

Occupational Health and Safety Risks for Pacific Workers in the New Zealand Food Manufacturing Sector: A Literature Review

by

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Abstract

Although there is ample international research on occupational health and safety (OHS) of workers in the manufacturing sector, little is known regarding the OHS of migrant and ethnic minority workers in the New Zealand (NZ) manufacturing sector and there is even less research on the OHS of Pacific workers in the food manufacturing sector. While government statistics have shown that most workers employed in the manufacturing sector are Pacific workers, there is little understanding of the OHS issues they face.

This study aimed to undertake a review of the literature to determine the working experiences of Pacific workers in the food manufacturing sector, with particular attention to the main OHS risks in their workplaces. As a result, the research showed OHS risks significantly negatively impact Pacific workers, their families, and friends, particularly Pacific workers in the food manufacturing sector.

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I would like to dedicate my dissertation to all high-achieving Pacific students who chose to sacrifice postgraduate study so they can find employment and earn an income to support their families – Thank you for inspiring me with your hard work paving the way so that I was fortunate to advance into postgraduate study!

Again thank you and God bless! Malo ‘aupito and ‘Otua ‘ofa atu!

Attestation of Authorship

I hereby declare that this submission is my own work, and it contains no material previously published or written by another person nor material which to a substantial extent has been submitted for the award of any other degree or diploma of a university or other institution of higher learning.

Etienne Tapueluelu

Date: 31/03/2023

Chapter 1 : Introduction

Based on Government data and literature, the New Zealand (NZ) manufacturing sector is deemed to be hazardous (WorkSafe, 2017; Dryson, et al 2005), having low levels of compliance (WorkSafe, 2017; Walls & Dryson, 2002) and a high risk of injury to workers particularly in small to medium enterprises (SMEs) (Lamm, 2014; Gravel, et al 2009). Furthermore, the Ministry of Business, Innovation and Employment (MBIE) statistics show that one of NZ manufacturing's main subsectors, food manufacturing (MBIE, 2018) has a very high risk of occupational injury and illness for migrant workers (Schweder, et al 2015) resulting in poor occupational health and safety (OHS) for workers from the Pacific when compared to other ethnicities (Department of Labour, 2012; HS Taskforce, 2013). Therefore, this dissertation will focus on the OHS risk factors and the strategies for managing these risk factors for Pacific workers in food manufacturing. The next section will present definitions of terms and concepts important in understanding the OHS topic that is critiqued and analysed in this dissertation.

Definitions of Key Terms and Concepts

Migrant and Immigrant Workers

A UN guide to the UN Migration Agency, International Organization for Migration (IOM), defines a migrant as any person who is moving or has moved across an international border or within a State away from his/her habitual place of residence, regardless of the person's legal status, whether the movement is voluntary or involuntary, what the causes for the movement are and what the length of the stay is. (UN, n.d.).

Furthermore, migrants move to improve their economic and social conditions or because of other circumstances where people are forced to move (Douglas, et al. 2019). In comparison, the IOM defines the term immigrant as, "a person who is a non-national person who is moving into a country for the purpose of settlement" (Gimeno-Feliu, et al. 2019, p. 2).

However, in this dissertation, although both the migrant workers and immigrant workers terms are stated in the research both types of migrants are found to share the same experiences in terms of OSH issues (Sargeant & Tucker, 2009) so both terms will be included where appropriate. That being said, the term migrant workers will be largely utilised in this dissertation as it reflects the research undertaken.

Occupational Health and Safety (OHS)

The International Labour Organization (ILO) notes that OHS involves multiple disciplines from different fields and industries collaborating in a common approach to help prevent work-related injuries and illness and protect and promote the health of workers (ILO, n.d.). Furthermore, OHS takes into account the potential impact on the encompassing communities and the general environment (Alli, 2008, p. vii). In addition, occupational health is concerned with public health in promoting and maintaining the health and well-being of workers in all occupations (WHO, 2023).

Pacific workers

The term Pacific workers will be the main term used in this dissertation to describe the migrant workers from the Pacific. However, according to Teranishi, et al (2013), the term Pacific Islanders is used to define people whose roots are from the three main island groups: Polynesia, Micronesia, or Melanesia. However, the term Pacific Islanders is considered insulting, degrading, and insensitive and not an indigenous term (McRae, 2021).

The term Pasifika is commonly used to describe people whose origins trace back to the Pacific or who identify with the Pacific in terms of ancestry or heritage (The Education Hub, 2022). The term Pasifika (or Pasefika) also encompasses the cultural and linguistic diversity within the Pasifika population in NZ (TKI, n.d.). Furthermore, the use of the term Pasifika differentiates those people with Pacific origins who might live in NZ, a country that is also considered a Pacific nation, according to Gorinski and Fraser (2006). The ambiguity of the term Pasifika suggests that for this dissertation the term is not suited for Pacific workers who migrate to Australia and the United States.

In NZ the term Pacific Peoples is used to describe a collective, of the eight main Pacific ethnic groups: Samoan, Cook Islands Māori, Tongan, Niuean, Fijian, Tokelauan, Tuvaluan, and Kiribati (Pasifika Proud, 2016). In terms of describing Pacific groups in general, the term Pacific peoples will be used instead of Pacific Islanders or Pacific Island people. Moreover, for this dissertation, the use of the term Pacific workers will be used broadly to include all workers who migrate to nations outside their main Pacific nations for the reason of employment.

Precarious Work

Precarious work is a term commonly referred to as temporary or non-standard employment that is often low-paid, insecure or uncertain, unprotected, or unsafe and

incapable of providing for a household (Fudge & Owens, 2006; Volsko, 2011).

Furthermore, in the United Kingdom (UK) precarious work: "...places people at risk of continuing poverty and injustice resulting from an imbalance of power in the employer-worker relationship" (TUC, 2008, p 11).

Temporary Worker

A temporary migrant worker can be defined as a person or individual accorded the right to live and work within a country for a limited time (Stringer & Michailova, 2019).

Vulnerable Worker

Canada defines vulnerable workers as all workers either young, new, ageing, and with migrant/immigrant status who are unduly employed in physically demanding or hazardous work that puts them at higher risk for workplace injuries and illnesses (CCOHS, 2023). In NZ, it is defined further to mean: "workers who are engaged as contractors are vulnerable to poor outcomes because they lack both the protections offered to employees by law and the power to negotiate a better deal" (MBIE, 2020a, p. 3).

Why Choose Pacific Workers?

Early Pacific migration to NZ had a meaningful impact on the labour market – particularly in the manufacturing sector (Mitchell, 2003; Spoonley, 2011). From 1951 to 1972, the Pacific population in NZ grew from 3,600 to over 50,000 (New Zealand Immigration, 2016). This growth was driven by two distinct waves of migration from the Pacific to NZ: the first in the 1950s to bolster the workforce with young Pacific males for both the agricultural and forestry sectors, and employ young Pacific women for domestic work, and the second wave in the early 1970s to help solve the acute labour shortage in the manufacturing sector (Fraenkel, 2012). Decades later Pacific workers continue to be a significant portion of the labour market for manufacturing; with 24,800 workers by June 2021 (MBIE, 2021) increasing to 25,700 workers by June 2022 (MBIE, 2022a). These statistics indicate that Pacific workers are a significantly large and growing labour force for the NZ manufacturing sector.

New Zealand-born Pacific Peoples

The Pacific population has grown steadily since the early Pacific migration into a dynamic and diverse group (Pasifika Futures, 2017). In 2006 6.9% of the NZ population considered themselves Pacific, increasing to 7.4% in 2013 and 8.1% by 2018 (StatsNZ, 2019). By 2043, 18 per cent of people are likely to identify with a Pacific ethnicity in Auckland, up from 16 per cent in 2018 (StatsNZ, 2022a). According to the 2018 Census, 66.4% of respondents who identified as Pacific Peoples were born in NZ and 33.6% were born overseas (StatsNZ, 2018). This statistic is significant as the Pacific population has grown through migration, a young population, and births exceeding deaths (StatsNZ, 2022a; Rogers, & Borsella, 2016). Combined with a higher-than-average fertility rate, their share of the NZ population is projected to increase from 7.8% in 2013 to 10.9% in 2038 (StatsNZ, 2015 as cited in Pearson, n.d.), reaching 11% by 2043 (StatsNZ, 2022a). Overall, the Pacific population growth, the youthful demographic and high fertility rates indicate that the Pacific ethnic group will continue to grow and have a significant future share of the NZ workforce (Hennecke, et al. 2021; Pasifika Futures, 2017).

The NZ Manufacturing Sector

The contributions of manufacturing to the national economy are far-reaching and broad (Wang, 2018), emphasised by its significant contribution to Gross Domestic Product (GDP) (Jenkins, 2020). The NZ manufacturing sector is a major contributor to GDP with Auckland an essential contributor to regional employment and growth regionally and nationally (MBIE, n.d.a). Auckland has the largest concentration of Pacific workers in the world (Boocock, et al 2016) with more than 300,000 Pacific residents – earning its name as the Polynesian capital of the world (MFAT, n.d.). The manufacturing sector – which employs the most Pacific workers (MBIE, 2021; Nash, 2022) – overall accounts for 9% of the workforce (MBIE, 2020b). Moreover, the number of work visas for the manufacturing sector doubled between 2012 and 2017 (MBIE, 2018). Food manufacturing and one of its main contributors – food and beverage – employed 19.2% of Pacific workers, the third largest ethnic group after European (48.4) and Asian (27.3) (Auckland Unlimited, 2015). However, government data and literature reveal alarming statistics that suggest there are significant and complex OHS problems in the manufacturing sector – particularly for Pacific workers – compared to other priority sectors (WorkSafe, 2017; StatsNZ, 2021; Schweder, et al. 2015; Department of Labour, 2012).

OHS in NZ Manufacturing

Occupational sectors such as manufacturing often involve work that is physically demanding which increases the risk of injury, illness, and fatality especially in workplaces that are likely unsafe (Ramos, et al. 2021; Moyce, & Schenker, 2018). Many of the OHS issues in the manufacturing sector are the result of this sector having high-risk occupations (Hennecke, et al, 2021; WorkSafe, 2018; Moyce, & Schenker, 2018) which are more physically intensive or expose the person to hazardous work environments (Collins, 2023) such as those involving machinery and equipment (WorkSafe, 2023c; Department of Labour, 2012) particularly if they produce high noise levels which can lead to hearing problems (WorkSafe, 2023c), labouring (Department of Labour, 2012; StatsNZ, 2016) and food production (Department of Labour, 2012; Schweder et al, 2015) where some workers have a poor understanding of OHS policies and practices (WorkSafe, 2017). Exacerbating these issues is the fact that work-related deaths, injuries, and ill health create a serious and continuing cost to the economy (MBIE, 2018b). In 2022 the cost of active work-related injury claims was just over \$968 million with the manufacturing sector with the second highest number of claims behind the construction sector between 2020 and 2022 (ACC, n.d.a). Furthermore, Auckland had the highest number of new work-related claims by region during the three-year span (ACC, n.d.a). In 2020 workers in food product manufacturing reported 2,808 injuries resulting in more than a week away from work (WorkSafe, 2023a). Moreover, Pacific workers had the second-highest incidence rate of any ethnicity among all sectors (StatsNZ, 2022b) and for some temporary migrant workers – including Pacific workers – the rate of injury was almost double that of permanent workers (Schweder, et al 2015; Department of Labour, 2012).

OHS and Pacific workers

Despite the benefits of employment for Pacific workers in NZ, research has identified heightened risk factors and causes of workplace harm for Pacific people (WorkSafe, 2018; Hennecke, et al., 2021). However, the OHS statistics – injury, illness and fatalities data – are likely to be even higher, with an under-reporting of incidents being historically common for Pacific workers who are less likely to report work-related issues for fear of job loss and being reluctant to complain or disappoint an employer (Lamm & Walters, 2003; Department of Labour, 2012). While the reasons are varied, it is vital to understand the main OHS risks given that Pacific workers are disproportionately represented in the Accident Compensation Corporation (ACC)

claims (Department of Labour, 2012.; StatsNZ, 2022b). The other main risks are communication factors such as poor English language skills (Department of Labour, 2012; ACC/ WorkSafe, 2016; MBIE, 2017 as all cited in WorkSafe, 2018), communication issues connected to cultural perspectives and their impact on messages being comprehended accurately (Lamm, et al 2011; Department of Labour, 2012). Furthermore, educational levels (MBIE, 2018b) is also another significant risk factor that must be considered when finding the most effective strategies for Pacific workers to help manage these risks (WorkSafe, 2018). The following section is a presentation of the research aim and the research questions for this dissertation.

Research Aim

To address the aims of this dissertation, the primary research question is: What are the main occupational health and safety (OHS) risks for Pacific workers in the food manufacturing sector? The secondary research questions are:

- What does the existing research tell us about how Pacific workers are managing OHS risks?
- What are the most effective strategies for managing these OHS risks?

Therefore, this research aims to establish through a literature review what strategies Pacific workers use for managing OHS risks to help alleviate or lessen the impact of the high number of work-related incidences of injury, illness, and fatality in food manufacturing. Despite the limited research on work-related health issues for Pacific workers (Lamm, 2010; Feilo, 2016; Department of Labour, 2012, WorkSafe, 2018), it is hoped that this literature review will increase understanding of the working experiences and OHS issues of Pacific workers face in their NZ workplaces.

