DOI: 10.37155/2811-0730-0201-6

ORIGINAL RESEARCH ARTICLE



Open Access

The Mental Health of Migrant Workers in the Australian Construction Sector: A Literature Review

Jose Cuenca¹, Iftekhar Ahmed², Lynne McCormack³, Mark Rubin⁴, Kavitha Palaniappan⁵, Liyaning Maggie Tang^{2*} and Elsa Licumba⁶

Received: May 22, 2023; Accepted: July 12, 2023; Published Online: July 24, 2023

Citation: Cuenca J, Ahmed I, McCormack L, Rubin M, Palaniappan K, Tang LM and Licumba E. The Mental Health of Migrant Workers in the Australian Construction Sector: A Literature Review. *Journal of Building Design and Environment*, 2023;2(1):16111. https://doi.org/10.37155/2811-0730-0201-6

Abstract: There is a high proportion of migrants in the construction industry; however, little is known of the factors that increase the risk of mental health difficulties among this group and in particular in Australia. Research studies on the mental health of migrant construction workers in Australia were searched in Web of Science, Scopus, PubMed and Google Scholar. The literature search found seven studies, of which five included a subgroup of migrant construction workers or stakeholders in the field and two studies sampled specifically from this population but from higher educational backgrounds. Three of the studies used cross-sectional surveys and the other four used qualitative interviews in combination with either other qualitative techniques or a literature review. The limited evidence suggests that migrant construction workers living in Australia are likely to experience psychological distress in the context of adverse working conditions, financial hardships and interpersonal stressors. Common methodological limitations of the literature reviewed for this paper were a lack of comparison groups, combined samples of workers from different occupations, limited use of standardised measures of psychological distress and a focus mainly on occupational factors. Implications include operationalizing interventions in a manner that is accessible to migrants and their culture. The review

© The Author(s) 2023. **Open Access** This article is licensed under a Creative Commons Attribution 4.0 International License (https://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, sharing, adaptation, distribution and reproduction in any medium or format, for any purpose, even commercially, as long as you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made.

© The Author(s) 2023. www.omniscient.sg

¹ Everymind, Hunter New England Local Health District, New South Wales 2300, Australia.

² School of Architecture and Built Environment, The University of Newcastle, University Dr, Callaghan New South Wales 2308, Australia.

³ School of Psychological Sciences, The University of Newcastle, University Dr, Callaghan New South Wales 2308, Australia.

⁴ Department of Psychology, Durham University, Stockton Rd, Durham DH1 3LE, United Kingdom.

⁵ School of Health Sciences, The University of Newcastle, University Dr, Callaghan New South Wales 2308, Australia.

⁶ Business School, The University of Newcastle, University Dr, Callaghan New South Wales 2308, Australia.

^{*}Corresponding Author: Dr. Liyaning Tang, School of Architecture and Built Environment, The University of Newcastle, University Dr, Callaghan New South Wales 2308, Australia. Email: Maggie.Tang@newcastle.edu.au

stresses that more research is required in this field sampling specifically from the migrant construction workers population, using comparison groups, prospective designs, and qualitative methods to help better understand the unique experiences of mental ill-health in this group.

Keywords: Construction, Migrant, Worker, Mental health, Review, Australia

1. Introduction

The construction industry fosters economic growth and employs thousands of workers who are key for building infrastructure. Furthermore, there is high demand for work in the industry and pressure to deliver projects on time. As a consequence, the construction industry is reliant on a strong and healthy workforce to meet the increasing demands placed on it[1]. However, recent research concerning the health of construction workers suggests that they are at risk of experiencing psychological distress and physical illness^[2]. Moreover, there is a high proportion of migrants in the construction industry and they play a key role in meeting the economic and industry related demands of the host country, as well as in providing essential goods and services in emergency situations such as the COVID-19 pandemic^[3]. Although some international studies have been conducted to better understand the factors that affect migrant construction workers' health^[4], little is known of the mental health difficulties experienced by migrant workers in the Australian construction sector. This study aims to review the literature on the mental health of migrant construction workers in Australia with the specific objective of identifying the various workrelated, social, cultural and individual level factors that may contribute to the mental health issues faced by this population.

