

# INVESTIGATION INTO WORKPLACE HEALTH AND SAFETY ISSUES WITHIN THE AUSTRALIAN COMMERCIAL CONSTRUCTION INDUSTRY'S MIGRANT WORKFORCE

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## ABSTRACT

*Each year, there are approximately 12,600 workers compensation claims arising from the Australian construction industry, each representing an injury or health condition resulting in loss of productivity. In 2013–14, the construction industry accounted for around 9% of the Australian workforce, but accounted for overall 12% of workplace related fatalities. Previous studies have shown a high association between accident rates in the construction industry and the migrant workforce adversely impacting on social sustainability. The main issues faced by non-English speaking workers were language, cultural barriers, training barriers and communication. The migrant workforce is equivalent to roughly 24% of the construction industry's total workforce. Over 11% of workers originate from countries where English is the first language and 12.2% originate from non-English speaking countries. The aim of this study is to investigate the challenges faced by non-English speaking migrant workers including communication and cultural barriers, and to explore any potential impacts this may have on construction site safety as a key contributor in achieving social sustainability. It presents a detailed single case study that is representative of a typical case, a typical "project" among many different projects. Data is captured on everyday working conditions using a series of tripartite interviews (project managers, site managers and Workplace Health and Safety officers). Using the triangulation theory, multiple perspectives were sought instead of looking only from a single perspective to facilitate a deeper understanding of these issues. The research found many unsafe working practices endemic to migrant workers and that communication and language barriers faced by migrant workers have an adverse impact on site safety within the Australian commercial construction industry.*

**Keywords:** Australia; Construction Safety; Migrant Workers; Workplace Health and Safety (WH&S).

## 1. INTRODUCTION

### 1.1. BACKGROUND OF WORKPLACE HEALTH AND SAFETY

According to Safe Work Australia (2016), up to 1.01 million people were employed in the Construction industry during 2011-2012 in Australia. This accounts for approximately 9% of the Australian workforce for the 2011-2012 period. In New South Wales, 260,800 people were employed in the construction industry during the same period. The construction industry is vital to Australia's economy, and is a major contributor to the growth of Australia's economy (The Australian Bureau of Statistics, 2016). One of the major Australian building and construction industry associations, Master Builders Australia, considers the building and construction industry to be a key driver of the Australian economy, making a major contribution to the generation of wealth and the welfare of the community, particularly through the provision of shelter (Master

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Builders Australia, 2016). According to the Australian Bureau of Statistics (2016), the construction industry is crucial to Australia's economic growth, with 7.7% contribution (in 2015) and as the 4th largest contributor to Australia's gross domestic product (GDP). To ensure Australia's construction industry stays strong, it is vital that a set of rules and regulations are put in place to ensure a safe workplace. Workplace health and safety in Australia has been ranked among the best safety standards in the world (Safe Work Australia, 2016). The construction industry workforce has increased by 33% over the past decade (The Australian Bureau of Statistics, 2016). Employees account for 76% of the construction industry workforce in Australia, and each employee is covered by workers' compensation insurance (Safe Work Australia, 2016). Over the last 10 years, a significant reduction in the number of fatalities and injuries have been reported for the construction industry as per Table 1, however it still remains a high risk industry to work in.

Table 1: Worker Fatalities in the Construction Industry

Industry sector	No. of fatalities		Fatality rate		
	2003-07	2009-13	2003-07	2009-13	% chg
<b>Construction services</b>	<b>138</b>	<b>119</b>	<b>4.69</b>	<b>3.38</b>	<b>-28%</b>
Building installation services	44	43	4.75	3.42	-28%
Land development & site preparation services	34	28	15.32	9.94	-35%
Building completion services	13	22	1.43	2.20	54%
Building structure services	30	13	6.67	2.73	-59%
Other construction services	17	13	3.96	2.59	-35%
<b>Building construction</b>	<b>20</b>	<b>21</b>	<b>1.89</b>	<b>1.76</b>	<b>-7%</b>
<b>Heavy &amp; civil engineering construction</b>	<b>38</b>	<b>27</b>	<b>13.76</b>	<b>7.35</b>	<b>-47%</b>
<b>Total</b>	<b>196</b>	<b>167</b>	<b>4.59</b>	<b>3.29</b>	<b>-28%</b>

(Source: Safe Work Australia, 2016).

