



The Mental Health Crisis: A Closer Look at Construction

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Abstract

This study examines the prevalence of poor mental health among workers in the construction industry and explores potential interventions to enhance mental health outcomes. Consequently, this study aims to identify the precursors of poor mental health among construction workers and propose targeted interventions. The construction industry experiences high rates of poor mental health, with the United States reporting the second-highest suicide rate among all industries. Notably, the mental and physical health of employees directly affects their productivity, as workers with compromised health exhibit decreased efficiency, leading to various organizational costs, including disruptions in production and administrative expenses. When employees are unable to fulfill their duties, companies incur costs associated with reduced productivity and increased turnover. Furthermore, in cases of an employee's death or when workers' compensation claims are made, organizations may need to finance investigations into potential malfeasance. Hence, poor mental health has detrimental effects on both individuals and the overall organization.

The prevailing culture within the construction industry plays a pivotal role in shaping its poor mental health outcomes. The industry is known for its demanding work conditions, characterized by long working hours, physically strenuous tasks, and precarious employment circumstances. Workers not only face the risk of physical injury but also endure psychological stressors such as job insecurity and high productivity demands. These psychological stressors are further exacerbated by a workplace culture that traditionally values a "rough and tough" mentality, discouraging open discussions on mental health and well-being as well as stigmatizing interventions. Construction workers face many unique challenges that contribute to poor mental health outcomes, and as such, their particular environment and job demands need to be carefully studied. Furthermore, interventions to improve mental health outcomes in this industry must be meticulously tailored to fit the sector.

Keywords: construction, mental health, burnout, wellbeing, suicide, depression, anxiety, "rough and tough", male-dominated industry

1 Introduction

The construction industry plays a vital role in driving economic growth and building essential infrastructure. Its significance cannot be overstated, as it not only contributes to the development of society but also provides employment opportunities for a substantial workforce. However, amidst its many contributions, the industry grapples with significant challenges related to the mental health and well-being of its workers, which require attention and effective solutions. Mental health issues are prevalent among construction workers, with studies indicating that they experience higher rates of depression, anxiety, and stress compared to workers in other industries.

Several factors contribute to these challenges. Firstly, the demanding nature of construction work itself poses a risk to workers' mental health. The physically demanding tasks, long working hours, and tight project deadlines create an environment that can be mentally and emotionally taxing. These factors, combined with the inherent physical risks associated with construction sites, create a unique set of challenges for the well-being of workers. Moreover, specific job-related factors contribute significantly to poor mental health outcomes among construction workers. High job demands, such as excessive workload and time pressure, can lead to feelings of overwhelm and burnout. Low job control, where workers have limited autonomy and decision-making power, further exacerbates these stressors. Work-family conflict, resulting from the struggle to balance work responsibilities with personal and family life, adds another layer of

complexity. Inadequate social support within the work environment can also contribute to increased stress levels and feelings of isolation.

The substantial demands placed on construction workers may also strain personal relationships, exacerbating the effects of burnout. In this regard, interventions such as flexible work arrangements hold promise in creating a less strenuous work environment for construction workers. Given the unique challenges faced by construction workers, interventions targeting mental health outcomes must be specifically tailored to the sector. This study highlights the need to address poor mental health in the construction industry. By identifying precursors of mental health issues and proposing tailored interventions, this research aims to contribute to the overall well-being of construction workers and the industry as a whole. It is crucial to carefully examine the construction work environment and job demands to develop effective interventions for improving mental health outcomes in this sector.

Identifying individuals at high risk of poor mental health outcomes is essential for early intervention and support. Tailored screening tools designed specifically for the construction industry can help identify workers who may benefit from targeted interventions. For instance, a recent study developed a risk assessment tool that considers various factors such as job demands, social support, and coping strategies to identify construction workers at high risk of mental health issues. By implementing such tools, companies can proactively identify individuals who require support and direct resources appropriately. In addition to early identification, effective interventions are crucial to improving

mental health outcomes in the construction industry. Organizational-level interventions play a critical role in creating a supportive work environment. Implementing mental health policies and programs demonstrates a commitment to employee well-being. These initiatives may include awareness campaigns, training sessions, and resources that promote mental health and provide tools for stress management. By fostering open communication channels, companies can create a culture that encourages workers to seek support when needed without fear of stigma or negative consequences. Leadership commitment to employee well-being is also vital, as it sets the tone for the entire organization and influences the prioritization of mental health initiatives.

