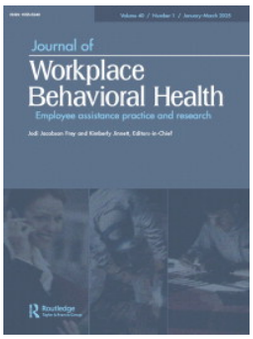

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Supervisor relationships, peer support and mental health stressors in the Australian building and construction industry

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ABSTRACT

Mates in Construction (MATES) is a multi-faceted strategy developed in Australia to address suicide prevention in the workplace. MATES operationalized a workplace mental health framework consisting of five domains in 2019 in a move toward a broader systems-based approach to workplace mental health in the building and construction work environment. Using job demands-resources (JD-R) theory and a revised version of the People at Work Survey (PAW-Con), the objective of this study is to explore workplace mental health trends within the Australian building and construction industry with the aim of identifying areas of improvement required to mitigate psychosocial hazards at work. A quantitative method of analysis of reported job demands and resources of 1158 construction workers was used to establish correlation and means scores within the building and construction work environment. Industry means scores enabled comparison with existing safe valid mean scores utilizing established JD-R measurements. Data was collected from construction industry workers over a twelve-month period with the findings highlighting concerns related to supervisor conflict, peer support and job control as psychosocial hazards requiring industry wide improvement. Fly-In Fly-Out (FIFO) and Drive-In Drive-Out (DIDO) work environments demonstrated different hazards in procedural justice, role ambiguity and role conflict. This study demonstrates workplace mental health issues that require attention. Targeted training of supervisors and implementation of workplace plans to address areas of identified concern will reduce rates of mental distress, harm and suicide in a high-risk industry.

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Introduction

Suicide is a global public health concern with outcomes shown to be disproportionately high within certain populations (Burki, 2018; World Health Organization, 2020). Suicide rates are generally higher in men, with men who work in the construction industry at particularly elevated risk of suicide (Milner et al., 2014; Milner et al., 2013). In Australia, lower skilled trade-workers have an adjusted suicide rate of 18 per 100,000, above that of higher skilled trade-workers, who have an adjusted rate of 13 per 100,000, and of the general male population (Milner et al., 2014). Reviews of international studies have found that laborer's and cleaners have an overall increased risk of suicide, relative to the general working population, machine operators, and agricultural workers (Milner et al., 2013). Risk factors for suicide among construction industry workers include mental health problems, employment instability, workplace injury or work limiting illness, financial or legal problems, relationship breakdowns, disputes over child custody, and substance use (Milner et al., 2017; Milner et al., 2018). At the same time, and perhaps contributing to this elevated risk, men are less likely to seek help for mental health problems or suicidality (Addis & Mahalik, 2003; Berger et al., 2005; Slade et al., 2009; World Health Organisation, 2014).

This study looks to identify workplace stressors and work environment factors that have the potential to contribute to poor mental health and rates of suicide in the building and construction industry. Job demands and job control are established factors in the building and construction industry that contribute to mental ill health and distress (Chan et al., 2020). The relationship of the supervisor in this work environment is a critical component of managing job demands and resources and associated mental health impacts of the work environment. Job demands-resources (JDR) theory encapsulates most established literature attached to the work environment and stress for the building and construction industry, notably role ambiguity and poor relationships (Tijani et al., 2023). These work environment factors can and do have an impact on disclosure of mental ill health and likelihood of workers seeking support and help (Brouwers et al., 2020).

Mates in Construction (MATES) is an example of a multi-faceted strategy developed in Australia to address suicide prevention in the workplace. MATES was established in 2008 by the Building Employees Redundancy Trust to prevent suicide in the Construction Industry (Shannon, 2018). It is a multimodal non-clinical, industry led, peer based workplace suicide prevention and early intervention program, consistent with the living is for everyone strategy (Department of Health and Ageing, 2007) and Mrazek and Haggerty's spectrum of prevention and intervention (Mrazek & Rj,

1994). MATES provides a range of mental health related training, offers non-clinical case management, an out-reach service and a twenty-four-hour support service to employees of the construction industry.