Research on the mental health of non-migrant construction workers in Australia suggest that long working hours, hard physical labour resulting in pain, unrealistic deadlines and having little or no say in one's work, play an important role in mental ill-health. For instance, Langdon and Sawang's^[5] interrelated studies of construction workers in Brisbane, Australia, found three main sources of stress among this population: (1) lack of personal time, (2) financial concerns, and (3) work concerns. They also found that workers who used maladaptive coping strategies, such as self-criticism and self-blame, were likely to report symptoms of depression, anxiety and stress. Another study of construction workers in Australia found that

workers who experienced pain were more likely to report symptoms of depression, and those who felt that their pain was the result of work activities had higher depression scores^[6]. Thematic analysis of interview transcripts showed that workers felt pressure to keep working through their pain in order to get paid and also felt awkward talking about mental health, which made them less likely to seek help. In relation to this, the Kurtzer *et al.*^[7] qualitative study of construction workers in Australia showed that workers found it difficult to talk about mental health issues in the workplace for fear of losing rank or esteem among co-workers.

Regarding migrant construction workers, previous studies suggest that they are at an increased risk of experiencing mental ill-health and physical injuries as a result of social, economic and occupational factors. The literature review by Flouris et al. [8] on the health of migrants working in the construction industry of big sporting events (e.g., Olympic Games) identified a number of factors associated with health and mental health difficulties, including: time pressure to complete work, insufficient sleep, difficulty speaking or understanding the language used at work, family separation and working outdoors in extreme temperatures. Similarly, the US report of young Hispanic migrants working in the construction industry identified three main sources of risk for work-related injuries: (1) structural and industry related factors, such as increased pressure on production, reliance on temporary workers and racism; (2) knowledge factors, such as lack of knowledge of standard safety procedures and language difficulties at work; and (3) cultural factors such as cultural beliefs of wanting to be perceived as a very hard worker^[9].

Most of the international studies that have examined the mental health of migrant construction workers have examined work-related factors or living conditions. Hamid and Tutt's^[10] ethnographic study of Tamil construction workers in Singapore found that migrant workers were paid less than Singaporean or Chinese workers and lived in precarious conditions, such as dormitories that housed about 60 workers in a single

room. Similarly, Devkota *et al.*^[11] focus groups and indepth interviews of 42 construction workers, found that migrant workers reported living in crowded rooms, having limited time to go out for entertainment, working long hours without breaks, feeling exploited and having difficulty communicating in a foreign language.

Only a few studies, mainly US based studies of migrant Latino construction workers, have measured social stressors such as acculturation stress in addition to the more widely studied workplace factors. Hill et al.[12] examined how the process of adjusting to a different culture can affect the mental health of migrants working in construction or landscaping. Over one hundred Latino workers completed an intervieweradministered survey, of which 40% of respondents experienced moderate to severe depression and 25% moderate to severe anxiety. Participants who had difficulties adjusting to the host country (e.g., difficulties communicating in English, being away from family and friends, or feeling that one is being taken advantage of by an employer or landlord) were at risk of experiencing depression and anxiety. In particular, feeling discriminated at work was associated with an increased risk of reporting symptoms of anxiety. In another US study of migrant Latino workers, Fernández-Esquer et al. [13] found that workers experiencing immigration stress (e.g., worries about being deported, missing family and friends or feeling disappointment of current life situation) were at risk of experiencing depression and this, in turn, increased the risk of having accidents at work.

Migrant workers are essential to plug the labour shortfalls in the construction industry and they also boost the working-age population. Moreover, the skilled migrant workforce contribute significantly to the Australian economy^[14]. If the health and wellbeing of such migrant workers are not taken care of, it may lead to significant construction delays, hike in wages and a serious labour shortage in the sectors such as construction, manufacturing, logistics and transportation. Some countries like Singapore and Dubai already witnessed a glimpse of such a condition during the COVID-19 pandemic, when country-wide lockdowns prevented the movement of migrants from their home countries. Despite some literature on the mental health difficulties of construction workers

and migrant construction workers, mostly in other countries, little is known about the mental health of migrant construction workers specifically in Australia. Moreover, previous studies on the mental health of both non-migrant and migrant construction workers have mainly focused on occupational, that is, work-related factors, and other important psychosocial factors beyond the workplace in terms of relationships to the wider society have not been examined. This study reviewed the literature on the mental health of migrant construction workers in the Australian construction sector.

For the purpose of this study, migrant workers are typically considered to be first-generation immigrants or short-term visitors from overseas. They generally have legal authorisation to work in Australia, however, there are also informal workers. Construction workers are typically defined as front-line workers performing manual construction tasks, such as working as a carpenter, concreter, plumber or tiler. Mental health was defined as a "state of well-being in which an individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and is able to make a contribution to his or her community" [15].