Research Gap

This research investigation signals that currently there is limited research on the OHS risk factors or strategies used to manage such risks for Pacific workers in the food manufacturing subsector (Pacific Perspectives, 2015) despite statistical evidence showing this group has a disproportionately higher risk of injury, illness and fatality compared to other ethnicities (Department of Labour, 2012; Hennecke, et. al, 2021). Whilst some important implications can be drawn from previous knowledge and research, the OHS experiences of Pacific workers are often dated (Department of Labour, 2012) and small in scale (Lamm, 2010). Furthermore, research on Pacific workers is scattered through different literature articles, books, government reports, newspaper articles and online

websites from different countries, including NZ (Hennecke, et al. 2021; WorkSafe, 2018; Pasefika Proud, 2016), Australia (Baker, 2021; Labour, 2020; PNG Report, 2017) and the US (Waltenburg, 2021). Additionally, the research may come from different sub-disciplines that all use a diverse range of methodologies and research designs (Boocock, et al 2016). This dissertation aims to gather, collate, and examine the previous knowledge to provide a more comprehensive picture of the overall OHS risks and strategies for Pacific workers and suggestions for opportunities for future research.

Structure of Dissertation

Following the introductory Chapter 1, Chapter 2 provides the background to the NZ manufacturing sector, focusing on food manufacturing and a profile of Pacific workers and their history and demographics with a particular interest in the labour force and the work conditions they experience.

Chapter 3 will offer a critique of the extant research for this dissertation. A short introduction will be followed by a critique of relevant research on the OHS topic with particular emphasis on four important studies on the OHS experience of migrant workers. These four important studies are:

- Schweder, et al's (2015) study of injury rates and psychological well-being in seasonal workers involved in temporary work in the NZ food processing industry.
- Underhill, et al.'s (2019) analysis of how temporary migrants, employed in food production, interact with two Australian trade unions together and in cooperation with ethno-specific social media groups, offshore unions, and community/religious organisations.
- Gravel, et al's (2009) analysis of migrant worker participation in Canada and strategies for managing OHS in small businesses, and finally,
- Sargeant & Tucker's (2009) paper assesses the OHS inferences of the increasing number of migrant or foreign workers in Canada and the UK using their layers of vulnerability framework.

Chapter 4 will present further analysis and discussion on the research critique in Chapter 3 including answering the main research questions stated in Chapter 1 as well as stating the limitations, presenting the contribution to the topic, making suggestions for further research and recommendations as well as the final conclusion of this dissertation.

The next section will describe the literature review criteria for this dissertation which includes the sources included, the years' range, the specific word searches used, and the internet databases accessed and explored.

Literature Review Criteria

After forming the research questions, a strategy was developed for how the research would be conducted and what research criteria would be chosen to identify the relevant sources for this study. For the literature review, all material sources were in English, and the following criteria were included:

- Peer-reviewed journals and articles
- academic books and published expert reports
- Grey literature, such as government reports, OHS policy literature, and academic papers, including published theses, dissertations, systematic literature reviews and newspaper articles
- sources covering the period 2000 – 2022
- Key research terms such as Pacific workers, Pasifika workers, Pacific Island workers, migrant workers, immigrant workers, temporary workers, seasonal workers, precarious work, food manufacturing, occupational health and/& safety or health and/& safety or OHS, workplace injury/illness/fatality, work-related injury/illness/fatality, managing risks, managing strategies and strategies for managing risks
- Additional inclusion criteria such as Pacific workers/Pasifika in food manufacturing, worked in NZ food manufacturing business, experienced at least one OHS risk and/or managed through a strategy at least one OHS risk
- *phrase searching* to help search for a combination of words or topics rather than terms individually, i.e., 'occupational health and safety risks'.
- *Boolean searching* to connect words or topics to either narrow or broaden results by using either AND, OR or NOT
- *truncated searches* using the asterisk symbol * for finding singular and plural forms of words and variant endings, i.e., effective strag* for strategy or strategies.

This literature review will identify and select a comprehensive number of sources that strictly adhere to the inclusion criteria stated above. The sources will be found through the following online databases and search engines:

- ScienceDirect, ProQuest, Scopus, Springer, Google Scholar, Auckland University of Technology (AUT) Library database, Research Gate, SAGE, JSTOR, Wiley, ILO webpage and Google search.

Research Process

The research paradigm used for this literature review was positivism and the research method was research synthesis. The research process for this dissertation was:

1. Evaluate the sources and critically appraise research
2. Synthesize and write and organize research into themes
3. Outline structure, write a literature review
4. Cite sources properly and accurately
5. Proofread

Summary

Pacific workers have been a significant labour force for the manufacturing sector since the 1950s which continues to grow, especially in Auckland, a major manufacturing hub. The sector has become more culturally and ethnically diverse and relies heavily on immigrant workers to fill vacancies of low-paid and precarious work (Lamm, 2014). As a result, there has been a high rate of injury, illness, and fatality, particularly for Pacific workers which remains unresolved and is a concerning issue for the manufacturing sector which is an important contributor to the economy. Therefore, this research aims to find the main OHS risk factors and the most effective strategies Pacific workers use for managing these risk factors within the NZ food manufacturing subsector. In Chapter 2 the background section will present the manufacturing sector with a particular focus on data relating to OHS for workers in manufacturing and most specifically Pacific workers in the food manufacturing subsector.

Chapter 2 – Background

Introduction

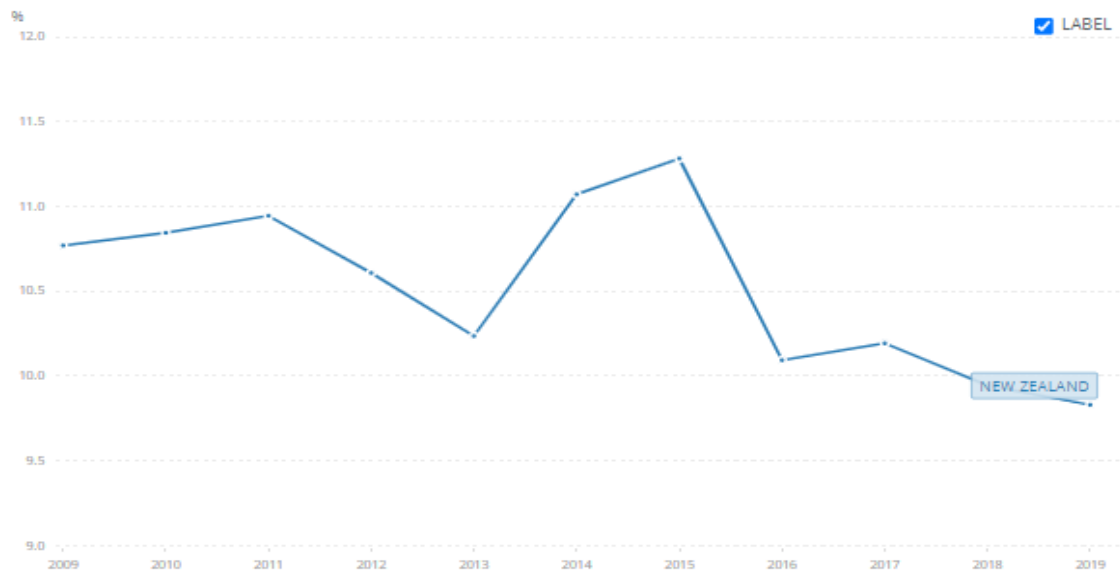
Currently, NZ's economic growth has slowed but workforce pressure is anticipated to ease as an increase in skilled labour begins to arrive for the manufacturing sector as the borders reopen (Nash, 2022). Manufacturing sales are down 7.4% from 12 months earlier although two of the biggest performing subsectors: meat and dairy products and beverage and tobacco products, were higher (Trade Economics, n.d.a). This chapter provides a background to the NZ manufacturing sector which is a significant contributor to the economy involving a variety of production processes across a highly diverse range of products (MBIE, 2018) and a detailed comparison with other major sectors within NZ. In particular, the focus of this chapter will be on one of the largest ethnic groups employed within the sector: Pacific workers (MBIE, 2021; Nash, 2022) and manufacturing's leading subsector: food manufacturing (MBIE, 2018). Specifically, the characteristics of the Pacific labour force who work within NZ will be examined, as well as a detail of the demographics of Pacific workers in the context of the work conditions and OHS issues they experience. Furthermore, relevant academic research on the topic – specifically Sargeant and Tucker's (2009) OHS for Migrant Workers from Canada and the United Kingdom (UK) will be discussed to help set the tone for the literature review in Chapter 3.

NZ Manufacturing Sector

NZ manufacturing is an important and diverse sector that makes vital contributions, to areas such as employment, exports, and the GDP (Jenkins, 2020). Manufacturing describes any process or procedure that turns raw materials, substances, or components into new products for domestic, international and specialist niche markets (StatsNZ, n.d.a). Manufacturing is divided by the MBIE into seven subsectors: food and beverage, wood and paper, machinery and equipment, chemicals and refining, plastics and rubber, metals, and other manufacturing (MBIE, 2018). Since 2013 the manufacturing sector has been a notable contributor to the economy consistently contributing 11 per cent to GDP (MBIE, 2020b) as illustrated in Figure 1 showing NZ's manufacturing GDP level from 2009 to 2019 (World Bank, n.d.a).

Figure 1

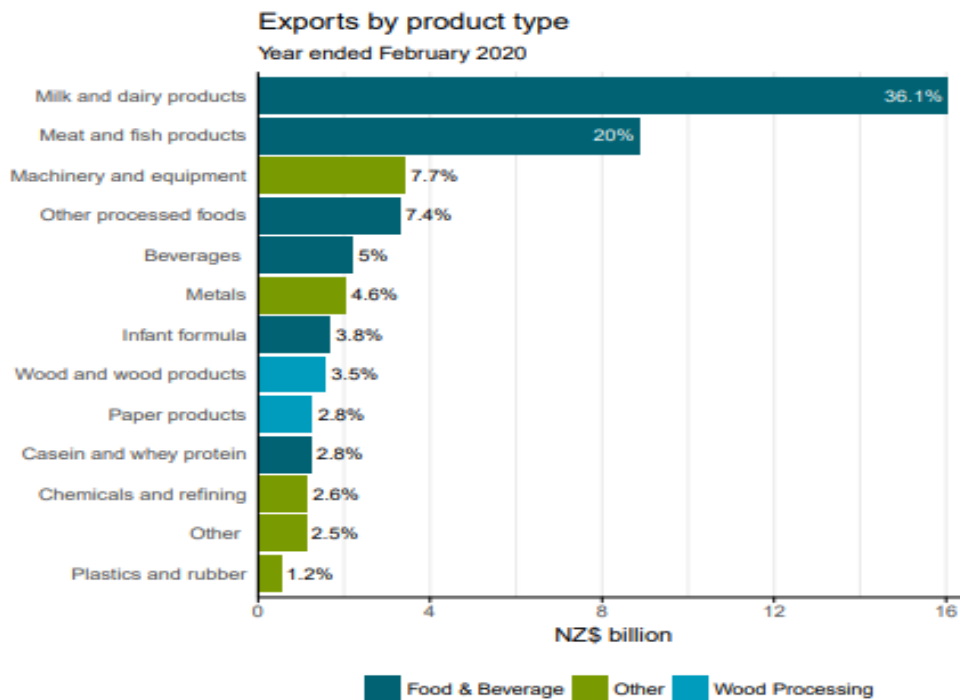
New Zealand Manufacturing GDP Level from 2009 to 2019 (Source World Bank, n.d.a)



However, like many developing countries, the manufacturing share of employment and GDP in NZ has been declining over time as reflected by a shift towards the purchases of services such as entertainment and health care due to overall wealth increases (Jenkins, 2020). But, due to NZ's small population and isolated location, the manufacturing sector relies on maintaining its international competitiveness through extensive exports (MBIE, 2018). By 2020, the manufacturing sector accounted for over 60 per cent of NZ's total exports which were valued at \$9.4 billion (an 8% increase from March 2019). NZ exports most of its manufacturing goods to China (20%) and Australia (16%), (MBIE, 2020b). Products such as dairy and fish are some of the major exports and helped to contribute 56.1% of total exports combined by the year ended February 2020, as shown in Figure 2 below (MBIE, 2020b).

Figure 2

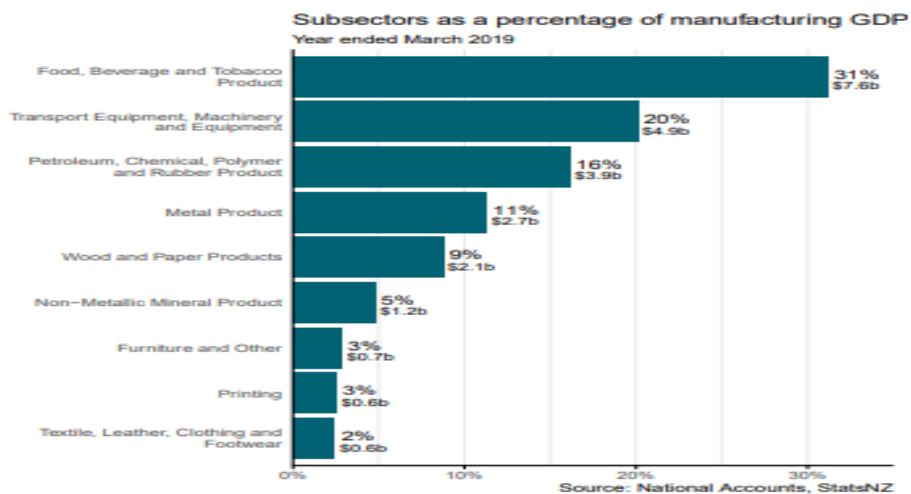
Exports by Product Type (Source: MBIE 2020b)



In March 2020, the largest contributor to sectoral GDP was food, beverage, and tobacco products accounting for 31% of GDP (Figure 3). Before the COVID-19 pandemic in 2020, the manufacturing sector contributed almost \$21 billion to NZ's GDP in 2019 (World Bank, n.d.b).

