

Impact of Occupational Health Hazards on Health-Risk Attitude: A Study of Gem Miners in Ratnapura District of Sri Lanka

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Abstract

This study examined the impact of occupational health hazards on the health-risk attitude among the gem miners of Ratnapura district in Sri Lanka. The study was driven by the growing health and safety concerns in the workplace in the gem mining sector, where miners often face a number of risks to their health, which may affect their physical and mental health. Although the gem mining industry has economic importance, empirical research on how occupational health hazards can determine the health-risk attitudes of miners has been limited. Thus, the primary objective of this research was to investigate the impact of chemical, physical, ergonomic, psychosocial, and biological hazards on the health-risk attitudes of gem miners. A qualitative research design was followed, based on the sample of 370 gem miners, which was taken on a simple random basis among a total population of 30,066 miners. Primary data collection was done using a self-administered structured Sinhala questionnaire. The descriptive statistics, Pearson correlation, and multiple regression analysis were performed on the data with the help of SPSS (version 25). The findings were that the psychosocial, ergonomic, and biological hazards had a significant impact on the health-risk attitudes of the gem miners, and yet the chemical and physical hazards did not. The paper is relevant to both theory and practice in terms of both confirming the psychometric paradigm of risk perception to the Sri Lankan gem mining industry and providing potential recommendations that can be utilised by policymakers, employers, and other interested parties. The measures to enhance psychosocial health, ergonomic safety and reduce biological hazards are prioritised as valuable in decreasing the health and productivity threats affecting the miners. The study is correspondingly an established tool and conceptual framework to be used in future research on occupational health and risk perception in artisanal mining sectors.

Keywords: gem miners, gem mining, health risk-attitude, health-risk behaviour, occupational health hazards