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Investigation into Workplace Health and Hygiene Associated to Cement Exposure and the Health Status of Construction Workers using Lung Function Parameters and a Hygiene Study

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Abstract: *Workers in the construction industry are frequently exposed to various hazardous substances on the job. Long-term exposure to cement has been associated with a range of health issues and progressive complications. Recent research indicates that occupational contact with cement dust can negatively impact the lungs, liver, and epithelial tissues. This study includes 633 participants, comprising masons, helpers, concrete mixers, tile workers, and those involved in loading and unloading. Among them, 74% have been exposed to cement for over 10 years, with 16% having more than 20 years of exposure. The occupational breakdown is as follows: 43% are masons, 15% helpers, 9% concrete mixers, 6% tile workers, and 27% are engaged in loading and unloading tasks. Skin-related problems are more commonly observed among masons and tile workers. Helpers and concrete mixers frequently report both pulmonary and dermatological issues. Loading and unloading workers experience all these symptoms at a higher rate.*
The construction industry is one of the fastest-growing sectors globally. Workers in this field are routinely exposed to a variety of hazardous substances. Portland cement, the most commonly used type of cement, contains several toxic components. Prolonged exposure to these substances can result in a range of health issues and long-term complications. This study examines 508 cases involving laborers from the construction sector. Participants were categorized into three groups based on their duration of exposure: less than 10 years, 10–20 years, and over 20 years. Among them, 60% were masons, 21% helpers, 12% concrete mixers, and 7% tile workers. Skin-related issues were reported by 90% of masons. Helpers commonly experienced both skin problems and respiratory conditions. Overall, 42% of the workers suffered from skin rashes or inflammations. Among concrete mixers, 72% reported skin burns and 23% experienced impaired lung function. Seventy percent of tile workers reported skin-related issues.

Keywords: Cement dust exposure; Construction workers; Occupational health hazards; Respiratory symptoms; Skin irritation; Lung function; Masons; Loading workers; Hygiene study; Personal protective equipment (PPE); Health risk assessment; Occupational safety; Preventive measures; Cement industry etc

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