

# Occupational Health and Diseases in Built Environment

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Past efforts to improve health and safety performance in the construction sector tended to focus more on the safety aspect, particularly on reducing and eliminating physical injuries. Although this is a worthy endeavour, there is also a need to focus on improving the sector's health performance. Occupational health tends to be neglected because it is usually invisible, and its impact does not manifest immediately. Furthermore, the end products of the construction industry are our built environment, comprising buildings, infrastructure, and facilities that we use daily. There are opportunities to consider how our built environments can be used to improve health and wellbeing, an aspect which needs more investigation to identify strategies and interventions to capitalise on this potential benefit. Therefore, this Special Issue on "Occupational Health and Diseases in Built Environment" intends to highlight this significant yet underexplored issue.

Five papers are published in the Special Issue. First, Nwaogu and Chan [1] investigated resilience and coping strategies for mitigating poor mental health among construction supervisors in Nigeria. They found that resilience moderates the relationship between coping skills and anxiety. Therefore, in addition to improving coping skills, this research advocates the development of resilience to improve mental health in construction. The context of the research, i.e., Nigeria, is significant, as most research on mental health in construction has been performed in developed, particularly Western, countries. More mental health research in developing countries is needed to identify specific sociocultural factors that influence the choice of coping practices and strategies to develop resilience for improving mental health management in construction [2].

Second, Alamoudi [3] used importance-performance analysis to determine the strengths and weaknesses of the safety climate in the Saudi construction industry. Even though the focus of this research is on safety, there are important findings relevant to improving health management in construction. In addition, its focus on Saudi Arabia is particularly valuable, as not much research has been conducted in this context. This research advocates for further effort from management to identify sources of health and safety issues instead of simply blaming workers for health and safety problems. Another important research finding is the need to have more meetings and consultations with workers to establish health and safety measures to improve performance. Due to the high power–distance culture in Saudi Arabia, the top–down approach is the main approach used to improve health and safety, with feedback from workers tending to be ignored or not sought after. Establishing culturally appropriate strategies to involve workers in managing health and safety should be further explored to promote improvements.

Third, Berglund and colleagues [4] investigated the impact of EU directives 92/52/EEC on improving health and safety in the Swedish construction industry. The research found that the new national regulations introduced in 2009 along with relevant new management roles and responsibilities had no apparent effect on health and safety performance, as reflected by incidence rates. Although this finding seems counterintuitive, it reveals the problem of measuring health and safety performance using lagging indicators, which depend on the accurate reporting of health and safety problems. Underreporting in the past, as well as more robust reporting after the directives were applied, may be responsible



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for the seeming lack of health and safety improvement. This research shows the importance of using both leading and lagging indicators to measure health and safety performance. A new paradigm called Safety-II, which learns from what goes well, can also be integrated into current practice to complement the traditional view of focusing on what goes wrong, e.g., incidents and injuries [5].

Fourth, Samuel and colleagues [6] conducted a systematic review to understand how young construction workers cope with psychological hazards. Young construction workers tend to have worse mental health than older workers because they are in a transitional phase in their lives. The researchers identified 29 coping practices, which can be categorised into 3 domains: problem-focused coping, emotion-focused coping, and maladaptive coping. More importantly, they identified 12 determinants of young construction workers' choice of coping practice. Personal factors, such as age, individual resilience, socioeconomic status, and individual perceptions, and environmental factors, such as cultural background, community attitudes, and organisational culture, determined whether young construction workers would employ problem-focused, emotion-focused, or maladaptive coping mechanisms. Establishing this relationship helps mental health stakeholders understand why young construction workers prefer to adopt maladaptive coping practices despite their proven ineffectiveness and negative impact on mental health. Future research and efforts, therefore, can consider young construction workers' preference and environmental context to develop targeted interventions.

Fifth, Sedghikhanshir and colleagues [7] conducted another systematic review to investigate the impact of visual stimuli, their properties, and type of delivery method on restoration and human stress. They developed a processing framework to visualise the relationship between human, visual processing, and scene, in which the visual processing can be categorised further into global (focusing on scenes) and local (focusing on objects) visual processing. Ultimately, they developed a framework of visual stimuli, visual properties, and restoration, along with delivery mechanisms, such as using images and immersive virtual environments. This research can support the design of a restorative built environment by integrating natural objects into the built environment to reduce stress. Future research and design efforts should consider the observer's goals and prior experience along with the scene definition and type of delivery method to study restoration concerning visual stimuli and their properties.

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