Nine percent of the Australian workforce comprised of workers in the construction industry during 2011-2012, however it accounted for approximately 10% of workers compensation claims involving more than a week out of work during the same period (Safe Work Australia, 2016). Each year, there are approximately 12,600 workers compensation claims from the construction industry alone, each representing an injury or health condition that involves taking one week or more off work. This works out to be approximately 35 major claims a day. During the 2012 - 13 period, the construction industry was ranked 4th highest for rates of serious claims per 1000 employees (Safe Work Australia, 2016). During the 2013 - 14 period, workers in the construction industry comprised the same percentage of the Australian workforce, however 12% of workplace fatalities came from the construction sector (Safe Work Australia, 2016). When analysed for fatality rate per 100,000 employees, the industry was ranked 5th highest during the 2013 - 14 period (Work Cover Authority, 2016). Occupational injuries, deaths and illnesses place an extra financial burden, both direct and indirect, on workers, employers and the community. For example, direct costs include workers compensation premiums paid by employers, or payments to workers injured on-site or whilst travelling to and from work. Indirect costs are more difficult to calculate because they encompass factors such as lost earnings (both present and future), lost productivity, lost output and so forth. The extent of this financial burden may vary, depending on the severity of the injury or health condition (Johns 2012). Direct costs are more measurable; however these costs cover only a fraction of the total cost of work-related injury and disease. According to Safe Work Australia (2016) for the period 2009 - 2010, \$7.3 billion was paid to workers compensation schemes. These payments consisted of: i) \$4.06 billion in direct payments (permanent impairment, incapacitated) (55.7%), ii) \$1.63 billion paid to medical, rehabilitation and other services (22.4%), iii) \$1.27 billion paid to insurance operations costs (17.4%) and iv) \$332 million paid to other administrative costs (4.6%).

## 1.2. PROBLEM STATEMENT

Many industries aim to minimise costs in order to maximise profits (ILO, 2012). A factor in minimising cost in the construction industry involves outsourcing physical work to sub-contractors (ILO, 2012). This practice in turn extends the division of labour. One key dynamic of this division of labour has been subcontractors hiring migrant workforces to try and obtain key skill requirements and reduce total labour costs (ILO, 2012).

Previous studies have made associations with high accident rates in the construction industry and the migrant workforce (Trajkovski and Loosemore, 2006; Loosemore and Andonakis, 2007; Salleh *et al.*, 2012). The migrant workforce is equivalent to roughly 24% of the construction industry's total workforce. Over 11% of workers originate from countries where English is the first language and 12.2% originate from non-English speaking countries (Australian Bureau of Statistics 2016). A large number of workers have been identified as illegal immigrants working within in the industry. This presents yet another challenge for construction sites in Australia. The figures above do not include illegal immigrant statistics (Wallace, 2011).

A mixture of cultural and communicative barriers among non-English speaking workers may create detrimental impact on quality and safety standards within the commercial construction industry. Literature has shown a link between the deterioration of safety and quality standards and an increasing migrant-dominated workforce (Loosemore and Lee, 2002, Skilled Migration Survey, 2011; Rosewarne *et al.*, 2012; Department of Immigration and Border Protection, 2016). The aim of this study is to explore this issue further and expand on previous research, and to identify factors that contribute to this effect.