Figure 3

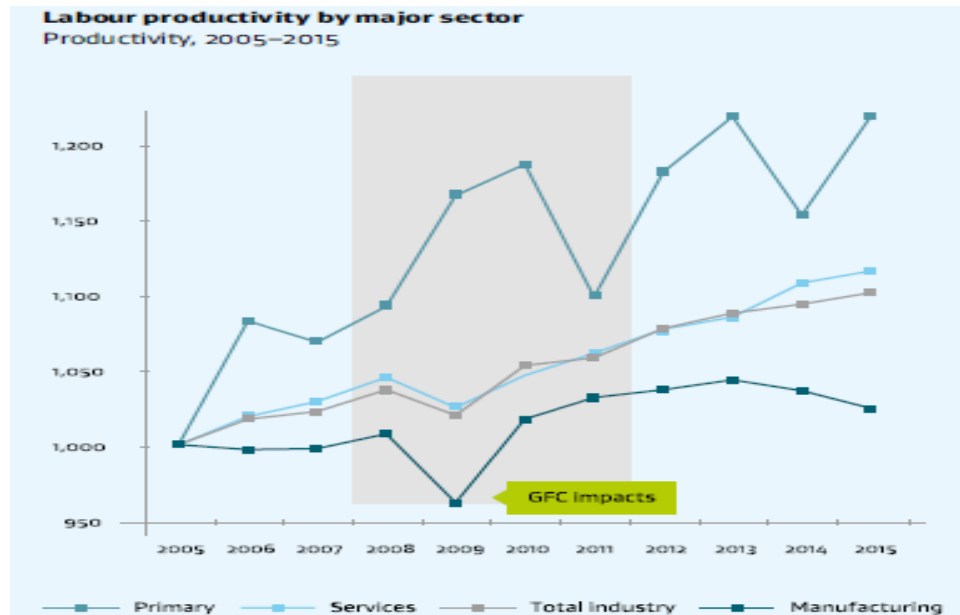
Subsectors as a Percentage of Manufacturing GDP (Source: MBIE 2020b)



The sector has also experienced average labour productivity growth of only 0.2%, which is well below the NZ average of 1% (see Figure 4).

Figure 4

Labour Productivity by Major Sector (Source MBIE, 2018)



Despite lower-than-expected labour productivity, food manufacturing continues to be a major subsector that is vital to NZ’s economic growth.

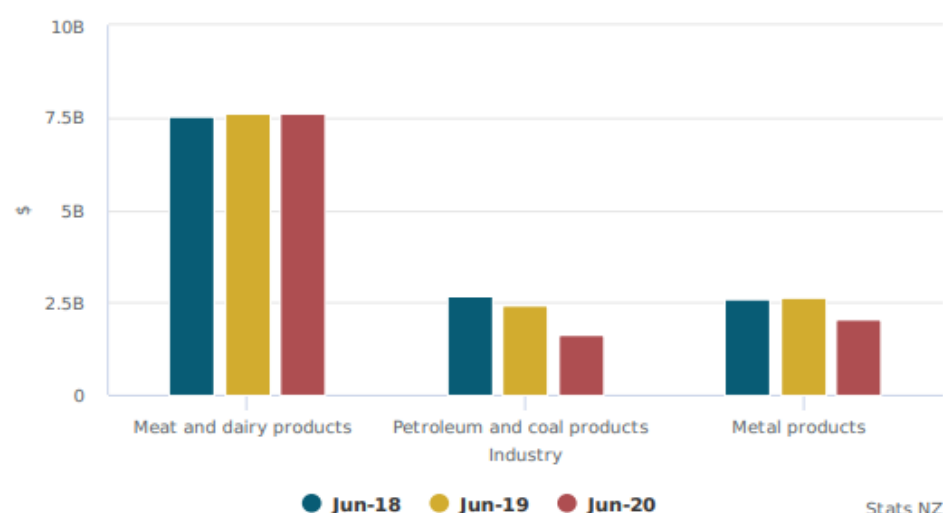
NZ Food Manufacturing.

Food manufacturing is the largest subsector of manufacturing, (MBIE, 2018) and food, beverage, and tobacco products are the largest contributors to sectoral GDP (MBIE, 2020b). The six main food exports are: meat, dairy, seafood, produce (fruit and vegetables), processed foods (chocolate, frozen, etc.), and beverages (wine, flavoured drinks, etc.) (MBIE, 2015). The food products milk and dairy, and meat and fish are major global exports for NZ (StatsNZ, 2020a; MBIE, 2020b). In 2017 the food and beverage subsector contributed 32% (\$7.4 billion) of manufacturing’s total GDP and 71% of its total exports (MBIE, 2018). The NZ meat and dairy industries were essential businesses that continued to operate during the 2020 COVID-19 lockdown periods allowing both industries to take advantage of high international dairy prices and continual export demand which were unchanged from June 2019 as shown in Figure 5 (StatsNZ, 2020a). Almost all of the manufacturing is located in Auckland, NZ’s largest city (Stats NZ, 2019), and food manufacturing employs a substantial number of Pacific

workers totalling 19.2% of the workforce in food and beverage alone (Auckland Unlimited, 2015).

Figure 5

Actual Manufacturing Sales, Selected Industry Volumes, June Quarter, 2018-2020
(Source StatsNZ, 2020a)



Overall, despite the impact of COVID-19, food manufacturing continues to thrive and continues to be a major contributor to the economy. More importantly, the large and diverse labour force has helped drive this manufacturing consistency and demonstrates the importance of the contribution Pacific workers have and continue to make as the largest cohort of Pacific workers of any NZ industry (Nash, 2022).

Manufacturing Sector: Demographics

The following section examines the demographic composition of the NZ manufacturing sector. Based on census figures, the manufacturing sector has been a major employer despite a significant drop in total number of workers according to the 2013 census (Table 1).

Table 1

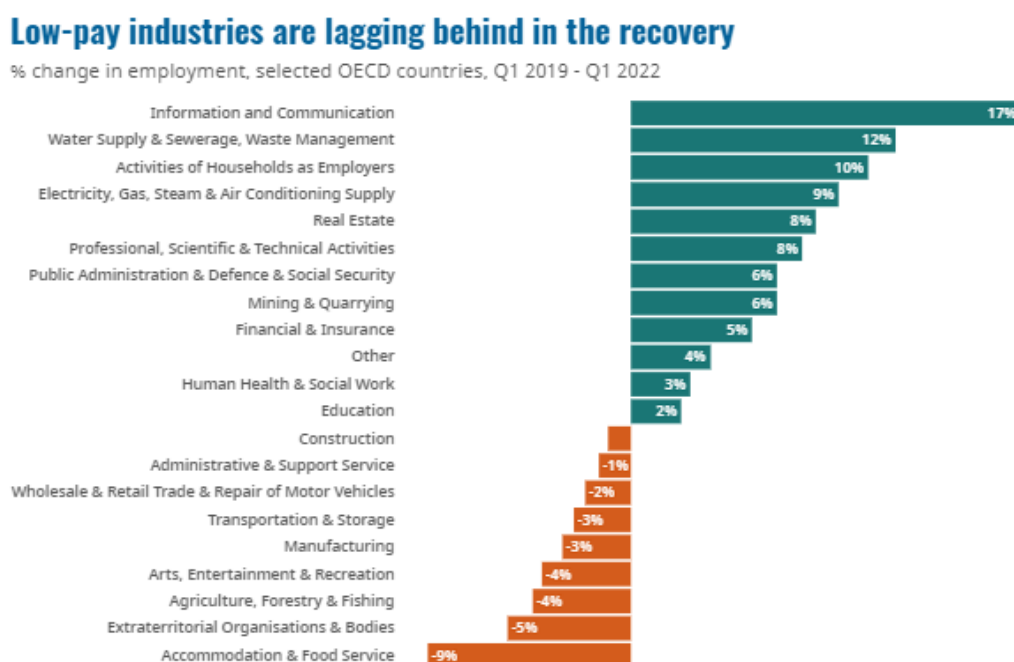
Census Figures from 2006-2013 for Manufacturing Sector

Census year	2006	2013	2018
Total workers	217,755	188,286	238,410

In 2017 241,100 workers were employed across 21,366 firms in total (MBIE, 2018). About 300 firms had 100-plus employees, comprising more than 50% of firms in the ‘other manufacturing’ and ‘machinery and equipment’ subsectors, and these employed almost half of all manufacturing employees (MBIE, 2018). As previously mentioned, the manufacturing sector continues to be a major employer, making up 9% of the labour force (MBIE, 2020b) and had a workforce of 248,400 workers by 2020 (StatsNZ, 2021). However, by June 2022 the number of workers employed in manufacturing fell to 235,950 despite an annual increase of 1.6% (MBIE, 2022b) supporting data (Figure 6) from the Organisation for Economic Co-operation and Development (OECD) (of which NZ is a member) indicating the impact of the COVID crisis on employment (OECD, 2022). Overall, the change in employment numbers for the manufacturing sectors within the OECD countries was 3% below its pre-COVID level.

Figure 6

Change in Employment in Low-pay Industries for Selected OECD Countries (%)
(Source: OECD, 2022)



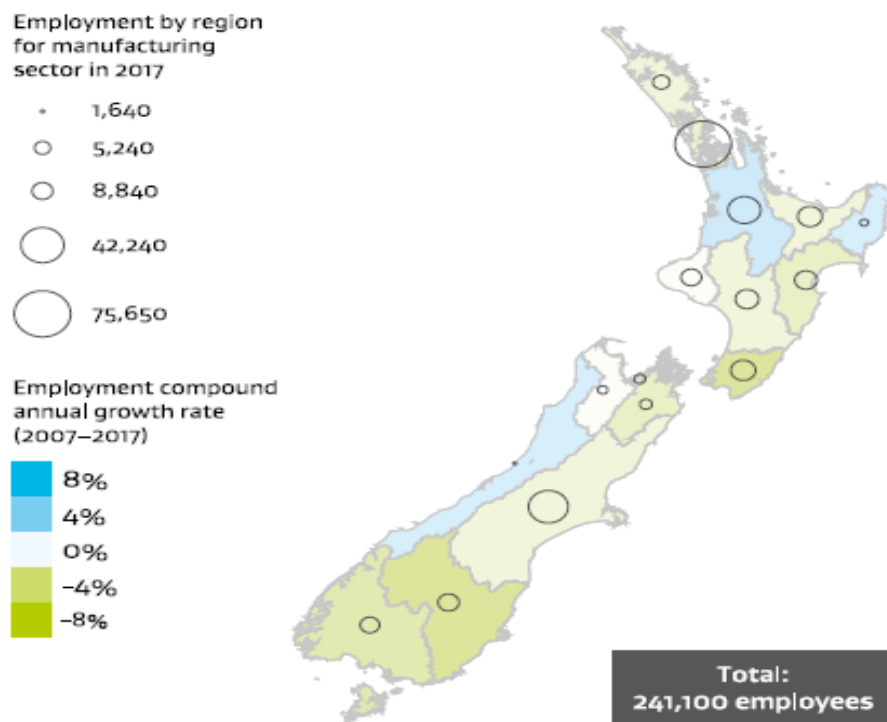
More recently, low-paid workers have been dealt a fresh blow following Russia's invasion of Ukraine on top of the impact that the COVID pandemic had. Low-pay industries had been recovering far more slowly than other sectors even before Russia's

invasion in February 2022 resulting in the first quarter of 2022, accommodation, and food services employment on average being 9.0% below its pre-COVID level (OCED, 2022).

Employment in NZ manufacturing has been significant for the regional economies as it has had a higher proportion of employment in smaller regions – particularly in the North Island – as illustrated in Figure 7 (MBIE, 2018).

