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Addis Ababa University

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ASSESSMENT OF KNOWLEDGE, ATTITUDEAND PRACTICE AND ASSOCIATED FACTORSON THE PREVENTION OF OCCUPATIONAL HEALTH RISKS AMONG SOLID WASTE COLLECTORS IN LIDETA SUB CITY, ADDIS ABABA.

By

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Table of contents

Contents pages

Abstract

Introduction: Municipal waste is produced as a result of economical productivity and consumption. It includes nonhazardous wastes from households, commercial establishments, institutions, markets, and industries. Municipal solid waste handling and disposal is a growing environmental and public health concern. There is no adequate credible evidence on workers occupational health practices and factors affecting the practice of waste handlers in Addis Ababa which help for designing strategies to address the problem for both government and non-government organizations.

Objective: The objective of this study is to assess knowledge, attitude and practice on prevention of occupational risks and associated factors among solid waste collectors in Lideta sub-city, A.A.

Methods: A cross sectional quantitative study was employed to assess knowledge, attitude, and practice and associated factors on occupational health risks among solid waste collectors in Lideta sub-city Addis Ababa from March to April 2013. All 427 solid waste collectors found in Lideta sub-city are included in the study. Structured pretestedquestionnaire and observational checklist has been used for data collection. The data was entered, cleaned, edited and analyzed by using epi info 3.5.1 and spss 16 version statistics software.

Results: The response rate of this study was 94.4% and female respondents accounted 69.7%. The median age of the study subjects was 35 years (ranging from 17 to 65 years). 64% of study participants had good knowledge on preventing occupational health risks. 76.4% of solid waste collectors had good attitude and only 8.9% had good practice on preventing occupational health risks. Job dissatisfaction is statistically significant factor for failing to have good practice among Lideta sub-city solid waste collectors.

Conclusion: The magnitude of having good practice on preventing occupational health risks among solid waste collectors in Lideta sub city is very low. So, implementation of basic occupational health services with provision of personal protective equipments and supervising solid waste collectors on appropriate utilization is advisable.

1. Introduction

1.1Statement of the problem

Municipal waste is produced as a result of economical productivity and consumption. It includes nonhazardous wastes from households, commercial establishments, institutions, markets, and industries(1, 2).

Municipal waste is a kind of waste generated from residential and institutions which doesn't contain hazardous and infectious wastes (2).

Health hazards from health care institution waste includes virus infections such as hepatitis B and C, through injuries from contaminated sharps(largely hypodermic needles) (2).

Municipal solid waste handling and disposal is a growing environmental and public health concern. The collection of household waste is a hard job, which involves working on a vehicle that moves through traffic throughout the year. It also requires repeated heavy physical activity, such as the manual lifting and handling of heavy bins(3, 4).

Municipal solid waste workers (MSWWs) are exposed to a number of pathogens (bacteria, fungi, viruses, parasites and cysts), toxic substances , chemicals that come from the waste itself and from its decomposition, as well as vehicle exhaust fumes, noise, extreme temperatures and ultraviolet radiation(1).

While standards and norms for handling municipal solid wastes in industrialized countries have reduced occupational and environmental impacts significantly, the risk levels are still very high in most developing countries because of inadequate understanding of the magnitude of the problem. In low income countries solid waste collectors are likely to have a low socio-economic status and the medical problems of these workers are further compounded by various socio-economic factors such as poverty, lack of education, poor housing conditions and poor diet. Farther more, these groups of workers are exposed directly and without adequate protection to municipal solid waste which includes hazardous substances, they are more susceptible to occupational hazards. The common health problem investigated among this working group includes respiratory symptoms , irritation of the skin, nose and eyes ,gastro

intestinal problems, fatigue, headache, psychological problems , allergies , musculoskeletal and injury , risks such as strains to sprains , confusions , fractures and lacerations(5).

A research done in A.A on solid waste collectors showed that only 43.6% of them were using personal protective equipment (PPE) all the time while they are on duty which may result in increasing the probability of occupational health risk among them(6).

Like many developing countries and cities solid waste in Lideta sub-city is collected home to home manually. It requires repeated heavy physical activities such as lifting, carrying, pulling and pushing. The waste awaiting collection is readily available to insect and rodents and other scavenger animals which are potential carriers of enteric pathogens. During the time of waste collection solid waste collectors may not use personal protective equipments, devices and follow safety measures. Besides during the time of waiting for waste loading truck they used to eat and drink on and near to the waste transfer site. This kind of practices may occur due to lack of personal protective equipments and poor knowledge and attitude towards occupational health risks.

2, LITERATURE REVIEW

2.1 Municipal Solid Waste Management

Municipal waste is produced as a result of economic productivity and consumption. It includes non-hazardous waste from households, commercial establishments, institutions, markets, and industries. Since 1970's when it was apparent that even controlled landfills were causing significant water pollution sanitary landfill technology was developed to provide leachate and gas management system(1).

Solid waste is defined as the solid component of any left over, surplus or unwanted by product from any business or domestic activity. Solid waste management encompasses a very wide range of activities including: collecting municipal garbage and recyclable materials; collecting, sorting, and processing of recyclable materials; composting of green waste; collection and processing of building and demolition, of commercial and industrial waste(7).

As per the estimates made India produces about 100,000 tones of urban solid waste daily. The waste collected by waste handlers clearly reduces the quantity of garbage that has to find its way to disposal sites found in Bengaluru one of the cities in India(8).

As study in Hebron and Bethlehem showed that house hold and commercial wastes are the most waste collected are 98.1% and 97.1% respectively(9).

Addis Ababa's' per capita solid waste generation rate is 0.45k.g/c/day and more than 200,000 tone of waste is collected each year. From this amount of waste 76% is produced from households; 18% from institutions, commercial centers, factories & hotels and the rest 6% is from street sweeping(10).

2.2 Occupational Health Risks on Solid Waste Collectors

A study done in Colombo revealed alcohol consumption was higher among solid waste collectors 72.3% and the prevalence of smoking was 63.8%. A significant number of solid waste collectors reported to have cuts i.e. 74%, needle pricks 42% and exposure toxins 60%(11).

Solid waste collectors are exposed to increasing risk of respiratory and gastro-intestinal tract diseases. These are attributed to the microbial agents they are exposed to in the course of discharging their duties. Violence from members of the public is another form of hazard. This might be as a reaction to the refuse tracks blocking the roads. The violence could be demonstrated in various ways from verbal abuse to physical violence in most cases. They are subjected to hazard of hearing and musculoskeletal disorders which has to do with back, shoulder, and arm injuries. Incorrect manual handling; size of the bin; and the distance they have to move the bins predispose to the injuries(12, 13).

The physical problems of solid waste collectors undertaking routine work most suffered with low back pain and sprain 95%, common cold 89% and skin rashes 66%. Other problems included headaches 49%, fatigue 34%, shortness of breath 23%, and impetigo 19%(14).

According to a rapid assessment done in Calcutta open dumps on solid waste handlers 40% had chronic cough and 37% had jaundice. The average quarterly incidence of diarrhea was 87%, of fever was 75%, and cough was 63%(15).

A study conducted in Nigeria among solid waste handlers revealed that 86% affected with eye irritation, 74% with asthma, 90% with cold and cough and 96% with fatigue(16).

2.3 Solid waste collectors' knowledge on occupational health risks

According to a research done on health risk reduction behaviors model scavengers exposed to solid waste in Thailand most solid waste collectors had low level of knowledge and alertness on occupational health risks(14).

2.4 Personal protective equipment utilization of Waste Collectors

Despite the severity of occupational health hazards encounter by solid waste collectors their provision and usage of personal protective equipments is low. The study done in Colombo municipal council workers revealed that gloves and boots were available for 44% of solid waste collectors and the usage is only 25%(11).

Results from a study done in Addis Ababa on solid waste collectors revealed that personal protective equipment utilization is only 43.6% of respondents were using it while they are on duty. Out of these PPE users 22.5% of them reported that they were not using it all the time while they are on duty. No access 83.7%, discomfort 25.6% and to save time 12.8% were the main reasons mentioned for non use of PPE(6).

A study done in Hebron and Bethlehem reveals most of solid waste collectors did not use PPE i.e. 98.6% do not use face mask; 78.9% do not use rubber boot; 45% do not use protective gloves; and 85.5% do not use over all protective materials(9).