2. Materials and Methods

2.1 Review and Search Strategy

We conducted a literature review following Grant and Booth's typology^[16] where published materials that provide an examination of recent or current literature are reviewed. No formal quality assessment was undertaken. An iterative process to searching the literature and refining based on search results was used^[17]. Research studies published in English on the mental health and wellbeing of migrant construction workers were searched in Web of Science, Scopus, PubMed and Google Scholar. The time range of publication was limited to the last two decades as older research was thought to be less useful. Literature considered in this study included journal articles, academic or professional and accessible through the commonly used databases mentioned above. An initial scoping search was undertaken, retrieved results appraised and further relevant search terms were identified following discussions within the research team. The search strategies were then refined and a more comprehensive search was rerun for each database. Keywords included: 'migrant' (immigrant, foreign, foreigner), 'construction' (building) (labour, blue-collar) 'worker' (labourer, employee), 'mental health', 'wellbeing', 'quality of life', 'mental ill-health' (depression, suicide, psychological distress), 'coping' (resilience, resilient) and 'Australia' (Australian). To supplement the database searches, reference sections of the reviewed articles were also searched. We undertook a narrative synthesis in which a descriptive summary of studies and their results is provided. To group information from different studies, the results are presented under headings and related participant quotations are shown to illustrate the findings.

2.2 Reviewed Papers

A total of 293 papers were located from these searches. Given the limited literature in this field, discussions within the research team established that studies that focused on or involved migrant construction workers living or working in Australia, as whole or

as a subgroup, should be included in the review. As a consequence, the review included samples of both migrant construction workers and migrant workers from different occupations (e.g., IT, hospitality) and from diverse educational backgrounds. This resulted in a total of 126 papers. A review of all the titles and abstracts resulted in seven papers that dealt with the mental health of migrant construction workers. The inclusion criteria for this review consisted of studies that had explored the various aspects of migrant workers' mental health in the Australian construction sector.

3. Results

The literature search identified seven papers that studied or focused on mental health difficulties among migrant construction workers in Australia. Three studies used cross-sectional surveys and four studies used qualitative interviews in combination with either other qualitative techniques (e.g., ethnographic work) or literature review (**Table 1**).

Table 1. Methodology and key findings of studies.

| Reference | Study design | Sample and data collection | Key findings |
|--|---|---|---|
| Daly <i>et al</i> . 2018 ^[18] | Cross-sectional survey | 585 migrant workers (including migrants from Arabic, Chinese and Vietnamese backgrounds) who lived in Melbourne, Sydney or Perth. Across the ethnic groups studied, between 6% and 24% of participants were labourers; between 11% and 16% were technicians or trade workers and between 5% and 8% were machinery operators and drivers. Data was collected using computer-assisted telephone interviews. | Job complexity, low job control and low job security more likely to be reported by labourers, technicians/ trade workers, and machinery operators than by workers in managerial occupations. |
| Daly et al. 2019 ^[19] | Cross-sectional survey | 2,215 migrant workers (from China, Vietnam, Arabian countries, New Zealand, Philippines and India) who lived in Australia. Across the various ethnic groups studied, between 6% and 23% of participants were labourers, between 9% and 27% were technicians or trade workers, and between 3% and 11% were machinery operators and drivers. Data was collected using computer-assisted telephone interviews. | Mental health problems were significantly associated with complex or demanding jobs, jobs with low control or jobs with low security. |
| Hedwards et al. [20] | Qualitative interviews and literature review. | Interviews with 27 participants from | Limited knowledge of workplace laws among migrant workers creates an opportunity for some employers to employ migrant construction workers on sham contracts and phoenix activities. Informal employment contracts and cash-in-hand wages in the construction industry increase the potential of exploitation of migrant construction workers. |

Table 1. Methodology and key findings of studies.

Continuation Table:

| Reference | Study design | Sample and data collection | Key findings |
|----------------------------|--|---|---|
| Loosemore et al.[21] | Cross-sectional survey | 79 migrants and refugees (from Arabian and non-Arabian groups) who had looked for work in the construction industry as professionals, administration or tradesmen. Thirty percent from nonengineering professions. Recruitment carried out through support agencies based in Sydney and Melbourne and at refugee employment related events. | Significant self-reported barriers to employment included lack of Australian work experience, employers not recognising past qualifications, limited support from government and perceived discrimination by employers. |
| Mayes ^[22] | Qualitative interviews | Group interviews with 7 migrant workers (from the Philippines, Japan, Mexico and South Africa) and 2 spouses living in Ravensthorpe in rural Western Australia. | Migrant workers described making substantial financial and emotional commitments in taking up transnational employment, but not receiving adequate support by their employer. Lack of knowledge of visa regulations contributed to a feeling of vulnerability. |
| Stevens ^[23] | Qualitative interviews and participant observation | 53 Chinese migrant workers living in Perth, Western Australia. Participants included welders, metal machinists, plasterers, massage therapists, restaurant owners and employees of meat processing and farm businesses. | Precarious work conditions and insecure legal status resulting in an inability to feel established in Australia. Separation from family and friends as a source of great stress. |
| Velayutham ^[24] | Qualitative interviews and ethnographic work | 40 individual interviews with Indian migrant workers from the manufacturing, construction, hospitality and information technology sector. Ethnographic work (e.g., participating in family and social gatherings) with Indian migrant workers from the manufacturing and construction sector. | Factors contributing to psychological distress included unlawful employment arrangements, lack of knowledge of visa conditions, substantial financial responsibilities to support family back home and feelings of shame and guilt for not being able to fulfill these obligations. |