Figure 7

Regional Employment and Annual Growth (Source MBIE, 2018)

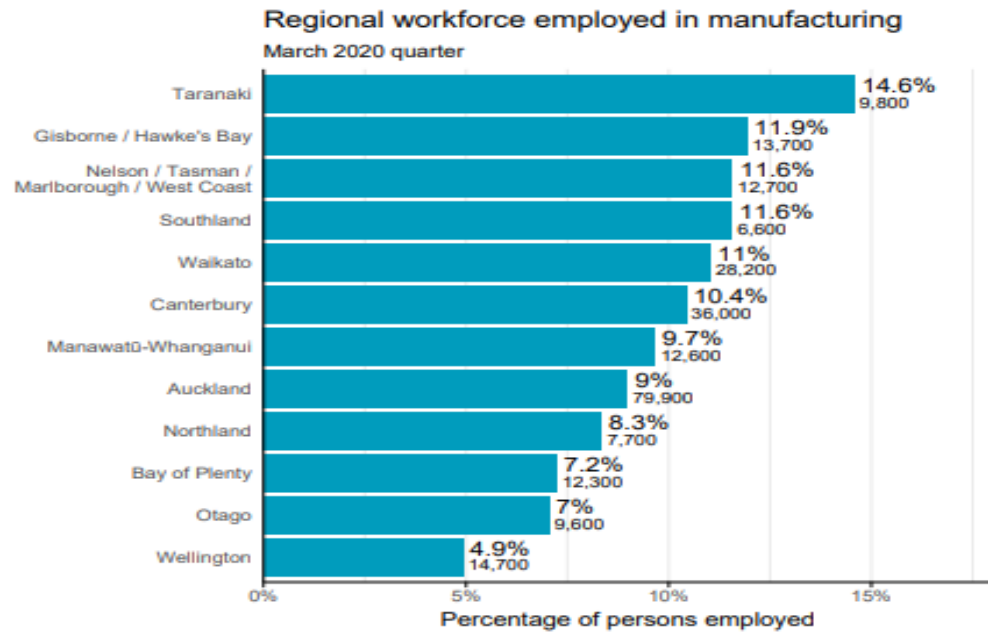


Interestingly, despite Auckland being a major manufacturing region, overall employment has remained below its 2015 level in the last five years to 2020, and so the Taranaki region (Figure 8) has the highest employment in manufacturing in NZ with 14.6 per cent of the region’s workforce compared to only 9 per cent of Auckland’s region’s workforce employed in manufacturing (MBIE, 2020b). Additionally, Taranaki is a major region for dairy farming and contributes largely to NZ’s biggest export – milk and dairy products (Stats, 2020b; MBIE, 2020b).

Furthermore, manufacturing is a significant employer in several other regional areas of NZ, such as Southland, Marlborough, and Hawke’s Bay (Jenkins, 2020).

Figure 8

Regional workforce employed in manufacturing (Source MBIE 2020b).



Gender.

According to the Ministry of Women (2020), 5.7% of the women in the workforce worked in the manufacturing sector. Based on census data, manufacturing is a male-dominated industry (as shown in Table 2) and since every NZ census from 2006 male workers have outnumbered female workers by almost 2.5 to 1 (StatsNZ, n.d.b).

Table 2

Gender Census Figures from 2006-2013 (Source: StatsNZ, n.d.b)

Gender	2006	2013	2018
Male	153,546	133,644	167,733
Female	64,209	54,642	70,677

Ethnicity.

Based on the 2018 Census (StatsNZ, n.d.b), Table 3 summarises the different ethnic groups employed in manufacturing. The largest ethnic group was the Europeans with 156,801 workers – more than all other ethnic groups combined. Overall, manufacturing is the second-largest employer of Māori, and the largest employer of Pacific people (Nash, 2022). The ethnic makeup of a workforce can be valuable for improving innovation and increasing productivity. In other words, a diverse group of

employees can offer diverse perspectives that can be adopted and nourished for the benefit of the workplace (Kirton & Greene, 2016).

Table 3

Ethnicity Census Figures for 2018 (Source: StatsNZ, n.d.b)

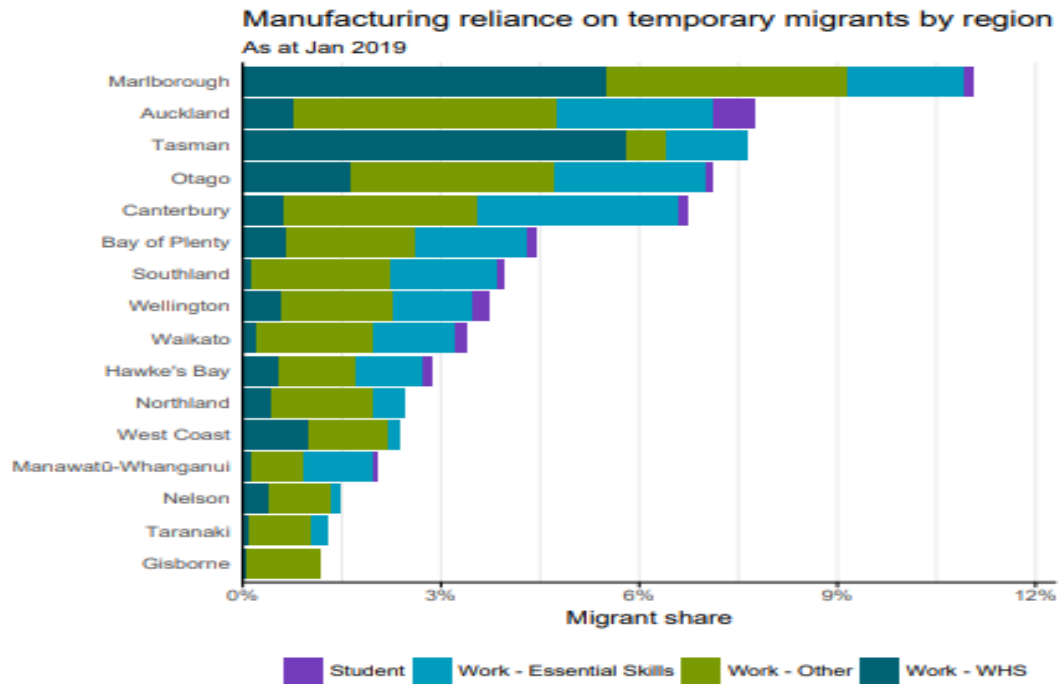
Ethnicity	Total	Male	Female
European	156,801	112,305	44,493
Māori	38,355	26,817	11,538
Asian	34,539	21,852	12,687
Pacific Peoples	24,192	17,133	7,059
Middle Eastern/Latin American/African	2,907	2,037	870
Other	3,342	2,607	735

Pacific Workers in Manufacturing.

The sector employs the most Pacific workers (Nash, 2022) and accounts for 24,100 of the workforce (MBIE, 2019). This number grew in 2020 – amid the global pandemic due to the deadly virus COVID-19 – to 24,800 workers (MBIE, 2021). Most Pacific workers are domiciled in Auckland – the world’s largest Pacific city – and represent the second-highest migrant worker group (Auckland Council Economic Profile, 2022). Moreover, the acute labour shortages in the manufacturing sector sparked a rise in the number of work visas for migrant workers; these doubled between 2012 and 2017 (MBIE, 2018). This indicates that this sector is culturally and ethnically diverse and relies heavily on low-paid, precarious migrant workers – particularly from the Pacific – to fill the job vacancies (Lamm, 2014). For example, temporary workers account for 6 per cent of the manufacturing sector’s total workforce with the Marlborough region (Figure 9) employing the highest proportion of migrant labour who primarily come on the working holiday scheme (WHS) visa holders (MBIE, 2020b).

Figure 9

Manufacturing reliance on temporary migrants (Source MBIE 2020b)



One of the working schemes for migrant workers – especially Pacific workers – is the Recognised Seasonal Employer (RSE) scheme which allows NZ horticulture and viticulture industries (winegrowing sector) to recruit workers to fill 5,000 places from the Pacific to do seasonal work from 2007¹. The scheme allows employers to recruit temporary workers from several island nations around the Pacific and offered work for up to seven months a year (NZ Immigration, 2023). Its success has seen an increase in demand for workers which has now seen the original cap more than triple to 16,000 in 2022 (RNZ, 2022a). But despite the claim that the scheme provides much-needed cash and skills back to workers' homelands and that orchards feature the sound of singing and laughing (PickNZ, n.d.), for many the experience is far from being memorable with workers being neglected, mistreated, and exploited (Fonua, 2022). The RSE scheme is worth mentioning as it is linked to the food manufacturing sector because the sector provides the raw materials for it.

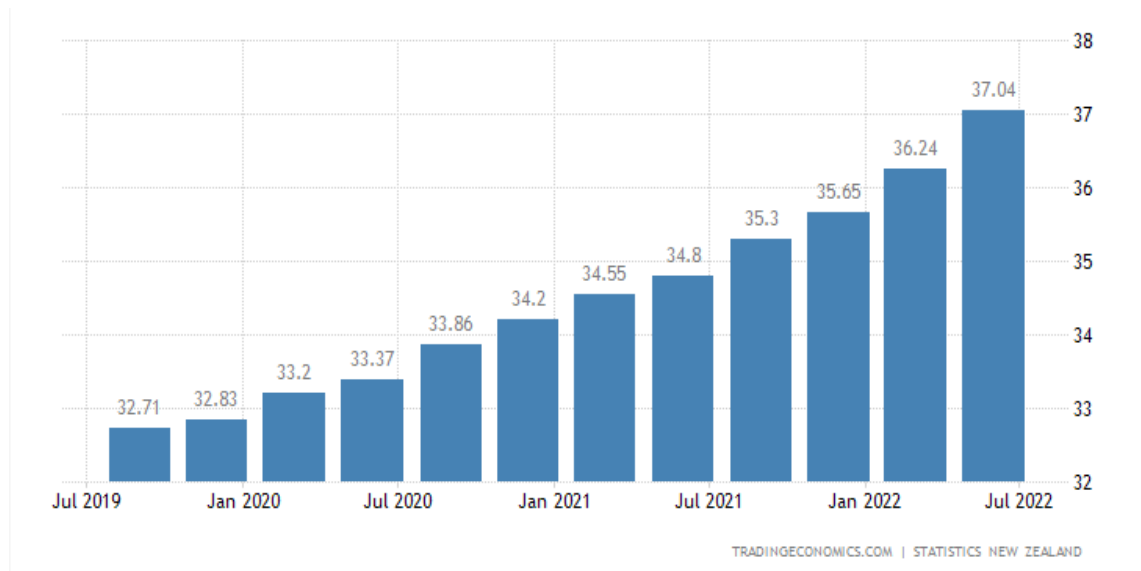
¹ See <https://www.immigration.govt.nz/about-us/research-and-statistics/research-reports/recognised-seasonal-employer-rse-scheme>

Wages

According to an MBIE report (2018), manufacturing employees earned an average of \$63,000 per year, (15% higher than the NZ average) but worked the highest average hours per week to earn it. Surprisingly, manufacturing employees continue to work more hours a week than all employees in other sectors (WorkSafe, 2017) and yet had an average hourly wage that was lower than the national average (Trade Economics, 2023a). Wages in NZ increased to 37.04 NZD/Hour in the second quarter of 2022 (Trade Economics, 2023a) as seen in Figure 10.

Figure 10

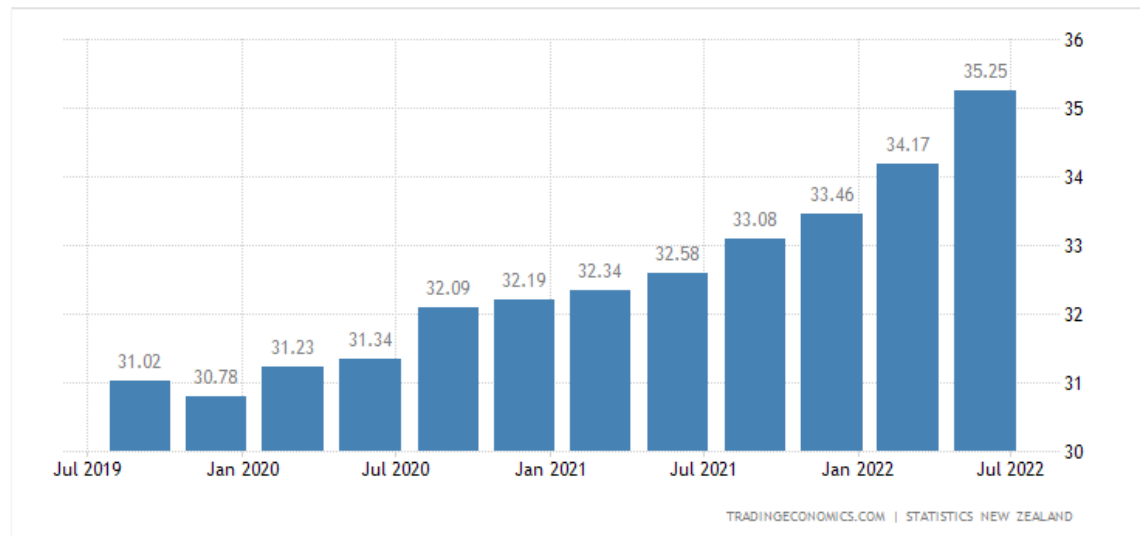
NZ Wages Over Three Years up to Second Quarter 2022. (Trade Economics, 2023a)



However, for the manufacturing sector, it had increased to only 35.25 NZD/Hour – \$1.79 less – by the second quarter of 2022 (Trade Economics, 2023b) as can be seen in Figure 11 below.

Figure 11

*Wages in Manufacturing Increased to 35.25 NZD/Hour in the Second Quarter of 2022
(Trade Economics, 2023b)*



As a result, workers in manufacturing have recently conducted strike action demanding an increase in wages due to the impact of COVID-19 and the recent dramatic increase in the cost of living with some succeeding in their strike action and being paid almost double the median weekly earnings (McIlraith, 2022). Other strikers demanded that previously promised increases be given sooner to workers to help their struggling families (RNZ, 2022b). As well as receiving an average hourly wage that was lower than the national average there was also an overall gender pay gap between male and female workers in the manufacturing sector. Overall males had 9.5 percent higher median hourly earnings than females (StatsNZ, 2020b).

