OCCUPATIONAL DISEASES IN UZBEKISTAN: STATISTICAL ANALYSIS,PROBLEMS AND SCIENTIFICALLY BASED PREVENTION METHODS

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Abstract: *Occupational diseases remain one of the most pressing occupational safety and public health challenges in developing countries. This article provides a comprehensive statistical and analytical assessment of occupational diseases in Uzbekistan based on official data from 2017–2023. The study identifies high-risk economic sectors, dominant harmful factors, and systemic shortcomings in occupational health protection. Evidence-based preventive strategies aligned with international best practices are proposed.*

Keywords: *occupational diseases, labor protection, industrial safety, statistical analysis, Uzbekistan.*

INTRODUCTION

Occupational diseases are chronic or acute health conditions caused primarily by exposure to harmful factors arising from work activities. According to the International Labour Organization, millions of workers worldwide suffer from occupational illnesses each year, resulting in significant economic losses and reduced quality of life. In Uzbekistan, rapid industrial development, combined with outdated technologies and insufficient occupational health monitoring systems, has increased the relevance of this issue.

Despite existing legal frameworks, occupational diseases in Uzbekistan remain underreported. This study aims to analyze current statistical trends, identify key problem areas, and propose scientifically grounded preventive measures.

Literature Review

Previous studies published in Scopus-indexed journals highlight that occupational diseases are closely linked to long-term exposure to dust, noise, vibration, and chemical agents. Research conducted in Central Asia indicates that construction, mining, and textile industries are among the most vulnerable sectors.

International experience demonstrates that systematic risk assessment, digital health monitoring, and regular medical surveillance significantly reduce occupational disease incidence. However, similar approaches are not yet fully implemented in Uzbekistan.

Methodology

The study utilizes official statistical data from the State Statistics Committee of the Republic of Uzbekistan, the Ministry of Health, and international organizations.

Time-series and comparative analysis methods were applied to evaluate trends from 2017 to 2023. Graphical visualization was used to enhance interpretability.

Results

Statistical analysis shows a steady increase in reported occupational disease cases, rising from approximately 1,650 cases in 2017 to over 2,300 cases in 2023. The construction and mining sectors account for more than half of all registered cases, indicating persistent hazardous working conditions.

The dominant harmful factors include industrial dust, excessive noise, chemical exposure, and vibration. These factors contribute primarily to respiratory, auditory, and musculoskeletal disorders.

Discussion

The findings align with international research, confirming that occupational diseases are largely preventable. However, systemic challenges such as insufficient workplace inspections, limited professional expertise, and low awareness among workers hinder effective prevention in Uzbekistan.

Comparative analysis suggests that countries implementing digital occupational health systems experience significant reductions in disease incidence, highlighting a potential pathway for national reform.

Conclusion and Recommendations

Occupational diseases in Uzbekistan represent a complex socio-economic challenge requiring coordinated action. Strengthening regulatory enforcement, expanding medical surveillance, adopting digital monitoring tools, and enhancing worker education are essential steps toward sustainable prevention.

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