2.5 Attitude of Solid Waste Collectors on health risks

Results showed from a research done among municipal solid waste collectors in Port Hartcourt Metropolis in Nigeria; the attitude of solid waste collectors towards safe occupational practice, 76.3% agreed that they had sustained injuries from sharp objects in the course of packing refuse with bare hands. 26.2% agreed that their protective equipments were of the right quality and suitable to the task(12).

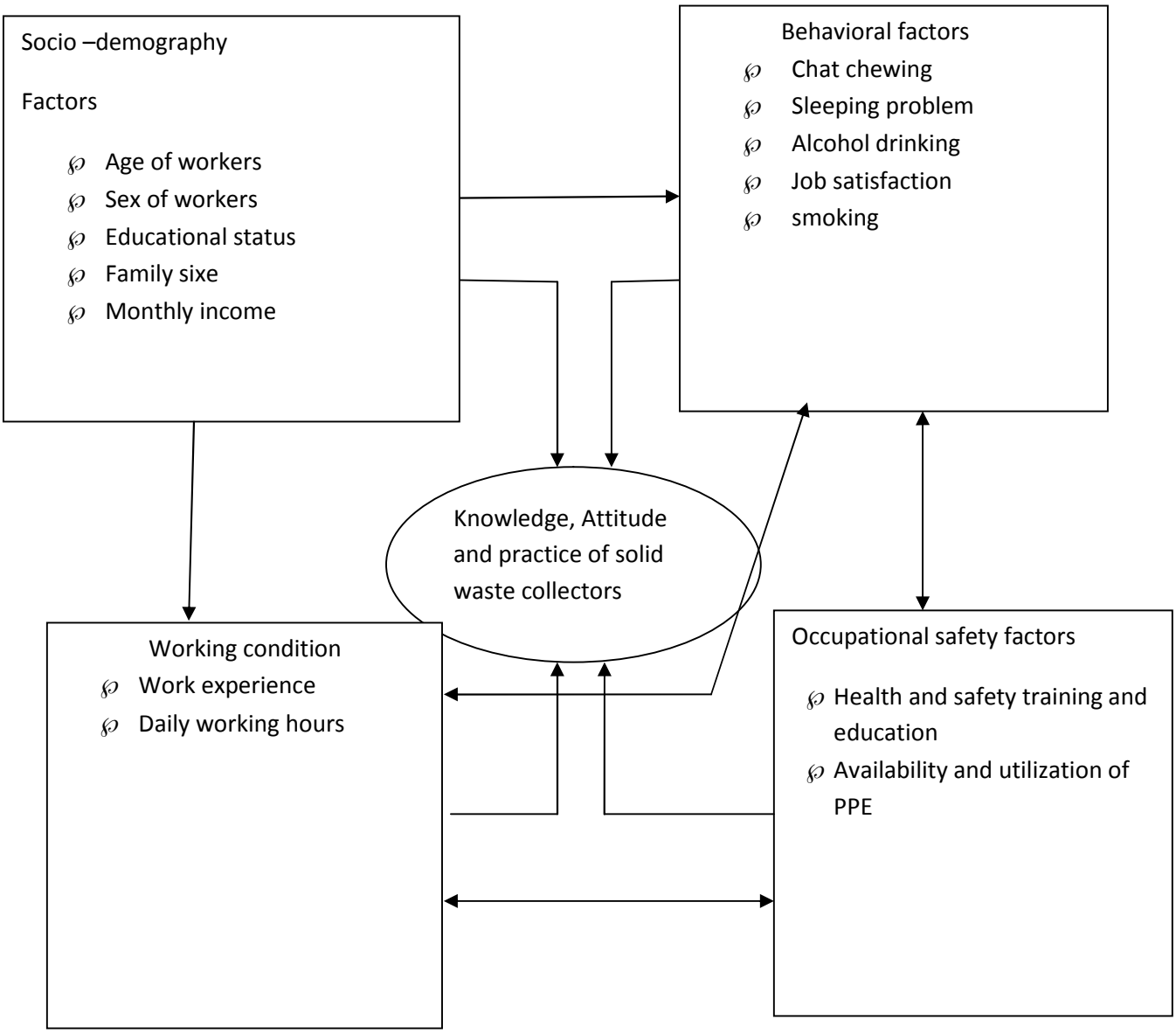
2.6 Factors affecting the practice of solid waste collectors on occupational health risks

The training of workers on occupational health and safety issues, as well as workers rights within the work place has been an important part of improving working conditions. Workers prior to commencement of new assignments should received adequate training and information enabling them to understand the hazards of work and to protect their health from ambient factors that may present. The training must cover knowledge of materials, equipments and tools; known hazards in the operations and how to control these hazards; potential risks to health; hygiene requirements; wearing and use of protective equipment and clothing; and appropriate extremes, incidents and accidents (17-19).

A research done in Addis Ababa revealed only 20.8% of solid waste collectors had training before starting the waste collection job and 57.3% had on job training after they engaged to this job. According to this research female waste collectors account 71.2% and the median age of waste collectors was 33 years with 18 and 70 years minimum and maximum respectively. The median monthly income for the research participants was 400 Ethiopian birr with range of 200 to 900 birr(6).

There is shortage of data on occupational health risks, which is now becoming a concern given for scaling up for development in Ethiopia. Specifically there is inadequate credible evidence on Knowledge, attitude and practice on prevention of health risks and associated factors among solid waste collectors in the country to design new strategies to address the problem for both governmental and nongovernmental organizations. The summary of relation between independent variables such as socio demographic factors, behavioral factors, occupational health and safety factors, working condition are expected to contribute to Knowledge, attitude and practice on prevention of occupational health risks and associated factors. Occupational health practice may be affected by knowledge and attitude and also knowledge is expected to have influence on attitude towards occupational health risks, socio demographic, behavioral, occupational factors and also working condition of solid waste collectors are expected to influence each other and also will have a great deal to have or not good occupational health knowledge, attitude, and practice. And the brief summary is charted in the figure as conceptual frame work putting into consideration of factors, assumptions and relationships mentioned above.

Conceptual frame work



3. Objective of the study

General objective

To assess knowledge, attitude and practice on prevention of occupational health risks and associated factors among solid waste collectors, in Lideta sub-city, A.A.

Specific objectives

- To assess knowledge of solid waste collectors on occupational health risks.
- To assess attitude of solid waste collectors on occupational health risks.
- To assess the practice of solid waste collectors on prevention of occupational health risks.
- To identify associated factors related to the practice on occupational risks.

4. Methods

4.1, Study Area and Period

The study has been carried out in Lideta sub-city, Addis Ababa.I (the principal investigator) have observed solid waste collectors working with bare hands, eating on work place, chewing chat and the like in Lideta sub-city while I was working on the same sub-city solid waste management office, because of this reason I became interested to select Lideta sub-city to be the study area for this study. It has a population of 259,450. The sub-city is organized by 2 layers of government i.e. the sub-city and 10 woredas under Lideta sub-city administration. Currently 37 micro and small scale enterprises are emerged to participate in primary solid waste collection. The emerged solid waste collection associations have tried to collect garbage from households and transport it to the municipal waste containers and transfer station. The sub-city is divided in to 37 zones and each comprises 120 to 1200households in each zone. At each zone one association is assigned to work on solid waste collection. The number of association organized to work on house to house solid waste collection are 37 with a total number of 428 members. The study has been conducted between December 15, 2012 and October 30, 2013.

4.2 Study Design

A Cross-sectional quantitative and qualitative mixed study design has been employed to answer the proposed objective of this study.

4.3 Source Population

All Lideta Sub City solid waste collectors those who were organized under 37 household solid waste collection associations.

4.4 Study Population

All Lideta sub city solid waste collectors who are found on the study period at their work place.

4.5 Inclusion criteria

All solid waste collectors willing to participate on the study and who can communicate in Amharic language has been included in the study.

I.e. Since the majority of workers are Amharic language users and there are multi ethnic population in Addis Ababa city translating the questioner in many languages couldn't be maintained

4.6 Exclusion criteria

Solid waste collectors whom can't communicate in Amharic language has been excluded from study.

4.7 Sample Size Calculation

The study sample size is determined by single population proportion formula. Since there are no studies on this area or in similar stapes, to calculate sample size for this study, the 50% proportion (50% of the respondents considered to be having good attitude and 50% of the respondents considered to be having practice of using safety materials) is used. Therefore, at 95% confidence level and 5% margin of error, the sample size is calculated below.

$$n = \frac{(z_{\alpha/2})^2 * p\,(1-p)}{d^2}$$

Whereas:-

n= sample size

p= 0.5 assumed proportion of good knowledge, attitude, and practice of waste collectors on occupational health risks. The proportion of 50% was considered for this study is in order to maximize the sample size.