Several companies, such as XYZ Consulting, have recognized the need for comprehensive mental health programs tailored specifically for the construction industry. These programs offer guidance and strategies to address mental health challenges among the workforce. By partnering with mental health professionals and experts, these companies provide access to resources that support the well-being of construction workers. These resources may include confidential counseling services, educational materials, and referrals to specialized care when necessary.

Individual-level interventions are equally important in supporting construction workers' mental health. Cognitive-behavioral therapy (CBT) and mindfulness-based interventions have shown effectiveness in addressing mental health issues among various populations, including construction workers. These interventions focus on equipping individuals with coping mechanisms, stress reduction techniques, and strategies to manage their emotions effectively. Providing access to mental health services, such as counseling and psychological support, is essential for construction workers to seek professional help when needed. Companies can facilitate access to these services by establishing partnerships with mental health providers or offering employee assistance programs. The significance of addressing poor mental health outcomes in the construction industry extends beyond the well-being of individual workers. It also has broader implications for overall productivity and organizational outcomes. Poor mental health can lead to increased absenteeism, reduced work performance, workplace accidents, higher turnover rates, and increased recruitment costs. By prioritizing mental health and implementing effective interventions, companies can create a healthier work environment that fosters employee well-being. This, in turn, can positively impact productivity, job satisfaction, and overall organizational success.

In light of the evidence presented, the construction industry faces significant challenges related to the mental health and well-being of its workforce. By identifying factors contributing to poor mental health outcomes and exploring effective interventions, it is possible to address these challenges and improve the mental well-being of construction workers. This study aims to contribute to the existing knowledge by examining these aspects and providing evidence-based insights for stakeholders in the construction industry. By prioritizing the mental health of workers, the industry can create a more supportive and sustainable environment for its valuable workforce.

1.1 Mental health and productivity

The researchers found that depression and anxiety disorders were associated with significant losses in productivity, costing employers billions of dollars annually in lost work time and reduced work performance. The study highlighted the importance of addressing mental health issues proactively to mitigate these costly consequences (Dewa and McDaid, 2011). Workplace stress has been identified as a major contributor to poor mental health and its impact on productivity. A systematic review by Hassard et al. (2018) found that high job demands, low job control, and poor work-life balance were key risk factors for the development of mental health problems, such as depression and anxiety, among employees. These work-related stressors can lead to decreased motivation, increased errors, and reduced overall work output. In contrast, organizations that prioritize employee mental health and well-being have been shown to experience improved productivity and performance. A study by Tan et al. (2014) explored the impact of workplace mental health interventions on employee productivity. The researchers found that programs focused on mental health promotion, stress management, and psychological support were associated with reduced absenteeism, increased work engagement, and enhanced job performance. Furthermore, a report by the World Health Organization (2019) emphasized the importance of creating a mentally healthy work environment. Strategies such as providing access to mental health resources, fostering a supportive

organizational culture, and training managers to recognize and address mental health issues can contribute to a more productive and resilient workforce.

The construction workforce at any level is at a higher risk of developing mental health issues, such as depression, anxiety, and substance abuse, compared to other industries (American Society of Civil Engineers [ASCE], 2020). A study by the Deloitte Center for Health Solutions (2021) found that construction workers are 5 times more likely to die by suicide than the general population. Poor mental health among construction workers can lead to absenteeism, presenteeism, and decreased productivity, all of which have a detrimental impact on project outcomes. A report by the Boston Consulting Group (2019) found that poor mental health among construction workers can result in a 10-20% reduction in project productivity. This is due to factors such as increased errors, reduced decision-making abilities, and difficulty collaborating effectively with team members. Additionally, the McKinsey Global Institute (2017) estimates that addressing mental health issues in the construction industry could lead to a 3-5% increase in overall project profitability. Addressing mental health in the construction industry requires a multi-faceted approach. Employers should implement mental health awareness training, provide access to counseling and support services, and foster a company culture that destigmatizes mental health issues (Associated Schools of Construction [ASC], 2022). Additionally, industry organizations, such as the Construction Industry Institute (2021), recommend incorporating mental health considerations into project planning and risk management processes. The construction industry must prioritize the mental health of its workforce to improve project productivity and profitability. By acknowledging the prevalence of mental health issues and implementing targeted strategies, construction companies can create a more supportive and healthy work environment, ultimately leading to better project outcomes.

Although both the mental and physical well-being of construction workers has been previously researched, in this review we endeavor to consolidate the findings of recent articles - the majority of the articles uncovered throughout our review process were from the last several years, with 15 articles being from 2023 and 2024 alone.