### **1.3. RESEARCH SIGNIFICANCE**

Problems relating to non-English speaking migrant workers in the construction industry have been examined previously in other studies including Loosemore and Andonakis, 2007, Allen, 1976, Premji *et al.*, 2008, Loosemore and Lee, 2002, Trajkovski and Loosemore, 2006 and Salleh *et al.*, 2012). The previous research undertaken in this area has helped to build knowledge about various issues faced by this section of the workforce. The outcomes of this previous research demonstrated the main issues faced are language, cultural barriers, training barriers, communication. Therefore, strategies aimed at addressing these issues are likely to have a positive impact on workplace health and safety issues relating to the migrant workforce. If these quality and safety issues are left unaddressed, this may result in negative outcomes such as accidents, delayed work, loss of productivity, insurance expenses, injuries, fatalities, disabilities. It is vital for managers to fully understand the problems that non-English speaking (NES) workers face, and to help resolve the issues as quickly as possible. These issues mentioned above will be investigated in this study, to help understand the issues faced by these migrant workers and the potential dangers they may present to the commercial construction industry.

### **1.4. RESEARCH AIM AND OBJECTIVES**

The aim of this research is to investigate issues faced by migrant workers working on construction sites. The specific objectives of the research includes: (i) Investigate migrant trends that specifically relate to the subcontractor trades of tiling, plastering and painting; (ii) Examine the communication barriers faced by the migrant workforce and explore how these different barriers can affect quality and safety standards in the commercial construction industry. (iii) Explore the different communication, language and training barriers which exist between construction workers with English speaking background and the migrant workforce with non-English speaking background, and (iv) Investigate cases involving migrant workers and assess what was learned from those experiences. The research reported in this paper has been carried out within the New South Wales construction industry on a Tier 2 construction company representing the Australian commercial construction industry. The research therefore is based on a single a case study. Within the case study, data triangulation theory was applied by conducting a formal interviews with three categories of stakeholders. These categories include safety officers, site supervisors and project managers. Key terms used in this paper are; Migrant Workers and Non English Speaking Migrant Workers (NESMW). A migrant worker is a worker that comes to work in Australian from overseas. Migrant workers remain classed a migrant worker until they become permanent resident or Australian citizens and Non-English speaking migrant workers (NESMW) is a worker who cannot speak English and comes from a country that has a first language other than English.

## **2. MULTICULTURALISM / DIVERSITY IN THE AUSTRALIAN CONSTRUCTION INDUSTRY**

The construction industry is ideally suited to take advantage of cultural diversity. Diversity is defined as a very broad term, it recognises a variety of characteristics that make individuals unique. These include differences in age, cognitive thoughts, disability, culture, language, gender identity, ethnicity, education, marital status, economic background, geographic background, religious beliefs, race, appearance, sexual orientation and the

like (University of Tennessee, 2012). Multiculturalism is an ever increasing feature of Australia's construction industry. When different cultures intermix, opportunities are created for other cultures to communicate with each other and work together to create a multicultural environment. Australia has a multicultural society and promotes a multicultural policy that provides fairness, equality, and inclusion for everyone. Australia supports a wide variety of religious, cultural and linguistic diversity, shared values and cultural traditions with the law and free from discrimination (Department of Immigration and Border protection, 2016). Therefore, construction sites must operate under the same set of laws and principles as the rest of Australia. For the period 2014-2015, 168,200 persons migrated to Australia under a number of classifications including skill migration, family migration, special eligibility and humanitarian. According to the Department of Immigration and Border Protection (2016), the top 5 nationalities who migrated to Australia in 1949 were from Italian, German, Polish Yugoslav and Greek background.

During the 2011-2012 period, 84,183 people became Australian citizens from one hundred and eighty different countries. Table 2 shows the breakdown of Australian citizenship during the 2011-2012 period, listing them by country of origin.

Table 2: Australian Citizenship Breakdown 2011-2012 (Source: Mantoufeh, 2012)

Former Citizenship	Persons	(%)
United Kingdom	16401	19.5
India	10076	12.0
People's Republic of China	6876	8.2
Philippines	5592	6.6
South Africa	4206	5.0
New Zealand	3458	4.1
Vietnam	1929	2.3
Sri Lanka	1671	2.0
Republic of South Korea	1570	1.9
Malaysia	1487	1.8
Other	30917	36.7
Total	84183	100.0