$Z_{\alpha/2}$= 1.96 (Z=score corresponds to 95% confidence level)

d= 0.05(Margin of error)

The calculated sample size based on the above assumption is indicated in the following table. However, the proportion of 50% is considered for this study because of lack of data on knowledge and there are multiple data on attitude and practice 50 % is selected as average.

$$n = \frac{(1.96)^2 * 0.5 * 0.5}{(0.05)^2} = 384$$

Considering 10% non-response rate, the sample size will be;

n= 384 + (384 x 10%) = **423 respondents**

The sample size for 4th objective is calculated using double population proportion formula based on the following assumptions:

Proportion of PPE users among individuals having safety training is assumed to be 50%.

$$n = \frac{(Z_{\alpha/2}\sqrt{(1+1/r)p(1-p)} + z\beta\sqrt{p_1(1-p_1)+p_2(1-p_2)/r})^2}{(P_1+p_2)^2}$$

Where p_1= 50% (proportion of PPE users among individuals having safety training)

P_2= (proportion of PPE non-users among individuals having safety training)

Detecting OR = 2.00

P= (pooled proportion)

α = 0.05 (the probability of committing type one error =1.96

β = 20% (the probability of rejecting a true difference)

r= 1 (the proportion of n_1 to n_2 is 1 to 1

n= 296

N.B 50% for p is selected because of lack of data to take 50% as average

Since the single population proportion yields the maximum sample size the final sample size is 423 and all 428 solid waste collectors in Lideta sub-city are included.

4.8, Sampling procedure

Since the difference between the calculated sample size and number of solid waste collectors in Lideta sub-city is 2 all solid waste collectors in Lideta Sub City which are found in 10 Woredas were included in the sample which means 37 households waste collection association and their members i.e. 428were the study participants.

4.9 Data Collection Tools and Procedures

The data collection instrument (Structured questionnaire and checklist) was developed to measure the knowledge, attitude and practices of solid waste collectors and associated factors on occupational health risks. The questionnaire and checklist has been prepared in English and then translated to Amharic to collect data and finally the Amharic also translated back to English to insure consistency. Pretest was conducted in other Sub City for validation of questionnaire 15days prior to actual data collection. Training has been given to data collectors and supervisors prior to data collection for 1day.20 BSC holders have been assigned to collect data. 2 BSC Environmental health professionals were supervised the data collection.

4.9, Operational definition

Good knowledge = if the respondent give 2 and above 'yes' response for Q 205, 207, 209 & 211 and if the respondent can specify properly 2 or more of the questions from Q 206, 208 & 210. (Assuming to know and specify more than 50 % of the questions to have good knowledge).

Good attitude = if the research participant strongly agree or agree on 5 and above questions. I.e. Q 301 to 310.(Assuming agreement on at least on 50 % of the questions to have good attitude).

Good practice = according to the observational checklist, if the interviewer observe the research participant well dressed glove, facemask, boot & overall dressing on duty.

NB Assumption is made to answer more than 50% of the questions on knowledge part and more than 50% agreement on selected questions on attitude part as average.

4.10 Study Variables

4.10.1 Dependent variables

- Attitude of workers on occupational health risks
- Knowledge of waste collectors on health risks
- Occupational health practice of worker

Independent variables

- socio demographic characteristics such as age, sex, educational status, family size
- Working condition like daily working hours, work experience as a solid waste collector
- Occupational and safety factors such as health and safety training, supervision and availability of personal protective equipment (PPE)
- Behavioral factors such as drinking of alcohol, Khat chewing, smoking, job satisfaction

4.11 Data Management

Data was checked for completeness and any incomplete information has been excluded from the entry. Coded data was double entered into Epi info version 3.5.1 computer software package. After the entry of every questionnaire was completed, the soft copy of every questionnaire was checked with its hard copy to see for the consistency. After the cross checking, cleaning has been made to avoid missing values, outliers and other inconsistencies before analysis. Cleaned data was exported to SPSS version 16.0 software package for analysis using stat transfer software package.

4.12 Data Analysis

Descriptive statistics (frequencies, percentages etc.) of different variables was computed. Crude odds ratio with CI has been computed to see the presence of association between the selected independent variables at different categories and good practice on occupational health risks. Multivariate analysis has been made to observe the relative effect of independent variable on the dependent variable by controlling the effect of other variables.

4.13 Data Quality Control Methods

To maintain the quality of the data structured and pre-tested questionnaires and standardized questionnaire and checklist was used to collect information. One day training was given to all data collectors and supervisors on the data collection procedure, the content of the questionnaire and checklist and objective of the study. The collected information was frequently checked at the field by the supervisor. The overall coordination was made by the principal investigator. The questionnaire and checklist was checked for completeness every night at the time of data collection. Feedback on previous day activities was given for both data collectors and supervisors before the next day data collection.

4.14 Ethical Considerations

Ethical clearance was obtained from the Institutional Review Board of Addis Ababa University College of Health Sciences. Formal letter was written to Lideta Sub City cleansing management office and this official written letter has been distributed to all woredas. The principal investigator has communicated these organizations. The information sheet and consent has been provided for respondents to read for those who can read and the interviewer has been reading the paper for those respondents who can't read. Finally the respondents were asked the agreement to participant in the study. Confidentiality was maintained by omitting their names and personal identification and it will not be revealed to anyone except the principal investigator and assistants and it will be kept locked with key. Privacy was maintained by arranging quite place for interviewer and study participant to protect them exposing other parties. Study participants had the right to participate on the study or not and they would withdraw at any time of the study they wish. There was no benefit the study participants can get in terms of money or other item but they can get benefit in the future if there is a change of policy and strategies by considering this study. There was no risk to the study participants because of this study other than taking their time for interview not more than 40 minutes.

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4.15 Study Finding Dissemination

The result of this study will be submitted to Addis Ababa University college of Health Sciences and the copies will be handed to Lideta Sub City cleaning management office. The findings will also be disseminated through publishing on national and international journals and presentations on scientific conferences.

5.Results

Socio-demographic characteristics

Four hundred six solid waste handlers were participated in the study with 94.8% response rate. The majority of respondents were female which accounts 69.7% and the median age of respondents were 35 years with 17 and 65 years minimum and maximum ages respectively.

Table 1 Distribution of respondents by socio-demographic characteristics of Lideta subcity solid waste collectors, Addis Ababa.

Variables	Frequency (n=406)	Percent (%)
Sex		
Male	123	30.3
Female	283	69.7
Marital status		
Single	116	28.6
Married	170	41.9
Divorced	40	9.9
Separated	15	3.7
Widowed	65	16
Educational status		
Illiterate	151	37.2
Can read and write	68	16.7
Grade 1-4	81	20
Grade 5-8	96	23.6
Grade 9-12	10	2.5

Knowledge and training issues

Solid waste handlers were asked about training before engaging to this work and only 173 (42.6%) of respondents were trained before engaging to this work. Regarding to the trainer organization 19 (4.7%) were trained by their association, 119(29.3%) by government and the rest 35(8.6%) by different NGOs. Concerning on job training 190 of the respondents trained while they are working. Out of this 145(76.3%) of them were trained by government and the rest 45(23.7%) were trained by NGOs. 247(60.8%) of the respondents did know about work related health risks and also 256(63.1%) know how to prevent work related health risks and about the method of preventing from health related risks the majority of the respondents answered wearing glove, mask, apron, and boots while working as a means of preventing methods of occupational health risks. About 300(73.9%) of the waste handlers know about PPEs and the rest 106(26.1%) doesn't know about PPEs.

Generally about 257(63.3%) of solid waste handlers have good knowledge on preventing occupational health risks and about PPEs.

Table 2, Workers attitude on preventing occupational health risks among Lideta sub city solid waste collectors, May 2013, Addis Ababa.

