

Title: Modeling Workplace Well-Being Factors in Infrastructure Construction Projects: PLS-SEM Approach

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Abstract: Working at construction sites can harm individuals' health and well-being. However, stakeholders often focus on improving health while discounting well-being. Establishing a better workplace environment can improve workplace well-being. Therefore, this study aims to investigate the factors influencing workplace well-being in infrastructure construction projects. To achieve this aim, the study objectives are to (1) identify the critical factors influencing workplace well-being in infrastructure construction projects; (2) develop an interrelationship model between underlying constructs of the factors; and (3) assess the influence of the underlying constructs on workplace well-being in infrastructure construction projects. First, a list of factors influencing workplace well-being was established using data from a systematic literature review and semi-structured interviews. Then, a survey was developed using the list of factors and distributed to infrastructure construction practitioners. In total, 124 responses were retrieved and analyzed using normalized mean analysis, exploratory factor analysis (EFA) and partial least square structural equation modeling (PLS-SEM). The analyses reveal that the critical factors include workload, salary package, the timeline of salary payment, working hours, planning of the project, insurance for construction workers, workers' welfare and project progress. Furthermore, the underlying constructs are physical factors and psychosocial factors. Finally, both physical and psychosocial factors are found to significantly influence workplace well-being in infrastructure construction projects. Focusing solely on physical factors may not sufficiently enhance workplace well-being in construction projects, as there are also non-visible factors, such as psychosocial factors. Thus, exploring the interplay between visible and non-visible factors and their influence on workplace well-being in construction projects is crucial. Nevertheless, the findings have several limitations, including using data from a single country and non-hands-on construction practitioners, as well as the underlying constructs being derived solely using statistical methods. Still, the study is original in its focus on modeling the relationship between the factors influencing workplace well-being within the context of infrastructure construction projects. In other words, this study differs from prior research by specifically modeling the factors that influence well-being in infrastructure construction projects.

Keywords: Well-being; Factor analysis; PLS-SEM; Infrastructure; Construction projects

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