

Investigation of Occupational Health and Safety
Hazards Among Solid Waste Collectors
In Biratnagar Municipality

By

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RECOMMENDATION FOR ACCEPTANCE

This is to certify that Mr. Jyoti Rajbanshi has prepared this thesis entitled "**A study on Investigation of occupational Health and safety Hazards among solid waste collectors**" under my guidance and supervision.

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I sincerely hope that this study will be beneficial to the policy makers, strategic planners, and health providers in the sanitary field in all municipalities, camps and villages in Nepal.

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Jyoti Rajbanshi

ABSTRACT

The present study aimed to investigate all types of wastes collected (Households, commercial, industrial, and biomedical) and their potential health hazards at domestic waste collectors in Biratnagar Municipality. It also aimed to investigate the ways used in collecting waste and the safety measures which was taken while collecting waste.

A self-designed interview schedule was used to study, and investigate the occupational health and safety hazards. The target population was solid waste collectors, waste drivers, and their direct supervisors. A convenience non probability sampling was taken.

The study showed that most waste collectors do not wear face masks (97.14%), overall (79.05%), rubber boot (83.80%) and protective gloves (42.86%). The study also showed that waste collectors suffered from different types of diseases and symptoms such as sore throat, cough, diarrhea or bloody stool (55.24%), shortness of breath (24.76%) and skin diseases (20%). Waste collectors were prone to different injuries such as hit by any hard or sharp object (25.71%), lift more than their capacity (16.19%) and fall while pulling or pushing the waste trolley (2.86%). It showed that (75.24%) of waste collectors were not vaccinated for tetanus and (83.90%) were not vaccinated for hepatitis.

In conclusion, waste collectors face tremendous health challenges. Waste collectors with middle age and with low level of education were at high risk. Waste collectors should be provided with the necessary protective measures (face mask, protective gloves, overall, and rubber boot). Education and training programs should be provided to all, and routine medical checkup program should be implemented and maintained, to keep them safe and secure.

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LIST OF ABBREVIATIONS

CO	-	Carbon Mono Oxide	
Dioxin	-	Polychlorinated Di-benzoin-p-Dioxin	
ILO	-	International Labor Organization	
ISWM	-	Integrated Solid Waste Management	
NAL	-	Nasal Lavage	
NO _x	-	Nitrogen Oxides	
OHS	-	Occupational Health and Safety	
PCB's	-	Poly Chlorinated Biphenyl's	
RC's	-	Refugee Camps.	
SO _x	-	Sulfur Oxides	
UFC/m ³	-	Refers to the total number of airborne micro- counted in a cubic meter of air.	Organism
UFU/m ³	-	Refers to the bio-aerosol count in one cubic meter of air.	
UNRWA	-	United Nation Relief Work Agency.	
USA	-	United States of America.	
USEIA	-	United State of Environmental Impact Assessment	
USPHS	-	United States of Public Health Services.	
US\$	-	United States Dollars.	
VOC	-	Volatile Organic Compound	
WHO	-	World Health Organization	