Variables	Strongly agree frequency(%) n=406	Agree frequency (%) n=406	Not decided frequency (%) n=406	disagree frequency(%) n=406	Strongly disagree frequency (%) n=406
Wearing glove can reduce damage to your hand	95(23.4)	181(44.6)	110(27.1)	13(3.2)	7(1.7)
Wearing mask can reduce damage to respiratory organs	96(23.6)	174(42.9)	117(28.8)	16(3.9)	3(0.7)
Wearing rubber boots can reduce damage to feet	131(32.3)	163(40.1)	93(22.9)	19(4.7)	0
Wearing apron can reduce physical damage to body	138(34)	166(40.9)	84(20.7)	16(3.9)	2(0.5)
Washing hands after work can prevent diarrheal diseases	171(42.1)	135(33.3)	95(23.4)	5(1.2)	0
Eating while working leads to several diseases	174(42.9)	127(31.3)	91(22.4)	14(3.4)	0
Having shower after work reduce diarrheal diseases	167(41.1)	132(32.5)	100(24.6)	7(1.7)	0
Having shower after work help to refresh mind	164(40.4)	146(36)	90(22.2)	5(1.2)	1(0.2)
Working with clean cloth can prevent dermal diseases	154(37.9)	139(34.2)	103(25.4)	9(2.2)	1(0.2)
Changing cloth after work gives you aesthetical satisfaction	166(40.9)	133(32.8)	96(23.6)	9(2.2)	2(0.4)

Regarding overall attitude of waste handlers 75.9% had good attitude on preventing occupational health risks.

Availability and utilization of PPE

Results on PPE availability shows that 286(70.4%) of the respondents have PPE like glove, facemask, boots, and apron are the equipments used by the workers and only 15(3.7%) of waste collectors reported to have overall PPE. 228(55%) of waste handlers reported to use the materials while working. Among the non users of PPE 112(61.9%) were said they fail to use because they don't have PPEs, 12(6.6%) lack of awareness, 39(21.5%) because of discomfort, 3(1.7%) negligence, and 15(8.3%) to save time.

Regarding onsite supervision only 143(35.2%) were supervised by woreda solid waste management staffs and their union leaders.

Only 49(12.1%) solid waste handlers have tetanus toxoid vaccine after engaged to this work and the source of the vaccine was 47(95.8%) from government and 2(5%) by themselves. The remaining 357(87.9%) were not taking tetanus toxoid vaccine, 95(26.5%) not taking vaccine because of lack of awareness, 254(70.9%) no access to vaccine, and 9(2.5%) because of negligence.

Personal hygiene of workers

The study participants were interviewed on some of their personal hygiene issues. Accordingly, 355(82.5%) waste handlers were washing their hand with soap after work, 317(78.1%) change their working close after work, 146(36%) wash their working close after work daily, and 140(95.9%) use soap to wash close, 160(39.4%) take shower daily after work, 122(30%) share their working close and PPEs with their colleagues, 144(35.5%) of the respondents reported that they were eating on work place.

Waste handlers behavioral related issues

Respondents were asked for some of behaviors and problems like work place instability, cigarette smoking, kchat chewing, and sleeping problem. 118(29.1%) respondents fight with colleagues, managers and residents on the work site and also 17.6% face physical abuse, 81.5% verbal abuse, and 0.8% other forms. 62(15.3%)

were smokers out of this 36(58.1%) started to smoke after engaged to waste collection job. 70(17.3%) used to chew kchat and also 45(64.3) of them start chewing after engaged to this work. 93(23%) of study participants had sleeping problem out of this 84(88.4%) were started to face this problem after they engaged to this work. 188(46.3%) of respondents were dissatisfied with their job. Low income 70.5%, bad working condition and stigma 3.3%, lack of health insurance and improper payment 2.7% were the main reason for job dissatisfaction.

Observational findings

Among 406 solid waste handlers only 190(46.8%) of them were using gloves during survey 45(23.7%), 151(79.5%), 102(53.7%), and 110(57.9%) were new, water proof, perforated and well dressed respectively. Regarding facemask utilization from 68 masks, 29(43.9%), 35(53%), 47(71.2%), were new, perforated, and well dressed respectively. 72 solid waste handlers were used boots at the time of observation. Out of this 19(26.4%) were new and 39(53.4%) were well dressed their boots. 65(84%), 246(60.7%), and also 138(34%) of the research participants were using new, perforated, and well dressed overall clothing during the observation time.

Types and status of push carts and waste collection sacks

Types of push carts were observed whether it is made from wood or metal. The majority of push carts were made from metal which accounts 62.4% and the rest were made up of wood. One hundred seventy five of observed push carts were easily movable and the rest 82 were not movable (either due to their size or the types of the wheel they have). These push carts were also observed for the smoothness of its general body parts. So that, 72.7% of these push carts were not smooth.

Out of 334 observed waste collection sacks, 289 were old and 162 were perforated at the time of observation.

Table 3, Selected occupational health risk prevention determinants, Lideta sub city, n=406.

Characteristics	Have good occupational health practice		Crude OR (95% CI)	P-value
Knowledge of workers on	yes	no		
Occupational health risks				
Yes	32(7.9%)	215(53.0%)	8(2.42-26.61)	
No	3(0.7%)	156(38.4%)	1.00	0.02
Overall knowledge status				
Have good knowledge	32(7.9%)	225(55.4%)	8(2.42-26.61)	0.02
Don't have good knowledge	3(0.7%)	146(36.0%)	1.00	
Knowledge of workers about				
Preventing injury				
Yes	32(7.9%)	225(55.4%)	1.00	
No	3(0.7%)	146(36.0%)	0.15(0.42-0.46)	0.01
Supervising workers on				
Occupational safety				
Yes	15(3.7%)	128(31.5%)	1.00	
No	20(4.9%)	243(59.9%)	0.45(0.23-0.9)	0.024
Eating on work place				
Yes	4(1.0%)	140(34.5%)	6.7(2.03-22.49)	0.02
No	31(7.6%)	231(56.9%)	1.00	
Job satisfaction				
Yes	25(6.2%)	193(47.5%)	-1.199(0.13-0.68)	0.04
No	10(2.5%)	178(43.8%)	1.00	

Table 4: Summary of Multivariate analysis of the relative effect of Socio-demographic, knowledge, attitude and behavioral factors on having good occupational health practice among Lideta sub city solid waste handlers, May 2013, Addis Ababa.

Characteristics	Have good occupational health practice		AOR(95% CI)
Educational status	Yes	No	
Illiterate	11(2.7%)	140(34.5%)	1.00
Read and write	6(1.5%)	60(14.8%)	0.22(0.64 – 1.16)
Grade 1-4	5(1.2%)	75(18.5%)	0.17(0.03 -0.9)
Grade 5-8	7(1.7%)	89(21.9%)	0.1(0.02 – 0.55)
Grade 9-12	6(1.5%)	4(1%)	11.12(1.81-68.2) *
Supervising workers on occupational Health matters			
Yes	15(3.7%)	124(31.5%)	0.51(0.23-1.14)
No	20(47.2%)	243(59.9%)	1.00
Job satisfaction			
Yes	25(6.2%)	193(47.5%)	4.13(1.65-10.37) *
No	10(2.5%)	178(43.8%)	1.00
Overall knowledge status of workers			
Good	32(7.9%)	225(55.4%)	0.25(0.07-0.89)
Not good	3(0.7%)	146(36.0%)	1.00
Eating on work place			
Yes	4(1.0%)	140(34.5%)	0.3 (0.07-0.15)
No	31(7.6%)	231(56.9%)	

* = significant $p< 0.05$

6.Discussion

The response rate of this study is 94.8% which was comparable with previous studies like 97.9% (6), 92% (20) and 95% (9). Number of female solid waste collectors was higher as compared with some other studies those either with no or small number of female workers in this sector(11, 20, 21) . The main reason for large number females in this study might be due to the sectors' being an emerging and leveled as one of small scale enterprises in the country and females are actively involved in this sector. Monthly income of waste collectors in this study is higher than previous study 150 birr (22) and 400 birr(6). This might be due to increasing government concern to this sector.

The proportion of trained waste collectors before engaging to this line of work was 42.6% which is greater than other studies done in Addis Ababa 6%(22) and 20.8%(6). This might be due to availability of stack holders' involvement like involvement of micro and small scale development office, different non government organizations and solid waste management office.

Regarding to supervising solid waste handlers on occupational health and safety matters which is not significantly associated with occupational health risk preventing practice in this study and proper usage of PPE by solid waste handlers it was higher than other studies done in Addis Ababa 0% (22). Even if the prevalence of this study is low by itself the result for being better than previous studies might be due to increasing concern of different stakeholders' involvement from time to time.

35.5% of solid waste collectors participated in this study were eating at work place which is comparable other study done in Addis Ababa 33.7% (22). Participants of this study hand washing habit with soap after waste collection is higher 78.1% compared to other study which is only 27.7% (22) which might be due to good knowledge of preventing occupational health risks.

