it is exposure alone or whether there are higher injury rates within occupations. If Pacific workers are being injured at the same rate as other ethnic groups within each of the occupations, this would suggest that it is mostly exposure to risk responsible for the higher rates. However, if the injury rates are higher, this suggests there are other factors involved.

Figure 3 clearly shows that, within occupations, Pacific workers' injury reporting is higher than that of non-Pacific workers. This is particularly the case in the labourers occupational group, where the injury rate is almost twice that of non-Pacific people. The other occupations that stand out are clerical and administrative workers, where Pacific people's rates are almost six times those of non-Pacific people.

Labourers are the largest occupational group for Pacific people, with 5,088 employed in 2009, and Figure 3 shows that this group also has the highest injury rate, with 68.2 injuries reported for every 1,000 people employed. This suggests that a focus on interventions with Pacific people should include an emphasis on labourers to achieve the greatest injury rate reduction.

Figure 3: ACC claim rates in manufacturing in Manukau, by occupation, 2009



Source: ACC & Statistics NZ

4.4 Fatalities in Manukau

ACC fatality reports in Manukau manufacturing from 2002 to 2009 were examined to ascertain whether Pacific people are over-represented in this type of accident (see Table 5). Fewer than or equal to three fatalities were found across the entire period considered (2002–2009). NZ European workers made up the majority of fatalities in Manukau manufacturing during the period. This suggests that while Pacific people are experiencing a high rate of injuries reported, the injuries are not anywhere near as frequently fatal as the frequency experienced by NZ Europeans. While any fatalities are always a concern for workplaces and health and safety, the relatively rare nature of fatalities within Pacific workers' injury reporting suggests that targeted campaigning towards Pacific people does not need to focus on fatal accidents.

Table 5: Fatalities in Manukau manufacturing, by ethnicity, 2002–2009

Year	NZ European	Māori	Pacific Peoples	Asian	Other	TOTAL
2002	≤3 ²²					≤3
2003	≤3					≤3
2004	6	≤3	≤3	≤3	4	14
2005	14	4			≤3	20
2006	8				4	12
2007	15	≤3			≤3	18
2008	8				≤3	9
2009	13	≤3			5	20
TOTAL	66	9	≤3	≤3	18	95

²² ≤3 means less than or equal to three. This data is suppressed to maintain confidentiality.

4.5 ACC Claims in Manukau, by Sex and Age

To better understand where the injury reporting rates are highest, the data was grouped by ethnicity, age, and sex (see Appendix C). It was clear from this that men aged between 24 and 65 years consistently make up the majority of the claims in the manufacturing industry in Manukau. This is not surprising given that men in this age bracket also appear to be the largest group employed within the industry. However, if the data from 2006 is representative of the industry, as expected, then this group are not just the largest group but they also have the highest rate of injury.

For future work targeting health and safety practices, it is the middle age group, particularly those in the 41–65 years age group, that are contributing the most to the high rates of injury reporting for Pacific workers in Manukau manufacturing. Research from ACC (2010) has suggested a link between reporting and the presence of other health issues, such as gout, diabetes, and cardiovascular issues. This may be an underlying factor for this age group, and this is discussed in greater detail in section 7.3.

4.6 Activity Prior to Accident in Manukau, by Ethnicity, 2009

The data offered the opportunity to see what activity was being undertaken immediately prior to the injury occurring. This data is of limited use, however, because much of the time the field was left blank and it is not clear whether the most common activities are also the most common activities undertaken in the jobs in manufacturing. However, it does point to examples that can be used in any future education campaign or harm reduction initiative.

The most common specific activity being undertaken prior to the injury occurring was 'lifting, lowering, loading, unloading' (see Table 6). This was by far the most common activity, with 'walking, running' the next most common, but with less than a third of the frequency.

Table 6: Activity prior to accident, by ethnicity, 2009

Activity	NZ European	Māori	Pacific Peoples	Asian	Other	Total
Lifting, lowering, loading, unloading	78	22	87	36	12	235
Walking, running	29	7	18	11	5	70
Operating machine	24	6	12	12	5	59
Using, operating (not machine)	23	3	19	9	2	56
Getting on or off, in or out of	13	6	3	2		24
Carrying	8	1	5	2		16
Other/blank	481	233	645	170	122	1,651
Total	656	278	789	242	146	2,111

Source: ACC

4.7 Cause of Accident in Manukau, by Ethnicity, 2009

The data included a field for the cause of the injury, which was also of limited use, although like the activity undertaken prior it does give some insight into possible intervention initiatives. Not surprisingly, given that the number one activity a worker was undertaking prior to the injury occurring was 'lifting, lower, loading, unloading', the most common cause was 'lifting/carrying/strain' (see Table 7). This was followed by 'collision with/knocked over by object.'

Table 7: Cause of accident, by ethnicity, 2009

Cause	NZ European	Māori	Pacific Peoples	Asian	Other	Total
Lifting/carrying/strain	105	47	192	63	28	435
Collision with / knocked over by object	88	39	70	36	17	250
Work property or characteristics	100	24	63	29	16	232
Struck by handheld tool/implement	57	16	54	21	7	155
Puncture	35	14	23	14	8	94
Other loss balance / personal control	32	10	30	5	9	86
Twisting movement	27	8	25	11	10	81
Slipping, skidding on foot	30	6	25	9	3	73
Tripping or stumbling	20	1	9	8	1	39
Pushed or pulled	13	10	9	4	3	39
Object coming loose / good shifting	15	4	13	6		38
Exposure to elements	18	4	10	1	3	36
Misjudgement of support	9	2	11	4	2	28
Loss of hold	9	2	10	1		22
Other or unclear cause	98	91	245	30	39	503
Total	656	278	789	242	146	2,111

Source: ACC

4.8 Summary

The data clearly shows that Pacific people have consistently had higher injury reporting rates in the manufacturing industry in New Zealand. When looking at Manukau specifically, there is evidence that occupation is an influence on the higher reporting rates, with Pacific people being over-represented in the higher-risk occupations. However, it is clear that this is not the only factor, with the reporting rates for Pacific people within the labourer occupations being almost twice those of non-Pacific people. Labourers is also the largest occupational group that Pacific people are employed in within Manukau manufacturing, suggesting that initiatives should focus on these workers in particular to have a significant impact on the reporting rates.

Pacific people are under-represented in fatalities reported to ACC, with NZ Europeans being the over-represented group, suggesting that a focus on injuries that cause death may not be the most appropriate for reducing injuries among Pacific people. The injuries that have activity prior and cause recorded suggest that lifting, lowering, loading, and unloading present the most common scene of the injuries reported, not just for Pacific people but across the manufacturing workforce in Manukau.

Pacific men aged between 41 and 65 years appear to have the highest rates and numbers of claims, suggesting this group should be an area of focus for any intervention initiatives in the future.

5 EMPLOYEES' PERSPECTIVES

The employees' perspectives provide the largest data set used in this research. Their opinions and experiences are particularly relevant for understanding the motivations behind the reporting behaviour seen in the statistics. As noted in the methods section, there were a total of 40 interviews with employees, of which 30 were Samoan, five were Cook Island Māori, one was Tongan, one was Rotuman, one was Fiji Indian, and two were of mixed ethnicity. This is reflected in the discussion, with much detail stemming from the majority Samoan group of participants.

5.1 Health and Safety Attitudes

The employees interviewed in this study had a good understanding of the definition of health and safety, and its importance in the workplace.

I heard it ages ago, but they explained it to us in Samoan. They said health and safety is about looking after your own safety first. If you work on a job, make sure you take responsibility to keep yourself healthy and safe in your workplace. If you're working on a job, for instance a sanding job, you still need to wear a mask, put on the safety glasses, gloves for your protection. That is my understanding about health and safety.

OK, first and foremost is the safety of all workers on site regardless of whether you work here or not. Health, well the last thing you want is an unhealthy person turning [up] to work and passing their flu on to somebody else...

To me, personally, health and safety is about reducing injuries to myself and prevent an accident from occurring. We have to ensure that all of our duties and responsibilities comply with health and safety requirements to prevent us from having accidents. That's what I know. In anything I'll be working on, ensure I need to protect myself to prevent myself from getting into an accident.

I think it's good and important, every place should have health and safety regulations. Standards help make the workplaces and other things and other areas like, you know, safe to work in, a good environment in it.

Before, I wasn't really paying attention until I got told about health and safety. I could never see through the importance of health and safety in operating a sewing machine. To me, it was just a sewing machine as long as you don't put your finger under the needle. It wasn't really a big deal. But now [I see] it's really important to learn and train people about the safe use of machinery.

One worker stated that health and safety also meant addressing the small things like picking up rubbish, because failure to do so could clutter the work area and create bigger health and safety problems.

It is a very important part of the workforce, you know, ACC nowadays or in factories, on the road, accident everywhere, but it causes from small things which is you just ignore it. To me if you see something lying on your walkway, some people they just ignore it, but that small thing is causing a big trouble or accidents or something like that. So you got to do something about it, like picking it up and putting it in the rubbish, or wherever it's supposed to be, and that will, that sort of, you know, causing trouble or an accident.

Reporting

As discussed in the Statistics section, this study is looking at the reporting rates for Pacific workers in the manufacturing industry in Manukau, which means it is reliant on injuries being reported to establish the levels of injury. There is always a risk of under-reporting, which may skew the results and thus the findings. There was also the issue of the Puataunofu Manukau Project, which may have had an impact on the reporting, contrary to an over-arching influence creating under-reporting. Participants in this study were asked about reporting behaviour to gather some insight into whether this was a factor in this study.

In contrast to the high levels of understanding of health and safety practices found in this study, many Pacific workers stated that they did not report injuries, whether minor or major, for a number of reasons, including: fear of losing the job, worrying over loss of income, and not wanting to disappoint the employer. The reasons why injuries were not reported are revealed in the experiences described by six Pacific workers.

Yeah I think it's not, I think it's the blood. I mean, for the Islanders, if we have a small pain we will think it OK, right, and, ah, if we cut your hand and look at it and it's a small thing, you know, not to worry about it because, ah, we, most people don't report it because it's only a small thing and that it will go away, you know? But now with health and safety, it is getting pretty strong and, you know, and, ah, people are starting to change.

It's not like I'm really worried too much about the parts on the line, because in laundry I always used to have little cuts, because we handle sharp parts with edges. When I came here, it hasn't been that sort of work so I guess the only hazard is the fire handle, sometimes I get a little burn here and there, but that it's always, I think I've always been used to it so that will be minor unless something caught on fire and blazing caught me somewhere on the face or something, then it will have to be serious.

Just handle it. Sometimes I just go and get treatment at home, herbal medicine, sometimes slap a bit of aloe vera.

Yes, depends, as long as I don't get hurt I guess, and I report. Mind you, all injuries here are mostly people's hands getting caught in the machine,

or just back injuries. But for me I've never come across it yet, like I don't think I've ever had one yet I don't know why. I won't lie to you man, I've had an injury in my back, but I still force myself, you know, that Samoan thing I got to make this money for family, can't complain about it. Yeah, I didn't use the right technique to lift and it was my fault, yeah, and I was like injured for two weeks but I still came to work.