Since its inception, MATES has had substantial uptake in the building and construction sector and has developed an evidence-base supporting its effectiveness (Gullestrup et al., 2023). Previous evaluation research has demonstrated the social validity of the program among construction workers (King et al., 2018), effectiveness in shifting beliefs around suicide (King et al., 2019; Ross et al., 2019), improving suicide prevention literacy, increasing intentions to offer help to workmates, and to seek help for workers themselves (Ross et al., 2020; Ross, 2017). Research has also demonstrated the significant economic return of investing in workplace suicide prevention initiatives, such as MATES (Doran et al., 2016; Kinchin & Doran, 2017).

MATES in Construction, *via* industry support and design, developed a formal peer support program based on a help offering modality, commencing in 2006 (Martin et al., 2016). This model incorporates world's best practice in suicide prevention and focuses on the strengths of construction workers willing to offer help to colleagues in distress (Ross et al., 2019). In 2016, MATES in Construction developed a Blueprint for better mental health and suicide prevention in the building and construction industry via a roundtable of representatives of workplace health and safety professionals, industry associations, employer groups, Trade Unions, Beyond Blue and academics (Milner & Law, 2017). The Blueprint is an extension of the peer support program by acknowledging that although suicide prevention is a critical component of strong workplace mental health in the construction industry, there are broader initiatives that also need to be in place to create an environment of psychosocial safety (Hutton et al., 2022).

The Blueprint framework is outlined in Figure 1 and incorporates existing evidenced workplace mental health categories grouped in three key domains: providing positive aspects of work; reducing workplace hazards; and, providing early intervention and prevention opportunities (LaMontagne et al., 2018). The Blueprint includes two additional domains, owing to the high-risk nature of the construction industry and risk profile of suicide within the construction workforce (LaMontagne et al., 2018). These domains are the provision of mental health and suicide prevention literacy and return-to-work activities. Focused suicide prevention and mental health literacy is an important component of addressing occupational suicide (King et al, 2022). Return-to-work activities and plans, although best practice and commonplace within the building and construction industry, are rarely adapted to the challenges of a mental health injury or exacerbated condition (Cullen et al., 2018). This directly impacts the

Figure 1. The five-focus model for mental health interventions in the workplace.

likelihood and perceived help seeking and help offering behavior of a work group (de Vries et al., 2018). This evidence of help seeking and help offering barriers to mental injuries or illness, therefore, has a formalized additional domain in the Blueprint framework (Milner & Law, 2017). Psychological distress from being away from the support of a work group, financial strain from limited work opportunities and collective work perceptions attached to stigma or absence from site are cumulative challenges to both disclosure and acceptance of mental health recovery in the construction environment (Baek et al., 2023). Willingness and openness to disclose mental health challenges, psychological injuries, and the need for extended periods of recovery or alternative duties are directly impacted by the culture and psychosocial environment of a work group (Brouwers et al., 2020). This creates a significant burden to workers impacted by distress or psychological injury to seek help and requires supervisors who are trusted to support and work with a person to return-to-work (Roughton et al., 2019).

Representatives from MATES in Construction use two tools to gain a picture of onsite activities and the work environment when a company or worksite endorses the Blueprint framework. The first tool is an audit survey encompassing workplace mental health activities compartmentalized into five domains. This tool asks questions about site activities related to the five domains of the Blueprint. The second tool is the People at Work – Construction tool (Loudoun et al., 2020). The People at Work – Construction (PAW-Con) gauges workers' experiences about aspects of the work environment known to be correlated with poor mental health. Representatives from companies with an organizational delegation attached to workplace mental health completed the audit tool. The two tools allow comparisons with other workplaces within the industry using industry benchmarks. These benchmarks can compare and contrast with work-groups or sites within the organization or the same workplace over time. The benchmarks are updated and expanded upon creating norms for each of the five domains when a new workgroup completes the survey. The tools enable representatives from MATES in Construction to develop a dialog with workplace health and safety representatives, project managers, site supervisors and human resource professionals about areas for a company, site or subcontractor to prioritize when developing workplace mental health initiatives.

The relationship of peers in offering support to prevent suicide is well evidenced and understood (Gullestrup et al., 2023). The relationship of supervisors as a point of support in the building and construction industry is much more complex and often identified as not being a trusted relationship to disclose suicide or mental health challenges or adversity. The nature of construction, however, is that in and amongst moving trades across building sites, trades-based workers will often have a constant point of interaction with their direct supervisor (Eyllon et al., 2020). Supervisors provide clearance and guidance and in a best practice scenario, emotional and organizational support. Imbedding psychosocial safety within this relationship is critical to improving both culture and support in the building and construction industry (Eyllon et al., 2020).

