

Advancing Construction Safety and Health Practices: Integrative Approaches from Cognitive and Technological Perspectives

Phuong H.D. Nguyen¹ and Md Nazmus Sakib²

¹ Assistant Professor, Department of Construction & Concrete Industry Management, South Dakota State University, Solberg Hall 116, Box 2223, Brookings, SD 57007, USA, E-mail: Phuong.Nguyen@sdstate.edu (corresponding author).

² Assistant Professor, Department of Civil Engineering, University of Texas at Arlington, 701 S. Nedderman Drive, Arlington, TX 76019, USA, E-mail: mdnazmus.sakib@uta.edu

Editors

Editorial

Available online November 25, 2025

Copyright © Journal of Engineering, Project, and Production Management (EPPM-Journal).
DOI 10.32738/JEPPM-2025-250

This special issue at the Journal of Engineering, Project, and Production Management (EPPM-Journal) brings together a diverse and timely collection of research papers that collectively advance our understanding of health, safety, decision-making, and technological innovation in the construction industry. All these papers were successfully presented at the 2025 Construction Safety Conference held at the University of Kansas by the Craig and Diane Martin National Center for Construction Safety. The papers bridge critical gaps between traditional safety management approaches and modern demands for holistic worker wellbeing, evidence-based decision-making, and intelligent monitoring systems. The papers explore emerging challenges such as mental health concerns identified through web crawling and ergonomic risks faced by construction students during hands-on training. Innovative frameworks are proposed for improving tower crane safety and guiding evidence-based decision-making in safety research. Cognitive perspectives are examined through comparative studies of accident perception among construction managers. Regional insights from Ghana and Nigeria highlight the roles of housing safety, client-led health practices, and facilities management. Additionally, this issue addresses the extent of safety practices in residential developments and reviews the integration of cyber-physical systems and digital twins for enhanced monitoring in construction.

This special issue makes valuable contributions to both academic knowledge and practical application in the construction safety and health areas. For researchers, it provides rigorous empirical evidence, innovative methodologies, and conceptual frameworks that advance theoretical understanding of safety phenomena. For practitioners, it offers actionable insights, assessment tools, and implementation strategies that can be adapted to various organizational and project contexts. For educators, it highlights the importance of integrating safety, ergonomics, and mental health awareness into construction training programs.

We extend our sincere appreciation to all contributing authors for their valuable research, to the reviewers for their thoughtful feedback and constructive suggestions, and to the editor and editorial team for their expert guidance throughout the process. We also acknowledge the support of the organizers and sponsors who made this special issue possible. Finally, we invite readers to engage deeply with the articles presented and to actively participate in the ongoing discourse aimed at enhancing health and safety practices within the construction industry.