That's where I hurt myself, there at [company]. I hurt...when I crack the box, I wasn't expecting it was a heavy one, and then just lift and then I hurt my back and then I went straight home. The problem, I didn't bend my knees, I just bend down like that and then just grab it. I was just go hard and then, you know. My boss I told her, and she said, 'Oh well you go home because you can't do anything, you've hurt yourself, go home.'

That's because we take it for granted, that's the other guys here. Ten or 15 or 20 years ago, I should say, health and safety wasn't kicking, and when you try to change the culture, say, 'hey those days are over'. They try to say to me, 'We never had an accident back 20 years ago,' and I say to them, 'Maybe at that time, everything was being done manually...Nowadays things was going faster, different technology.' I try to change the culture at work, not the heritage, not double standard, everyone's in the same boat.

For these workers, the only time an injury is reported is in a situation where the injury is so significant that there is no way around not having to report it. This would also be the only time medical intervention is sought, otherwise alternative medicine is preferred.

However, there were cases contrary to the above. Some of the workers interviewed discussed the need to report minor injuries and near misses.

Ah well, it's funny because when you are talking about that and you're telling me about what the culture is about over the years, you learnt that anything hurt it can come back and bite you later on. So it may be a scratch, people just need to report it. But anything really, whether you think that it's major or not, that's where we go wrong and we get a little cut and then that can get infected. And make sure that you report it so that there is documentation that he had cut his, you know, you go through the right channels.

Near misses are situations when something almost happened that would have or could have caused injury and thus have attracted medical attention. Near misses are often neglected and trivialised. A Pacific worker recognised its significance and acknowledged it.

I will report everything, even a scratch, or near miss.

There is some evidence that there is an undercurrent of non-reporting by Pacific workers in the manufacturing industry in Manukau, but it is not clear from this

study whether this is specific to Pacific workers or whether it is industry wide. This is an area that could extend the current study if looked at in the future. This study is not focused on under-reporting, but it does provide a better context for understanding Pacific people's reporting behaviour and suggests that the injury rates are even higher than those seen in the statistics.

Responsibility

Workers were asked where the responsibility for health and safety lies. Some commented that it was everyone's responsibility and the rest thought it was his/her own responsibility.

Safety one, make sure they, because sometimes we assemble those sharp edges of you, know, the shields, so I, we, supply the gloves to wear when they do their work there.

I suppose if what you're doing, you gotta keep it clean, make sure bits and pieces which can cause some slipping from the floor, you gotta make sure you sweep it, once it falls. Some of those parts fall off you gotta pick it up straightaway otherwise it will be too late. Not only in that area but other areas.

We had to fill in observation every week, and also a 'near miss', 'anything', 'hazard', have to fill in at the same time looking after the guys. If someone is not wearing the safety glasses, to put them on. Some of the guys went outside and straight in without wearing them. Remind them to wear your glasses, if you lose your eyes, you're nothing.

I just tell them that the glue is hot, don't try and do something silly and, ah, cause the glue will bounce back on your skin and it spread down on you like that. You gotta be fast because the board's coming fast.

Climbing over the machines, some crew members do that while the machine's running. Sometimes you have to climb over the machine and see what's on the other side. Really, you don't have to walk right around the machine and see what's happening on that side. So the box is not folding properly for some reason, and you can't even see if you have a look and you can't adjust anything. You have to walk right around the machine and adjust because the machine is on.

Following this, workers were asked if they would report hazards in the workplace. The common response was to report it, if it was deemed dangerous and required action, but the next step after the reporting varied in terms of whether to fix it oneself or get someone else to handle the matter.

First thing I'll do is let someone know, health and safety officer or team leader or someone. If nothing could be done about it I will try and solve it myself.

In my area, I go see my team leader first and talk to him about any danger before an accident occurs or something gets worse. If he comes and sees the problem is getting worse, then he will try and stop it immediately and then call on the people who are responsible for it. Even though we know about the cause of the problem, we have to stay back and observe and let the professionals do their work; i.e., to fix the problem for our safety. We don't have to try and fix the problem. They told us if it's not your job then don't try fix it.

There was some understanding among the employees interviewed that the responsibility for health and safety lies both with themselves and with anyone who enters the workplace. The messages as to why health and safety is important appear to have gotten through to those who participated in this study. However, the rates of reporting still remain at a higher level than in other ethnic groups, suggesting that another factor is creating a higher rate of reporting.

5.2 Communication

Communication between staff and managers was raised by employees as being an issue. Although the employees interviewed had an understanding of the principles of health and safety, it was clear they felt there were gaps in the messages being communicated.

Training

Pacific workers who stated that they had received health and safety training when they started the job acknowledged the value of the training they had gained and described the importance of this training when they practised it in the workplace.

They put me all on those health and safety courses, and all the other first aid, can't find spaces. Not because I'm going to get it, but just for me to know when they do happen I have a rough idea how to rescue or so I can roll out to the customer floor. This is a safety aspect of that safety permit.

If you're doing the, uh, heavy lifting so they train us how bend your knees down, straight your back up and lift, yeah.

Um, what's the other one? Oh yeah, where the fire alarm, so yeah, make sure we, um, straight where we, um, the assemble point outside where those assemble point.

Other Pacific workers mentioned that they had received health and safety training from past workplaces or from other departments, which they transferred to their current workplace or department.

Yes, the first time that I was down in X, haven't been to X, it's, yeah, Sunday, they trained me in the health and safety, yes.

However, the ease of transfer of health and safety training from one workplace to another varied in terms of the type of workplace they previously worked in and the level of training they received, which could be anything from basic to comprehensive. In one instance, a Pacific worker commented that when he received health and safety training specific to the department he was working in, it closed down and he and his colleagues were reassigned to other departments in the same workplace. When he started in his new department he didn't receive any updates or health and safety training specific to this new department and assumed his employer didn't feel that further health and safety training was necessary.

I just remember getting the health and safety training from the [old department]. Maybe when we came here they would have thought we already had the knowledge about it, you know, knowing we already did it.

Another suggestion for the lack of health and safety training was made by some Pacific workers, who stated that it depended on the type of work that was undertaken, as some duties were not really regarded as a significant health and safety concern. Limited health and safety training also applied to Pacific workers who were 'temps': one Pacific worker felt that his work status had determined the depth and extent of health and safety training for him, not the type of work he was employed to do, so his health and safety training was different to what a fulltime permanent staff member received. Further research into health and safety for temporary workers would be a useful extension of this work.

...because we're temps, it's not like they opened everything to us, just a little bit like that, plus they told us, depending on the work we do we'll need to put on our safety boots. The only other thing they told us is that if we need further information or need anything about our safety then we have to ask them. That's all they told to us.

The length of time between comprehensive health and safety training when they first started and the next health and safety refresher training or update varied. Some Pacific workers received it either within or beyond a five-year period, while other Pacific workers had not received a refresher or an update since they started working.

The quality of health and safety training for Pacific workers varied, but this should be standardised, regular, and comprehensive if sessions are to be effective. There were Pacific workers who had been employed for over a decade and had not received a refresher course. This leads to developments such as shortcuts and the passing down of shortcuts to new Pacific workers. In terms of basic training, one Pacific worker said he was given a folder to read, he was not shown around the factory because it was closed for maintenance, and a week later he was working in the factory. All he knew about health and safety training was the following:

First aid box location and fire alarm drills. I think it was my second week, but there was no training, basically being shown around, where we put the

cream, and the bandaids if you need it. Then we walk around, pointing us to an exit in case of a fire alarm, and that's what they've communicated to us...

Finally, an area that some employees discussed who had previously worked in one of the Pacific Islands was the difference between expectations of them there and the expectations in New Zealand, where standards are less rigorous in their country of origin. This highlighted the importance of effective training for all staff, even if they have previous experience.

When I was in X, every day you were looking at those big bags of sugar, about 20kg, if you lift one that is enough for the whole day. It's very heavy. So when I came here and I said, holy me, lucky me. I know that in Samoa there is no technique. No lifting, breaching and bending because bending can cause...

We'll just go through the process, because you're telling him he's supposed to be inducted or somebody with him if he's doing something wrong.

Learning styles

(This will also be discussed in the employers' section.)

Pacific workers reported that their learning style was not consistent with the approach taken when training in health and safety. Pacific workers stated they prefer to learn and receive messages through demonstration, or being shown how to do something in the first instance. Then they can copy what they have been shown and later keep practising it until they are competent and adept.

I like learning hands on. For example, we have a guy he thinks he knows it all, he reads a lot about what we do. So I said to them, you bring your binder and I'll bring my hand. He end up coming to me and say, 'How do you do that?' I said, 'What did the book say? I'm using my hand.' To me learning using your hand is much better than reading. Some of the things don't match what we do.

A handful of Pacific workers preferred to learn and receive messages by using either a combination or all of the approaches (talking, reading, formal instruction, and workplace demonstration).

I can learn from both, but then I'm very happy if you show me how to do it, or like listening and read. Like the course we do, on those we just listen and read them.

Ah, for me there are things that I can visually see and I can do, but I am not a fast person, fast thinking, so I sit at the back and do a little bit of reading. I mean, read and then go back, because I like to trace back [interrupted] [laughter]. I like to see, and I like to read about it, and I like

to be shown it, yeah. I'm not, I can't just read and understand everything. It's not me.

This was in contrast to the way in which they currently learnt about health and safety issues in their workplace. There were three ways in which messages about health and safety were passed down to Pacific workers. The first was through email:

When they sometimes, they email us, so if they got some news for the whole they have each, um, leaders in areas. So they email us, so ... we have to check our emails every morning, so there so there's any good news or if there's any news, so we can pass it on, because every Wednesday, we have a meeting each line. So, yeah, that's the time we, so, but if they have other news, you know, before that meeting, all those ladies here will come around and let us know...

The second way was through team meetings:

It will just be a team meeting once every week. If there's a health and safety issue we usually have them come around and bring up the issues about it.

The final way was through visits by appointed health and safety officers within their workplace:

Yeah, those health and safety members committee, they always come over.

The examples given show a disconnect between what is needed by employees and what is being provided by employers. This gap may have a contributing role in the increased injury rates that are revealed in the ACC reporting data.

Language barriers

As seen in the literature review, language barriers have been shown to increase the level of health and safety risk faced by staff. This occurs in two ways: by lessening the comprehension of written or oral messages (Premji et al 2008), and by increasing the chances of a worker being employed in a physically demanding occupation (Smith et al 2009). This was discussed in interviews with employees and employers, though it came out in more depth with employers.

Signage was an area where the issue of language barriers came up, though only for a small number of staff.

It's good, though, if there are translations for the older people, especially the young ones from Samoa who have recently migrated to New Zealand, especially the newcomers.

Probably some of them will understand what it means, but it's better to explain it in Samoan, like put Samoan word down the bottom so they know what it is. It's like I said, it's alright for the other fellas, they know what it is, they are born here, but for the older people.

Two workers suggested that language is a reason behind some of the under-reporting.

Interviewer: As to the causes, are you as the team leader helping, some of our Pacific workers are sometimes shy, or a bit scared of reporting...

Participant 1: Language barrier.

Interviewer: Are you assisting?

Participant 1: Yes, like I said before, that's all part of my role. They explain to Samoa and I can put it in English. Explain to me what happened in their own words and I translate it and put it down.