Although MATES is primarily a peer support program establishing psychological safety through community development to prevent suicide at a site level (LaMontagne & Shann, 2020), the Blueprint pillar of reducing hazards at work enables the lens to be widened to consider the impact of supervisors within this on-site network (Gullestrup et al., 2023). To this extent, the current research adds value to prior MATES-related research and compliments further information on the role of supervisors in the well-being of construction workers. Specifically, this research explores the findings from the PAW-Con undertaken by work groups from the building

and construction industry that have endorsed the Blueprint. The period of analysis is from August 2021 to August 2022. The objective of this study was to explore workplace mental health trends within the Australian building and construction industry with the aim of identifying areas of improvement required to mitigate psychosocial hazards at work. The influence and impact of supervisors to a site or company network and work environment is a contradictory focus of evidence to existing research regarding MATES due to the individuality of the relationship with a supervisor. This approach singles out one stressor or contributing factor to the work environment rather than an all of site, community development approach to suicide prevention (Sun et al., 2022). This is in contrast to the collective and community development model of existing evidence regarding MATES and the use of a peer network to prevent suicide and improve mental health (Gullestrup et al., 2023). This contradictory approach is not to take away from community development or the core program logic of MATES. This approach, however, uses the overarching Blueprint to isolate the preventing hazards pillar of the framework (Loudoun et al., 2023). This is one factor out of five, that used in tandem creates psychosocial safety at work for construction workers (Loudoun et al., 2023). Independent research outside of the MATES model of community development, that demonstrates the cause and effect of stress and mental ill health due to both the supervisor relationship and JD-R theory, is the basis of this study (Sun et al., 2022, Sommovigo et al., 2021, Lingard et al., 2022). The evidence from this study enhances, rather than contradicts the existing body of research attached to MATES and broader workplace initiatives that seek to improve mental health and suicide prevention globally in the building and construction industry (Loudoun et al., 2023).

Evidence of the construction work environment and impact of job demands and job resources on the mental health of workers is varied and diverse. Brouwers et al., 2020, used qualitative methods to look at mental health in the work environment and established the supervisor relationship as a component of both non-disclosure, stress and stigma. This study used some, however, limited narrative from construction workers (Brouwers et al., 2020). The study also used thematic analysis not including valid measures for determining workplace mental health trends. Chan et al., 2020, systematically reviewed literature attached to mental health in the construction industry and concluded that there were few studies that looked at the collective mental health or mental health stressors in the industry and asserted the need to enhance risk factor scales with valid statistical rigor. JD-R scales were identified as the dominant tool to assess mental health risk factors in the building and construction work environment to date (Chan et al., 2020). Almroth et al., 2022 used a job exposure matrix in Sweden and determined direct correlation between job control

and suicide attempts. This study was using existing statutory health data (Almroth et al., 2022). Sommovigo et al., 2021, used JD-R measures to demonstrate the impact of job control and supervisor support for tunnel workers. This study parallels Sommovigo et al., 2021, in highlighting the impact of work environmental factors on the wellbeing of the construction workforce, however, rather than focusing on one subsection or trade within the industry, surveys multiple sites and trades. Wu et al., 2019, used JD-R measures to look at job stress and burnout in Chinese construction work environments. This study explored stress and burnout and focused on role ambiguity and role conflict. The evidence demonstrates that JD-R theory can be used more strategically to look at the mental health and wellbeing of the construction industry. Sun et al., 2022, used surveys of JD-R approaches with 200 construction workers to determine an order of precedence to what psychosocial hazards can be mitigated using Bayesian network analysis to prevent mental health challenges and distress (Sun et al., 2022). Literature therefore lacks risk indicators with reliable validity separate to qualitative themes or existing statutory data to determine workplace mental health trends for construction workers. Where valid JD-R risk indicators have been used, it has been to measure stress and burnout rather than the overall factors impacting the work environment of construction workers (Chan et al., 2020). In the instance of Sun et al., 2022, the use of JD-R measures to assess priority of mental hazard mitigation was exceptionally successful, however, used a modest sample of construction workers. This study, however, paved the way for using JD-R as an approach to assist with psychosocial hazard mitigation. Sommovigo et al., 2021, similarly used a quantitative JD-R methodology, however, focused on one subsection of the industry, tunnel workers. This study seeks to broaden and increase the use of the approach with a larger more diverse sample across multiple worksites. This study also uses the Australian building and construction industry and the unique work factors of this jurisdiction to investigate workplace mental health trends and highlight areas of improvement for the building and construction industry. This builds on international examples that have used this approach with a larger more diverse sample, including FIFO and DIDO work environments.

