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

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Symbol Number: 2140284
T.U. Reg. No.: 5-2-3-2111-2000

A Thesis
Submitted to Health and Population Department
In Partial Fulfillment of the Requirements for Master Degree in
Health Education

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SUKUNA MULTIPLE
CAMPUS INDRAPUR
MORANG
2011

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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ACKNOWLEDGMENTS

I would like to acknowledge my major advisor teacher lecture Mr. Manish Thapa; other Advisory committee members lecture Mr. Hari Bahadur khatri and Krishna Bhurtel and all of the professors and instructors who are part of the Health Education Department program for preparing me to this point in my degree.

God know that I could do this even when I did not think I could through the tears, stress and frustration. He was there by my side and even carrying me at my lowest times. Acknowledging him pales in comparison to the love and encouragement. He has shown me, but it is very least I can do.

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
NOx	-	Nitrogen Oxides
OHS	-	Occupational Health and Safety
PCB’s	-	Poly Chlorinated Biphenyl's
RC’s	-	Refugee Camps.
SOx	-	Sulfur Oxides
UFC/m^3	-	Refers to the total number of airborne micro- Organism counted in a cubic meter of air.
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