OHS Issues in Manufacturing

Research has shown that workers in the manufacturing sector globally, are affected by ineffective OHS policies and procedures in workplaces. According to the International Labour Organisation (ILO), it is estimated that 2.3 million people are killed by work-related accidents or diseases every year which is more than 6000 fatalities every day, with 340 million occupational accidents and 160 million victims of work-related illnesses occurring annually (ILO, n.d). Migrant workers are often employed in ‘3-D jobs’ described as dirty, dangerous, and demanding (sometimes degrading or demeaning) and they are likely to be exposed to high levels of environmental conditions and toxins, including extreme temperatures, pesticides, and chemicals (Moyce, & Schenker, 2018).

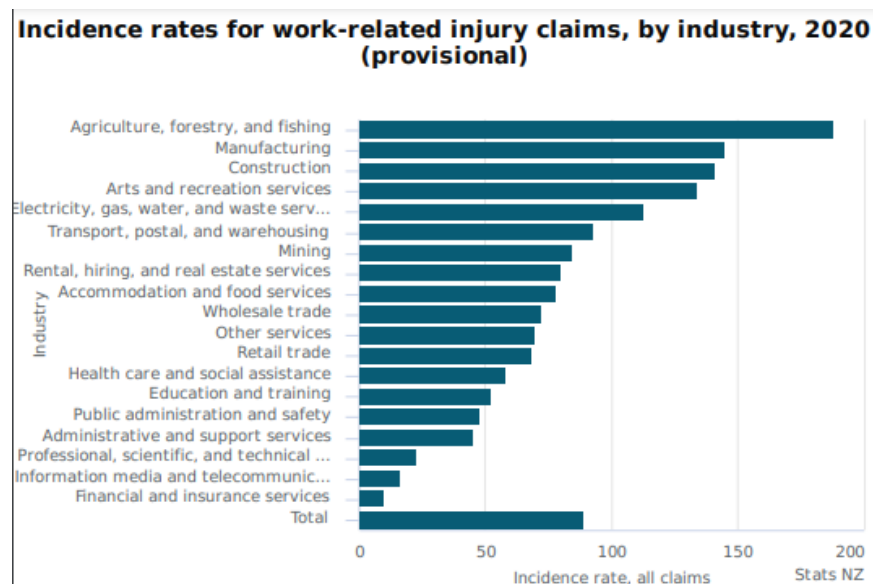
One NZ manufacturing survey revealed the gulf between both employers' and employees' views on health and safety with very few employers believing that work pressures, risks, near misses and serious accidents existed to the extent employees do (WorkSafe, 2017).

Manufacturing Employees' Compensation Data

The NZ manufacturing sector has alarming OHS statistics including having some of the highest rates of work-related compensation claims with 35,000 claims in 2020, and 37,700 claims in 2019 – the highest number of claims by any sector (StatsNZ, 2021). In 2019 the sector had the highest number of work-related injury claims, and then in 2020 had the second-highest number of work-related injury claims (StatsNZ, 2021) as shown in Figure 12.

Figure 12

Incidence Rates for Work-Related Injury Claims, by Industry, 2020 (Provisional)
(Source StatsNZ 2021)



The sector also had the highest rate of compensation claims in 2020, with 31 claims per 1,000 full-time employees (FTEs) including additional payments such as death benefits, loss of earning payments, lump sums, and rehabilitation payments (StatsNZ, 2021).

Table 4

Number of Injuries Resulting in More Than a Week Away from Work (WorkSafe, 2022a)

Sector	Number of injuries
Manufacturing	6,225
Construction	5,700
Health Care & Social Assistance	3,558
Retail	2,616
Transport, Postal, Warehousing	2,532
Total	20,631

Manufacturing Employee's Injury, Illness, and Serious Harm Data.

Even more daunting are recent statistics that revealed that, in 2020, the manufacturing sector had the highest number of injuries resulting in more than a week away from work of all sectors (WorkSafe, 2022a) and again from November 2020 to October 2021 (WorkSafe, 2022a) as illustrated in Table 4. In addition, manufacturing had the second highest number of injuries, illnesses, and serious harm combined in all sectors (Table 5) with 396 (from July 2021 to June 2022) (WorkSafe, 2022b).

Table 5

Number of Injuries, Illnesses, and Serious Harm by Sector (WorkSafe, 2022b)

Sector	Injury, Illness, Serious Harm July 2021 – June 2022
Construction	431
Manufacturing	396
Unknown	314
Not elsewhere included	239
Arts & Recreation services	176
Total	1556

Finally, despite the discouraging health and safety record, statistically the sector does not have one of the highest fatality rates with only 41 fatalities compared to the two most deadly sectors agriculture with 141 (WorkSafe, 2022c) fatalities and construction with 91 fatalities over the past 10 years (WorkSafe, 2022d). There was only one fatality

(Table 6) from February 2021 to January 2022 which occurred in the food manufacturing subsector (WorkSafe, 2022e).

Table 6

Number of Deaths by Sector (WorkSafe, 2022e)

Sector	Fatalities Feb 2021 to Jan 2022
Transport, Postal, Warehousing	17
Construction	11
Agricultural & Horticulture	6
Forestry & Logging	3
Manufacturing	1
Total	38

OHS in Food Manufacturing.

The NZ food manufacturing is not only the largest and most significant subsector but it also has an alarming health and safety record. Statistics showed the subsector had the highest number of injuries, illnesses, and serious harm notified in 2020 at 211 (45% of all cases) (WorkSafe, 2022f) and in 2021 it was 164 (34% of all cases) (WorkSafe, 2022g) of all manufacturing subsectors. Additionally, the subsector in both 2020 and 2021 had the highest notified rates of workplace harm and exposure than any other subsector in manufacturing particularly in notifiable incidents where an individual was exposed to a serious and immediate risk of harm (WorkSafe, 2023b). The most often reported physical work stresses in the subsector causing injury were carrying, awkward postures and lifting (Wong & Choy, 2015) as well as lowering, loading, and unloading for all workers (Department of Labour, 2012).

OHS for Migrant Workers.

By 2019 169 million workers were estimated to have migrated to work internationally and engaged in precarious work often hazardous to their health, where pay was less, but work hours were long and workplaces were substandard (ILO, 2021). Global research has also found that migrant workers have higher rates of workplace injuries than native-born workers, even in NZ where the migrants are relatively highly skilled (Hennecke, et al. 2021).

In another study, temporary workers in seasonal work had an injury rate that was double that of full-time workers (Schweder, et al 2015) revealing that migrant workers – who make up the majority of the seasonal workforce – were likely to have a high incidence of injuries.

Immigrant workers are more likely to suffer poorer health outcomes, workplace injuries and occupational injuries from unfavourable occupational exposures and working conditions compared to non-immigrants (Moyce, & Schenker, 2018). Other risk factors are long work hours (WHO, 2021), lack of awareness of rights or ability to exercise rights in a safer workplace (Cropp, 2019), barriers related to language such as lack of English skills (Moyce, & Schenker, 2018; Cropp, 2019), and illness from exposure to toxic chemicals (Moyce, & Schenker, 2018; Ramos, et al 2021).

Research has shown high rates of occupational injury and illness for migrants within the food manufacturing sector with Hispanic/Latino meat packing workers working in the US with high injury rates as a result of the speed of the production line, repetitive motions, and other inherent exposures (Ramos, et al 2021). Some immigrant workers have reported that their supervisors want the work to be quick and less costly, ignoring worker safety which often leads to higher rates of injury or accidents and psychological stress – with workplace stress linked to poorer mental health outcomes for immigrant workers in a fast-paced environment (Moyce and Schenker, 2018).

OHS of Pacific Workers in the Manufacturing Sector.

Due to several risks and underlying causes of workplace harm for Pacific workers (WorkSafe, 2018), their health and safety record has been much worse compared to other ethnicities in NZ (HSTaskforce, 2013). In 2020 Pacific workers had the second-highest incidence rate of any ethnicity (amongst all sectors) with 87 work-related injury claims per 1,000 FTEs (StatsNZ, 2021). However, the true statistics are likely to be higher for migrant workers – like Pacific workers – who are likely to under-report health-related issues for fear of retribution such as loss of jobs or deportation (Department of Labour, 2012, Ramos, et al. 2021; Cropp, 2019; Boden, et al 2016).

OHS of Pacific Workers in the Food Manufacturing Sector.

A case study of workers in Manukau found evidence that occupation was a determining factor in higher reporting of injury rates as Pacific workers were over-represented in the higher-risk occupations such as labouring occupations where

reporting rates were almost double that of non-Pacific people (Department of Labour, 2012).

Most recently, NZ food manufacturing workers have had the highest notified rates of workplace harm and exposure of all other subsectors in manufacturing with the number of notifiable incidents where an individual was exposed to a serious and immediate risk of harm in 2020 was 55 (31% of all cases) and in 2021 was 46 (24% of all cases) (WorkSafe,2023b).

Summary

This chapter overviews the NZ manufacturing sector and presents its many historic and lasting qualities and challenges due to the impact of COVID-19. The main focal points were the highly successful food manufacturing sector and the significant and vital Pacific workforce that are employed within it. Furthermore, the chapter explored the OHS experiences of one of the largest ethnic groups in the sector. Next, Chapter 3 will critique significant literature on migrant workers as well as Pacific workers and their OHS experiences and present important outcomes through relevant themes and debates prior to an overall summary of the chapter. In short, Chapter 3 will aim to answer the research aim stated in Chapter 1, which is to address the primary research question: What are the main OHS risks for Pacific workers in the food manufacturing sector? Furthermore, the secondary research questions are: What does the existing research tell us about how Pacific workers are managing OHS risks? What are the most effective strategies for managing these OHS risks?

Chapter 3 : Critique of Research

Introduction

The purpose of this chapter is to build on both the description and explanation of the Pacific workers in Chapter 1 and the background of the NZ manufacturing sector in Chapter 2 by conducting a critique of seminal and relevant research on migrant workers, and in particular Pacific workers, and their experiences of OHS. In addition, there will be a particular focus on how the research can assist in identifying and explaining the risk factors Pacific workers face in the food manufacturing subsector.

Relevant research conducted in NZ and overseas will be explored to shed light on the possible similarities and differences that migrant workers experience with a specific emphasis on the overall themes of the overall OHS risk factors that these workers experience and the most relevant overall strategies used or have the potential to be used in any given setting. Furthermore, as previously mentioned, the research will include relevant grey literature (e.g. government reports, newspaper articles, etc.), which will complement and support the main themes emerging from the literature review. At the end of this chapter, a summary of the key aspects of the research including the strengths and weaknesses of the various approaches.

Research Background

There are over 200,000 research papers on the topic of OHS of migrant workers. Most studies have shown that migrant workers face several OHS risks which can be grouped into the five themes listed below:

- unsafe working conditions
- exploitation
- non-reporting
- communication and
- valuing OHS.

For the purposes of this dissertation, I have drawn heavily on four seminal studies that provide vital insights that may help answer the main research question, namely: what are the main occupational health and safety (OHS) risks for Pacific workers in the food manufacturing sector? The first two sources are studies investigating migrant workers who were in some form of temporary work in either manufacturing or food manufacturing in NZ and Australia. They are:

- Schweder, et al's, (2015) article examines the risk exposure of seasonal workers in NZ as well as the injury rates and psychological well-being of workers involved in temporary work in food processing.
- Underhill, et al.'s (2019) study analyses how temporary migrant workers (TMWs), employed in food production, interact and benefit from network collectivism – a mixture of two Australian trade unions together in collaboration with various external groups such as ethno-specific social media groups, offshore unions and community or religious groups.

The other two sources are studies that involve migrant workers working in the UK and Canada. The authors of these studies have adopted a systems approach and used the *layers of vulnerability framework*.

- Gravel, et al (2009) analyse migrant worker participation in Canada and strategies for managing OHS in small businesses using a fourth layer of vulnerability framework.
- Sargeant & Tucker's (2009) article assessed the OHS inferences of the increasing number of migrant or foreign workers in a comparison of the situation of at-risk migrant workers in Canada and the UK using their original three layers of vulnerability framework created to recognise the heterogeneity or variability of the experiences of migrant workers.

The next section will present the critique of the research that helped formulate the proposed themes with a strong emphasis on the four influential studies stated previously.

Unsafe Work Conditions

International evidence indicates that migrant workers in precarious employment are found to have higher rates of workplace injuries (Schenker, 2010; Moyce, & Schenker, 2018; Hargreaves, et. al, 2019; Hennecke, et al. 2021), illnesses (Reid, 2011; Sterud, et al. 2018) and fatalities (Schenker, 2010; Moyce, & Schenker, 2018) compared to native-born or permanent workers. In particular, ACC data showed that Pacific workers' claims for serious injuries increased by 12.2 per cent in the period between 2015 and 2018 (StatsNZ, n.d.c).

Research has also shown that temporary migrant workers in non-standard or precarious employment with possible adverse circumstances, such as low pay (Cummings, & Kreiss, 2008; Moyce, & Schenker, 2018) or job uncertainty, have a greater burden of injury and illness compared to workers in standard employment (Virtanen, et

al 2005; Boden, et al 2016; Benavides, et al 2006; Benach, et al 2010). Other possible factors that can increase the number of injuries and illnesses among this cohort is their over-representation in dangerous occupations (Foley, et al. 2014; Moyce, & Schenker, 2018), less worker protection in unsafe workplaces (Cummings & Kreiss, 2008; Underhill & Quinlan, 2011), inadequate health and safety training (Benavides, et al 2006; Jacinto, et al 2009; El-Menyar, et al 2016), and worker inexperience (Benavides, et al 2006; Breslin & Smith, 2006).