Method

People at work – construction survey

PAW-Con is a validated measure of the work environment underpinned by the JD-R model theory (Demerouti et al., 2001; Loudoun et al., 2020). It asks questions about job demands (supervisor relationship conflict, supervisor task

conflict, role conflict, role ambiguity and role overload) and job resources (change consultation, procedural justice, praise and recognition, supervisor support, co-worker support and job control) (Ong & Johnson, 2023). The PAW-Con pivots from existing research from the Government of Australia, Safe Work Australia, WorkSafe Queensland and Beyond Blue. This original People at Work survey was extended and modified to create a survey that used culturally appropriate language attached to the building and construction industry and aspects of work unique to this psychological work environment (Loudoun et al., 2020). Examples of these aspects are the inclusion of less emotive and more practical language attached to reported emotional safety. The PAW-Con adaptation also took into consideration the nature of work in construction such as subcontractor relationships with multiple supervisors at the same time (Loudoun et al., 2020). To accommodate this, additional questions are asked, and different phrasing is used to identify a primary supervisor. The constructs were also condensed and shortened where possible to reduce the overall number of questions and time taken to complete the survey as a workgroup. This condensed version requires significantly less time to complete, which is important in an industry with heightened time pressures and focus on project deadlines and milestones. Using a combination of focus groups, pilot surveys across 11 sites and 406 individual workers, construct validity was confirmed (Loudoun et al., 2020).

The PAW-Con uses a 7-point Likert scale where a higher mean (M) score (in brackets) indicates stronger agreement that the construct (such as for example, job control or supervisor support) is part of a respondent's daily work life.

Participants

Construction industry workers were invited to complete the survey either before commencement of work or at an assigned time prescribed by the principal contractor. Participation was voluntary with information sheets explaining individual confidentiality and the noncompulsory nature of the survey. Surveys were distributed in paper format after trialing online versions with limited to no return when offered via a survey link. On average, the return for work groups with the paper survey ranged from 80 to 90% return. Individual workgroups had an allocated site contact, normally a workplace health and safety representative who, after completion of the surveys, received an aggregated report with recommendations for an improvement plan if areas of concern were identified. For the purposes of this article, the overall results of all participating sites and workers are averaged over the course of a twelve-month period.

Analysis

To establish workplace mental health trends, the aggregated responses of construction workers using the PAW-Con survey tool were used to develop correlation scores (Sun et al., 2023). This method was also used to establish correlation means within FIFO and DIDO work groups.

Results

Demographics of participating workers and work groups

PAW-Con was completed by 1,158 construction workers with 88% being male. Of these workers 71% were born in Australia and 58% had ten or more years of industry experience. Participants were employed by the principal contractor (52%), subcontractors (41%) or self-employed (2%). Employee role descriptions included tradesperson (26%), laborer (14%), other professional staff (12%), operator (11%) and leading hand/foreman (11%). The direct supervisor of participants was predominately the site manager (27%), the foreman (24%) or another manager such as a construction or project manager (15%). The sample included 364 employees (31%) from organizations using FIFO and DIDO.

Employee job demands

Results for the 17-items addressing the five-employee job demands (Figure 2), suggest that, overall, participants experience high levels of supervisor task conflict ($M = 5.79$) and supervisor relationship conflict ($M = 5.83$), and lower levels of role overload ($M = 2.74$), role conflict ($M = 2.55$) and role ambiguity ($M = 1.78$).