3.1 Included studies

Daly et al.[18, 19] conducted two cross-sectional studies on the relationship between workplace stressors and psychological distress (defined as feelings of depression and anxiety) among migrant workers recruited from the community. Note that these papers are not independent from one another because they are based on shared samples. Methodological strengths of these papers include large samples and the use of standardised measures of psychological distress. An important limitation is that young, low skilled migrants with only a few years of schooling were less likely to take part in the surveys. One of these studies^[18] compared the distribution of work-place psychosocial stressors among different groups of migrant workers (including migrants from Arabic, Chinese and Vietnamese backgrounds) who lived in Melbourne, Sydney or Perth. Using a combination of purposive and random sampling methods, they recruited 585 migrants who completed computer-assisted telephone interviews. Across the various ethnic groups studied, less than a quarter of participants were labourers, technicians/ trades workers or machinery operators and drivers.

In the second cross-sectional study by the same research group, Daly et al. [19] compared the prevalence of workplace psychosocial stressors (i.e., high job demand, low job control, low job security and perceived unfair pay) for migrants and Australianborn workers as well as the relationship between these stressors and mental health. About 1,000 Australianborn workers and more than 2,000 migrant workers (from China, Vietnam, Arabian countries, New Zealand, Philippines and India) completed computer assisted telephone interviews. Participants were chosen according to their ability to communicate in English; budgetary limitations of the project did not allow a wider set of linguistic communications through the employment of interpreters and translations of scripts. Across the various ethnic groups studied, between 6% and 23% of participants were labourers.

In another cross-sectional survey, Loosemore *et al.*^[21] explored some of the difficulties that migrants and refugees experience when seeking jobs in the construction industry as professionals, administrative

positions or tradesmen. Loosemore *et al.* recruited participants from two refugee and migrant support agencies in Sydney and Melbourne. Of 205 refugees and migrants who were identified, 79 participants (68% skilled migrants and 32% humanitarian refugees) answered an online survey. Thirty percent of the sample had non-engineering related professions.

Regarding qualitative studies, the research report of the Australian Institute of Criminology (AIC) on labour exploitation in the construction industry consisted of semi-structured qualitative interviews with stakeholders from the construction industry and a review of Australian literature and policy^[20]. Twenty-five interviews were carried out with 27 stakeholders from government agencies, union officials, industry stakeholders, experts in the field of human trafficking, and non-government stakeholders involved in victim services and counter-trafficking programs. Migrant construction workers were not interviewed.

Velayutham^[24] carried out 40 interviews and some ethnographic work with temporary skilled Indian migrants (visa subclass 457) working in the manufacturing and construction industry, hospitality and in the information technology (IT) sector. The ethnographic work was carried out with a group of blue-collar workers and it involved taking part in the workers' family and social gatherings, as well as in union activities.

Using a combination of qualitative techniques, Stevens^[23] studied the experiences of 53 Chinese migrants who were sponsored by their employers as temporary visa holders. Participants' occupations included welders, metal machinists, plasterers, massage therapists, restaurant owners and employees of meat processing and farm businesses. Immediate family who had been sponsored by employers were also interviewed.

The other qualitative study of migrant workers in Australia was conducted by Mayes^[22]. Mayes study aimed to better understand the experiences of 457-visa holders, the local community and the relationships between these two groups. Mayes carried out group interviews with temporary skilled migrants who had to leave Australia because of the sudden closure of their employer's mining site in Western Australia. Seven migrants in engineering related jobs (and 2 spouses) were interviewed.

3.2 Sample Characteristics

Four studies sampled migrant workers from the community rather than by their specific occupation, resulting in samples that included a proportion of construction workers, but also of workers in other occupations such as kitchen hands or information technology professionals. Two studies specifically sampled migrant construction workers, but of mainly highly educated backgrounds^[21, 22]. One study recruited participants from government, industry and union sectors, or academics in the field of migration or advocacy and support services personnel^[20].