Gravel, et al's (2009) study found that migrant workers were more likely to lack health and safety protection than their non-migrant counterparts. For example, in Canada, Temporary Foreign Workers (TFWs) in a low-skill programme were employed to fill less desirable, physically demanding, repetitive, dirty, and dangerous jobs (Gravel, et al 2009). This represents a similar finding for migrant farm workers in Canada also who were employed to do the most difficult and hazardous work compared to non-migrant workers who were often assigned supervisory roles (Sargeant & Tucker, 2009). Despite this, demand for migrant workers was still high as employers in Canada sought to widen the low-skill programme to allow more workers to fill roles in high-risk sectors, such as construction, food processing, and manufacturing (Sargeant & Tucker, 2009). For example between May 2004 and June 2008 workers who registered under the workers' registration scheme (WRS) were employed in two of the top five sectors: manufacturing (7 per cent) and food, fish, and meat processing (5 per cent). Similar temporary employment in the same high-risk sectors in the UK was also likely to involve vulnerable workers (Sargeant & Tucker, 2009).

Schweder, et al's (2015) study also found that temporary, seasonal workers in NZ had double the injury rate of full-time workers indicating that seasonal workers were more likely to have a high incidence of work-related injuries. Furthermore, temporary workers had a higher prevalence of musculoskeletal disorders (MSDs) compared to permanent workers doing the same or similar work (Schweder, et al 2015). Other studies have also shown that female seasonal workers may have a greater prevalence of musculoskeletal symptoms due to work-related physical and psychosocial factors compared to male workers (Yu, et al 2011; Barbe, 2013). However, Schweder et al's (2015) study found no differences when comparing the psychological well-being levels of permanent and seasonal temporary workers in NZ although some research has indicated that poor OHS implementation at a worksite or workplace exacerbates workplace stress and poor mental health for temporary migrant workers (Virtanen, et al 2005; Ang, et al 2017; Moyce, & Schenker, 2018). A high percentage of the seasonal worker labour force are often Pacific

workers and so high-risk jobs like seasonal food processing, and labourer occupations may have an impact on their health (Schweder, et al 2015; Department of Labour, 2012). Moreover, the above-average rates of workplace injury or illness among Pacific workers may also have detrimental impacts on Pacific families and their support network (Department of Labour, 2012; ACC, n.d.b).

Exploitation

Migrant workers are often victims of exploitation and discrimination by their employers (Seixas et al., 2008; Fuller & Vosko, 2008; Moyce & Schenker 2018; Sterud et al., 2018; Cropp, 2019). For example, previous reports from Canada indicated that some recruitment agencies acted unlawfully by charging fees illegally for finding jobs for temporary workers, which added further pressure on TFWs to earn maximum wages to help pay for debts they accrued for travel to Canada (Sargeant & Tucker, 2009). Also, in the UK one trade union stated that migrant workers' lack of awareness of their employment rights causes vulnerability that employers may exploit (Sargeant & Tucker, 2009; Underhill & Quinlan, 2011). In NZ, reports of the exploitation of migrant workers have seen an increase of 450 per cent since 2021 (RNZ, 2022c). One recent example was a migrant couple who exposed an employer who demanded \$5000 for employment but unfortunately are being deported despite reporting the exploitation attempt to Immigration New Zealand (INZ), who stated that the couple initially concealed the payment and as a result are considered not of 'good character' to stay in NZ (Kilgallon, 2022). Another recent example was an illegal Pacific worker who reported unsafe work conditions at a construction site that caused them significant injury as a result of their work visa expiring during the COVID-19 lockdown and being unable to fly home because of border closures in 2021 (1News, 2022).

Despite these problems, Pacific workers are still keen to migrate to NZ for work. In one NZ study, it was argued that employment as a channel to enter NZ is an important influence (pull factor) for migrant international students (Anderson, 2021) who like Pacific people will leave their homeland for NZ to undertake employment opportunities. And since NZ has the biggest Pacific population, the likelihood of family members and friends residing in NZ also has a major influence on Pacific workers' decision-making. However, in other employment schemes, such as the Recognised Seasonal Employment scheme, research has shown that Pacific workers have experienced neglect, mistreatment, and exploitation (MPP, 2019; Fonua, 2022), human trafficking (MPP, 2019), and modern slavery (Walk Free, 2020; RNZ, 2022d). In some cases, Pacific people are found guilty

of exploiting their own people. In one recent case, a Hawkes Bay labour contractor – of Samoan descent – was sentenced to 11 years for human trafficking and slavery (Hawkes Bay Today, 2020) of fellow Samoan nationals. In another recent case of exploitation, a Hamilton trio – of whom two are of Pacific descent: one from Papua New Guinea, the other of Samoan descent – were found guilty under the Immigration Act of offences that were false and misleading regarding a group of seasonal workers from Papua New Guinea (PNG) who worked illegally for wages less than the minimum wage and under the false impression they were working under the RSE scheme (1News, 2023; Mather, 2023; Feek 2023).

Similar reports from Canada indicated that some recruitment agencies also deliberately provided incorrect information to TFWs on promised employment and its links to citizenship which increased the prospect of disparity between the skills workers had and the skills required for the actual job (Sargeant & Tucker, 2009). In the Australian meat processing sector, recent evidence of exploitation of Pacific workers shows the regulated labour scheme has failed. Pacific meat workers in Victoria had over 50% of their pay deducted to cover costs such as airfares, visas, phone plans, housing, and furniture rentals. And in New South Wales, Pacific workers were charged five times more for rent even after significant pay cuts by their employers (Labour, 2020). Such examples have prompted exploitation concerns (Baker, 2021).

According to Sargeant & Tucker (2009), because many migrant workers in the UK are classified as self-employed workers, they are denied basic employment protection provisions, such as entitlement to redundancy payments and the right to claim unfair dismissal; rights that they would be entitled to if they were just classified as migrant workers. Most migrant workers are in temporary jobs and are likely recruited and employed by gangmasters – a group of organisations that provide seasonal workers to industries such as agriculture and food manufacturing. However, the activities of gangmasters have been largely unregulated despite evidence of abuse, for example, the tragic fatalities of 23 cockle pickers from China – many of them illegal workers – trapped by the incoming sea (Sargeant & Tucker, 2009). Similarly, migrant workers from the Accession 8 (A8) countries² were more likely to be employed to undertake hazardous work irrespective of their qualifications and, as a result, were over-represented in sectors such as manufacturing, construction, agriculture, hospitality, and catering and under-

² Eight States - Czech Republic, Estonia, Hungary, Latvia, Lithuania, Poland, Slovakia, and Slovenia - joined the European Union in 2004 and could move freely to the United Kingdom for work.

represented in industries such as public administration, education, and health (Sargeant & Tucker, 2009).

Furthermore, findings in Gravel, et al. (2009) showed that small businesses in Canada that employed immigrants either partly or completely failed in their application of workplace OHS. This represents a similar finding to that of small workplaces in the UK³ that were most likely to employ vulnerable workers (Sargeant & Tucker, 2009). However, unlike Victoria, Australia, the UK gangmasters are required to be licenced and their activities are overseen by the Gangmasters Licensing Authority (Sargeant & Tucker, 2009). The Authority has rescinded a number of licences for violations. Authors of the GLA96 report found the most common forms of non-compliance included poor induction, incorrect wage deductions, absence of annual leave entitlements, lack of signed opt-out forms for working beyond 48 hours per week and non-existence of a written contract (Sargeant & Tucker, 2009).

Even large food manufacturing companies are found to be significantly non-compliant. In Ireland's meat processing sector, almost 50% of all inspections in meat plants between 2015 and 2020 identified violations of labour laws relating to wages, working time, unsatisfactory record-keeping, and employment permit issues (McSweeney & Young, 2021). Manufacturing in NZ has historically had a compliance problem. In NZ more than 50% of manufacturing businesses were found to ignore basic regulatory requirements to control workplace health and safety risks (Walls, & Dryson, 2002). Moreover, one report indicated that, despite health and safety practices being in place, the manufacturing sector was the worst-performing sector because workers were more likely to report both serious accidents and near misses compared to almost all other sectors (WorkSafe, 2017).

Non-reporting

Non-reporting of OHS issues in the workplace by migrant workers can occur due to fear of the consequences of raising concerns (Foley, et al., 2014; Moyce & Schenker, 2018; Ramos et al., 2021) such as fear of losing their job (Boden, et al 2016; Gravel et al., 2009) or being deported (Seixas et al, 2008; Cropp, 2019). One UK government report (Department for Business Enterprise and Regulatory Reform, 2008 as cited in Sargeant & Tucker, 2009) stated that one of two enforcement issues was the unwillingness of vulnerable workers to report (or know how to report) problems at work (cited in Sargeant

² defined as employing 10 or fewer workers

& Tucker, 2009). In the study by Gravel, et al (2009), migrant workers who voiced their health and safety concerns often feared retaliation or punishment from employers and encountered barriers regarding accessing workers' compensation. In one NZ study, Lamm (2014) found that even if vulnerable workers were allowed to report concerns and an appropriate epistemology was found to help voice these concerns, several challenges hampered their ability to be heard. It was also noted in the same study that there was a lack of understanding of basic OHS by small business employers, for example, not knowing how to elicit critical information from workers regarding their OHS. In contrast, the Schweder et al. (2015) study reported that their data was mainly based on self-reporting from migrant workers which they stated could have underestimated injury frequency and severity subject to inaccuracy due to recall error by the workers.

However, there is ample evidence to show that some migrant workers remain silent and do not report their OHS concerns or assert legal rights even if in precarious, poorly paid employment to appear favourably to employers or for monetary reasons. These migrant workers agree to do dangerous work or use dangerous equipment they were not trained to use in the hope of both future career advancement and favouritism from their employer (Gibb, 2006; Fairey, 2008, as cited in Sargeant & Tucker, 2009). In addition, they also remain silent due to an unwillingness to lose any wages by being absent from work (Sargeant & Tucker, 2009).

Moreover, migrant worker remittances (IMF, n.d.) play an essential part in the international flow of labour and capital (Al-Assaf, & Al-Malki, 2014). Remittances have a positive impact on developing countries' economies (Gupta et al., 2007), especially for small Pacific nations. For Pacific workers the wages they make abroad are very important for supporting their families by raising their living standards (Mineshima, & Browne, 2007). Small island nations, such as Samoa and Tonga, rely heavily on remittances from family members who have migrated to work in wealthier countries than their own (Yuan, et al 2014). For example, the total Tonga annual remittance money was equivalent to over 45.5% of the Tongan GDP (Sin & Ormsby, 2019; World Bank, n.d.c).

But then there are many OHS issues as a result of migrant workers focusing on wages and staying silent on reporting OHS problems. Seasonal Agricultural Worker Program (SAWP) workers from poorer countries were likely to find work regardless of dangerous work conditions or knowingly unsafe work practices, similar to migrant workers in the UK who had the desire to earn the highest wages possible in a short period of time which, combined with working long hours and poor English language skills, could make them more vulnerable (Sargeant & Tucker, 2009). Similarly, Pacific migrant

workers are likely to endure poor pay and conditions, and compromised health and safety, for wages that they can send back home (Yuan, et al 2014).

However, as expressed earlier, reporting OHS problems or unethical conduct by employers has negatively affected the “whistle-blowing” migrants. As in the examples previously mentioned, the Pacific construction worker who reported unsafe work conditions that caused them significant injury later experienced harassment towards their family members from the contracting company owner who hired him (1News, 2022) and the migrant couple who exposed an employer who demanded money were to be deported despite reporting the exploitation attempt to INZ (Kilgallon, 2022). This represents a similar finding to that of the Pacific Labour Scheme in Australia where Samoan workers were punished for giving evidence at a hearing against a major labour-hire firm MADEC. One worker was stripped of their shifts and their supervisory role for speaking out about their mistreatment (Sullivan & Marie, 2022). But Pacific workers in NZ are historically less likely to report health-related issues for fear of job loss, and not wanting to complain or disappoint an employer (Department of Labour, 2012). There are several reasons why seasonal migrant workers refuse to make complaints about their employment concerns or obtain compensation as employees: firstly, there is a lack of knowledge surrounding the rights of workers and the OHS regulations, secondly, poor English skills and cultural barriers hinder the ability for migrant workers to submit official grievances, and thirdly, there is an unwillingness to inform the Department of Labour about violations of employment law regarding OHS regulations due to the risk of negatively impacting a migrant worker’s visa status (Boocock, et. al 2016). Additionally, the likelihood that an OHS inspector could randomly inspect an NZ business, was at the time, most likely low as the number of NZ businesses far exceeds the number of available OHS inspectors (Quinlan, et al, 2010 as cited in Boocock, et. al 2016).

For RSE workers, non-reporting is a major problem with evidence revealing many instances of workers reluctant to raise concerns. An RSE Impact Study in 2019 showed both men and women were less likely to report concerns for various reasons such as not wanting to cause more work for an accommodation provider due to no hot water, fear of retribution from their team leaders who were working for the employers interests first, fear that female workers would be seen as troublemakers for asking for days off to rest after working non-stop for weeks, fear that speaking up about wages rates would risk opportunities for recruits, and female workers being too embarrassed to ask a male supervisor to go to the toilet (Nunns, et al 2019). Furthermore, some RSE

worker contracts included a ban on criticising employers which enables exploitation (Frame, 2022).