KPMG's study on Australian skilled migration identifies migrant workers as becoming more viable and an alternative to fill labour shortages within Australia's construction industry. Australian temporary work visa previously known as the 457 visa allows businesses to employ skilled workers outside of Australia to come and work within Australia. This may bring sponsored skilled workers to the construction industry. Skills include painting, tiling, plastering, carpentry etc. (Department of Immigration and Border Protection, 2016). The temporary work visa shows an increase of skilled workers most prominent in the construction, mining, and manufacturing industries. 10 percent of the temporary work visa workers gain work within the construction industry. The highest source regions for skilled migrant comes from the United Kingdom. The rest of Europe (17.5%) and China/South East Asia (15.5%). To summarize, the Australian construction industry is a multicultural environment which has led to several areas of concern especially for working trades that have a high percentage of NESB workers. The biggest multicultural barrier faced by the industry is language, but the existence of illegal migrants within the industry is also of significant concern as it directly affects safety, economy, and safety and work quality.

### 2.1. *MIGRANTS SPECIFIC TO TRADES*

According to Mantoufeh (2012) reducing costs to increase profit margins in the Australian construction industry has led to construction firms concentrating on contracting and project management and leaving the physical work to subcontractors. The consequence of this has led to numerous subcontractors employing migrant workers. By hiring migrant workers, these sub-contractors can reduce labour costs and source its necessary skill requirements.

There are many trades within the construction industry that do not require any formal qualifications e.g. Painting. A common strategy within Australia construction industry has been for licenced contractors to hire migrant workers in trades that do not require qualifications. According to Constance and Quinland (1988) this is no new occurrence, Italian immigrants arriving to Australia post World War 2, relied on their experience rather than on qualification. These Italian migrant workers used their experience to dominate the tiling, concreting and rendering trades. In more recent times, the majority of migrants coming to Australia are coming from countries within Asia such as India and China. These workers are being drawn to the same trades as the Italian migrants before them. These new migrants have a tendency to work in the trades of painting, plastering, cleaning and tiling (Rosewarne *et al.*, 2012; Mantoufeh, 2012; Loosemore and Lee, 2002; Department of Immigration and Border Protection, 2016). New migrants are being drawn to these trades because there is no formal qualification needed to work in these trades. There is evidence to suggest that a large number of temporary migrants are being drawn into certain occupations within Australia's construction Industry. Work in these occupations is often on an irregular and casual arrangement and usually take the form of non-standard agreements. In many of these cases, workers are paid cash in hand, which allows the workers to avoid paying tax on their earnings and employers to be able to avoid paying superannuation, payroll tax and standard industry wages requirements including workers compensation insurance. This is supported by Rosewarne *et al.* (2012) and Mantoufeh (2012), who state that conditions are generally irregular and against legislation and enterprise agreements.

There is very little research into the cash economy of undocumented workers. Due to the lack of research it is impossible to estimate how much these workers are costing the Australian economy each year. Shin (2010) conducted research on Korean and Chinese nationals working in Sydney's metropolitan areas tiling sector. The research specifically focused on the standard forms of work and its prevalence within the sector. Shins research determined that by employing migrant workers on temporary and residence visas, as well as hiring undocumented workers, subcontractors have been able to reduce costs by paying cash to evade paying tax, paying workers less than their legal entitlements, not paying workers compensation insurance and by not paying workers superannuation. Migrant workers coming to Australia need to have appropriate training and language assistance provided to them. Without this training and language assistance, many of these workers present serious WH&S concerns which may have serious implications for site safety within Australia. These migrant workers are being placed in exceptionally vulnerable positions as not only are they not being provided with adequate training, there is no protection being provided by the subcontractors they work for. This includes failing to pay workers compensation, which by itself is a serious concern.

## 2.2. COMMUNICATION

All human languages are tools aiming to solve the problem of communication (Everett, 2012). For migrant workers living in host societies, communication can be difficult due to workers being from different regions, socio economic backgrounds, speaking different languages, levels of education and training. This can lead to migrant workers being marginalized and excluded socially from their host society. Migrant workers who experience communication barriers, such as speaking limited English, are susceptible to health and safety issues (Lo, 2014).