Participant 2: That's what I want everybody to do it, like every time I go up see the boss. But, like you say, they too shy and some of them, the English is not that good.

Language barriers were not discussed much by employees. This may stem from a reluctance to talk about a lack of English-language ability by employees who already feel marginalised by it. However, there are clearly cases where this is creating a barrier, and translating training materials and sessions is a potential mitigation technique for this.

Interviewer: Should that be in a Pacific manual?

Participant: They should. I think that's a good way to make people understand what safety is all about. But, I don't know, it's kind of hard for people to translate that...

Literacy

Low levels of literacy is discussed in existing studies and it correlates with poorer health and safety outcomes, although a causal relationship has yet to be established (Lashuay & Harrison 2006, Arcury et al 2010, Menzel & Gutierrez 2010). Satherley and Laws (2008) found that Pacific people in New Zealand have literacy rates that are less than half of New Zealand as a whole (see Table 1), which suggests it could be a factor in this situation.

This was explored in interviews with employees. However, much like language barriers, little came through in the interviews. Low literacy levels have a strong stigma attached to them and it is not surprising that the employees involved in the study did not openly discuss this issue. This area remains inconclusive at this stage as the interviews did not rule literacy either out or in as a factor.

5.3 Power Distance

Power distance is a concept developed in the 1980s by Hofstede (see Hofstede 1984) to describe the degree of inequality within a society, felt by those with the least power. This has an impact on the health and safety behaviour of individuals in a hierarchical workplace, where workers feel disempowered and that they have little control over their working environment. Employees interviewed hinted at this issue without explicitly discussing it.

One Pacific worker felt there was a lack of cultural sensitivity in his workplace, which meant he was not able to practise his cultural practice without losing earnings. This clearly seemed to have a disempowering effect on him.

It's one rule for everybody and sometimes doesn't understand the way the Pacific people. Funeral, say my aunty, she is still family but the law says next of kin for bereavement leave. The Māori people are like that, they brought up with their grandma, aunties.

Someone else thought that management and its decisions were at times inconsistent and unachievable, and left no room for input from staff members. This suggests there *could* be quite a strict hierarchy within the business structure, leaving employees feeling disempowered in their work routine.

I think management is not right all the time. I think plans lay out for our Toolbox meetings in the morning, you go there and you go there, and then next meeting an urgent job comes in. It is a lot of work changing for a new job to be set, up it's all manually, adjusting, takes a bit of time, if you really know the procedure, I follow the example, just finish a 250 job, we just finish last night, and then we change over to 40 job, and then all of a sudden they come back we need tonnage of 250, and we just finish, and the other boss we have to change it back again. We use to have our own individual planner, but this planner to run all three sites it's a bit hard for the planner.

There were also hints that, at times, management was more focused on getting through the work and less concerned about doing this safely.

Got to be honest with you, I really have issue with management, cause I'm part of management as well, but you gotta ... sometimes compromise our safety by, they're driven, you gotta [get more product]²³ out the door. That's pressure to me as a team leader, to get the guys, and somehow I demand the guys, and by that demand it will compromise their safety, you know? They lost things, the stress and frustration kick in.

Another employee mentioned that contact with management was scarce—another sign of a more hierarchical workplace:

²³ Edited to maintain confidentiality

Interviewer: No, all right, do you have a manager, that's the boss of your supervisor, do you have someone like that? Have you ever met that person?

Participant: Haven't talked to him personally but, yeah, I know I've seen him around

Interviewer: OK, has he ever come over to say hello to you for the last five years?

Participant: To be honest, no, but he's all right. He just comes along and has a little observation thing going on and just does his own thing.

This sort of distance between management and staff could introduce the potential for health and safety issues to arise. Minor injuries could remain unreported if staff feel unable or unwilling to approach their supervisors or health and safety co-ordinators.

5.4 Samoan Culture

Due to the large proportion of Samoan participants, much of the discussion on culture relates to Samoan culture.

When asked about their culture, the most commonly mentioned practice was respect. After this, employees mentioned humility, loyalty, and hard work. 'Respect' is a wide-reaching term that refers to respect for the hierarchy within the organisation, but also the hierarchy created by age. Older workers are automatically given respect by younger workers. In every case, where a Samoan worker was asked about their Samoan culture, 'respect' was the first topic or issue for discussion.

If I respect someone, there is sort of different respect, that you respect your family, you respect someone else. I respect you with everything and one on this side, I respect you as a friend. I can't explain the two respects, but is always in me that you're my brother, I will respect you, I will give you anything you want, but you got to give them respect.

I fitted in well with them. Having all of these guys smaller than you, you have to respect. It's automatic coming from a Samoan family.

Samoan culture ... for me Samoan culture is respect, to respect especially the old ones, and even if the small one, and then the small one will respect you. That's the Samoan culture.

You gotta respect your team leaders, you gotta respect the elders, you gotta respect women who you working with, you gotta respect your boss. There's a boundary in between all those.

The second practice was humility.

Oh yeah, you know all the Samoan, the humble, you know, because without that, you know, just, you know you, just humble yourself, or whatever, because you face all those different people.

This practice combined with loyalty (tautua) at times led to staff members doing work that was not part of their role. But because they were asked to do it, they performed the task.

You know, I didn't ask for something like this because I didn't know what a safety rep is, but they kept looking and looking at me the way I work, and everything they ask me I do. Can you sweep? Yes, I sweep, even though they're in the toilet I sweep, but that is not my job. Most of the time I come the toilet is a mess. I close my eyes and then, squish squish squish, clean. To me that is because that is the job is the Matai²⁴, and this is my tautua to the Matai.

Though none commented that this had a direct impact on their health and safety practice, there is the potential for this willingness to step outside their role to be exploited by employers and to create unsafe situations for these workers.

5.5 Summary

The interviews with Pacific workers raised communication issues that are occurring for them that lead to a reluctance to report minor injuries, along with less accessible training and health and safety messages. These issues stem from learning style differences, language barriers, a power distance between staff and managers, and (potentially) literacy issues.

Both literacy and language barriers were two areas that were only hinted at during the interviewing. This could be related to the style of data collection, where individuals may not want to talk about problems in either area because of the stigma attached. However, the international literature suggests that these factors are at play for workers who are working in countries where the dominant language is not their primary language.

Training in health and safety came through as an issue in both kinds of language barrier, but also in the learning style preferences. This was not an area that appeared in the literature but seems to have a significant impact on the worker's uptake of health and safety messages. Future work that looks at training will need to examine the different media that can be used to transmit messages, giving particular consideration to giving hands-on demonstrations in small groups, rather than large lecture-type sessions.

²⁴ The term Matai can be loosely translated to the title of Chief. It is a position of power and responsibility within the fa'amatai system in Samoa. For more information, see: http://en.wikipedia.org/wiki/Fa%27amatai#Matai_title

6 EMPLOYERS' PERSPECTIVES

The second substantive source of qualitative data for this study came from interviews with employers and supervisors in the firms participating. These interviews provide information on the context of the health and safety environment the Pacific employees are working in, the communication issues experienced by managerial staff, and the perceptions of Pacific workers in general, which arguably influence interactions between staff and management.

This section will first discuss the company approaches to health and safety, looking at the current situation, how this has changed, and the impact that unions have on health and safety standards. Following this, communication issues reported by managers will be discussed, including English-language ability and learning styles, as well as the formal social structures that are specific to Samoan culture and reportedly affect communication. Finally, this section will cover the managers' perceptions of Pacific workers, which were clearly influencing the approach taken by management with regard to health and safety messages in their workplaces.

6.1 Company Approaches to Health and Safety

Most of the companies participating in the research had well-developed policies and procedures for health and safety. They had put effort and resources into analysing their employee health and safety needs and had developed approaches which, to a greater or lesser extent, appeared to produce good health and safety outcomes. The reason for this was undoubtedly to protect their workers' welfare, but it also had a strong business underpinning.

Well, from a business perspective, I mean, people getting injured is going to affect the bottom dollar as well, so there's a whole lot of reasons. A person gets injured. They need time off work. We need replacement staff. All those kind of things, all the costs involved. Like you said, the humanitarian view and also just, you know, public perception does impact on the company as well, so I think there's a whole lot of things on why, you know, we want to protect our employees and keep our injury rates as low as possible.

If somebody was injured, then that's one—he has to leave the line. He has to leave the line to go and get him sorted out, and while he's away, you know, we're getting behind on production, you know? Whereas having that injury level dropped dramatically, we're finding that productivity is, you know, we're getting our numbers, we're delivering more than what we used to deliver when we used to have a lot of injuries ... well injuries sort of accounted for a lot of downtime, that we were getting, and we weren't delivering in that area. Now that's dramatically dropped; now we're getting good numbers through consistently.

Trends in health and safety practices

The number of workplace injury ACC claims in the manufacturing industry as a whole has been decreasing in the past five years. Peaking at 13,713 in the first quarter of 2005, the number of claims in the first quarter of 2010 was 9,471. At the same time there has been a gradually decreasing claim rate across the industry. Claim rates are used to compare annual data to address any changes in nominal claims due to economic activity (see section 4.1). Total claim rates within manufacturing in New Zealand have steadily declined since the June 2003 quarter, from 21.73 per 1,000 employed in the industry to 19.73 in the December 2009 quarter, with the lowest rate of 17.66 in June 2009 (see Figure 2).

This decrease was noted in interviews with managers.

There's been a big movement in the last four years in regards to health and safety and it's probably the best—I've been here, this will be my 25th year in June, and you know, where we're at in the last five years now is just absolutely, it's, you know, we've gone in leaps and bounds from when I first started here. It was like, this place was just a shambles and everything else. Over the last four, five years, it's just so—it's become very safe.

I've been in here for eight years with this company ... it was probably five years ago, the company wasn't working really well with the employees regarding safety—getting the employees the right training and skills and stuff like that to actually carry out their daily tasks with. It wasn't really strong, but it was being improved from five years ago. I think that's probably our last major injuries that we had...

The companies represented in this study are aware of the importance of early exposure of workers to hazards awareness and their need to follow good health and safety procedures. A number of employers pointed to the processes that had been (or in one case were being) put in place to get a new worker well briefed on appropriate behaviours from induction, though none discussed regular training updates.

But before anyone comes into [the factory], we have an induction which includes health and safety, making sure the people know what their role and what their responsibility for health and safety is, how to recognise hazards and what do you do, no horse-playing, and they know what are the company's responsibilities as well, to make sure that they provide a safe working place.

We have our health and safety reps in all the inductions, they're involved in that. So we're relaying the message back to them what needs to be done when they take employment here.

We'll bring them in here and we'll talk to them and go through everything on the safety issues.

What I also do is talk to new employees, take them through their health and safety books, where we have an assessment at the end for them to complete.

Among the employers interviewed there was some variation in practice. One respondent pointed to the complexity of the challenge, particularly when new health and safety approaches were being implemented, and the difficulty of changing long-held work habits.

So you plug one thing, and you go, okay, we think we've got that under control. Now another one appears. Put your finger in, and we let go with that hand, and it's, and it's spirals again. And I think that's to do with long-serving staff, and the culture that they have—not Pacific Island culture, just general work cultures.

Another manager discussed a relatively weak approach to health and safety in the company being represented.