Communication

A basic requirement in OHS is the ability to communicate with others (Rosengren, 2000). Unfortunately for migrant workers working in their host country, communication can be a major problem that poses significant risks to their OHS and working experiences. Several studies have produced important data in relation to risk factors from communication problems at work that may affect migrant workers such as barriers related to language (Ramos et al., 2021; Moyce, & Schenker, 2018; Cropp, 2019) and lack of awareness of rights or the ability to exercise rights in a safer workplace (Ang et al 2017; Cropp, 2019).

According to Sargeant & Tucker (2009), previous research (Dustmann et. al, 2003; Green et. al, 2008; McKay, et al 2006 as all cited in Sargeant & Tucker, 2009) identified communication as one of the OHS issues contributing to the vulnerability of migrant workers working in the UK. The research revealed that some migrant workers felt isolated in their new communities because of unfamiliarity with the language and customs which presented another vulnerability that could worsen the migrant workers' overall life and work experiences. There is also evidence that one of the root causes of fatalities among non-English speaking migrant farm workers is a language barrier, such as being unable to comprehend instructions written in English (Sargeant & Tucker, 2009). Gravel, et al (2009) also found that migrant workers in Canada had communication problems – further exacerbated by Canada having two official languages, English and French, with the latter being commonly used in Quebec – particularly in understanding and translating OHS instructions and procedures. In short, the inability to comprehend feedback, especially in regard to possible cultural or diversity factors, may contribute to bias, inaccurate recording, and interpretation of the data (Lamm, 2014).

To further compound the communication risk for migrant workers, Sargeant & Tucker (2009) stated that migrant workers in the UK were unlikely to participate in language training because of their eagerness to work long hours in order to accumulate pay. Similarly, other research has shown that workers from Mexico under the Most Seasonal Agricultural Worker Program (SAWP) arrived untrained and then not adequately trained once in Canada and had no experience in using hazardous farming equipment (Sargeant & Tucker, 2009). Similarly, for Pacific workers, communication factors pose a risk to their OHS; that is, poor English language skills impacting training,

the comprehension of OHS; the reticence to enquire and to build relationships with fellow work colleagues (Department of Labour, 2012; ACC/ WorkSafe, 2016; MBIE, 2017 as all cited in WorkSafe, 2018). In addition, these communication issues for Pacific workers are connected to cultural perspectives such as cultural sensitivity, cultural practice, respect for hierarchy/authority, and respect and humility for others which may affect the understanding of non-verbal communication; workplace structures; and risk perceptions (Department of Labour, 2012).

Another consequence of communication problems, and previously mentioned, is the lack of awareness of rights and how to access them (Underhill & Quinlan, 2011; Ang, et al. 2017; Cropp, 2019). A UK government report (Unison, 2008) identified low awareness of rights and how to enforce them among vulnerable workers as being one of the enforcement issues (cited in Sargeant & Tucker, 2009). For example, migrant workers with no previous familiarity with the health and safety system or awareness and ability to exercise rights and the addition of the complications of accessing OSH training made them more vulnerable (Sargeant & Tucker, 2009).

In NZ, there is evidence to show that Pacific workers in NZ also have communication problems as a result of limited English (Sin & Ormsby, 2019; Department of Labour, 2012) and a lack of knowledge of processes for accessing sufficient care or compensation for work-related injuries and illnesses (Department of Labour, 2012). Additionally, migrant workers employed temporarily in NZ also may not possess the same legal entitlements or be able to easily access the rights they do possess (Bohle et al., 2008). Furthermore, Longitudinal Immigration Survey New Zealand (LISNZ) interviews with Pacific workers have revealed that, combined with language issues, low education may have resulted in low-paying or part-time work which caused Pacific workers to be more vulnerable to economic conditions (Sin & Ormsby, 2019)

Evidence of communication problems is also found for Pacific workers in the NZ RSE scheme. Liaison Officers employed to help liaise with RSE workers were either employed full-time elsewhere and not fully committed to helping RSE workers or were ignored by female workers who only had a male officer delegated to them whom they did not want to raise issues with (Nunns, et al, 2019). However, evidence showed that RSE workers could rely on support from team leaders who aimed to find the best solution based on their own culture and the NZ culture – as was the case for a team leader from Vanuatu – and church leaders who offered information on where to get the best advice and support and could act on their behalf if workers gave their consent (Nunns, et al, 2019).

One such methodology is the *talanoa* research methodology which represents the most conventional means of oral communication across the Pacific (Prescott 2009). Talanoa allows Pacific people to engage in relaxed discussion of story sharing, opinions, and personal sentiments (Vaioleti, 2006) and thus is a framework for conveying and linking with others (Cammock, et. al 2021). The benefit of utilising the methodology for a Pacific researcher is the ability to engage with the particular Pacific group by sharing personal and lived experiences, emotions, and interests (Johnston, 2013). However, as Felio (2016) stated, more research is needed to establish the true potential of talanoa. Additionally, Feilo's (2016) thesis investigated how precariously employed Pacific construction workers managed OHS using the Pacific research methodology talanoa and found several factors relevant to this dissertation and related to uncertainty with finances, employment, OHS policy and practices, problems with communication in multicultural workforces, cultural appropriateness, and the impact of a diverse workforce.

Valuing OHS

One of the key factors influencing the OHS experiences of Pacific workers is whether or not OHS is valued in the organisation. Research has shown that safety training is necessary to negate unsafe behaviour by workers (Ghahramani & Amirbahmani, 2021) and that health and safety measures within the workplace have a positive influence on workers' ability to perform (El-Menyar, et al., 2016; Howard, 2017). In Canada TFW workers, in collaboration with trade unions and community groups, have helped to provide access to OHS information on hazards and rights of workers (Sargeant & Tucker, 2009). Similarly, in the Australian food production industry, a new form of worker mobilisation among cross-border workers, known as network collectivism, has helped strengthen the sense of belonging and connection among temporary migrant workers (TMWs) (Underhill, et al. 2019). Network collectivism is a combination of union organisation, community organising, transnational union cooperation and ethno-specific social media that helps to educate migrant workers about the conditions of their employment and their worker rights (Underhill et al. 2019).

In terms of how management can lead and implement strategies to value their migrant workers and manage OHS risks, Gravel, et al's (2013) study on the strategies for managing OHS measures in small Montreal businesses employing immigrant labour shows that to enhance the participation and commitment to OHS by immigrant workers, small business managers and directors need to be more cognisant or aware of the best practices in OHS and the cultural and power dynamics within their workplaces.

Furthermore, a study by Seixas, et al (2013) of unionised immigrant Latino workforce employed in a small business also indicated that those health and safety committees that accommodate and support cultural diversity could improve the OHS of vulnerable migrant workers and their level of engagement in OHS. However, even though the company's improved health and safety committee had raised interest and engagement among the Latino workforce, it had not produced substantial changes in the company's management practices.

Moreover, based on the research of this dissertation there were no clear and specific strategies that Pacific workers use or could use to effectively manage the OHS risks and as a result, more research is needed. However, in NZ there are approaches to educating and supporting Pacific workers that could be designed to build on family-oriented values.

Previously employers have conducted training sessions for smaller groups to enable a more open environment which has been satisfying for all involved (Department of Labour, 2012). Currently, the Puataunono Come Home Safely educational programme has focused on delivering health and safety messages to Pacific workers in higher-risk industries since 2006 (WorkSafe, 2018; Meehan, et al. 2021). Furthermore, the study of migrant workers provides a further opportunity for migrant workers to voice their concerns. From the perspective of the researcher, using a research methodology such as talanoa to study Pacific workers will help explore even further what OHS issues exist and how they can be resolved particularly for Pacific workers in the food manufacturing subsector.

Summary

The key aspects of the literature review suggest that there are OHS risk factors in an NZ setting that could possibly make migrant workers, including Pacific workers more vulnerable to injuries, illnesses, and fatalities than non-migrant workers. There is sufficient evidence to surmise that Pacific workers in the NZ food manufacturing sector are at risk of working in unsafe work conditions that could increase the risk of developing MSDs, particularly for female workers. Additionally, significant injury from unsafe work conditions could impact the families and support networks of Pacific workers.

Also, exploitation by NZ employers is a major risk which could make Pacific workers more vulnerable which, combined with evidence of non-compliance in the NZ manufacturing sector, could further exacerbate the experience for Pacific workers.

Another risk factor that could make Pacific workers more vulnerable is the non-reporting of OHS concerns. Researchers who wish to interview migrant workers have many challenges which hinder their ability to study OHS. Another common reason is some migrant workers aim to accumulate as much money from wages as they can to send as remittance to their families overseas, particularly Pacific workers whose contributions are substantial relative to their nation's GDP. However, not reporting OHS concerns for monetary reasons increases the risk to migrant workers' health and safety, particularly for female workers in NZ who have been found to report fewer OHS concerns than male workers.

Another risk that could make Pacific workers more vulnerable is communication factors such as poor English skills and comprehension skills, difficulty in connecting to cultural perspectives, a lack of awareness of rights and how to access them, a lack of knowledge of processes for accessing sufficient care or compensation for work-related injuries and illnesses and low education. That is why talanoa may provide an effective communication approach that is culturally appropriate.

In regard to the main research question, what are the main OHS risks for Pacific workers in the food manufacturing sector, the research suggests the main OHS risks for Pacific workers in the food manufacturing sector are unsafe work conditions, non-reporting, and communication. Moreover, evidence suggests the risk of exploitation in food manufacturing is a growing risk for Pacific workers. More importantly, female Pacific workers have a higher OHS risk concerning unsafe work conditions and non-reporting than male Pacific workers. In addition, when addressing the secondary questions, what does the existing research tell us about how Pacific workers are managing OHS risks and what are the most effective strategies for managing these OHS risks, research shows there is a lack of approaches to managing risks or proven strategies to manage risks that benefit Pacific workers.

The next chapter, Chapter four, analyses and interprets the main points of the key themes and explains the implications of those main points with regard to answering the main research questions stated in Chapter one. Furthermore, the limitations of the research and its contribution to the field of study in question are explained followed by the opportunity for further research, recommendations, and final conclusions.

Chapter 4 : Discussion and Conclusion

Introduction

The critique of academic research and grey literature in this dissertation regarding the OHS of migrant workers, including Pacific workers in the food manufacturing subsector, has shown that many of the main themes are consistent with the experiences of migrant workers worldwide. The five main themes that emerged from the critique of the research in Chapter 3 on the experiences of migrant workers such as Pacific workers (presented in the table below) were: unsafe work conditions, exploitation, non-reporting, communication, and valuing OHS.

More importantly, this chapter focuses on and examines the findings of the research and how it helps not only to further explore the OHS risk factors for Pacific workers in general but also ignites a discussion on the most effective strategies Pacific workers could use to manage these risk factors in the NZ food manufacturing sector. Furthermore, this chapter considers the limitations of the research, possible future research that should be undertaken, the recommendations as a result of this dissertation, the contribution that this dissertation makes to the OHS topic and the final conclusions.

Key Themes

The findings of this dissertation suggest that migrant workers, such as Pacific workers, are at risk from many OHS risk factors which were presented in five main themes in the previous chapter, Chapter 3, and summarised in an overview below in Table 7, particularly in the NZ food manufacturing subsector where there is a large Pacific worker cohort and a history of OHS non-compliance in the manufacturing sector overall. And although the research had shown that some migrant workers in NZ and Australia are offered or involved in similar industry-initiated programs or collaborate with relevant external groups in an effort to minimise and manage the impact of OHS risks, specifically targeted and effective strategies for managing risk factors for Pacific workers are limited and largely ineffective.

Table 7

Overview of Themes

Themes Identified	Key points	Example of supporting evidence
<ul style="list-style-type: none">Unsafe Work Conditions:	<ul style="list-style-type: none">Physical impact on migrant workers	<ul style="list-style-type: none">Schweder et al (2015) found workers had a higher prevalence of MSDs and

	<p>particularly female workers</p> <ul style="list-style-type: none"> Negative impact on the collective well-being of Pacific workers and their families 	<p>women a higher prevalence than men (Yu et al, 2011; Barbe, 2013)</p> <ul style="list-style-type: none"> through the lens of Pacific collective well-being (Pacific Perspectives, 2015) injury and illnesses negatively impact their families and support networks (Department of Labour, 2012)
<ul style="list-style-type: none"> Exploitation: 	<ul style="list-style-type: none"> Pacific workers in seasonal work programs rife with exploitation Meat processing in Australia exploits Pacific workers 	<ul style="list-style-type: none"> exploitation of migrant workers in NZ has increased by 450% since 2021 (RNZ, 2022), particularly through the RSE scheme in NZ (MPP, 2019; Fonua, 2022) Pacific meat workers in Victoria were deducted more than 50% of their wages (Baker, 2021) and in New South Wales, Pacific workers were charged five times more for rent (Labour, 2020)
<ul style="list-style-type: none"> Non-reporting: 	<ul style="list-style-type: none"> Fear of retribution, reprisal and retaliation Some contracts for RSE workers include a ban on criticising employers Female workers less likely to report than male workers 	<ul style="list-style-type: none"> Pacific workers feared job loss (Department of Labour, 2012). But after reporting concerns, were either harassed (1News, 2022) or demoted Sullivan & Marie, 2022) some RSE worker contracts were found to include a ban on criticising employers (Frame, 2022) female workers in NZ were less motivated to report (Bohle et al. 2008).
<ul style="list-style-type: none"> Communication: 	<ul style="list-style-type: none"> Negative impact of limited English skills Impact of the lack of consideration of cultural perspectives and factors Importance of having competent advisors for RSE workers 	<ul style="list-style-type: none"> English language skills are limited (Department of Labour, 2012; ACC/ WorkSafe, 2016; MBIE, 2017; Sin & Ormsby, 2019) The lack of considering cultural perspectives affects comprehension and understanding (Department of Labour, 2012) and the failure to consider cultural or diversity factors may cause issues (Lamm, 2014) Migrant workers found team leaders were far better at helping them (Nunns, et al., 2019).