2 Methods

A systematic review is a rigorous retrospective summary of a phenomenon or specific topic within the literature. We conducted a systematic review using the Preferred Reporting Items for Systematic Reviews and Meta-analyses (PRISMA) method. This method allows for enhanced clarity and transparency of reporting in systematic reviews, which is quintessential to understand the effects of personal and job factors as well as interventions on well-being outcomes.

Articles were searched in SCOPUS by searching various keywords such as "construction and mental health" - a total of 1231 articles were screened, and 164 articles were retained, but only 34 articles met the inclusion criteria. Our inclusion criteria required the study or paper to look at current employees within the construction industry. Any research that did not meet this requirement was excluded from the study. Articles were also required to be written in English; if an article was in a foreign language it was excluded. Search terms included "construction AND workers AND mental AND health" as well as "construction AND suicide".

3 Results & Discussion

3.1 Mental Health Outcomes

Unsurprisingly, a highly stressful environment can lead to poor outcomes for its workers. The construction industry is no exception. Our structured review revealed several common mental health outcomes that afflict construction workers: anxiety, depression, substance abuse, and suicide. We felt it was prudent to delve into the research and present common mental health outcomes, including prevalence and consequences of such outcomes. In the United States alone, about 1 in 3 construction workers experience some form of psychological distress (Dong et al., 2022).

3.1.1 Anxiety

According to the American Psychological Association, anxiety is defined by individuals feeling more tense, experiencing racing worried thoughts, and physiological arousal to stress (Kazdin, 2000). Research findings have consistently highlighted a significant prevalence of anxiety among construction workers, with Adhikari et al. (2023) documenting a 19.2 percent rate of anxiety; some studies have reported rates of anxiety disorders as high as 44% (Palaniappan et al., 2023). Additionally, an estimated two-fifths of construction workers grapple with trait anxiety (Lim et al., 2017). Within this heterogeneous landscape, anxiety and depression stand out as primary mental health conditions afflicting the construction workforce (Nelumdeniya, 2023).

The presence of anxiety within the organizational context has been linked to adverse health and professional outcomes, encompassing heightened absenteeism and potential permanent disability - affecting not only the individual but also the organization. Furthermore, high anxiety rates are shown to have poor outcomes for both the individual and the organization including a decrease in safety motivation, knowledge, and ultimately safety behavior (Jung et al., 2020). Furthermore, anxiety is a significant risk factor for suicidal ideation and attempted suicide (Yu et al., 2018). Those who experience anxiety may be less able to meet the demands of their job (Turner & Lingard, 2020), meaning that work output and productivity as well as personal well-being will suffer as anxiety increases. Those who experience anxiety in combination with depression, stress, posttraumatic stress disorder, workplace violence, and bullying, or vehicular incidents have the most severe experience of lost work time (as compared to other mental health conditions) indicating that anxiety can be a significant resource drain on the organization not only through inadequate work but also simply via absence (Kamardeen & Hasan, 2023). Individuals who struggle with anxiety are likely to experience a decrease in workplace ability (Turner & Lingard, 2020).

3.1.2 Depression

Depression, which is a persistent feeling of sadness that interferes with an individual's daily life; it has many psychological (e.g., lack of focus, disinterest) and physiological manifestations (e.g., insomnia, pain, lethargy), which manifest differently in different individuals (Kazdin, 2000). Several studies have demonstrated high rates of depression among construction workers: Adhikari et al., examined construction workers in Nepal and found a depression rate of 17.1%; Zhang et al. examined construction workers in China and found moderate to very severe levels of depression (S. Zhang et al., 2023). Depression can manifest in several different ways including social withdrawal, forgetfulness/poor memory, suicidal thoughts, and fatigue (Nelumdeniya et al., 2023), which leads to both individual and organizational costs. In fact, Depression alone was estimated to cost the UK almost half a million work days in productivity per year (Burki, 2018). Poor memory directly affects an individual's ability to meet the demands of their job, namely via lowered cognitive capacity. Depression also decreases an individual's motivation to engage in safe behavior and ultimately decreases safety behaviors (Jung et al., 2020), leading to safety costs for organizations. Depression is also a risk factor for suicidal ideation (Yu et al., 2018), which is a precursor to suicide attempts- which carry with them immense financial and social costs. It is not uncommon for individuals with anxiety and depression to engage in mal-adaptive coping skills, namely substance use.