We do the minimum, and we're pretty much fire fighters. I don't know about the staff. They don't really express any deep concerns about health and safety. When we have an accident, they're interested to learn about if their fellow colleague is okay or not, but that's I think—I've never had a discussion with anybody seriously, you know, apart from them complaining maybe that it's hot in the factory, that they think that they do a dangerous task or that something could be improved.

Unionisation in the workplace

A strong union presence in the workplace has a positive impact on health and safety. One respondent reported that the unions act as facilitators for the messages being disseminated by management.

The particular union people that we have out in the factory environment are really engaging. They know their community out there. They spread messages. They, they want to get involved. They want to keep the staff safe, so I think that's an advantage that they're out there on the ground floor. They know the people, but then they're also working in with different levels in management. So I do think it is positive.

Unions can clearly add value to the company's efforts to implement and maintain sound health and safety practices.

Well, they work together to make sure that the health and safety align with what, what's in-house, and they must support. So their role is the people. They have to support, like, discipline. If health and safety's a hazard, of course they have to support [company practice], to make sure that guy gets disciplined, not disagree with, 'Hey you can't give that guy a warning'. So the union here is very aligned with the company approach to health and safety. So they make sure that we are talking on the same

page. So, yes, the union does help a lot, especially accident situations and things like that in here—hazards, for example.

The union presence has a particular importance for Pacific workers because of their apparent reluctance to speak out in meetings where safety issues are being discussed.

The good thing about when you're unionised, because all those people who don't want to say anything to the boss, will hide at the back of the delegate, telling the delegate, these are the issues that I want raised—so the delegate won't name any names, but he said, look, we've got some issue here. But sometimes the manager asks, 'So who was it?' I said, 'I'm not going to name names, but these are the issues.'

Where union representation was not strong, and the quality of the organisers involved was reportedly lacking, it appeared that this had an impact on the health and safety environment.

I don't think our delegates are very strong—we see the union once a year for negotiations ... in my previous position, the unions were part of our daily routines, but here it's every six months we have contact, and it's normally for either wage negotiations or something's got to its final—some worker's got to his final written warning, or he's been sacked and, and they seem to intervene at the very end— cause the delegates are poor. And that seems to go also for the health and safety. The delegates here don't push forward any union health and safety requirements, or—so consequently they've no voice here.

But this was not the majority viewpoint given that most of the companies we contacted were heavily unionised and the union played an active role in matters such as health and safety.

6.2 Communication

Communication is an integral part of health and safety. One respondent explicitly discussed how important communication is in catalysing a change in the health and safety culture in his workplace.

Participant: Before it was, we had that, sort of thinking of leaving it to somebody else who will ... but now everybody's so sort of at a level—when they see hazards now, they sort of highlight it to whoever—one of the leaders or safety coordinators or whoever. You know, that's the culture that we've, that's in there now. It never existed when I sort of started.

Interviewer: What produced that cultural change?

Participant: Oh it was just communication—communicating things out there in the factory, where it counts, where the people are, are involved with it, they could endanger themselves.

However, there was a strong indication across the group that communication between management and staff did not always work well and some stereotyping was evident.

Yeah, sometimes they [Pacific workers] don't ask—they just keep it to themselves. I think that's one other major issue, is that when they have problem, they sort of talk quiet or very hard to approach or ask for help.

Well, I mean, I think they're, they're a shyer race of people in some areas. Like, [another company]'s a complete contrast to the area where I'm working. That's predominantly Polynesian, and they are quieter, shyer.

I don't know what they think. They don't tell me.

... they'll nod and smile. They're good at that. You have to really make sure that they've understood what you want, and often that means watching, and getting them to explain it back to you. But it's not enough to say, 'Can you do this?' so you know what I'm talking about. 'Yeah yeah,'—you'll always get yes. You always get yes and nodding, and then you're—and then they just won't do it. They won't give you, you won't get, 'No I don't understand,' or—they won't say, they never say no. It's very hard to get a 'no'.

However, there were examples where proactive communication that was adapted to suit the Pacific workers' style led to clearer understanding between management and staff and meant that the health and safety messages were perceived to have been taken onboard more fully.

I didn't so much tell him off as, 'Can you sort this out; can you get some scaffolding there?' you know? And the reaction you get it's always the same. It's always, 'Yes,' looking down and nodding and just accepting that ... They take it like a telling off, you know? Essentially I sat them down—we sat down outside on the ground. I was just explaining to them the process and why they had to do this thing differently, and all the implications right from marketing through to selling the product ... just explaining it all to them and saying what their part in it was. And by the end of the conversation they were smiling and looking at me—it had taken it from a telling off to involving them in it. And it, that was when it changed. So when they realised that I wasn't there to tell them off, I was there to explain things to them, they did start looking at me.

Learning style differences

In terms of a difference in communication style, a number of employers commented on the different learning needs of their Pacific workers. Styles of learning can differ within ethnic groups, but they also have culture-specific aspects that make a relatively common method of learning for one group inaccessible to another. The employers in this research felt from experience that large group settings were not appropriate for their Pacific workers. They reported

that if employees were in small groups or one-on-one, communication issues were lessened and the messages were more clearly transmitted to their staff.

This has implications for future work in this area, and for any initiatives aiming to focus specifically on health and safety compliance among Pacific communities. None of the literature examined in this study discussed learning styles as playing a role in differences in health and safety risk, but some addressed literacy and numeracy, which could be underlying the differences seen in this study.

Managers commented that their experience was that Pacific workers preferred to learn in a one-on-one or small group setting. Larger group meetings were seen as inefficient, because messages were not received, and often staff (though this may not be specifically Samoan staff) tuned out:

Today there was two of them. If there had been five of them it wouldn't have worked. With that type of guy, two of them was the limit, I could, I could get them to understand. More of them it would have just been lots of looking at the ground and nodding. Nothing would have changed. Yeah.

When I'm implementing systems and processes, I, I'll do that. I'll hold that formal, formal talk with the guys, but then I'll go down to the floor and go, OK, this is ... let's, let's have a look and see how this is going to work. Try it. Have a look. Talk them through the process, and make sure that they're happy with it, and make sure it works. If you don't do that, and there's your piece of paper, follow it [laughs], it's more likely to fall over.

We have general factory meetings where we're all assembled in a room, and I guarantee you, there is less than 10 percent even listening, because you can see who's looking up in the ceiling and just basically got that blank stare. You see ... it in the Islands, and you see the guys and the women. They'll just stand it and stare. They're just having that little bit of time out, you know?

We have our Toolbox meeting. Again my team leader or my health and safety reps to actually read the minutes or the new procedure, and we go through it and translate it to the guys. We also have a training session as well—like if we maybe take half an hour after our Toolbox meeting to actually sit down with the guys and actually go through everything really properly so they can probably understand. Other training we do is, we don't do everyone's at one time, so we basically bring, like, three, four people in one time and actually it's easier for us to do it like that.

With our guys here they're not really people that would sit down and listen for half an hour. When we have Toolbox, and I mean when we sit down and talk about safety, they fall asleep.

I think the smaller the Toolbox, the better, cause you can do big Toolbox where there might be 30 people and some, well, I see it when I'm, I might go to one of the converting weekly meetings, or something, and you see if

there's only 45 chairs, there might be five guys sit on the floor, and half of them in chairs are starting to nod off, and not interested. And it might only be a 10 minute chat from team leader, just to say, quality issues of the week, this, we're focusing on this. This week we got to remember this for this job, x, y, z, whatever. And the interest is gone. But when you get them in a smaller group, there's a bit more focus.

I have to talk to them one on one. Or, or two of them who I know are familiar with each other and don't mind being talked to or spoken to together. I would approach them about things like that, like, OK, did we have any safety issues today?

Added to the preference for a smaller group setting, managers reported that hands-on sessions on health and safety seemed to have the most success with their staff.

Tell me and I'll forget. Show me and I'll remember. *Involve* me, you know, I'll understand.

Sometimes written things as well is a problem. We give them pamphlets for people to read—'Oh yeah I read...' chuck it, 'Nah, no time.'

If it's handing out of brochures and that, people just tend to sit and look and put them on the table and, as you've probably noticed in the past, sometimes you go, leave somewhere and a few of them are left on the tables.

The interviews highlighted how important the method of delivery is in getting a message across, yet this was not always recognised in the chosen delivery method of health and safety training (as seen in the employees' perspectives).

Language barriers

International literature has pointed to language barriers creating increased risk in relation to health and safety (Premji et al 2008). This research also found that language barriers play a role in the miscommunication of health and safety requirements. For whatever reason, employees at times did not raise any issues relating to language barriers with management, and this meant there were language discrepancies that were missed.

This requires employers to adopt appropriate strategies to overcome misunderstanding and to convey essential health and safety information. Employers interviewed for this study discussed times when this was an issue in their workplace:

The workshops do work if they are presented in a format that people can understand. Everybody speaking English is not going to work. I recognise that. I wish I could speak Samoan.

If people can't watch the video, and then answer 20 simple questions ... and that's nothing to do with literacy. That's a language issue.

You do get miscommunications out there. Some people out there, I know if I talk to, they'll say yes to everything, and just very, very, very agreeable people, but doesn't actually mean that, that the answer is yes. So I think if you don't realise that sometimes that's the response you're going to get, then you'd be, OK, fine, you can carry on with the job, whereas they actually haven't understood you. So, yeah, those language barriers can be a problem like that as well

If English isn't their first language, they, they may not actually quite understand what's being asked of them at times, so not fully understand the role that they're being asked to do and how to do it safely. And so then they end up injuring themselves more because of that.

To this end, employers discussed informal measures that were put in place to try to overcome language barriers, involving asking other staff with bilingual skills to translate. However, this was not done in a systematic way and it was evident that barriers still persisted.

What we do is, we, when we do our training or we start explaining to the guys or we talk about a new procedure or old procedure, we also have a translator as well, in the old language, a person who actually can speak it and is really clearly, and also understand their own language. So we actually get them to actually translate it to their own people, and I also, and I do the other translating for the Tongans. So yeah, we use that—because there's a lot of people on here who actually can speak English and also speak to them in their own language as well.

I have to say something in Fijian. I know a little bit of Samoan—mostly swearing [laughs] and that's what my team leader is, because he's a team leader, he's on health and safety too. And after he say things, and he's expanded in Samoan—and they ask questions in Samoan. And we, you know, and we discuss things and yeah, I think it's, hopefully it's mostly things—I don't know about in here, that, you know it's a good thing, because there's somebody here to explain it to the boys in Samoan as well. It's really important. You know, I'm a Fijian, I can't speak in Samoan. I pick my team leader, he's a Samoan, so he can explain it and he got willingness too.

In every Toolbox meeting we have health and safety issues as the first subject that we talked about before anything else. We know that he is having problem understanding English, we have a Samoan supervisor actually doing the training. So he'll be [able to] explain everything to him in Samoan.

The issue of language ability was not specific to Pacific workers. One interviewee discussed the communication techniques used with Chilean workers:

Well the Chileans are a good example. One of them is quite good, well his English and that was ... the other one is nowhere near as good. So at times you have to go to one and say, 'Now you explain what I've just explained to you, to him,' and make sure that they do understand.