Proper communication is essential for a workplace to operate effectively and safety. This is especially true for the communication between an English speaking workforce and a non-English speaking workforce. The dominant language on Australian construction sites is English. Workplaces are the most likely context in which a non-English speaking worker will need to use English (Clyne and Ball, 1990).

Australian workplaces, can be difficult to navigate for migrant workers as English language and literacy skills are required. While workers may be proficient in their native tongue for everyday speaking and writing tasks, they lacked this proficiency in English for similar tasks. This meant they were unable to participate and understand fully the requirements of the workplace environment where English is dominant (Mantoufeh, 2012).

Proficiency in the official language can influence WH&S by impacting on the workers ability to understand and communicate information and supported relationships that can affect work related health. Language proficiency refers to the worker's ability to understand and be understood both orally and in writing (Mantoufeh, 2012). It is imperative that cultural and communication barriers are overcome to prevent difficulties arising in the workplace. Statistics indicate that multiculturalism is an ever increasing feature of

the Australian construction industry. The result of having a diverse workforce can generate significant challenges. The consequences of mismanaging these challenges and cultural groups can create frustration, stress, confusion and conflict within the workplace. This leads to lower morale, productivity, quality problems and increase in accident rates (Mantoufeh, 2012). It is apparent a culturally diverse workforce will remain a prominent feature of the Australian construction industry into the foreseeable future and that it is a challenge that managers will need to overcome well into the future. To prevent difficulties arising managers should have an understanding of the different cultures in their workplace. To do this, managers can familiarise themselves with the body language and customs of the workers. This will help in understanding the different communication styles of each culture, which can reduce the chance of misinterpretation. This is supported by Vandenheuvel and Wooden (1997) who suggests that management need to understand the cultural differences between workers and help to create cohesion between all cultures on site by providing English training for non-English speakers. This creates less reliance on information being spread by informal methods of literacy (Beal, 1990; Lo, 2014). If issues' surrounding migrant workers is not tackled by management, non-English speaking workers, will begin to rely more on other non-English speaking workers for information on regarding their safe work practices. This is important for two reasons. Firstly, this means accessing information remain under the control of the worker. Information needs to be clearly distinguished from any formal and informal attempt to convey workplace health and safety information (Trajkovski and Loosemore, 2006). Secondly, this is not adequate safety training and workers need to be taught based on their level of literacy (Beal, 1990). Mantoufeh (2012) suggests that the use of graphic images showing basic safety messages can be useful. However Lo (2014) suggests that even if health and safety documents are translated into their native language, those workers with limited English may be at risk of unexpected dangers if they cannot fully understand verbal instructions or danger warnings. Mantoufeh (2012) has suggested the use of specialist safety advocates, who are able to communicate with a bilingual workforce in order to relay information to workers.

### **3. RESEARCH METHODOLOGY**

The research method chosen for this paper is a single case study design, which is made up of individual observations and data collected in interviews, and via a Likert scale questionnaire. The reason a single case design was used is that a single case study design is the representative of a typical case. The object is to try and capture everyday conditions and circumstances. The case study may represent a typical “project” among many different projects (Yin, 2009). The data collection methods used in this case study have been established by reviewing the supporting literature and in consultation with Western Sydney University academics. For the case study, the triangulation theory was used to obtain a more precise picture of WH&S in relation to NESMWs at the commercial construction company. According to the triangulation theory, multiple perspectives of the same phenomena may enable a more precise picture to be developed, in comparison to results gained from only one perspective. This is achieved through a triangulation of observers where many different people observe the same phenomenon (Neuman, 2011 and Yin, 2009). In this study, the triangulation theory has been used to get insights from a range of construction personnel, who gained knowledge on the issue of WH&S through their experience in their particular roles and duties (Neuman, 2011). Qualitative data collection methods were used to obtain data through interviews and a questionnaires. The responses are then triangulated by looking at those that are agreed upon by the participants (Guion *et al*, 2002). This approach helps to enhance the validity of the findings by using different sources of information to investigate the research question, to increase confidence that the findings reflect the true situation at the company (Guion *et al*, 2002). This interview questions and questionnaire materials were subjected to stringent Western Sydney University ethics approval. After a series of amendments, the interview questions were granted ethics approval. Three categories of people were interviewed from three different positions namely, Site Supervisors, WHS officer and Project Manager within the chosen commercial construction company that deal directly with matters relating to site safety. Based on their comments and experiences with site safety relating to NESMW results were compiled to form the representative typical case, or ‘project’ among other projects, in the commercial construction industry for theory building purposes. Participants employed in these positions were selected due to their broad understanding of WH&S concerns and practices on commercial construction sites, to provide insight into potential issues relating to NESMW. Furthermore, their positions include dealing with WH&S issues on a daily basis and usually involve experience of working with NESMW. A total of 9 interviews were conducted for each of the three categories. All interview participants are from the same tier 2 commercial construction company.