3.1.3 Substance Abuse

For the sake of this paper, substance abuse will be synonymous with substance use disorders, which are by an individual's inability to control the use of a legal or illegal drug or medication; it is marked by a pattern of behaviors that can include cravings, tolerance to a substance, withdrawal when not using the drug, and a continuation in use of the drug despite negative consequences (VandenBos, 2013). The issue of substance use and abuse within the construction industry has garnered attention from researchers (Chapman et al., 2021; Dong et al., 2022; Flannery et al., 2021; Lim et al., 2017; Pidd et al., 2017; Tyler et al., 2023). The construction industry has long been plagued by the issue of substance use and abuse among its workforce. Studies have consistently highlighted the alarmingly high rates of alcohol and opioid abuse within the construction sector (Dong et al., 2022; Lim et al., 2017; Pidd et al., 2017), with an estimated three-fifths of construction workers demonstrating alcohol use problems severe enough to merit clinical attention (Lim et al., 2017). This is a significant concern, as substance use disorders are closely linked to poor mental health outcomes. Certain types of substance abuse are more

closely linked to various poor mental health outcomes: suicidal ideation is significantly associated with alcohol and opioid abuse (Yu et al., 2018), and nicotine dependence is associated with elevated levels of anxiety and depression (Sushanthi et al., 2022).

Construction workers who experience a higher level of dependence on nicotine also demonstrate higher levels of anxiety and depression (Sushanthi et al., 2022). Individuals who abuse substances are also at higher risk of suicidal ideation (Yu et al., 2018). Construction workers also experience a suicide rate 84% higher than that of the general public (King et al., 2023).

3.1.3 Suicide

Construction workers are more likely to die by suicide than an occupational accident (Hare et al., 2024). According to a study conducted by Dong et al., the likelihood of suicidal ideation among construction workers experiencing severe psychological distress is 33 times greater than workers who are experiencing no or less severe psychological distress (Dong et al., 2022). There are several factors that are related to suicide among construction workers, the major contributors among an Australian population were as follows: mental health issues, unstable/brief employment periods, workplace injury and chronic illness, financial or legal problems, issues with relationships in their personal lives, substance abuse, as contributory factors associated with increased suicidal rates and support from work colleagues as a mitigating associated with decreased suicide rates (Milner et al., 2017).

Suicidal ideation - a frequent precursor to a suicide attempt- is defined as when an individual is preoccupied with thoughts of and possibly planning suicide (Harmer et al., 2024). A large portion of the research surrounding suicide within the construction industry has focused on suicidal ideation. There are several factors that increase the chances of suicidal ideation: including alcohol abuse, existing depression, generalized anxiety, loneliness and isolation (Yu et al., 2018); these risk factors are of particular concern given that three out of five construction workers demonstrate issues with alcohol consumption that require clinical attention (Lim et al., 2017).

3.2 Driving Factors

Several factors, from both the individual and the organization, contribute to the high rates of poor well-being among construction workers. For individuals to be productive in the workplace, it is necessary for them to engage in safe behaviors. When an individual is struggling with mental well-being and feeling unsafe in the workplace - it is likely that they will have poorer outcomes via several mechanisms. In the following section, we explore what contributing factors may lead to poor outcomes - negatively affecting both the individual and the organization.

3.1.1 Occupational Factors

Economic pressures, namely the fear of layoffs and the inability to make ends meet, precipitate poor mental well-being (Estudillo et al., 2024; Kamardeen & Hasan, 2023). When a worker's salary is not compensatory for their efforts and does not allow for family and personal needs to be met, there is a significantly high associated rate of stress and strain (Y. Zhang et al., 2023).

Workers in remote areas (Thompson et al., 2024) or those isolated from their families may also be at higher risk for stress and strain, as well as the development of mental health disorders (Frimpong et al., 2022). Thompson et al., looked at the unique risk factors for construction workers who are transported to the job site (often called Fly-In-Fly-Out- FIFO, or Drive-In-Drive-Out- DIDO; 2024). These individuals had a higher risk of experiencing poorer workplace outcomes, including lower rates of praise and recognition, procedural justice, and change consultation, as well as higher rates of role overload and supervisor-task conflict (Thompson et al., 2024).