This shows one of the main ad hoc measures undertaken by management to address the language barriers: many managers spoke about using bilingual staff to translate the messages. This had its own issues, in that messages could be incorrectly relayed and management would not be aware of this. The formalisation of a role like this one way to address mixed messages. If a staff member, or an external translator, is employed specifically in this role, management have more of an opportunity to hold this person to account.

The issue of multilingual workplaces is becoming increasingly important in the light of an increasingly globalised workplace. The language barriers noted by the employers in this study are unlikely to be a rare occurrence, and are more likely an indicator of an issue underlying health and safety in workplaces with a diverse workforce.

The Matai system

The Matai system in Samoan culture was explored in a number of the interviews with employers. The Matai was seen as one of the key power players in a workplace that is composed primarily of Samoan workers, which was the case in the companies we researched. Although it was not too difficult for the managers we interviewed to recognise when 'competing' messages or versions of the message were being discussed at a meeting, it was sometimes a challenge to operate in that environment.

I had my Toolbox meeting with the guys. OK, this is what we're doing, this is what—tell me what you want us to do. And then, after then when we go down, half of the guys are still having their own meeting. You always hear one guy actually going, 'Oh they're having a meeting over there.' So we have a lot of Matais working over here. And the Samoan tradition is, is to respect the oldest, so whatever the oldest or the Matais actually tell them what to do is what they're doing.

...because the team leader was a Samoan. They would never listen to the team leader; they would only listen to this guy because he's a Matai.

Concern was expressed about the potential for the reinterpreted messages to give the wrong information that could ultimately be harmful to workers (and particularly to younger workers, who are often influenced by their elders), although there was no evidence of the employers attempting to address these concerns.

If they don't listen to the supervisor or listen to the health and safety rep, and listen to their own chief, and they definitely end up in the wrong place

in the wrong times and then end up doing something they're not supposed to be doing—yeah I think it will affect them one day, on the health and safety. Basically it happens to younger workers, because of the fact they listen to their elders. Basically the elders are the ones with their own way of doing things.

The significance of the Matai culture for workplace health and safety is considerable. It prescribes the relationship hierarchy and the behavioural responses people on different levels would normally make in any given situation. For example, as demonstrated in the preceding quotation, a younger worker would not normally speak out against an elder/Matai.

Being able to understand the power dynamics being played out on the factory floor and adopting appropriate methods of transmitting messages is key to a smoothly operating factory—one where health and safety stand the best chance of being protected.

But a lot of the guys there, especially the guys that are in their 50s and ... there's a lot of family stuff that goes on and you can see that amongst the guys, how they respect the senior Matai ... because there's different levels of Matais in Samoa. And when that comes here, you can see how one Matai talks to another Matai, and especially at gatherings when we have the union talks. The guys that can speak fluent English would stand up and talk, but that's after advice from one of the wiser guys of the workplace.

As indicated above, there is a major challenge for managers in a workplace with Matais present to develop strategies to work with the deeply entrenched Matai culture and not against it.

But a big part of it is played by the culture ... a lot of Matais have been here 40 years, that's been in New Zealand 40-plus years. Because our culture is still at home and he's the Matai and he'll be going back and forth between Samoa and here and he's still as—I don't know, he's still the same as a Matai who would come over from the Islands. But the basic behaviour may be different. But internally, how they think, they will still think back to the culture.

6.3 Perceptions of Pacific Workers

Although there is no universal 'Pacific worker' description that would accurately encapsulate the entire Pacific workforce in New Zealand (or in Manukau, for that matter), an employer's perceptions of their employees plays a significant role in how the employer communicates with and treats individuals. These perceptions affect the interactions that are occurring between the two groups, both generally and in terms of health and safety messages. This research revealed many of the common perceptions of Pacific workers that are prevalent in the manufacturing industry in Manukau. Some of these perceptions were in agreement with what the workers themselves were saying, and some were not. All are reported as they were stated, with a more critical evaluation in the discussion section.

Overall, the comments from employers about Pacific workers were positive, and the themes were based on hard-working, respectful employees.

Self-effacing behaviour

Employers discussed respect for authority as making a positive contribution to the workplace, but that it may also have a detrimental impact on a Pacific worker's health and safety. When asked why a Pacific worker might not report a hazard, one employer representative interpreted the attitude as follows:

Yes, I don't want to speak up. I might get in trouble. I don't want to overstep the mark—but there's a hazard there, they're supposed to fix it, I don't want to report it, he might get angry—absolutely. That's probably the major factor that our Pacific Island people are too proud or they don't want to piss off the boss. What I reckon is, pissing off a boss is a good thing, to be honest, because it will bring the best out of two people.

Another employer discussed the potential for this practice, when combined with an unsafe request from an employer, to lead to dangerous situations for the worker.

It's probably ingrained in them, the cultural thing where respect is high ... a boss might say to someone, 'Move that chair from here to there' but in doing so, they fall in a big hole ... They may not say too much about it. Instead of saying, 'Hey look, it is unsafe to do it', a lot of them won't question it. I do notice it sometimes when there are big meetings in the factory. They all just sit quietly and accept what's said, and don't really get involved in pushing back with comments, possibly out of respect for the elder or senior statesman.

Fatalistic beliefs and spirituality

Employers reported that they thought a level of fatalism existed in some of their Pacific workers. Fatalism is an 'acceptance of the belief that all events are predetermined and inevitable'.²⁵ Employers stated that their experience was that the spiritual and religious convictions of some of their workers involved an element of fatalism, and this affected their decision-making with regard to health and safety practice.

It was clear there was a feeling amongst employers that some Pacific workers had a belief (akin to fatalism) that if something was going to happen to you—in this context an industrial accident—then there was little that could be done to avoid the accident. The concern was that a worker may not take appropriate actions to improve their approach to health and safety in this situation.

Certainly some of our Pacific workers believe ... that, and if something's going to go wrong to you, then it's, it could be somebody's actually put a, a spell on you and things like that. We still get that from a lot of the

²⁵ Taken from the *Free Dictionary* (<http://www.thefreedictionary.com/fatalism>)

workers out there. They actually believe that—you can see ... in the fact that if they're going to be injured by it, then it's probably somebody else's doing—that something else happened that's caused it, rather than ... if they've made mistakes themselves.

Another health and safety issue that arose in relation to a Pacific worker's commitment to religion and the church was the propensity of workers to seek faith-based healing. The comment that 'God will provide' was mentioned more than once during our interviewing.

'My God will look after me' ... looked after by, through my religion, and it'll get better. So they put off going to the doctor. A month later it's worse.

A lot of churches have ... healing and then they tend, with injuries from work ... they take it [to] their church on a Sunday and then come back on a Monday and say everything's fine and then a couple of weeks later it reoccurs. And they think that just because they go in for the blessing, it's a big—I don't know, they have a lot more trust in God than any other thing.

These opinions clearly influenced the ways employers engaged with their employees and are attitudes to be mindful of in producing initiatives to address the higher injury rates of Pacific workers in manufacturing in Manukau.

6.4 Summary

Employers and their representatives stated that there had been significant improvements in health and safety practices in the past four to five years. The practices of firms were seen as being influenced by a union presence in the workplace. Participants felt that unions had a two-fold positive influence on health and safety: through being a vehicle of information dissemination and through pushing for stronger practices from employers.

The employers' representatives interviewed in this study highlighted the communication issues occurring within their firms that are affecting the health and safety behaviour of their Pacific workers. The communication issues affect the training uptake, staff relations, and message transmission through language barriers, learning style differences, and the formal social structures in place among staff. Employers were aware of these issues, but there was a diverse range of responses. Some did not address the issues at all, while others employed informal procedures such as having a Samoan member of staff translate health and safety messages for those who did not speak English fluently. There was little evidence of a systematic approach to any of the issues, although some employers tried to conduct training sessions in smaller groups periodically to create a more accessible environment for Pacific workers, which was seen as rewarding for employers and staff.

Interviewees discussed their perceptions of Pacific workers as hard-working people who are also self-effacing and strongly religious. These beliefs were

viewed as having an impact on the workers' reporting behaviour of both minor injuries and near misses and dangerous situations, as well as on their willingness to perform duties outside their roles, which could lead to an injury.

Overall, communication issues came out as being a clear issue for the employers and employees in the research, and this is an area for future work for the Department.

7 DISCUSSION

7.1 Communication

The perspectives of employers and employees are, not surprisingly, different. However, both groups raised the issue of communication lapses that influence the health and safety practices in the workplaces studied. Communication issues stemmed from language barriers, learning style differences, and communication style differences.

The employers/managers interviewed for this study noted that there were situations where it seemed as though their Pacific workers had understood the instructions given to them in relation to health and safety when in fact they had not. They were also well aware of the language issues affecting training sessions, and some had employed ad hoc remedies such as staff members translating messages.

Employers/managers also discussed the need for hands-on, small-group training sessions when working with their Pacific staff. The research did not ascertain whether this was specific to Pacific staff, or preferred by all staff, but it was clear from the interviewing that these smaller practical sessions were preferred by Pacific staff. Employees in this study also stated that hands-on, small-group training was their preferred method of learning. This is something the literature had not previously raised, but it was seen consistently across both employers' and employees' interviews.

Employees in this study also noted that the use of English in health and safety messages created barriers for them. Both signage around the plants and training sessions that were solely in English were seen to limit the uptake of lessons/messages because staff did not find them accessible.

7.2 Importance of Management Focus

The importance of management focus on health and safety was evident throughout the interviews of both employers and employees

Yeah. Because I've worked on the, on the, in corporate sides, and the first line of every meeting is health and safety. You know, we have, we have meetings and we don't even mention it, unless somebody's been seriously injured. And all we do then is mention how much it's going to cost. So the general focus of the owners, right through the management, the general manager—he doesn't know anything about health and safety. He's a, he's a salesperson, and so he's not enforcing anything. He's not trying to direct us in a, in a new, in a new way, whereas in, in the corporate world, or a company that's heavily into health and safety, it's normally the first line in the meetings and there's a lot more physical health and safety.

I think the attitude of managers is one of, we'd need to be stronger. We do the minimum, and we're pretty much fire fighters.

We had three fatalities here. And there really was no commitment from the senior management team to health and safety. They were talking talk, but there was no visible or felt leadership in that department, and we, we've struggled on. It's probably only in the last four years, when senior management changed, that we've 100 percent commitment. And that's the main focus of the business.²⁶

This study suggests that the attitude taken by management is a defining feature of the health and safety behaviour of staff, as was seen in the study by Mearns and Yule (2009). The greater the focus of management initiatives on health and safety, the greater the awareness among staff of the need to adhere to proper procedures and to report injuries and near misses. This can have two possible effects on the injury rates seen by agencies like ACC and the Department of Labour: either a decrease caused by fewer accidents in the workplace, or an increase caused by greater reporting of accidents.

7.3 Co-morbidity

The age group within Pacific people contributing the most to the high ACC reporting rates is 41–65 years (see section 4.5). An underlying cause of this may be co-morbidity. Co-morbidity refers to two or more medical conditions coinciding to, in this case, create greater risk of injury. Studies have shown that if an individual is already experiencing a chronic illness, such as diabetes, gout or heart disease, their risk of being injured in the workplace is increased (Cunningham et al. 2010).

