

Mapping Evidence on Cognitive Ergonomics and Employee Well-being: A Scoping Review

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Abstract

This scoping review aims to synthesise the existing evidence on the impact of cognitive ergonomics on employee well-being across all workplace settings. The major concerns emerging in today's workplace are technological advancements, complex and continuous cognitive demanding work, which are severely impacting the mental health and occupational well-being, focusing on burnout, mental fatigue, cognitive fog, etc. Thus, cognitive ergonomics is recognised as a critical factor in optimisation of human-system interaction and mental workload, still evidences related to these factors remains unexplored across various disciplines. This research also aligns with global efforts relevant to the Sustainable Development Goals (SDGs): SDG 3 - Good Health and Well-being, SDG 8 - Decent Work and Economic Growth and SDG 9- Industry, Innovation, and Infrastructure. The Preferred Reporting Items for Systematic Reviews and Meta Analyses for Scoping Reviews (PRISMA-ScR) guidelines and methodology were used for the scoping review. Peer-reviewed literature published in English between 2015 and 2025 was reviewed across various databases, including Scopus, Web of Science, PsycINFO, and PubMed.

Study selection was employed by the Participant-Concept-Context (PCC) framework. Most of the studies involved were quantitative and cross-sectional designs. The findings indicate that a poor cognitive ergonomic condition contributes to increased burnout, mental fatigue and decreased well-being among professionals in various sectors. In contrast, a cognitively supportive environment reduces cognitive strain. The review also highlights the need for multi-disciplinary literature work in the field, incorporating psychology-based ergonomic interventions for better workplace well-being. This review provides a foundation for future literature and evidence aimed at enhancing mental health in the workplace. Thus, the study has implications for organisational policymaking, better human-system design and sustainable mental health strategies that can address the contemporary organisational psychology challenges

Index Terms

Cognitive Ergonomics, Employee Well-Being, Occupational Stress, Workplace Mental Health, Cognitive Workload