Wearing glove among Lideta sub city solid waste handlers was higher than previous studies done in Addis Ababa 39%(6) and 37.6%(22). This might be due to involvement of different non government organizations on supplying PPEs for waste handlers. Even if the quality of the gloves is not the right item and most of the gloves were old, perforated and not using appropriately.

Conflicting at work place, chat chewing, alcohol consumption, and smoking were the main psycho-social problems identified among solid waste collectors. Most employees admitted to starting those habits after joining waste collection job. This might be due to job dissatisfaction occurred by stigma and discrimination from family members and neighbors because of their waste collection job, due to the tiring nature of work, increased availability of these substances and influence of other workers. However, only job satisfaction and educational status were statistically significant factor related with safe occupational health practice.

7. Strengths and Limitations of the study

7.1. Strengths of the study

- Using observational checklist for the status and utilization of PPE and the nature of waste collection sacks and push carts directly while on use.
- Addressing all solid waste collectors in the study area.
- This sector is an emerging enterprise that involves large number of people with various socio-demographic characteristics. Therefore, this study is an operational study which will be helpful for policy and decision makers to prevent occupational health risks.

7.2. Limitations of the study

- The data was collected on self-report of study participants and may be subjected to recall bias.
- Since the number of solid waste handlers whose educational status in high school is to low the 95% CI is very wide for the AOR and this may affect the significance

8. Conclusion and Recommendation

8.1. Conclusion

- The result of this study revealed that the magnitude of practice on preventing occupational health risks among solid waste collectors is very low.
- This study found that job dissatisfaction is a significant factor which leads to fail on practicing of preventing occupational health risks.

8.2. Recommendation

- Lideta sub-city solid waste management office should provide occupational health and safety training, support and supervise woreda solid waste management offices on occupational health and safety.
- Woreda solid waste management offices should supervise solid waste collectors on preventing occupational health risks and should provide personal protective equipments and trainings on preventing occupational health risks.
- Researchers should design studies on knowledge, attitude and practice on preventing occupational health risks among solid waste collectors in the whole Addis Ababa city.
- Policy makers should enforce training occupational health and safety before engaging to waste collection job for every waste collector.

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Annex – 1: Participant's Information Sheet

Title of the Research Project

Assessment of knowledge, attitude and practice on occupational health risks and associated factors among solid waste collectors in Lideta sub-city, Addis Ababa.

Name of Principal Investigator: Fikrom G/medhin

Name of the Organization: Addis Ababa University, College of Health Sciences, School of Public Health.

Name of the Sponsor: Addis Ababa University

Information sheet and Consent form prepared for solid waste collectors who are going to participate in this Research.

Introduction

This information sheet and consent form is prepared with the aim of explaining the research project that you are asked to join by the group of research investigators. The main aim of the research project is to assess attitude practice on occupational health risks and associated factors among solid waste collectors in lideta sub-city.

Risk and /or Discomfort

By participating in this research project you may feel that it has some discomfort especially on wasting your time (a minimum of 40 minutes) but this may not be too much as you are one of the member of the community, so your response will help as an important input to show the gap and means to improve occupational health and safety. There is no risk in participating in this research project.

Incentives/Payments for Participating

You will not be provided any incentives or payment to take part in this project.

Confidentiality

The information collected for this research project will kept confidential and information about you that will be collected by this study will be stored in a file, without your name, but a code number assigned to you. And it will not be revealed to anyone except the principal investigator and assistants will be kept locked with key.

Right to Refusal or Withdraw

You have the full right to refuse from participating in this research. (You can choose not to response some or all the questions) and this will not affect you from getting any service. You have also the full right to withdraw from this study at any time you wish, without losing any of your right.

Person to contact

This research project will be reviewed and approved by the ethical committee of the Addis Ababa University. If you want to know more information you can contact the committee through the address below. If you have any question you can contact any of the following individuals and you may ask at any time you want.

1. Fikrom G/medhin.

Mobile: 0912 041450 / e-mail: fikromgm@yahoo.com.com

2. Dr. Abera Kumie, (MD,MSc,Phd): Addis Ababa University
   e-mail; aberakumie2@yahoo.com

<u>የመረጃና የስምምነት ውል ቅፅ</u>

<u>የምርምሩ/የጥናቱ ርዕስ</u>

በልደ ክ/ከተማ የሚገኙ የደረቅ ቆሻሻ በመሰብሰብ ስራ ላይ የተሰማሩ ሰራተኞች ስለ ስራ ላይ ጤንነት ና ደህንነት ያላቸውን አመለካከት. ተግባርና ተያያዥ ጉዳዮች ምን ይመስላል የሚለውን ርዕሰ ጉዳይ ለማወቅ ነው፡፡

የዋና ተመራማሪው ስም ፡ፍቅሮም ገ/መድህን

የድርጅቱ ስም: በአዲስ አበባ ዩኒቨርሲቲ ጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባበቅ ት/ቤት

ወጪውን የሚሸፍነው፡ አዲስ አበባ ዩኒቨርሲቲ ጤና ሳይንስ ኮሌጅ የህብረተሰብ ጤና አጠባበቅ ት/ቤት

በልደ ክ/ከተማ ውስጥ ለሚገኙ ደረቅ ቆሻሻ በመሰብሰብ ስራ ላይ ለተሰማሩ ሰራተኞች ስለ ስራ ላይ ጤንነት ና ደህንነት አመለንከት ና ተግባር ና ተያያዥ ጉዳዮችየተዘጋጀ የመረጃ ቅፅ፡፡

<u>መግቢያ</u>

ይህ የመረጃና የስምምነት ውል ቅፅ የተዘጋጀው እርስዎ ተሳታፊ እንዲሆኑ ስለተጋበዙበት በምርምር ቡድኑ የሚካሄደውን ጥናት በተመለከተ መግለጫ ለመስጠት ነው፡፡ የምርምር ፕሮጀክት ዋና ዓላማየደረቅ ቆሻሻ በመሰብሰብ ስራ ላይ የተሰማሩ ሰራተኞች ስለ ስራ ላይ ጤንነት ና ደህንነት ያላቸውን አመለንከት. ተግባርና ተያያዥ ጉዳዮች ለማጥናት ነው፡፡

<u>ሊገጥም የሚችል ችግርና/ወይም አለመመቻቸት</u>

በዚህ ጥናት ላይ እርስዎ ተሳታፊ በመሆኖ አንዳንድ አለመመቸት ይኖራል ብለዉ ሊያስቡ ይችላሉ በተለይም ደግሞ ጊዜዎን በመሻማታችን (40 ደቂቃ በትንሹ) ነገር ግን እርስዎ እንደሚያስቡት በጣም ብዙ ጊዜ አንሻማዎትም እንዲሁም ደግሞ ርስዎ የሚሰጡን መልስ ችግሩን ለመለየት እና እንዴት መቅረፍ እንዳለብን እንደ ጠቃሚ ግብዐት ያገለግለናል፡፡ በዚህ ጥናት ላይ መሳተፍምንም አይነት ጉዳት አይደርስም፡፡

ጥቅሞች

እርስዎ በዚህ ጥናት ተሳታፊ በመሆኖ በቀጥታ ሊያገኙ የሚችሉት ጥቅም ላይኖር ይችላል ነገር ግን የእርስዎ በዚህ ጥናት መሳተፍ የደረቅ ቆሻሻ በመሰብሰብ ስራ ላይ ለተሰማሩ ሰራተኞች የስራ ላይ ጤንነት ና ደህንነት ለማሻሻል ይጠቅማል፡፡

ለመሳተፍ ጥቅማጥቅሞች

እርስዎ በዚህ ጥናት ተሳታፊ በመሆኖ ምንም ዓይነት ማበረታቻ ወይም ክፍያ አይሰጥዎትም፡፡

ምስጢራዊነት

ለዚህ የጥናት ፕሮጀክት የሚሰበሰብ ማንኛውም አይነት መረጃ በምስጢራዊነት የሚጠበቅ ሲሆን እርስዎን በተመለከተ የሚሰበሰበው መረጃ የእርስዎ ስም ሳይፃፍበት ነገር ግን ምስጢራዊ ቁጥር ተሰጥቶት በፋይል ውስጥ የሚቀመጥ ይሆናል፡፡ እንዲሁም መረጃው ከጥናቱ ዋና }S^T] እና ረዳቶቹ በስተቀር ለሌላ ለማንኛውም አይነት ሰው ግልፅ አይሆንም፡፡