Five studies included migrant workers who lived in metropolitan areas such as Melbourne, Sydney and Perth, whereas one study involved migrant workers who lived in rural Western Australia. The studies included migrant workers from different backgrounds and settings. Frequently reported countries of origin included China, India, Vietnam, Philippines and Arabian nations, and less frequently New Zealand. One study included migrant workers from Japan, Mexico and South Africa.

3.3 Adverse working conditions and employment practices

In Daly *et al.*^[18] survey of workplace stressors and psychological distress, 83% of the overall sample experienced one or more workplace stressors, such as bullying, racial discrimination, low job control, concerns about losing one's job or unfair pay. Ethnic discrimination at work was reported by 55% of the sample. Labourers, trade workers and machinery operators and drivers were more likely to report low psychosocial job quality (i.e., jobs with high demand, low job control and low job security) than workers in managerial occupations. Female labourers and female technicians and trades workers were more likely to report low job quality compared with males of the same occupation.

In a related study by Daly *et al.*^[19], the probability of reporting mental health difficulties was associated with job complexity, low job control and low job security. The relationship between workplace stressors and psychological distress varied according to migrant group. For instance, feeling that one was unfairly paid seemed to be particularly detrimental to workers from Arabian backgrounds. Likewise, perceiving low

control over one's job (e.g., how and when the work is done) affected Vietnamese workers but not so much Australian-born workers or workers born in other countries.

In the AIC report on labour exploitation^[20], interview participants reported that migrants in the Australian construction industry worked excessive hours, 7 days a week, in poor working conditions and with little or no work-related training. Other adverse work-related factors identified by participants were subcontracting, sham-contracting and the illegal practice (phoenix practice) of transferring the business of an indebted company into a new company to avoid paying employee entitlements or taxes^[20].

3.4 Financial hardships

In the qualitative study of Velayutham^[24], participants described moving to Australia with the help of migration agents who charged large sums of money (half of it had to be paid upfront and the other half deducted from wages once in Australia; other expenses included airfares and Australian visa charges). Participants often had to borrow money from friends, family or third parties, and failing to pay debts on time was sometimes followed by threats from debtors who would claim the collateral. In addition to paying debts, participants had expenses associated with family back in India, such as paying for younger siblings schooling and contributing to the household income. "One worker reported having AUD33 left in his pay packet after all the deductions. At the time, he was also supporting his wife and baby who had accompanied him to Australia. To reduce rental costs, they lived in a two-bedroom flat in Western Sydney with two other (single) Tamil workers. He shared a room with his wife and baby" [24] (p. 349).

In the qualitative study of Stevens^[23], participants also described borrowing "exorbitant fees" (p. 302) to pay migration agents, ranging from \$29,000 to \$42,5000 AUD. Similarly, the study of Mayes^[22] on migrant workers described making substantial financial commitments in taking up employment in Australia: "we've all sold our homes, our cars, physically wrapped up our lives in order to come here" (p. 78).

3.5 Perceived inadequate support from employers and government agencies

In Mayes' qualitative study[22], migrant workers felt

unfairly treated by their employers as illustrated by one of the participants: "...basically [the mining company] gave us a redundancy package thing and said here it is, do you understand this? And thank you for working for us. That's it. ...we had a general HR telephone number and email address but we don't have a contact person. ...now we are being sent home, I feel like we're invisible' (p. 78).

In Loosemore *et al.*'s^[21] study of migrants and refugees seeking work in the construction industry, common barriers to employment included lack of previous Australian work experience, employers not recognizing past qualifications and experience, perceiving that employers and government agencies lack an understanding of the challenges faced by migrants and refugees, complex procedures for getting a job and perceived discrimination by employers. Moreover, participants who perceived that the laws and regulations to find a job were confusing were more likely to change jobs. Overall, migrants' and refugees' experiences while seeking employment in the construction industry were very similar, but refugees took longer to find a job.

3.6 Separation from family and friends

In Stevens^[23] qualitative study of Chinese migrants, participants experienced distress in relation to family separation. A migrant mother who joined and lived with her husband in Australia explained that she "...rented one room in a shared house while their young daughter remained in China with her paternal grandparents. [The mother] hated this separation, greatly envying the close relationship she could see her daughter developing with her grandparents when they communicated through online video chat. She recounted how she spent several weeks crying in their room at home before finally finding work in a Chinese-run massage shop in a shopping mall'^[23] (p. 304).