#### 4. RESEARCH FINDINGS AND CONCLUSIONS

The results of this study have shown the Australian commercial construction industry to be a very multicultural industry. Due to the commercial construction workforce being so culturally diverse, problems become apparent. This case study found communication to be a major problem faced by the non-English speaking migrant workforce within the commercial construction industry. These communication issues may have adverse effects on site safety within the Australian commercial construction industry. The language barriers faced by non-English speaking migrant workers investigated in this study have revealed problems with communication on safety requirements, safe work instruction, safety training and site inductions. This is consistent with the findings of previous studies (Mantoufeh, 2012; Saleh *et al.*, 2012; Trajkovski and Loosemore, 2006).

Further problems were found during this study. These problems included the workers continuing to resort to work practices and cultural norms from their home country. Workers did not conform to site safety requirements by not using the correct Personal Protective Equipment (PPE), having untagged tools and by conducting unsafe work practices. There were several reports of non-compliant work and miscommunication. Various Construction personnel have stated that while dealing with non-English speaking migrant workers they have faced stress, frustration and confusion when communicating with non-English speaking migrant workers. This study has found that despite the communication barriers that exist with NESMW, employers continue to hire them to reduce labour costs and fulfil their skills needs. Construction managers have yet to establish an efficient way of communicating and dealing with the NESMW. Often NESMW have been reported to use third party communication methods and documentation to aid in understanding the language barriers. This informal method of communicating safety instructions may have adverse effects on site safety as the information being passed on through these channels may be incorrect or misinterpreted.

The findings suggest there is deterioration in safety and quality assurance within certain trades in the commercial construction industry. Particularly in the plastering, cleaning and tiling trades. Additionally, the findings of this study have recognized the use of new technology to aid in overcoming the language and communication barriers, e.g. Google translate. Finally the results of this study have established that the commercial construction industry is a multicultural industry. The three chosen subcontractor trades of plastering, tiling, and final clean were identified to up to 70% NESMW. This is further supported by the interviews carried out on WH&S officers, site supervisors and project managers. Both communicative and cultural barriers were found to be present within the commercial construction industry. These communicative and cultural barriers have caused deterioration in safety standards. Interestingly despite the findings of some studies mentioned in the literature review of this study, communicative and cultural barriers were not found by interview participants to have detrimental effect quality standards.

The findings of this study had shown that there are many different communications, language and training barriers exist between construction workers and the NESM workforce. These barriers were found to be detrimental to site safety but not to work quality.

It was also found that while management do aim to resolve and eliminate the negative effects created by these barriers, there is little or no special attention given to needs of NESMW in regards to site safety. Interview respondents reported that there was no special or additional safety training provided to NESMW to ensure that they fully understand site safety. This may be detrimental to safety on site.

The interview participants reported a wide range of real experiences of dealing with NESMW. There was many cases of unsafe work practices, communication problems, and misunderstandings, cultural norms, stress and frustration. However interview participants reported NESMW to be hard working with the capability to work fast in large teams. During this research, considerable challenges were found to be facing NESMW with regards to safety and quality assurance on Australian construction sites. Different cultural and communicative barriers have created these considerable challenges. It can be concluded that communication and language barriers faced by NESMW have an adverse impact on site safety within the Australian commercial construction industry.

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