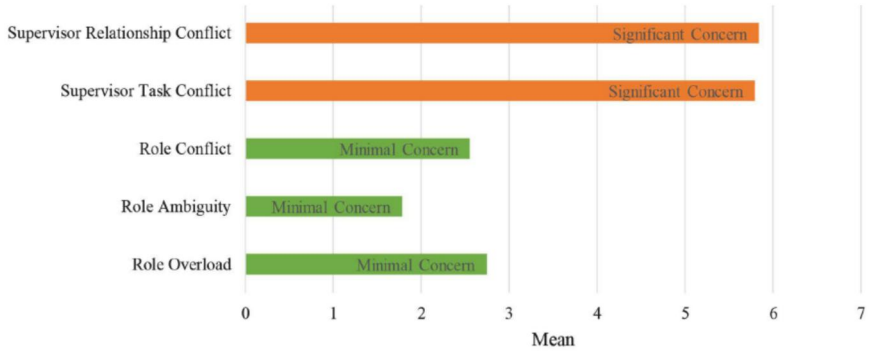

Figure 2. Employee job demands.

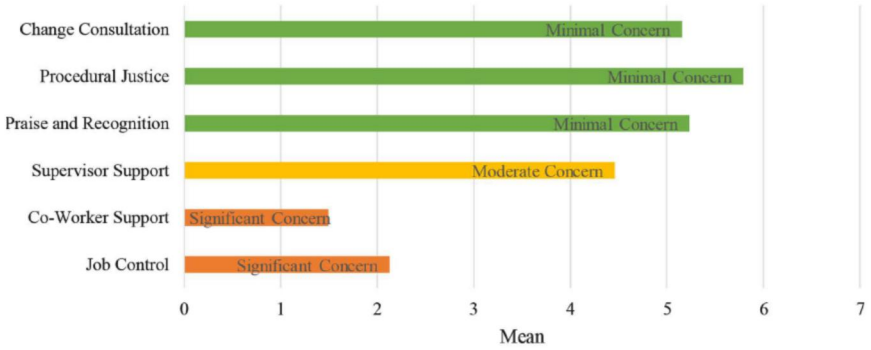

Figure 3. Employee job resources.

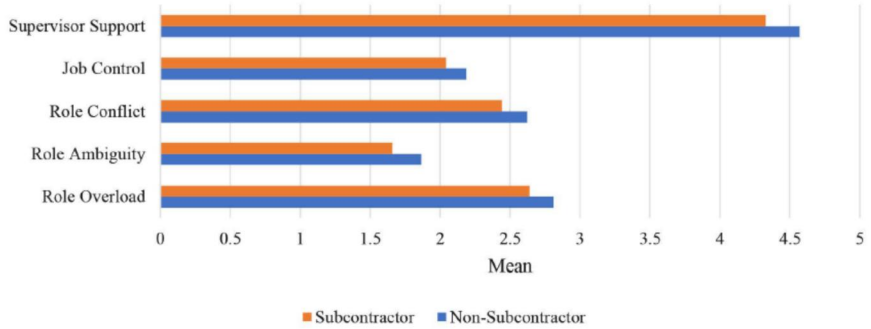

Figure 4. Differences between non-subcontractors and subcontractors.

Employee job resources

Results for the 19-items addressing the six employee job resources (Figure 3), suggest that overall, participants experience low levels of job control ($M = 2.12$), coworker support ($M = 1.49$), as well as moderate levels of supervisor support ($M = 4.46$). Participants reported receiving higher levels of praise and recognition ($M = 5.23$), procedural justice ($M = 5.79$) and change consultation. ($M = 5.15$).

Differences between non-subcontractor and subcontractors

Four-hundred and seventy participants classified themselves as working for a subcontractor (Figure 4). Subcontractors reported lower role overload (−6%), role ambiguity (−11%), and role conflict (−7%) scores compared to non-subcontractors. However, they also reported a reduction in job control (−7%) and supervisor support (−5%).

Differences between FIFO and DIDO vs. non-FIFO and DIDO

Three-hundred and sixty-four participants classified themselves as working on a FIFO and DIDO worksite (Figure 5). FIFO and DIDO participants

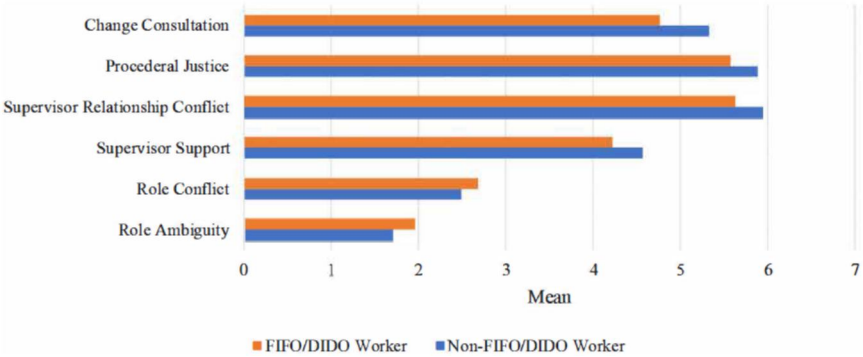

Figure 5. Differences between FIFI and DIDO and non-FIFO and DIDO.