ከጥናቱ ያለመሳተፍ ወይም የማቋረጥ መብት

በዚህ ጥና ƒ ያለመሳተፍ ሙሉ በሙሉ የተጠበቀ መብት አለዎት፡፡ (ለጥያቄዎቹ በሙሉም ሆነ በከፊል መልስ አለመስጠት መምረጥ ይችላሉ) ይህ ደግሞ ማንኛውም የጤና አገልግሎት ከማግኘት የሚያግድዎት አይሆንም፡፡ እንÇ=ሁም በማንኛውም በፈለጉት ሰዓት ማንኛውንም መብትዎን ሳያጡ የማቋረጥ ሙሉ መብት አለዎት፡፡

ሊገናኙዋቸው የሚችሉ ሰዎች

ይህ የምርምር ፕሮጀክት በአዲስ አበባ ዩኒቨርሲቲ የስነ ምግባር ኮሚቴ ተከልሶ የሚፀድቅ ይሆናል፡፡ የበለጠ መረጃ ማግኘት የሚፈልጉ ከሆነ ኮሚቴውን በሚከተለው አድራሻ ማግኘት ይችላሉ፡፡ የትኛውም ዓይነት ጥያቄ c=ኖርዎት ከዚህ ቀጥሎ የተጠቀሱትን ግለሰቦች ማግኘትና በማንኛውም ጊዜ መጠይቅ ይችላሉ፡፡

1. **ፍቅሮም ገ/መድህን ፡**

   የሞባይል ስልክ ቁጥር፡- 0912041450/ e-mail: fikromgm@yahoo.com

2. **ዶ/ር አበራ ቁሜ ፡- አዲስ አበባ ዩኒቨርሲቲ**

E-mail: aberakumie2@yahoo.com

Annex - 2: Consent Form

Hello! My name is ……..I am here on behalf of Fikrom G/medhin, student of the School of Public Health in the Addis Ababa University . He is conducting a research for the partial fulfillment of second degree on “Assessment of attitude and practice on occupational health risks and associated factors among solid waste collectors in Lideta sub-city, Addis Ababa”. He has received permission from school of public health at Addis AbabaUniversity, to conduct this study. The objective of this study isto assess attitude and practice on occupational risks and associated factors among solid waste collectors in Lideta sub-city, A.A.You are selected for this study because you are working as a solid waste collector and with the hope that you will cooperate with us. We are kindly requesting you to answer the questions that we have prepared for you. We assure all information gathered during the course of the study will be kept completely confidential. All the information that you are going to deliver to us will be coded for anonymity. Only the principal investigator and the research assistants collecting the data will have access to the data.

Would you be to participate? Yes …….1 No …….2

Having been well explained and informed of the intentions and benefits of the study, I voluntarily consent to participate in the study.

Respondent

Sign. Date

_____ _____

Interviewer name Sign. Date

_____ _____ _____

<u>የሰምምነት ውል ቅፅ</u>

ጤና ይስጥልኝ ስሜ _____ ይባላል፡፡ የመጣሁትበአዲስ አበባዩኒቨርስቲየህብረተሰብ ጤናአጠባበቅትምህርት ቤት ተማሪ የሆኑት አቶፍቅሮም ገ/መድህንንወክዬነው፡፡ዕርሳቸው በልደ ክ/ከተማ የሚገኙ የደረቅ ቆሻሻ በመሰብብ ስራ ላይ የተሰማሩ ሰራተኞች ስለ ስራ ላይ ጤንነት ና ደህንነት ያላቸውን እውቀት አመለከከት. ተግባርና ተያያዥ ጉዳዮችላይ ጥናት/ምርምርአያካሄዱ ይገኛሉ፡፡ ለዚህ ምርምር የሚሆን ፈቃድከአዲስ አበባዩኒቨርስቲየህብረተሰብ ጤናአጠባበቅትምህርት ቤትአግኝተዋል፡፡

የምርምሩ/ጥናቱ ዋና አላማበልደ ክ/ከተማ የሚገኙ የደረቅ ቆሻሻ በመሰብብ ስራ ላይ የተሰማሩ ሰራተኞች ስለ ስራ ላይ ጤንነት ና ደህንነት ያላቸውን አመለከከት. ተግባርና ተያያዥ ጉዳዮችምን ይመስላል የሚለውን ርዕሰ ጉዳይ ለማወቅ ነው፡፡ አርሶዎ ለዚህ ጥናት የተመረጡት ደረቅ ቆሻሻ በመሰብሰብ ስራ ላይ ስለተሰማሩ ና በጥናቱ ላይ ይተባበሩናል ብለን ስላመንን ነው፡፡ አኛ ለዚህ ጥናት የሚሆን ጥያቄዎች አዘጋጅተናል፣ለምናነሳቸው ጥያቄዎች መልስ በመስጠት ይተባበሩን ዘንድ በአክብሮት አንጠይቃለን፡፡

በዚህ ጥናት ሂደት ውስጥ የሚሰበሰበው ማንኛውም ዓይነት መረጃ ሙሉ በሙሉ በምስጢር የሚጠበቅ መሆኑን ልናረጋገግጥልዎ አንወዳለን፡፡አንዲሁም የሰበሰብነውመረጃ ሌላ ሰው ሊያውቀው በማይችል መንገድ በምስጢራዊ ቁጥር የተቀመጠ/የተመዘገበ ይሆናል፡፡ ከዋናውተመራማሪ አና ከጥናቱ ረዳቶች በስተቀር ሌላ ማንኛውም ሰው ሊያገኘው መረጃ ፈቃድ አይኖረውም፡፡

በዚህ ጥናት አርሶ ለመሳተፍ ፈቃደኛ ነዎት?

አዎ - - - - - - - - - -1 አይደለሁም- - - - - - - - - - - - -2

የጥናቱ ዓላማና ጥቅም በደንብ ተገንዝቤና አውቄ በዚህ ጥናት ለመሳተፍ በፍቃደኝነት ተስማምቻለሁ፡፡

ተሳተፊ: ፊርማ ቀን

_____ _____

ቃለ መጠይቅ አቅራቢ ፊርማ ቀን

_____ _____ _____

English version Questionnaire:

Addis Ababa University College of Health sciences School of Public Health questionnaire for assessment of knowledge, attitude practice and associated factors on occupational health among solid waste collectors in Lideta sub-city,2013.

Name of Enterprise/association:

Address: Woreda----------

Part 1 Socio-demographic information

S.no	Question	Possible response	Skip
101	Age	----------Years	
102	Sex	1.Male 2.Female	
103	Educational status	1.Illitrate 2.Can read write 3.Grade 1-4 4.Grade 5-8 5.Grade 9-12 6.Above 12	
104	Marital status	1.Single 2.Married 3.Divorced 4.Separsted 5.Widowed	
105	Work experience as waste collector	----------year(s)	
106	Working days per week	----------day(s)	
107	Working hours per day	----------hours	
108	Number of family members	----------	
109	Monthly income	----------birr	

2 Questions on solid waste collectors knowledge

s.no	Question	Possible response	skip
201	Have you had training on any type of occupational safety issues when you were first engaged in this work?	1.yes 2.no	
202	If the answer is yes for question no 201; who trained you?	1.our union 2,government 3.NGO 4.other(specify)	
203	Have you ever had on job training on any type of occupational safety issues?	1.yes 2.no	
204	If the answer is yes for question no 203; who trained you?	1.our union 2.government 3.NGO 4,other(specify)	
205	Do you know health risks related to your work?	1,.yes 2. no	
206	If the answer is yes for question no 206; specify		
207	Do you know how to prevent your self from work related risks?	1.yes 2.no	
208	If the answer is yes for question no 207; specify	1 2.	
209	Do you know about PPE?	1.yes 2.no	
210	If the answer is yes for question no 209; mention some of them	1.gloves 2. boots 3. facemask 4. aprons More than one answer is possible	
211	Do you know how to use PPEs?	1.yes 2.no	

Part 3 Questions on attitude

S. no	Questions	Possible answers	Skip
301	Wearing glove can reduce damage to your hand	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
302	Wearing mask can reduce damage to respiratory organs	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
303	Wearing rubber boots can reduce physical damage to feet	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
304	Wearing apron can reduce physical damage to your body	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
305	Washing hands after work can prevent diarrheal diseases	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
306	Eating while you are on work can lead you several diseases	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
307	Having shower after work can reduce dermal diseases	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
308	Having shower after work can help you to refresh your mind	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	
309	Working with clean cloth can prevent dermal diseases	1.strongly agree 2.agree 3.not decided 4.disagree	