Statistics from the Manukau District Health Board have shown that Pacific people in this region are at greater risk of chronic illness such as diabetes, gout, and heart disease. Rates of hospitalisation for gout within the Pacific communities in Manukau are 15 to 16 times those of non-Pacific/non-Māori communities in Manukau (Novak 2007). Pacific ethnic groups also have a diabetes prevalence rate that is over twice that of European ethnic groups, and over one and half times that of Māori and Asian ethnic groups (Novak 2007).

Employers in this study noted that there were cases at their business that were in line with this research.

Having come from that clinic-based role, a lot of the people I've worked with here for gout, diabetes, all those kind of things, are from the Pacific Island group. And again are the ones showing up with maybe more injuries potentially as well. Not always. Tend to be the older people ... I notice that in, middle-aged to older people. The younger people tend to be more, 'I'll just get on with it ... Oh, it's a bit of a niggle' ... then it's worse and worse, and then it becomes a problem. Whereas the older people, it is, yeah, more the co-morbidities showing up ... and needing to go on transitional duties, or be moved into a different area...

²⁶ Edited to ensure confidentiality

We've got a medical centre on site with an occupational health nurse. And the same old story—we see 20 percent of the people 80 percent of the time, and whether that's for accidents or illness, it doesn't really matter. It's the same people. Gout particularly, I think, because—yes they don't tend to move well. I have one particular man who has two pairs of boots, one larger than the other, for when he has trouble.

We asked them what they wanted and what problems were that they thought needed addressing. We thought—as would most people—that we would need to get the smoking people in. It's [the] biggest problem on site. But it was actually gout. Once we got some buy-in with the gout sufferers, the rest was easy. And there's so many resources out there that deal with Pacific Island and Māori people, from a health perspective.

These examples also highlight some of the measures taken by businesses to deal with co-morbidity issues that could affect health and safety, particularly information provision and providing equipment that is suited to the individual's needs.

7.4 Power Distance

'Power distance' is a term used by Hofstede (1984) to describe the degree of inequality present in a society/organisation, as measured by those with the least or lesser power. This was explored in this research, but with limited success. There were examples and hints that the Pacific workers interviewed saw an unequal distribution of power, and in response experienced a degree of marginalisation. However, the breadth of the interview topics meant this was not explored to a depth that would allow for definite conclusions to be drawn.

If the hints of power distance are a sign of a more widespread issue, this means that Pacific workers' high rates of injury in the workplace may in part be explained by their marginal position within the organisation. This is an area for potential future work as a research topic in its own right. However, in terms of this research, whilst some sort of hierarchy will inevitably be present within companies, this type of structure does not need to have an impact on health and safety practices and if it is, further research may offer suggestions of how to mitigate this unintended consequence.

7.5 Literacy

There is already research that has found Pacific people in New Zealand have lower rates of literacy and numeracy than other ethnic groups (Satherley & Laws 2008). Like power distance, there were hints of this being an issue for the Pacific workers in Manukau manufacturing interviewed in this research, but it did not come through as strongly as other issues.

This low level of discussion could simply stem from it not being a significant issue, or perhaps (more likely) from the method of data collection not being suited to this area of research. Individuals with low levels of literacy are subject to social

stigma, and subsequently shame, and may not feel comfortable discussing such a sensitive topic with anyone, let alone someone they have met so few times and who was, in some cases, younger than themselves.

Employers did discuss literacy as being an issue they were aware of in terms of training issues. Given the lower literacy rates established in the wider Pacific population and references made to this by employer representatives, literacy is likely factor to consider in future initiatives to ensure that health and safety messaging and training are accessible for the target audience.

7.6 Cultural Factors

The role of culture in health and safety behaviour is very complex. Understanding the impact that a particular cultural practice has on behaviour requires knowledge of the context surrounding the practice and behaviour, as well as knowledge of the practice's origins.

Rather than any one culture creating an issue in health and safety, it is more clearly the interaction of different cultural practices that creates some of the breakdown between the goals of health and safety and the reality of the situation on the ground. New Zealand health and safety expects that staff will report all injuries and speak up if there are aspects of training or guidelines that are not understandable, but this is not necessarily the practice of all cultures.

The practices that exist within Samoan culture—of respect, humility, loyalty, and hard work—appear to be contributing to the high rates of ACC reporting in both a positive and a negative way. There is evidence from both sides (employees and employers) in this study to suggest that Pacific workers, particularly Samoan workers, under-report minor injuries and near misses. This stems from a fear of losing their job, not wanting to be disrespectful or disloyal, as well as not wanting to make a fuss. However, it also appears that this approach leads to Pacific workers being in riskier situations with regard to health and safety, through a willingness to step outside their role if asked by employers, as well as an unwillingness to speak up if an instruction or message about health and safety practice is unclear.

The Matai structure is another cultural practice that is having an impact on health and safety practices. Employer representatives discussed the Matai structure as having a strong influence on the practice of Samoan workers, who would regard the Matai's advice more highly than a manager's. Utilising this structure in an appropriate way could lead to better communication of messages by employers, but there was limited understanding of how to do this.

7.7 Summary

The factors involved in the high rates of ACC reporting by Pacific workers are complex, multifaceted and inter-related. Issues such as co-morbidity and the degree of power distance in workplaces are outside the scope of the work of the Department of Labour, but are important factors to bear in mind in any

interventions in this area. Communication issues are highlighted by both employees and employers in this study, and relate to the need for different cultures to find common understanding. Communication issues arise because of the varied approaches taken by different ethnic groups, both in learning, first language used, and communication style, which are influenced by cultural practices. Cultural practices thus influence communication issues but also have an influence outside of communication (as discussed above). This adds to the complexity of the problem.

While the situation is complex, there are some potential initiatives the Department of Labour could undertake to improve the situation seen in Manukau, which is likely to be indicative of the manufacturing industry as a whole, and potentially of a number of workplaces that have diverse workforces with a number of different ethnic groups employed. Potential interventions and recommendations for next steps are discussed in the next section.

8 CONCLUSION AND RECOMMENDATIONS

8.1 Conclusions

This study has illustrated the need for health and safety training to be regularly administered and tailored to the needs of the audience. Across all businesses interviewed in Manukau manufacturing, and across a number of Pacific ethnicities, both staff and management pointed to language barriers and learning style differences leading to poor uptake of health and safety messages.

Employment figures clearly show that Pacific workers are over-represented in those roles in the manufacturing industry in Manukau that face greater risks to health and safety, and currently have the highest claim rates of employees in Manukau manufacturing. This majority position means they are a group of interest for harm reduction in this area.

Unions have a positive impact on the levels of reporting and the attitudes to health and safety within a workplace. Employers reported that unions have the role of spreading health and safety messages to staff and ensuring standards are maintained by employers.

Communication between staff and management, including health and safety messages, is clearly an issue for both staff and management at times. Training, signage, and general communication are not accessible for a substantial group employed in the industry, and this alone suggests there is room for improvement.

A compounding factor in this study was the interaction between Pacific cultural practices and traditions and the New Zealand workplace culture. Practices like respect and humility combine with other marginalising factors to create a higher vulnerability of Pacific workers to injury.

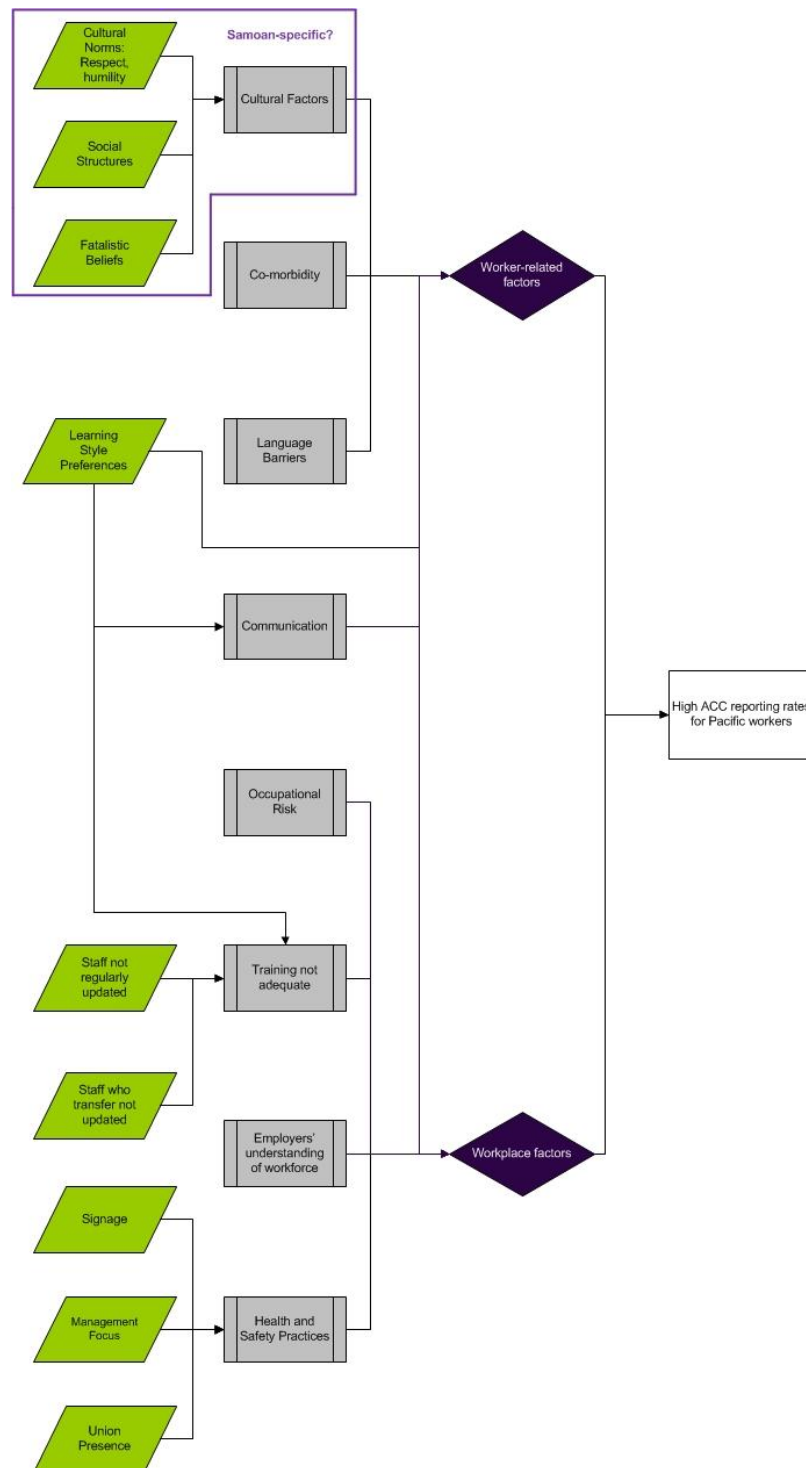
Many of these findings are in line with literature in this area, including the role that occupation plays, the increased risk created by a lack of English-language ability, and the under-reporting among migrant and ethnic minority groups. The one area that stood out that is not covered in other empirical studies explicitly learning style preferences. This may be because learning style preference is not specific to Pacific workers, and establishing whether this is the case would be a useful extension to this research.