reported 5% less supervisor relationship conflict compared to their non-FIFO and DIDO counterparts. However, FIFO and DIDO participants reported increased role ambiguity (+15%) and role conflict (+8%), as well as less supervisor support (−8%), procedural justice (−5%) and change consultation (−11%) than their non-FIFO and DIDO counterparts.

Discussion

Supervisor relationship and task conflict within the building and construction industry can have numerous complexities. Identifying a direct supervisor within the environment of subcontractors and project management presents unique industry-based challenges (Lingard et al., 2019). Trade roles and responsibilities at differing points of a project build, add to the complexity of relationship and task conflict and high-pressured environments (Oswald & Lingard, 2019). The objective of this study was to explore workplace mental health trends within the Australian building and construction industry with the aim of identifying areas of improvement required to mitigate psychosocial hazards at work. Aggregated data suggests there is significant work to be done in improving both supervisory relationships and task conflict across the industry. Job control, similarly, requires industry wide attention. While high risk and safety orientated, autonomy and choice directed work can be a part of work design in the building and construction industry (Sommovigo et al., 2021) developing the overall psycho-social safety of the construction workforce requires deliberate strategic intervention to model effective supervisor relationships. These relationships need to embed psycho-social safety to be able to communicate complex shared work tasks with a collaborative solution focused outcome of mutual benefit and understanding (Lingard et al., 2022). The supervisor worker relationship, in particular conflict, alongside with job control directly impacts the mental health of workers (Milner et al., 2018). Deterioration of mental health, while not predictive of suicide ideation, can be a

contributing factor to suicide ideation and a common attribute of ongoing supervisor conflict and lack of job control (Virtanen, 2018).

Peer support and mental health at work

All sites that formally endorse the Blueprint have some level of MATES in Construction engagement; this includes all participants in this study. This endorsement usually involves engagement with trained peer-to-peer connectors and applied suicide intervention trained professionals and site awareness training around suicide prevention and workplace mental health to improve suicide awareness and preparedness to assist (LaMontagne & Shann, 2020). Engagement with a view to accreditation varied by individual work cohort, however, with any combination of these three best practice initiatives having taken place. These variations included:

1. Initial engagement to arrange these workplace activities, without broad community development at a site level having taken place, but a desire of the worksite to enhance the wellbeing of the workforce.
2. Activities having taken place, however, only general awareness.
3. Full accreditation to the MATES program involving all workers undergoing general awareness, a percentage of peer-to-peer trained connectors who can link workers into support as required and at least one Applied Suicide Intervention Skills trained resource to guide workers with thoughts of suicide to safety.

Perceived coworker support, however, was at concerning rates irrespective of engagement with MATES in Construction or the trajectory of the applied program logic and engagement. The coworker support was of concern even amongst a majority of engaged sites with community development principles around suicide prevention live and in action. Existing evaluation of peer-to peer support demonstrated strong perceptions of work-related support and care (Ross et al., 2019). Ongoing maintenance of awareness and psychosocial education around help offering and peer support requires site-based focus and full ongoing accreditation of the program logic to create cultural change in the building and construction industry (LaMontagne & Shann, 2020).

Creating psychosocial safety at work through leadership development

Key initial objectives attached to these findings include the need for tailored supervisor training for the building and construction industry. The presumption that trades-based professionals automatically have the capacity

to understand the nuances of effective supervisor relationships from the duration or experience in the industry, fails to consider the complexity of the construction industry or the complexity of the supervisor's role in a high-risk, high-pressured environment. This is of particular importance to return-to-work activities where the supervisory relationship is critical to recovery. This includes but is not limited to working with support services such as clinical and medical professionals, managing alternate duties and maintaining peer connection with the team. These activities are critical to recovery and without a strong supervisory relationship are fraught with challenges. Peer led, help offering programs that are culturally appropriate to the work environment of building and construction, similarly require additional advocacy and take up, to enhance the wellbeing of construction workers at significant occupational risk to suicide. This will develop a site-based community able to respond to the mental health and wellbeing needs of its network irrespective of the perceived peer support of individuals.