		5.strongly disagree	
310	Changing cloth after work can give you aesthetically satisfied	1.strongly agree 2.agree 3.not decided 4.disagree 5.strongly disagree	

Part 4 Availability & Utilization of PPE

S.no	Question	Possible answer	skip
401	Do you have PPE?	1.yes 2.no	
402	If yes to question no 401 what kind of PPE do you use?	1.Glove 2.Face mask 3.Boot 4.Apron 5.Overall 6.other(specify	
403	Do you use PPE while you are on duty?	1.yes 2.no	
404	If the answer is yes for question no 403; which kind do you use? (more than 1 answer is possible)	1.Glove 2.Boot 3.Apron 4.Overall 5.Facemask 6. Other (specify)	
405	If the answer is no for question no 403; why don't you use?	1. I don't have 2.Lack of awareness 3.To save time 4.b/c of discomfort 5.other (specify)	
406	If the answer is yes for question no 401;from where do you get PPE?	1.It is supplied by gov't 2.It is supplied by NGO 3.It is supplied by our union 4.From other source (specify the source)	
407	Is there any one going to supervise you at work place on occupational safety matters?	1.yes 2.no	
408	If the answer is yes for question no 407; who trained you?	1.our union 2.government 3.NGO 4.other(specify)	
409	Have you had vaccination for tetanus after you engaged in this work?	1.yes 2.no	
410	If the answer is yes for question no 409;	1.our union	

	from where do you get the vaccine?	2.government 3.NGO 4.other(specify)	
411	If the answer is no for question no 409; why don't you take vaccine?	1.Lack of awareness 2.No access for the vaccination 3.Negligence	

Part 5 Personal hygiene of solid waste collectors

S. no	Questions	Possible answers	skip
501	Do you wash your hands always with soap after work?	1.yes 2.no	
502	Do you change your working cloth immediately after working?	1.yes 2.no	
503	Do you wash your working cloth every day after work?	1.yes 2.no	
504	If yes for question no 503; do you use soap while you wash your working cloth?	1.yes 2.no	
505	Do you take shower always after work?	1.yes 2.no	
506	Do you share your working cloth or any protective clothing with your colleagues?	1.yes 2.no	
507	Do you eat food on work place	1.yes 2.no	

Part 6 psycho-social related issues of solid waste collectors regarding to their work

S. no	Questions	Possible answers	Skip
601	Have you faced any work related instability like work place violence and disagreement in the past 12 months?	1.yes 2.no	
602	If the answer is yes for question no 601; with whom it was?	1.with manager 2.with residents 3.with colleagues 4.other(specify)	
603	If the answer is no.602 for question no601, what kind of violence it was?	1.Physical abuse 2.verbal abuse 3.other(specify)	
604	Do you smoke cigarette?	1.yes 2.no	
605	If the answer is yes for question no604, when do you began to smoke?	1.before I engaged to this work 2. after I engaged to this work	
606	Do you drink alcohol?	1.yes 2.no	
607	If the answer is yes for question no606, when do you began to drink?	1.before I engaged to this work 2. after I engaged to this work	
608	Do you chew khat?	1.yes 2.no	
609	If the answer is yes for question no608, when do you began to chew khat?	1.before I engaged to this work 2. after I engaged to this work	
610	Do you have any kind of sleeping problem?	1.yes 2.no	
611	If the answer is yes for question no. 610, when do you develop this problem?	1.before I engaged to this work 2. after I engaged to this work	
612	Are you satisfied with this work?	1.yes 2.no	
613	If the answer is no for question no.612, why?	_____	

Observational checklist

1. Personal protective equipment related questions

1. Glove

1.1.new a. yes b. no

1.2. waterproof/rubber a.Yes b. no

1.3. perforated a.yes b. no

1.4. well dressed a. yes b. no

2. Facemask

2.1.new a. yes b. no

2.2.perforated a. yes b. no

2.3.well dressed a. yes b. no

3. Shoe cover/boot

3.1.new a. yes b. no

3.2.perforated a. yes b. no

3.3.well dressed a. yes b. no

4. Overall clothing

4.1.new a. yes b. no

4.2.perforated a. yes b. no

4.3.well dressed a. yes b. no

5. Did he/she eat food on work place a. yes b.no

2. Working material condition related observation

1. Trolley/push cart a.wood b. metal

a.easily movable b. not easily movable

a. smooth b. rough/not smooth

2. Waste collection sack a. new b. old

a. perforated b. not perforated

a. easily lift able b. no

የአማርኛ ትርጉም መጠይቅ

ይህ መጠይቅ በአዲስ አበባ ከተማ አስተዳደር ልደታ ክፍለ ከተማ ውስጥ ደረቅ ቆሻሻ በመሰብሰብ ስራ ላይ የተሰማሩ ሰራተኞች ከሙያ ደህንነት እና ጤንነት ላይ ያላቸውን እውቀት፤ አመለካከት፤ ተግባር እና ተያያዥ ጉዳዮች ለማጥናት የተዘጋጀ ነው፡፡

የመጠይቁ መለያ ቁጥር፡

የማህበሩ ስም፡

አድራሻ፡

ወረዳ፡

ክፍል 1፡ ማህበራዊ እና ስነ-ህዝባዊ ገጽታዎችን በተመለከተ

ተ.ቁ	ጥያቄዎች	የሚጠበቅ መልስ	ዝለል
101	እድሜ	----------ዓመት	
102	ፆታ	1 ወንድ 2 ሴት	
103	የትምህርት ደረጃ	1 ያልተማረ/ች 2 ማንበብና መጻፍ 3 1-4 ክፍል 4 5-8 ክፍል 4 9-12 ክፍል 6 ከ12ኛ ክፍል በላይ	
104	የጋብቻ ሁኔታ	1 ያላገባ/ች 2 ያገባ/ች 3 የፈታ/ች 4 የተለያየ/ች 5 የሞተበት/ባት	
105	በዘህ ስራ ላይ ቆይታ	---------- ዓመት	
106	በሳምንት የሚሰሩባችዉ ቀናት ብዘት	---------- ቀን	
107	በቀን ዉስጥ በሰራ የሚያሳልፉበት ሰዓት ብዛት	---------- ሰዓት	
108	የቤተሰብዎት ብዛት	----------	
109	የወር ገቢዎት ስንት ነዉ	----------ብር	

ክፍል 2 በስራ ደህንነት እና ጤነነት ላይ እውቀት ለመለካት የተዘጋጀ መጠይቅ

ተ.ቁ	መጠይቅ	አማረጮች	ዝለል
201	በዚህ ስራ ላይ ሲሰማሩ ስለ ስራ ላይ ደህንነት እና ጤንነት ስልጠና ወስደዋል?	1.አዎ 2.አልወሰድኩም	
202	ለጥያቄ ቁጥር 201 መልስዎ እዎ ከሆነ ማን አሰለጠኖት?	1.ማህበራችን 2.መንግስት 3.የእርዳታ ድረጅት 4.ሌላ ካለ ይግለፅ	
203	በሰራ ላይ እያለ የስራ ደህንንት ፣ጤንነት እና መከላከል ልይ ሰለጠና ወሰደዋል	1.አዎ 2.አለሰለጠንኩም	
204	ለጥያቄ ቁጥር 203 መልስዎ እዎ ከሆነ ማን አሰለጠኖት?	1.ማህበራችን 2.መንግስት 3.የእርዳታ ድረጅት 4.ሌላ ካለ ይግለፅ	
205	ከስራዎ ጋር በተያያዘ ሊያጋጥምዎት ስለሚችል የጤና ችግር ያውቃለ	1.አዎ 2.አላውቅም	
206			
207	ራስዎን ከስራ ጋር በተያያዘ ከሚያጋጥሙ የጤናችግሮች እንዴት መከላከል እንዳለብዎ ያውቃለ	1.አዎ 2.አላውቅም	
208	ለጥያቄ ቁጥር 207 መልስዎ አዎ ከሆነ ራስዎን እንዴት እንደሚከላከለ ቢገልጹልን		
209	ስለ የአደጋ መከላከያ የግል መሳሪያዎች ያውቃለ	1.አዎ 2.አላውቅም	
210	ለጥያቄ ቁጥር 209 መልስዎ አዎ ከሆነ የተወሰኑትን ይጥቀሡ		
211	ራስን ከአደጋ መከላከያ መሳሪያዎች አጠቃቀም ያውቃለ	1.አዎ 2.አላውቅም	