Finally, the businesses participating in this research were considered to have good health and safety practices in the manufacturing industry and appeared to be responsive to staff needs. The situation for staff in businesses with a weaker approach to health and safety may be worse. Future work that focuses on staff in businesses where health and safety is not given priority would also extend this work.

8.2 Pulling it All Together: Contributing Factors Logic Model

Below is a logic model that illustrates the factors that contribute to increased injury reporting by Pacific people in the manufacturing industry in Manukau. The factors have been taken both from the literature and from the findings of this study. Factors stemmed from both the workplace and the worker, though there are inter-related factors.

Figure 4: Contributing factors logic model



8.3 Recommendations

Following consultation with a number of stakeholders in the research, the following recommendations have been formulated. These recommendations relate to the next steps for this area of work, and are designed to be introductory, allowing for fine-tuning as the steps progress.

Efforts to reduce injury rates for Pacific workers need to focus on:

1. Training:

- i. frequency of training for all staff
- ii. training for staff who transfer jobs
- iii. translation of training resources into the first languages of staff
- iv. pictorial signage (as opposed to words)
- v. method of delivery, particularly using smaller groups in hands-on settings

2. Workforce awareness:

- i. resources/approaches to further employers' understanding of any specific needs of their workforce
- ii. resources/approaches and training for health and safety trainers on cross-cultural communication

3. Pacific learning style preferences:

- i. further research into this area to ascertain the dominant learning style preferred in workplace learning by Pacific workers

4. Engagement with unions:

- i. greater collaboration with unions on health and safety, who are seen as having a positive impact on health and safety practice

5. Target areas:

- i. men aged 41–65 years – the group with the highest claim rates and number of claims
- ii. Labourers – the occupation with the highest claim rates and number of claims
- iii. 'Lifting, lowering, loading, or unloading' was the most common activity workers were undertaking prior to the injuries recorded across the ethnic spectrum, and the most common cause of injury was 'lifting, carrying or strain'.

REFERENCES

- Ahonen EQ, Benavides FG & Benach J (2007) Immigrant populations, work and health: a systematic literature review. *Scandinavian Journal of Work, Environment and Health*, 33(2):96-104
- Anthony MJ, Martin EG, Avery AM & Williams JM (2010) Self-care and health-seeking behavior of migrant farmworkers. *Journal of Immigrant and Minority Health*, 12(5):634-9
- Arcury TA, Estrada JM & Quandt SA (2010) Overcoming language and literacy barriers in safety and health training of agricultural workers. *Agromedicine*, 15(3): 236-48
- Barwick H (2000) Improving Access to Primary Care for Maori and Pacific Peoples. A literature review commissioned by the Health Funding Authority
- Berdahl TA & McQuillan J (2008) Occupational racial composition and nonfatal work injuries. *International Journal of Health Services*, 38(1)
- Berdahl TA & Zodet M (2010) Medical care utilization for work-related injuries in the United States 2002–2006. *Medical Care*, 48(7):645-51
- Bossley CJ (1975) Industrial hand injuries in Pacific Island immigrants. *New Zealand Medical Journal*, 81(534):191-3
- Callister P & Didham R (2007) Some emerging demographic and socio-economic features of the Pacific population in New Zealand. Paper prepared for Thought Leaders Dialogue: With the Pacific ... About the Pacific, Auckland, 30 and 31 August 2007
- Corvalan CF, Driscoll TR & Harrison JE (1994) Role of migrant factors in work-related fatalities in Australia, *Scandinavian Journal of Work, Environment and Health*, 20(5):364-70.
- Cunningham R, Carter K, Connor J & Fawcett J (2010) Does health status matter for the risk of injury? *New Zealand Medical Journal*, 123 (1327)
- Dávila A, Mora MT & González R (2011) English-language proficiency and occupational risk among Hispanic immigrant men in the United States. *Industrial Relations: A Journal of Economy and Society*, 50:263–96
- Davis P, Suaalii-Sauni T, Lay-Yee R & Pearson J (2005) Pacific Patterns in Primary Health Care. Ministry of Health
- De Raad J-P & Walton M (2008) Pacific people in the New Zealand economy: understanding linkages and trends. In A Bisley (ed) *Pacific Interactions: Pasifika in New Zealand—New Zealand in Pasifika*. Institute of Policy Studies, School of Government, Victoria University of Wellington
- Department of Labour (2009) *New Faces, New Futures: New Zealand: The Longitudinal Immigration Survey: New Zealand. (LisNZ) Wave 1*
- EMCONET (2007) *Employment Conditions and Health Inequalities: Final report to the WHO Commission for the Social Determinants of Health, Employment Conditions Knowledge Network*. WHO
- Eng A, 'T Mannelje A, Ellison-Loschmann L, McLean D, Cheng S & Pearce N (2010) Ethnic differences in patterns of occupational exposure in New Zealand. *American Journal of Industrial Medicine*, 54: 410-18
- Finucane ML, Slovic P, Mertz CK, Flynn J & Satterfield TA (2000) Gender, race and perceived risk: the white male effect. *Healthy Risk & Society* 2(2)
- Frumkin H, Walker ED & Friedman-Jiménez G (1999) Minority workers and communities. *Occupational Medicine*, 14(3):495-517

- Garrett JE, Mulder J & Wong-Toi H (1989) Reasons for racial differences in A & E attendance rates for asthma. *New Zealand Medical Journal*, 102(864):121-4
- Geddes A, Scott S & Bang Nielsen K (2007) Gangmasters Licensing Authority Evaluation Study: Baseline report. Gangmasters Licensing Authority & University of Sheffield
- Hofstede, G (1984) *Culture's consequences: International differences in work-related values*, Beverly Hills, CA: Sage Publications.
- ILO (2004) *Towards a fair deal for migrant workers in the global economy*, International Labor Organisation Report 92 VI, Geneva
- Koloto AH (2005) *Pacific Peoples' Access to ACC Services and Entitlements: Final report*. Unpublished paper prepared for ACC
- Kosny A, Lifshen M, MacEachen E, Smith P, Jafri GJ, Neilson C, Pugliese D & Shields J (2011) *Delicate Dances: Immigrant workers' experiences of injury reporting and claim filing*. Institute for Work & Health, Toronto
- Lamm F, Lamare R, Laurenson TM, McDonnell M, Schweder P, Shulruf B & Walters D (2010) Issues around researching health and safety of Samoan migrant workers. *Proceedings of the 14th Labour, Employment and Work Conference, School of Geography, Environment and Earth Sciences, Victoria University of Wellington*
- Lamm F & Pio E (2008) A literature review on the links between culture and health and safety. *Proceedings of the 13th Labour, Employment and Work Conference in New Zealand (held in conjunction with the Australian Labour Market Research Workshop), School of Geography, Environment and Earth Sciences, Victoria University of Wellington*
- Lashuay N & Harrison R (2006) *Barriers to Occupational Health Services for Low-Wage Workers in California*. Commission on Health and Safety and Workers' Compensation, California Department of Industrial Relations
- Loh K & Richardson S (2004) Foreign-born workers: trends in fatal occupational injuries. *Monthly Labor Review*, June:42
- Loomis D & Richardson D (1998) Race and the risk of fatal injury at work. *American Journal of Public Health*, 88(1)
- López-Jacob MJ, Safont EC, García AM, Garí A, Agudelo-Suárez A, Gil A & Benavides FG (2010) Participation and influence of migrant workers on working conditions: a qualitative approach. *New Solutions*, 20(2):225-38
- McKay S, Craw M & Chopra D (2006) *Migrant Workers in England & Wales*. Health & Safety Executive, UK
- Mearns, K and Yule, S (2009) The role of national culture in determining safety performance: Challenges for the global oil and gas industry, *Safety Science*, 47
- Menzel NN & Gutierrez AP (2010) Latino worker perceptions of construction risks. *American Journal of Industrial Medicine*, 53(2):179-87
- Ministry of Health & Ministry of Pacific Island Affairs (2010) *Ala Mo'ui: Pathways to Pacific Health and Wellbeing 2010–2014*.
- Ministry of Pacific Island Affairs (2010) *Career Futures for Pacific Peoples: A report on future labour market opportunities and education pathways for Pacific peoples*.
- Moala A (2004) Impacts on Pacific health. In Slater T, Pearce N, Booth M, Ellison-Loschmann L, Jeffreys M, Thornley L & Ward M (eds). *Health Impact*

Assessment: Proceedings of the Third Annual Centre for Public Health Research Symposium in Health Research and Policy, Centre for Public Health Research

- Murray LR (2003) Sick and tired of being sick and tired: scientific evidence, methods, and research implications for racial and ethnic disparities in occupational health. *American Journal of Public Health*, 93(2):221-6
- Nissen B (2007) Immigrant Construction Workers and Safety and Health in South Florida. Research Institute on Social and Economic Policy, Center for Labor Research and Studies, Florida International University
- Novak, B (2007) Ethnic-Specific Health Needs Assessment for Pacific People in Counties Manukau, Manukau City: Counties Manukau District Health Board
- Nuwayhid I, Fayad R, Tamim H, Kassak K & Khogali M (2003) Work-related injuries in Lebanon: does nationality make a difference? *American Journal of Industrial Medicine*, 44: 172-81
- Orrenius PM & Zavodny M (2009) Do immigrants work in riskier jobs? *Demography*, 46(3):535-51
- Premji S, Duguay P, Messing K & Lippel K (2010) Are immigrants, ethnic and linguistic minorities over-represented in jobs with a high level of compensated risk? *American Journal of Industrial Medicine*, 53(9):875-85
- Premji S, Messing K & Lippel K (2008) Broken English, broken bones?: mechanisms linking language proficiency and occupational health in a Montreal garment factory. *International Journal of Health Services*, 38(1):1-19
- Quinlan M, Mayhew C & Bohle P (2001) The global expansion of precarious employment, work disorganization, and consequences for occupational health: a review of recent research. *International Journal of Health Services*, 31(2):335-414
- Quinn MM, Sembajwe G, Stoddard AM, Kriebel D, Krieger N, Sorensen G, Hartman C, Naishadham D & Barbeau EM (2007) Social disparities in the burden of occupational exposures: results of a cross-sectional study. *American Journal of Industrial Medicine*, 50(12):861-75
- Sargeant M & Tucker E (2009) Layers of Vulnerability in Occupational Health and Safety for Migrant Workers. CLPE research paper 08 5/2
- Satherley P & Laws E (2008) The Adult Literacy and Life Skills (ALL) Survey: Gender, ethnicity and literacy. Ministry of Education, Wellington
- Schenker MB (2010) A global perspective of migration and occupational health. *American Journal of Industrial Medicine*, 53(4):329-37
- Seymen OA & Bolat OI (2010) The role of national culture in establishing an efficient safety culture in organizations: an evaluation in respect of Hofstede's cultural dimensions. Paper presented to Balikesir University, Turkey
- Shannon CA, Rospenda KM, Richman JA & Minich LM (2009) Race, racial discrimination, and the risk of work-related illness, injury, or assault: findings from a national study. *Journal of Occupational and Environmental Medicine*, 51(4):441-8
- Smith PM, Chen C & Mustard C (2009) Differential risk of employment in more physically demanding jobs among a recent cohort of immigrants to Canada. *Injury Prevention*, 15(4):252-8