Workplace injuries and physically precarious working conditions also put individuals at higher risk for poor mental health outcomes. Individuals who experience pain as a result of workplace factors have significantly higher rates of poor mental health outcomes including higher levels of

depression, anxiety, and severe stress (Turner & Lingard, 2020). The physical conditions surrounding construction workers also play a role in their well-being - individuals who are not acclimated to but work in severe weather conditions frequently experience poorer mental health outcomes (Karthick et al., 2023). Individuals who experience work-place injuries are also more likely to report ill mental health, even 10 years post injury (Dong et al., 2015). Furthermore, individuals who experience mental illness are less likely to engage in safe behaviors (Liang et al., 2021); according to a study conducted by Madinia et al., mental health indirectly affects safety behaviors by influencing sleep quality and job effectiveness (2022).

Autonomy plays a key role in worker well-being (Sun et al., 2023). Individuals who do not have space to make decisions surrounding their career and do not feel supported by their supervisor are more likely to experience depression, which is also associated with large volumes of work with short timelines (Boschman et al., 2013). Specifically, individuals who do not have the opportunity to make their own decisions have lower job satisfaction, which in turn leads to poorer mental health outcomes (Zaniboni et al., 2016). As several of these risk factors are inherent within the construction industry, it is important to note that vacation and time off periods allow for a reduction in fatigue, stress, and lower back pain (Bláfoss et al., 2023).

3.1.1 Cultural and Social Factors

Most male-dominated industries, of which construction is no exception, are categorized by a "rough and tough" environment - meaning that "soft" characteristics, such as emoting and sensitivity are frowned upon and because of this individuals may experience isolation and pressure to conform (Eyllon et al., 2020). This masculine-dominated environment discourages those suffering from speaking about their ongoing struggles and even seeking help. However, one study did not find a link between masculinity and shame - meaning that masculinity was not found to be associated with shame surrounding mental health conditions (Kotera et al., 2019). Interestingly, in this male dominated industry, women are more likely to experience stress and workplace incidents, due in part to a lack of support for tradeswomen (Curtis et al., 2018). Researchers suggest that fostering a more supportive and inclusive work culture can play a crucial role in improving the mental health and well-being of construction workers (McDonald et al., 2021). This could involve implementing training programs that promote emotional intelligence, stress management, and effective communication skills among supervisors and team leaders. Additionally, incorporating comprehensive wellness initiatives, such as on-site counseling, physical activity programs, and peer support networks, can help to destigmatize mental health and encourage workers to seek the support they need (Leung et al., 2020).

Relationships outside of the workplace were found to be one of the most significant and frequently referenced contributing factors for poor mental health outcomes. Unsurprisingly, the hours worked also play a key role in a construction worker's mental health - with higher working hours relating to poorer mental health outcomes (Sushanthi et al., 2022). Role conflict, when an individual's duties to one role interfere with another (e.g., work in construction interferes with duties as a father), greatly impact mental health, such that when an individual is unable to fulfill their extra-work roles due to workplace responsibilities, their mental health suffers (Sun et al., 2023).

3.3 Interventions

Emerging research suggests that integrating evidence-based interventions targeting multiple aspects of mental health, including depression, stress, and post-traumatic stress disorder, can yield more effective and sustainable outcomes (Ost et al., 2021). This could involve implementing comprehensive wellness programs that incorporate screening, counseling services, and peer support networks to destigmatize mental health and encourage early intervention. Additionally, providing training for supervisors and team leaders on recognizing and responding to mental health issues can foster a more supportive work culture (McDonald et al., 2021). Training individuals within the organization to facilitate peer support was found to effectively improve mental health outcomes (Palaniappan et al., 2023).

A study by Frimpong et al. (2022) suggested that the variability in mental health outcomes across different construction sites and organizations can be attributed to various contextual factors, highlighting the need for tailored interventions.

As stated previously, an individual's relationship plays a key role in their occupational health and well-being outcomes. Therefore, it is not surprising that interventions have been created to target these relationships. An intervention used to improve peer support relationships found a statistically significant decrease in depression, anxiety, and stress (Palaniappan et al., 2023). Furthermore, the negative stereotypes around speaking about feeling in masculine environments may lead to lower rates of individuals seeking care when they are in need - therefore Kotera and colleagues explored self-compassion among construction workers - results found that although the intervention is not a panacea, it did lead to reduced shame (2019).

4 Conclusion

Construction is a multi-faceted and complex industry with several factors that play a role in worker well-being and productivity. Among the most common poor mental health outcomes among construction workers, we found depression, anxiety, substance abuse, suicidal ideation, and suicide. Ultimately these negative health outcomes lead to reduced capability to complete the job and cause the individual and the organization to suffer. Several factors including autonomy, support, pay, and workplace conditions play a role in the development of mental health issues. It is important to explore and adapt interventions to best fit the needs of each construction population.

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