<ul style="list-style-type: none"> Valuing OHS 	<ul style="list-style-type: none"> Safety training benefits worker behaviour and performance Group or teamwork helps build family-oriented values Talanoa methodology is a valuable research tool 	<ul style="list-style-type: none"> safety training can improve workplace behaviour (Ghahramani & Amirbahmani, 2021) and improve worker performance (El-Menyar, et al., 2016; Howard, 2017). group or teamwork in an open environment helps to build family-oriented values (Department of Labour, 2012) talanoa represents the most ideal means of oral communication (Prescott 2009) which allows for engaged and relaxed discussions (Vaioleti, 2006) to share personal and lived experiences, emotions, and interests (Johnston, 2013)

Unsafe Work Conditions

Unsafe working conditions experienced by migrant workers are a recurring theme in the literature, especially in high-risk occupations such as food manufacturing. Moreover, a critique of the research suggests that compared to other international migrants, the OHS risks may have a greater impact on female Pacific workers and the collective well-being of Pacific workers and their families.

As previously mentioned, Schweder et al. (2015) found that temporary seasonal workers had higher rates of injury and a higher prevalence of MSDs compared to permanent workers and that in other studies it was found that female workers had a higher risk of musculoskeletal symptoms because of work-related physical and psychosocial factors (Yu et al, 2011; Barbe, 2013). Furthermore, unsafe work conditions that cause significant workplace injury or illness for Pacific workers have negative impacts on the families' collective well-being (Pacific Perspectives, 2015) and support networks (Department of Labour, 2012).

Moreover, a workplace fatality can also have severe negative impacts on families' ability to find closure or deal with grief. An Australian study by Matthews et al. (2014) found that surviving families of deceased family members who died at work received little support and had difficulty gaining information regarding the inquiry into the death of their loved ones. A workplace death of a family member in NZ can also

have devastating impacts on Pacific families and the communities they worked in (Tokalau, 2022; RNZ, 2020).

Exploitation

The exploitation of migrant workers is another common theme found in the literature and may be an increasing problem for Pacific workers in food manufacturing, especially those working for employers that adopt seasonal work programs that may recruit from the Pacific (Schweder et. al, 2015).

As noted earlier, there has been a significant increase in the exploitation of migrant workers in NZ (RNZ, 2022c), particularly Pacific workers who enter NZ through the RSE scheme (MPP, 2019; Fonua, 2022). Similarly, evidence also showed that Pacific workers were exploited in Australia too (Labour, 2020; Kelly, 2021), notably in the meat processing sector through a regulated labour scheme (Baker, 2021). In some cases, it was shown that Pacific seasonal workers who died as a result of a work accident were also victims of exploitation (PNG Report, 2017).

Based on this evidence, it is clear that seasonal workers from the Pacific are at a high risk of exploitation in the food manufacturing sector and more is needed to minimise this risk factor.

Non-reporting

Non-reporting by migrant workers of OHS violations is another common theme in the literature. The critique of relevant research suggests that non-reporting is a major challenge for Pacific workers, particularly among Pacific women who were less likely to report than Pacific men.

Although the study by Lamm (2014) found that studying vulnerable migrant workers had its many challenges and that the study by Schweder et al. (2015) allowed for self-reporting, being able to report OHS concerns is still a major obstacle for migrant workers. Non-reporting is a significant issue for RSE scheme workers with evidence showing that many Pacific workers are fearful of reporting health-related issues because of employer retribution resulting in being fired from their jobs. One study, previously mentioned, showed men and women were less likely to report concerns for reasons such as reluctance to cause a fuss, fear of reprisal from team leaders, fear that female workers would be frowned upon for complaining, and fear of the negative impact on new recruits in the future (Nunns, et al, 2019). Moreover, some RSE worker contracts were found to include a ban on criticising employers (Frame,

2022). However, evidence that the fear of punishment by employers was a reality, was shown in one example where Samoan seasonal workers in Australia were punished for providing proof of unsafe work practices (Sullivan & Marie, 2022). In contrast, female workers in NZ were less motivated to report workplace-caused illnesses than men for unknown reasons; this aspect requires further research (Bohle et al. 2008).

Communication

With regard to the theme of communication (or the lack of it), there is a particular risk for workers from foreign, non-English speaking countries, regarding understanding of health and safety instructions and messages in their place of work.

For Pacific workers, communication factors can negatively impact their ability to understand workplace OHS if English language skills are limited (Department of Labour, 2012; ACC/ WorkSafe, 2016; MBIE, 2017 as all cited in WorkSafe, 2018; Sin & Ormsby, 2019), or if cultural perspectives are not considered; both these affect comprehension and understanding of their workplace environment (Department of Labour, 2012). Furthermore, the failure to grasp feedback based on cultural or diversity factors may contribute to bias, inaccurate recording, and misinterpretation of the data (Lamm, 2014). A low level of education may also compound the vulnerability of Pacific workers (Sin & Ormsby, 2019). For some Pacific workers in the NZ RSE scheme, part-time Liaison Officers tasked with assisting them were ignored by female workers if they were male officers and that team and church leaders were far better at meeting their needs (Nunns, et al., 2019).

Valuing OHS

As previously stated, safety training can both help improve workplace behaviour (Ghahramani & Amirbahmani, 2021) and improve worker performance (El-Menyar, et al., 2016; Howard, 2017). For Pacific workers in NZ, activities that focus on building family-oriented values like group or teamwork in an open environment can help provide workers with an opportunity to respond to OHS issues and give them more access to health and safety information (Department of Labour, 2012). Also, as previously mentioned, the Puataunofo Come Home Safely educational programme was designed to focus on educating and teaching Pacific workers the value of OHS in higher-risk industries (WorkSafe, 2018; Meehan, et al. 2021).

Additionally, much can be gained from a research study of migrant workers including gaining important knowledge that will help benefit employers by increasing

their ability to improve workplace OHS. A study of Pacific workers can obtain viewpoints and opinions that could contribute to a more comprehensive understanding of their OHS needs and how it can ultimately help to minimise risk factors. As suggested above, one way of achieving this goal could be through the use of the talanoa research methodology which represents the most ideal and conventional means of oral communication across the Pacific and the Pacific people in NZ (Prescott 2009). However, Felio (2016) stated, more research was needed on how effective talanoa could be in creating a workplace culture where Pacific workers and their employers value OHS.

Addressing the Research Questions

Based on a review of the relevant literature, there are a number of critical OHS risk factors for Pacific workers in food manufacturing. The extant literature also indicates strategies Pacific workers can use to help alleviate or lessen the impact of the high number of work-related incidences of injury, illness and fatality. Despite the limited research on work-related health issues for Pacific workers and even more so in food manufacturing, the critical literature review has contributed to an improved understanding of the working experiences and OHS issues migrant workers such as Pacific workers face in NZ workplaces.

To fully address the aim of this research the research questions were reiterated and individually answered. As previously stated in Chapter 1 the primary research question of this dissertation is:

- What are the main OHS risks for Pacific workers in the food manufacturing subsector?

Answers:

- unsafe work conditions can increase the prevalence of MSDs, particularly for female workers, and negatively impact the collective well-being of Pacific workers and their families
- exploitation of Pacific workers employed through seasonal work programs in various industries in NZ and Australia is widespread
- the effects of non-reporting of OHS violations, particularly for female workers, could negatively impact the OHS of Pacific workers even further

- the negative impact of poor communication due to limited English skills, low education, and lack of awareness of employee rights for Pacific workers can make them more vulnerable, and finally,
- the lack of effective strategies that consider the cultural factors of Pacific workers in regard to meeting their OHS needs.

The secondary research question is:

- What does the existing research tell us about what effective strategies Pacific workers use to manage OHS risk factors in the food manufacturing subsector?

Answers:

- Besides seasonal workers finding team leaders and church leaders are better at meeting their needs, and that safety training does benefit worker behaviour and performance and that group or teamwork helps to build family-oriented values through an open environment to express and learn, there are no specific and effective strategies to help Pacific workers manage OHS risk factors
- But the talanoa research methodology could be a valuable research tool for exploring the viewpoints and opinions of Pacific workers regarding their OHS experiences, in a mutual and relaxed discussion.

Limitations

While this review of the grey literature contributes to our knowledge of the OHS topic, this literature review is limited by the scant number of studies on the OHS experiences of Pacific workers in food manufacturing and so cannot reliably be generalized overall for all Pacific workers. In addition, there is a limited focus on Pacific workers in food manufacturing as a group or collective with a culture based on family values and beliefs. In addition, the lack of critical appraisal of the research and ineffective synthesis of the research also impacted the reliability of this literature review.

One important study commonly used in this literature review found that employment in high-risk occupations may impact the collective well-being of Pacific workers (Department of Labour, 2012) but since this report, there have been very few studies on Pacific workers in food manufacturing. As a result, this is a short dissertation to start the conversation about the growing concern of poor OHS for Pacific workers (as mentioned in Chapter 2) with the aim of adding to the overall discussion of the OHS

Pacific workers in general. Additionally, the lack of critical appraisal of the research for a large selection of grey literature that was included for the research topic with fewer academic literature and peer-reviewed studies included. Also, the lack of synthesis of research of the grey and academic literature and peer-reviewed studies brings into question the reliability of the combination of ideas particularly in regard to the understudied topic of OHS risks that Pacific workers experience in food manufacturing.

There has been, however, more interest in the OHS experiences of RSE scheme workers of which Pacific workers are commonly employed. As previously mentioned in Chapter 2, the RSE scheme is worth considering as it is associated with the food manufacturing subsector (secondary industry) and because agriculture (a primary industry) provides the raw materials for food manufacturing.

Contribution to the Topic

This research contributes to the discourse on the OHS of migrant workers, with a focus on Pacific migrant workers and has highlighted the food manufacturing subsector as one which needs more attention on how to improve OHS in order to help reduce OHS risks and the high rate of injury and illness that migrant workers like Pacific workers currently experience.

More specifically, the findings from the research revealed the negative impact, unsafe work conditions and non-reporting could have on female Pacific workers, and the high possibility of exploitation of Pacific workers in the food manufacturing subsector particularly when attached to seasonal work programs, and that the number of effective strategies targeted to assist Pacific workers to manage risks are limited. In addition, the research found that talanoa is a possible method to help start the conversation on the OHS concerns Pacific workers have.

Further Research

As noted previously, more research is needed into the *working experiences of Pacific migrant workers in food manufacturing*, as a unique group or collective with a culture based on family values and beliefs. Another area that requires more research is *why and how poor OHS standards impact the collective well-being* of Pacific workers and what measures could be provided for better health outcomes. Finally, further research is required into the *effectiveness of OHS preventative strategies aimed at Pacific migrant workers in food manufacturing* and what possible changes could be implemented to benefit Pacific workers.

Recommendations

The recommendations based on the research of this dissertation are:

- Carry out an urgent review of OHS policies and procedures and work conditions of food manufacturing businesses, particularly those businesses that have been non-compliant and have recruited migrant workers such as Pacific workers.
- Undertake an immediate review of all work programs that recruit workers from the Pacific to work in food manufacturing in order to ascertain the prevalence of exploitation of Pacific workers.
- Consider firmly allowing academic researchers to study Pacific workers using the talanoa research methodology to help explore the OHS issues and concerns that will help employers address and implement strategies to minimise negative health and safety impacts in the workplace.

Summary

The purpose of this dissertation was to identify the main OHS risks and the most effective strategies for managing these risks for Pacific workers in the NZ food manufacturing subsector. The five main themes discussed in this chapter embody the OHS risks that migrant workers like Pacific workers experience. More importantly, this chapter addressed the two research questions based on the main themes: unsafe work conditions, exploitation, non-reporting, communication, and valuing OHS with specific emphasis on the OHS risks Pacific workers encounter in various industries – particularly in NZ and Australia – but revealed the limited number of effective strategies they use or are available to them to manage risks effectively. Additionally, the potential for these risks to intensify and increase their negative impact on Pacific workers in the food manufacturing subsector is stressed.

Furthermore, the limitations of this research highlights the possible future research that should be undertaken, and recommendations are made as a result as well as identification of the contribution that this dissertation makes to the OHS topic.

It can be concluded that based on the review of the literature and the main themes found in the research, OHS risks have a significantly negative impact on Pacific workers, their families, and friends. In particular, these OHS risks have a negative impact on female Pacific workers, also on workers recruited through seasonal work programs from the Pacific and Pacific workers with poor communication skills.

Ultimately, these aspects will have a detrimental impact on Pacific workers in the food manufacturing subsector.

Essentially and despite the inherent evidence of OHS risks found through the research there is a lack of proven strategies to benefit Pacific workers. Although there are programs emphasising OHS in the workplace for migrant workers, more research is needed on what the most effective strategies are to help Pacific workers manage these OHS risks. The network collectivism concept used in Australia could help Pacific workers because of its emphasis on collaboration with relevant groups and organisations. Furthermore, the talanoa research methodology can provide Pacific workers with a platform to voice OHS concerns however much more research is needed on how effective it is in addressing the needs of Pacific workers.

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