4. Discussion

This review set out to explore the mental health of migrant construction workers with a focus on the Australian construction sector. Three broad results were found: (1) very few studies have examined the mental health of migrant construction workers in Australia, but results of cross-sectional and qualitative studies suggest that this population tends to experience psychological distress and to live and work in precarious conditions;

(2) research on the mental health of migrant construction workers in Australia have mainly focused on examining workplace factors, and little is known of other potentially important factors such as social support, acculturation stress or resilience; and (3) methodological challenges for future work in the field include use of prospective designs that draw upon data on longitudinal outcomes, comparison groups, larger samples and further qualitative studies to shed light into the unique experiences of this group.

This review suggests that migrants working in the construction industry in Australia are at risk of experiencing psychological distress that is linked with poor work conditions. Other reviews of international studies have also found a relationship between workplace stressors and psychological distress among migrant construction workers^[8], and a recent US study^[13] showed that depression is associated with an increased risk of workplace injuries. Given that international studies have shown that migrant^[8, 25] and non-migrant construction workers^[2] have poor work conditions and are at risk of experiencing mental ill-health, we believe that a similar relationship exists among migrants working in the Australian construction sector.

4.1 Research Gaps and Future Research Directions

Studies of migrant workers in the Australian construction sector have mainly focused on measuring work-related factors, not taking into account other social, cultural or individual-level factors such as resilience and coping strategies. Only recently, international studies of migrant construction workers have examined other factors such as resilience^[26], acculturation stress or masculinity. For instance, a recent US qualitative study^[27] found that men working in industrial and manual occupations described seeking help for depression as a weakness and not befitting a man. Of the Australian studies of migrant construction workers that were identified, only the study by Daly et al. [18] measured racial discrimination at work. To better understand the mental health of migrant construction workers in Australia, factors outside the workplace should be considered.

Most studies in the field have identified correlates of mental ill-health using cross-sectional designs. However, this type of study designs does not allow answering questions about risk factors that act as an antecedent to increasing the likelihood of mental illhealth^[28]. In addition, the studies identified in this literature search did not compare Australian samples of migrant construction workers with non-migrant construction workers, which prevents answering questions about increased vulnerability and associated factors. An exception to this was the study of Daly et al.[19] Additional questions in relation to the influence of migration itself on mental health would require longitudinal studies with assessments before, during and after migration^[25]. Qualitative studies of Australian samples used in-depth interviews, focus groups or ethnographic work, resulting in a rich description of the experiences of these groups. More work is still required to shed light into the experiences of mental illhealth among migrant construction workers, including in-depth analysis of their lived experience.

4.2 Implications for Potential Interventions

The Mental Health Act 2007 promotes voluntary treatment and has also established safeguard measures to protect the rights, dignity and autonomy of people going through mental ill-health. Apart from enacting legislations, the government also provides support to population mental health crisis and support services. However, when it comes to migrant workers, the effectiveness of such legislation and support services is unclear due to the stigma that is associated to the problem at hand, especially when they had migrated to Australia for a living and their sustenance depends on their occupation. Based on the current review, we can suggest some preliminary interventions to address mental health problems among migrant construction workers in Australia. First, interventions must overcome the stigma that is attached to mental health problems. The Australian culture is becoming more open towards discussing mental health issues, although the laissez-faire attitudes of 'she'll be right' and 'suck it up' remain prominent. However, migrant workers may feel reticent about discussing their mental health problems due to inhibitions stemming from their own cultural background or concerns about losing their jobs. We should also acknowledge that stigma about mental health issues is greater in the masculine culture represented by construction workers. Hence, interventions need to be tailored to young migrant men who may feel that it is a sign of weakness to show any concern about their mental health.

Second, interventions must be operationalized in a manner than is accessible to migrants. This requirement includes multi-lingual and culturally sensitive communication strategies. At a psychological level, interventions may also need to overcome the lack of entitlement and belonging that is felt by some migrants. At a more practical level, migrant workers need to be reassured that their involvement in the intervention will not jeopardise either the employment or residency status

Finally, and perhaps most importantly, interventions should be targeted to the unique causes of mental health issues that are experienced by migrant construction workers in Australia. These causes are likely to vary according to the individual and from one context to the other, but the current review indicates that they may include an increased risk of work-related injuries, experiences of racism and discrimination at work, a lack of work-related knowledge, acculturation difficulties, concerns about deportation, precarious employment status, underpayment, and feelings of exploitation.

5. Conclusions and Limitations

This paper has described a literature review undertaken to explore the mental health of migrant construction workers in Australia. An iterative search strategy was used to identify relevant papers in the field. To our knowledge, this is the first study to review both quantitative and qualitative studies on the mental health and wellbeing of migrant workers in the Australian construction sector. The main factors identified from this review concerned precarious living conditions, acceptance of substandard and often unlawful work arrangements, financial hardships and separation from family and friends. Among the factors studied, it has been predominantly occupational factors and very little emphasis had been given to other social, cultural or individual level factors.