- Smith PM & Mustard C (2010) The unequal distribution of occupational health and safety risks among immigrants to Canada compared to Canadian-born labour market participants: 1993–2005. *Safety Science*, 48(10)
- Souza K, Steege AL & Baron SL (2010) Surveillance of occupational health disparities: challenges and opportunities. *American Journal of Industrial Medicine*, 53(2):84-94
- Strong LL, and Zimmerman FJ (2005) Occupational injury and absence from work among African American, Hispanic, and non-Hispanic White workers in the national longitudinal survey of youth, *American Journal of Public Health*, 95:1226–1232
- Szczepura A, Gumber G, Clay D, Davies R, Elias P, Johnson M, Walker I & Owen D (2004) Review of the Occupational Health and Safety of Britain's Ethnic Minorities. Health and Safety Executive, UK
- Stahl and Appleyard (2007) Migration and Development in the Pacific Islands: Lessons from the New Zealand Experience, mimeo available from: www.ausaid.gov.au/publications/pdf/migration.pdf
- Tiatia J & Foliaki L (2005) Draft 4: Pacific Cultural Competencies Framework for District Health Boards, Unpublished report
- Tobias M, Yeh LC (2009) How much does health care contribute to health gain and to health inequality?: Trends in amenable mortality in New Zealand 1981–2004. *Australian and New Zealand Journal of Public Health*, 33(1):70-8
- TUC (2008) Hard Work, Hidden Lives. TUC Commission on Vulnerable Employment, UK
- Vickers I, Baldock R, Smallbone D, James P & Ekanem I (2003) Cultural Influences on Health and Safety Attitudes and Behaviour in Small Businesses. Health and Safety Executive, UK
- Zhang X, Yu S, Wheeler K, Kelleher K, Stallones L & Xiang H (2009) Work-related non-fatal injuries among foreign-born and United States-born workers: findings from the US National Health Interview Survey, 1997-2005. *American Journal of Industrial Medicine*, 52(1):25-36

APPENDIX A: INTERVIEW SCHEDULES

Employer interview	Pacific Worker Health and Safety Project—February 2011
Key themes	Proposed interview questions
Opening	<ul style="list-style-type: none"> • Thank you for supporting the project. Did you receive the background documentation and are you familiar with scope of the project and what we are trying to achieve?
1. Demographic information	<ul style="list-style-type: none"> • What are the details of the company—size, workforce, products etc? • How many Pacific workers (PWs) are employed here? <ul style="list-style-type: none"> ○ What is the nature and range of the work they carry out? ○ Are they often employed in particular occupations? ○ What is the nature of those occupations? • What is your range of responsibilities? • Is this a unionised workplace? How strong is the union influence?
2. H & S climate	<ul style="list-style-type: none"> • Can you tell me about management and employee attitudes and approaches to H&S in your company? • Do stereotypes exist among the workers with regards to H&S? What are these stereotypes? • When you compare the attitudes to H&S of your employees with those of other companies you come across, do you think they are similar or different? If different, in what way?
3. H & S organisation	<ul style="list-style-type: none"> • How is H&S organised in this company? <ul style="list-style-type: none"> ○ What are the formal tools and practices you employ? • Besides the formal processes, are there informal ways worker and employer concerns are raised? How important are these informal processes? Do PWs utilise these informal channels? • In your experience do workers 'see a problem and fix it' without triggering formal activity or are they fairly relaxed about, or tend to ignore, potential H&S issues? • What is the value of H&S related signage in the workplace? What sort of impact does it have on employees? What aspects of the signage are the most important and 'attention-grabbing'? • Is the signage in your workplace written in the languages of your employees? Is this necessary? • Do employees get blasé about signage that has been in place for some time? How do you counter this?
4. Pacific workers	<ul style="list-style-type: none"> • What is the workplace accident record? What are the most common forms of H & S issues? • What is your experience with PWs? Do they have more accidents than other groups? What are the most common reasons why the PW accident record is as it is? Do PWs approach H & S differently from other ethnic groups? How? • Can you tell me about a typical H & S situation involving a PW. • Do you find that Pacific employees are more or less outspoken about their H & S concerns compared with other groups of employees? What do you think are the reasons for this? • Do you think that workers report all accidents? What sort or severity of injury might go unreported? What are your thoughts about PWs and potential or actual under-reporting? Is accident or injury reporting behaviour age related? Do PWs differ from the norm? How? • What sort of changes, if any, to the PW approach to H & S and

	<p>reporting of accidents can be related to the length of time the worker has lived in NZ?</p> <ul style="list-style-type: none"> • What factors lead a PW to become a workplace leader on H & S? • How important is worker literacy and numeracy in the prevention of H & S incidents? Is this a particular issue for PI workers? If so, why? If not, why not?
<p>5. Message transmission</p>	<ul style="list-style-type: none"> • How do you think your company can best act to reduce the incidence of PW H & S issues? • What advice can you give about the best way to target different groups of workers, and particularly PWs, on H & S matters? • How successful are current initiatives to improve PW H & S? • Will your PWs act on material pinned up on the notice board or discussed at a workplace meeting? Do they need work-related training specifically directed to each individual (or small groups of individuals)? • Are there approaches or initiatives the government can or should take to help bring down the rate of PW H & S incidents?

Employee Interview	Pacific Worker Health and Safety Project—February 2011
Key themes	Proposed interview questions
Opening	<ul style="list-style-type: none"> • Thank you for supporting the project; do you know what the project is about?
1. Demographic information	<ul style="list-style-type: none"> • How old are you and where were you born? • Which Pacific Island are you from? • What year did you arrive in NZ? • Tell me briefly about your education/schooling background? • Tell me briefly about your work background—what kind of jobs have you been doing?
2. Pacific worker's job	<ul style="list-style-type: none"> • How did you get the job that you're doing now? • If I asked you what sort of worker are you, what would you say? (Describe? Explain?) • If I was working in your current job what kind of things would I be doing? • What do you like about your current job? What don't you like? • Tell me what sort of people do you work with and how would you describe your relationships? • Tell me about how you get on with your supervisor(s) and your managers.
3. Culture	<ul style="list-style-type: none"> • Tell me about your Pacific Island culture. • Does your Pacific Island culture have any impact on you in the way you approach your job? Explain. Give examples. • What does health & safety (H & S) mean? How do you feel about it? • Back in the Islands tell me about how H & S was looked after in the Islands. • What differences do you feel in this company compared with what you had been used to in the Islands?
4. Organisation of health and safety	<ul style="list-style-type: none"> • When you started the job you are in now did you get training about H & S? What did you learn? If not, why not? • Tell me, in the job that you're doing now do what impresses you about the way the company tries to improve H & S? Any concerns? Explain. Give examples. • As a worker, how do you contribute towards making sure your workplace is healthy and safe? Is it your responsibility or someone else's? • If you saw something dangerous what would you do? How would you handle the matter? Have you had any experience of this? Have you seen anything happen that you can tell me about? • What sort of injury will it have to be before you reported it? <ul style="list-style-type: none"> ◦ Will this mean you will seek immediate treatment? Explain. • When would you make an ACC claim? Explain. • Tell me are the H & S signage at your workplace clear and do you understand them? Give examples. • Do you think the H & S signage should be in relevant languages? What about where it is positioned in the workplace? Is it relevant to your workplace? • Tell me what is the role of Department of Labour inspectors?
5. Message transmission	<ul style="list-style-type: none"> • How do you like to learn and receive messages—talking, reading, formal instruction, workplace demonstration? • How do you get messages about H & S in your workplace? • Do you attend workshops (onsite or offsite)? Are these valuable and do you learn a lot?

	<ul style="list-style-type: none">• Do you get on-the-job training?• How is this delivered? Language? External trainer, supervisor trainer?
Closing/ summary	<ul style="list-style-type: none">• Thank you for sharing your thoughts and advice. Do you have any final comments, suggestions, or advice before we finish our interview?

APPENDIX B: LETTER TO EMPLOYERS

Dear company manager,

Statistics show that Pacific workers are far more likely to get injured at work than other ethnicities. This high rate of injuries has a huge impact on the individuals who are injured, their families and the organisations they work for.

The reasons for this high rate of injury are poorly understood, and the Department of Labour, in partnership with the Ministry of Pacific Island Affairs, EPMU and ACC are undertaking a programme of research to try and shed some light on this very serious issue.

In order to inform this research we are interviewing Pacific employees and people from the organisations they work for. We would very much like to include your organisation in these interviews.

Briefly, we would like to undertake the following:

- Interview approximately 6 employees from your organisation who are of Pacific heritage. Ideally, most of these employees would be employed on the 'factory floor'. Ideally, these interviews would take place in a single day.
- Interview the person who is responsible for Health and Safety at your organisation.
- Interview a shift or floor manager that has day to day contact with Pacific employees.

Each interview will take up to an hour, but it may take less.

Interviews with Pacific staff will be undertaken by a Pacific researcher, Moses Faleolo. Interviews with H & S managers and other managers will be undertaken by a researcher from the Department of Labour.

The identity of your company or any individuals interviewed will be kept completely **anonymous** and **confidential**.

Interviews with Pacific staff

We anticipate interviews with Pacific staff to be undertaken in a single day on site on a day to suit you. Interviews need to be carried out in a private room with reasonably low levels of noise (interviews will be recorded).

We would like to ask your assistance in asking a selection of your Pacific employees to participate—these should be a range of employees that represent the Pacific employees in your organisation, not just those who perform well, or have experience.

Selection of staff to interview

Our research will not be successful if we only talk to employees with certain characteristics. We need a range of Pacific employees that you feel represent the type of employees at your company.

You may want to consider the following issues when asking staff to participate:

- We would like to interview employees with good English language skills as well as those with less or no English language skills (our Pacific researcher is a Samoan speaker).
- We would like to interview employees with good relationships with managers and colleagues as well as those who have poorer relationships.
- We would like to interview employees with good knowledge and practice of H & S as well as those with poor H & S practice / knowledge.
- We would like to interview employees with long service in the company as well as those new to the company.
- We would like to interview employees with a range of ages that reflect your employees.

These criteria are simply a guide—the key issue for us is to talk to a representative range of employees.

Participation is entirely voluntary. Participants can pull out at any time and refuse to answer any questions. We will, however, ensure that everything discussed in interviews is kept confidential. **By way of thanks, we will provide Pacific participants with a \$20 voucher for their time.**

Please find attached some information sheets to give to prospective participants.

Interviews with management

A researcher from the Department of Labour will travel to Auckland to conduct interviews with management on specific dates in December 2010 and February 2011. We would like to speak with at least 2 managers from each company:

- The person responsible for H & S at the site in question
- A floor or shift manager who has day-to-day contact with Pacific employees.

Interviews will take approximately 1 hour each and all identifying information will be kept confidential. We will arrange interview times to suit you—these may or may not occur on the same day as the Pacific employee interviews.

If you would be willing to participate in this very important research, please let your contact know, and a staff member from the Department of Labour will be in touch.

⇒ More information

www.dol.govt.nz

0800 20 90 20

Information, examples and answers to your questions about the topics covered here can be found on our website www.dol.govt.nz or by calling us free on 0800 20 90 20.