Limitations

Limitations of this study require recognition. These relate to the overall sample in an industry far larger in scale than the aggregated data. The diversity of participation, however, spans a twelve-month period without repeat workplace cohorts engaging in the survey and of a statistically large sample by research standards. Another limitation is external factors that may have influenced the results but are not related to the work environment, such as project delays, COVID-19 social restrictions and unprecedented shortages of key workforce personal and materials. This data provides a snapshot in time related to some of the known stressors across the building and construction industry. A larger, more diverse sample would allow examination of subgroups within the industry such as individual trades and subcontractor worker responses contrasted with principal contractor workers responses and enhance broader understanding of key trends in the industry and areas of focus for workplace mental health initiatives. Exploration of peer support as reported through this data would be enhanced if engagement with peer-to-peer programs could be isolated into sub sections. These subsections as per best practice are, initial engagement with program, ongoing psychosocial and general awareness of suicide risk and help offering, fully accredited with peer-to-peer program (LaMontagne & Shann, 2020). This study uses only quantitative analysis. Qualitative themes of experiences of workers and their job demands and resources including impacts on mental health would enhance perspectives from the sample of workers within this or future studies.

Conclusion

The findings of this study demonstrate that job control and coworker support in the building and construction environment were of significant concern and impacting the mental health and wellbeing of workers. Supervisor support was of moderate concern, supervisor task conflict and supervisor relationship conflict were of significant concern including in FIFO and DIDO work environments. Workplace mental health trends *via* this cohort of construction workers indicate that the supervisory to employee relationship is challenging and requires focus and commitment to enhance at an industry wide level. This is of increased importance due to the rates of suicide for construction workers and the clear impact of stress attached to this relationship as a psychosocial hazard. For FIFO andDIDO environments this is somewhat different in that procedural justice and role conflict requires additional support and industry attention. These FIFO and DIDO specific hazards still rely heavily on the supervisory relationship to improve. Overall job demands and resources across the industry point to a significant need to improve the mental health of a high-risk industry with concerningly high rates of occupational suicide. These rates are clearly impacted by stress and mental health challenges that stem from the work environment and factors attached to site-based relationships and industry culture.

Analysis of workgroups perceptions of peer support based on the levels of take up of the MATES in construction program, particularly comparing limited engagement with a peer support program, to somewhat of a peer support program, to full site accreditation, requires further research to determine what factors are required in the building and construction work environment to improve peer relationships and reduce perceptions of isolation. With peer support evidenced as one of the most effective components of suicide prevention, this research is of significant priority for the high-risk profile of the building and construction industry. Targeted training of supervisors as identified in this sample requires further interrogation for the building and construction industry. This study warrants evidenced research on what is required for supervisors to effectively support and enhance the wellbeing of their teams and mitigate reported psychosocial hazards, particularly supervisor conflict. This research needs to look at existing evidence in supervisory training programs, skills development and organizational work design that support supervisors and their relationship impacts. This research also requires the qualitative needs of supervisors in multiple, diverse, changing construction environments spanning the life cycle of sites. This needs to include multiple trades, subcontracting arrangements, and roles. Evidence where a site or company has implemented strategies and programs to address these workplace hazards in an effective way,

is also required to give best practice scenarios and case studies to the industry of workplace health and safety initiatives that have successfully implemented measures to mitigate psychosocial hazards. The overall trends attached to mental health of the Australian building and construction industry are influenced by the job demands and resources of the construction environment as evidenced by the 1158 construction workers who participated in the People at Work - Construction Survey. These trends across the Australian building and construction industry require consistent monitoring and focus to improve the collective wellbeing of the industry and reduce the high rates of occupational suicide.

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Ethical approval

Ethics approval provided from Central Queensland University Human Research Ethics Committee (Application reference 24218).

Author contributions

NT conceived and developed the research. CD assisted in ethical clearance and manuscript preparation. All authors contributed to drafting of the manuscript and revising it for important intellectual content. All authors gave approval of the final version.

Disclosure statement

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Data availability statement

Data extracted and analyzed in this study can be made available from the corresponding author upon reasonable request and within constraints of ethical clearance.

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