The value of this review is that it included quantitative and qualitative studies, providing a broader view of mental health among this population. In addition to searching for workplace factors, our review also searched for factors such as coping strategies, resilience and masculinity. A limitation, however, is

that the participants of most of the studies that were reviewed were sampled from the community and not directly from the construction sector. Moreover, the studies that were reviewed included a combination of both front-line and highly educated construction workers. It is possible that the findings of migrants from the community, which included various occupations, do not generalize to frontline migrant construction workers who carry out manual labour. Although the literature was searched as extensively as possible, another limitation of this review is that the search was not systematic and may have missed some relevant literature.

Implications of these findings point to the necessity of operationalizing mental health interventions in a manner that is accessible to migrants, overcoming stigma and taking into account acculturation difficulties. "Decent work and economic growth" is one of the goals (Goal 8) of the United Nations' Sustainable Development Goals (SDGs), and the work experience and contributions of migrant construction workers relates strongly to this goal; improvement of their working conditions such that it can be considered "decent work" and the recognition of the contribution of that work to economic growth is important to meet the targets of SDG 8. There are broader connections to other SDGs, such as, SDG 3 on "Good Health and Wellbeing" where mental health is a vital element, and to SDG 10 on "Reduced Inequalities" where migrant workers experience unequal conditions and treatment, as discussed in our paper. The review stresses that more research is required in this field, specifically sampling a wider and more diverse set of migrant construction workers, and including comparison groups, prospective designs, standardised measures of psychological distress and qualitative studies to help better understand the unique experiences of mental ill-health in this group. More detailed exploration on Western versus non-Western perception of mental health, particularly of migrant workers themselves provide a valuable dimension to the understanding of their challenges and corresponding mental health interventions. Also, based on the literature selection criteria in this review, further research is required in order to ascertain the potential influence of industry type and educational background.

Acknowledgements

This research was funded by The University of Newcastle, NSW Australia, College of Engineering, Science & Environment (CESE) Multidisciplinary Strategic Investment Scheme.

Conflict of Interest

The authors declare no conflict of interest. The funders had no role in the design of the study; in the collection, analyses, or interpretation of data; in the writing of the manuscript; or in the decision to publish the results.

References

- [1] Lingard H, Harley J. Mental health in the construction industry. RMIT University, 2020. https://www.pc.gov.au/_data/assets/pdf_file/0009/251001/sub827-mental-health.pdf.
- [2] Chan APC, Nwaogu JM, Naslund JA. Mental ill-health risk factors in the construction industry: Systematic review. *J Constr Eng Manag*, 2020, 146:04020004. DOI:10.1061/(asce)co.1943-7862.0001771.
- [3] Awad I, Panzica F, Popova N. Forecasting and meeting future demand for migrant labour settings. KNOMAD, 2023, paper 48.

 https://www.knomad.org/sites/default/files/publication-doc/knomad_paper_48_forecasting_
 - publication-doc/knomad_paper_48_forecasting_and_meeting_future_demand_for_migrant_labor_ibrahim_awad_francesco_panzica_and_natalia_popova_june_2023.pdf.
- [4] Onarheim KH, Phua KH, Babar ZR, et al. Health and social needs of migrant construction workers for big sporting events. The BMJ, 2021, 374:n1591. https://doi.org/10.1136/bmj.n1591.
- [5] Langdon RR, Sawang S. Construction workers' well-being: What leads to depression, anxiety, and stress? *Journal of Construction Engineering and Management*, 2018, 144:1-15.
 - https://doi.org/10.1061/(ASCE)CO.1943-7862.0001406.
- [6] Turner M, Lingard H. Examining the interaction between bodily pain and mental health of construction workers. *Construction Management* and Economics, 2020, 1009-1023. https://doi.org/10.1080/01446193.2020.1791920.

- [7] Kurtzer D, Blackmore N, Farrugia N, et al. Productivity enablers and inhibiting health and wellbeing practices of South Australian construction site-based workers: a qualitative study. *International Journal of Construction* Management, 2020, 20:882-899. https://doi.org/10.1080/15623599.2018.1496538.
- [8] Flouris AD, Babar Z, Ioannou LG, *et al.* Improving the evidence on health inequities in migrant construction workers preparing for big sporting events. *The BMJ*, 2021, 374. https://doi.org/10.1136/bmj.n1615.
- [9] NIOSH, ASSE. Overlapping vulnerabilities: The occupational health and safety of young immigrant workers in small construction firms. *DHHS* (NIOSH), 2015. https://doi.org/10.26616/NIOSHPUB2015178.
- [10] Hamid W, Tutt D. "Thrown away like a banana leaf": precarity of labour and precarity of place for Tamil migrant construction workers in Singapore. *Construction Management and Economics*, 2019, 37:513–536.
- [11] Devkota HR, Bhandari B, Adhikary P. Perceived mental health, wellbeing and associated factors among Nepali male migrant and non-migrant workers: A qualitative study. *Journal of Migration and Health*, 2020, Dec 4; 3:100013. https://doi.org/10.1016/j.jmh.2020.100013.

https://doi.org/10.1080/01446193.2019.1595075.

- [12] Hill CM, Williams EC, Ornelas IJ. Help wanted: Mental health and social stressors among latino day laborers. *Am J Mens Health*, 2019, 13:1-12. https://doi.org/10.1177/1557988319838424.
- [13] Fernández-Esquer ME, Gallardo KR, Diamond PM. Predicting the influence of situational and immigration stress on latino day laborers' workplace injuries: An exploratory structural equation model. *J Immigr Minor Health*, 2019, 21(2):364-371.
 - DOI: 10.1007/s10903-018-0752-3.
- [14] National Skills Commission. State of Australia's skills 2021: now and into the future. Available from:
 - https://www.nationalskillscommission.gov.au/reports/state-of-australia-skills-2021. [Last accessed on 12 July 2023]
- [15] World Health Organization. Mental health:

- Strengthening our response. 30 March 2018. Available from:
- https://www.who.int/news-room/fact-sheets/detail/mental-health-strengthening-our-response.
- [16] Grant MJ, Booth A. A typology of reviews: an analysis of 14 review types and associated methodologies. *Health Info Libr J*, 2009, 26:91-108.
 - https://doi.org/10.1111/j.1471-1842.2009.00848.x.
- [17] Brettle A. Information skills training: A systematic review of the literature. *Health Information & Libraries Journal*, 2003, 20:3-9.
 - DOI: 10.1046/j.1365-2532.20.s1.3.x.
- [18] Daly A, Carey RN, Darcey E, et al. Workplace psychosocial stressors experienced by migrant workers in Australia: A cross-sectional study. PLoS ONE, 2018, 13:e0203998.
 - DOI: 10.1371/journal.pone.0203998.
- [19] Daly A, Carey RN, Darcey E, *et al.* Using three cross-sectional surveys to compare workplace psychosocial stressors and associated mental health status in six migrant groups working in Australia compared with Australian-born workers. *Int J Environ Res Public Health*, 2019, 16:E735. DOI: 10.3390/ijerph16050735.
- [20] Hedwards B, Andrevski H, Bricknell S. Labour exploitation in the Australian construction industry: risks and protections for temporary migrant workers. *Australian Institute of Criminology*, 2017. http://hdl.voced.edu.au/10707/423902.
- [21] Loosemore M, Alkilani SZ, Hammad AWA. The job-seeking experiences of migrants and refugees in the Australian construction industry. *Building Research & Information*, 2021, 49(2):1-18. https://doi.org/10.1080/09613218.2021.1926215.

- [22] Mayes R. 'We're sending you back': Temporary skilled labour migration, social networks and local community. *Migration, Mobility, & Displacement*, 2017, 3:71-84. https://doi.org/10.18357/mmd31201717074.
- [23] Stevens C. Temporary work, permanent visas and circular dreams: Temporal disjunctures and precarity among Chinese migrants to Australia. *Current Sociology Monograph*, 2019, 67:294-314. https://doi.org/10.1177/001139211879292.
- [24] Velayutham S. Precarious experiences of Indians in Australia on 457 temporary work visas. *The Economic and Labour Relations Review*, 2013, 24:340-361.
 - https://doi.org/10.1177/1035304613495268.
- [25] Hargreaves S, Rustage K, Nellums LB, et al. Occupational health outcomes among international migrant workers: a systematic review and meta-analysis. The Lancet Global Health, 2019, 7:e872-e882.
 - https://doi.org/10.1016/S2214-109X(19)30204-9.
- [26] Nwaogu JM, Chan APC, Tetteh MO. Staff resilience and coping behavior as protective factors for mental health among construction tradesmen. *Journal of Engineering, Design and Technology*, 2021, 20(2): 671-695. https://doi.org/10.1108/JEDT-11-2020-0464.
- [27] Mahalik JR, Dagirmanjian FR. Working-class men's constructions of help-seeking when feeling depressed or sad. *Am J Mens Health*, 2019, 13:1-13.
 - DOI: 10.1177/1557988319850052.
- [28] Kazdin AE. Research design in clinical psychology, 4th ed. Allyn and Bacon, 2003, Boston, MA.