ክፍል 2 በስራ ደህንነት እና ጤነነት ላይ የአመለካከት መጠይቅ

ተ.ቁ	መጠይቅ	አማረጮች	ዝለል
201	የእጀ ገንት ማድረግ በእጅ ላይ የሚደርስ አደጋን ይከላከላል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
202	የፊት እና የእፋ መሸፋኛ በሰራ ላይ መጠቀም ከመትንፈሽ አካላት በሽታ ይከላከላል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
203	ረጅም ጫማ ወይም ቦቲ መጠቀም እግር ላይ የሚደርሰ ጉዳትን ይቀንሳል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
204	ቱታ በሰራ ወቅት መጠቀም ሰዉነት ከባአድ ነገሮች ጋር እንደይገናኝ ያደርጋል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
205	ከስራ በኃላ እጅን በሳሙና መታጠብ ከተቅማና እና ሌሎች ተላላፊ በሽታዎች ይከላከላል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
206	በስራ ላይ ሆነዉ ምግብ መመገብ ለተቅማና እና ሌሎች ተላላፊ በሽታዎች የደረጋል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
207	ከስራ በኃለ ገላን መታጠብ የቆዳ በሽታን ለመከላከል ይረዳል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም	

		4. አልስማማም 5. በጣም አልስማማም	
208	ከሰራ በኃላ ገላን መተጠብ ንፁህና ደስተኛ ለመሆን የረዳል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
209	በንፁህ ልብሰ ስራ መሰራት ለጤና እና ለአምሮ ሰላም አሰተዋፀ አለው	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	
210	በስራ ልብስ ወደ ቀኑን ሙሉ መዋል የጤና ችግር ያመጣል	1.በጣም አሰማማለሁ 2. አሰማማለሁ 3.አርግጥኛ አይደለሁም 4. አልስማማም 5. በጣም አልስማማም	

ክፍል 3 ራስን የመከለከያ መሳርየዎች አቅርቦትና አጠቃቀም

ተ.ቁ	መጠይቅ	አማረጮች	ዝለል
301	በሰረ ላይ አደጋ መከላከያ መሳርያ አለዎት ወይ?	1.አዎ 2.የለኝም	
302	ለጥያቄ ቁ.301 መልስዎ አዎ ከሆነ ምን አይነት(ከአንድ በላይ መልስ ይቻላል)	1.ጉንት 2.የፊት መሸፈኛ 3.ቦቲ ጫማ 4.የሰራ ቱታ 5.ሁሉም ዓይነት 6.ሌላ ካለ ይጠቀሱ----------	
303	ስራ በሚሰሩበት ጊዜ እነዚህን መሳረያዎች የጠቀማለ?	1.አዎ 2.የለም	
304	ለጥያቄ ቁ.303 መልስዎ አዎ ከሆነ ምን አይነት(ከአንድ በላይ መልስ የቻላል)	1.ጉንት 2.የፊት መሸፈኛ 3.ቦቲ ጫማ 4.የሰራ ቱታ 5.ሁሉም ዓይነት 6.ሌላ ካለ ይጠቀሱ----	

305	ለጥያቄ ቁ 303 መልሰዎ አልጠቀምም ከሆነ ምክንያትዎ ምንድን ነዉ	1.መሳሪዎች ሰለሌሉኝ 2.ለስራ ቅልጠፋና ሰለማይመች 3.ምቾት ስለማይሰጥ 4.በግዴለሽነት 5.ሌላ ካለ ይጥቅሱ----------	
306	መከላከያ መሳርያዉን ከየት ነዉ የሚገኙት (ከአንድ በላይ መልስ መስጠት ይችላሉ)	1.መንግሰት ይሰጠኛል 2.የእርዳታ ድረጀቶች ይሰጡኛል 3.ማህበረችን ይሰጠናለ 4.ራሴ ገዝቼ ነዉ የምጠቀመዉ 5.ከሌላ ምንጨ	
307	በዚህ ስራ ላይ ሲሰማሩ ስለ ስራ ላይ ደህንነት እና ጤንነት ስልጠና ወስደዋል?	1.አዎ 2.አልወሰድኩም	
308	ለጥያቄ ቁጥር 307 መልስዎ እዎ ከሆነ ማን አሰለጠኖት?	1.ማህበራችን 2.መንግስት 3.የእርዳታ ድረጅት 4.ሌላ ካለ ይግለፅ	
309	በሰራ ላይ እያለ የስራ ደህንነት ፣ጤንነት እና መከላከል ልይ ሰለጠና ወሰደዋል	1.አዎ 2.አለሰለጠንኩም	
310	ለጥየቄ ቁጥር መልሰዉ እዎ ከሆን ማን አሰለጠንኖት	1.ማህበራችን 2.መንግሰት 3.የእርዳታ ድርጅት 4.ሌላ ካለ ይገለፀ	
311	በዚህ ስራ ላይ ከተሰማሩ በኃላ የመንጋጋ ቆልፍ ክትባት ተከትበዋል?	1.አዎ 2. አልተከተብኩም	
312	ለጥያቄ ቁጥር 311 መልሰዎ አዎ ከሆነ ክትባቱን ከየት አገኙት/ከእንድ በላይ መልስ መሰጠት/ ይቻላል	1.ከማህበረችን 2. ከመንግሰት 3.ከእርደታ ድረጅት 4.በግሌ 5.ሌላ ካላ ይገልፅሁ	
313	ለጥያቄ ቁጥር 311 መልሰዎ አልተከተብኩም ከሆን ለምን?	1.ስለ ጥቅሙ ስለማልወቅ 2.ክትባቱን የሚያቀርብ ስለ ሌለ 3.በግዴለሽነት	

<u>የሰራተኞች የግል ንጽህና የተመለከተ መጠይቅ</u>

ተ.ቁ	መጠይቅ	አማረጮች	ዝለል
401	ከሰራ በኃለ ሁልጊዜ እጅዎን በዉሃ እና በሳሙና ይታጠባለ?	1.አዎ 2.የለም	
402	**የስራ** ልብስዎን ከስራ በኃላ ወዲያውኑ ይቀይራለ ?	1.አዎ 2.የለም	
403	የሰራ ልብሶን በየቀኑ ያጥባለ	1.አዎ 2.የለም	
404	ለጥያቄ ቁጥር 403 መልስዎ አዎ ከሆነ ሳሙና ይጠቀማለ	1.አዎ 2.የለም	
405	ከስራ በኃላ ሁልጊዜ ገላዎን ይታጠባለ?	1.አዎ 2.የለም	
406	የሰራ ልብሰዎን ወይም የአደጋ መከላከያ መሳረያዎን ከሰራ ባልደረባዎት ጋር በጋራ ይጠቀማለ	1.አዎ 2.የለም	
407	በስራ ላይ ሆነው ስራ እየሰሩ ባለበት ጊዜ ምግብ ይመገባለ?	1.አዎ 2.የለም	

የሰራተኞችየስራላይባህሪየተመለከተመጠይቅ

ተ.ቁ	ጥያቄዎች	አማረጮች	ዝለል
601	ባለፉት 12 ወራት በሰራ ቦታ ላይ ዘለፋ አለመሰማማት ግጭት ገጠሞዎት ያውቃል?	1.አዎ 2.የለም	
602	ለጥያቄ ቁ.601 መልስዎ አዎ ከሆነ የተጋጨት ከማን ጋር ነበር ?	1.ከሰራ ሀለፊ 2.ከነወረዎች 3.ከሰራ ባልደረባ ጋር 4. ሌላ ካለ ይግለፁ	
603	ለጥያቄ ቁጥር 601 መልስዎ እዎ ከሆነ ምን እይነት ግጭት አጋጠሞት	1.ድብደባ 2.ስድብ እና ዛቻ 3.ሌላ ካለ ይግለፁ	
604	ሲጋራ ያጨሳሉ	1.አዎ 2.የለም	
605	ጥያቄ ቁጥር 604 መልሰዎ እዎ ከሆነ፣ማጫሰ መቼ ጀመሩ?	1.ወደ ዚህ ስራ ከመሰማረቴ በፊት 2.ወደዚህ ስራ ከተሰማረሁ በኃላ	
606	የአልኮል መጠጥ እንደ እረቂ፣ጠለ፣ጠጀ፣ቢራ የመሳሰሉትን ይጠጣሉ	1.አዎ 2.የለም	
607	ለጥያቄ ቁጥር 606 መልሰዎ እዎ ከሆነ መቼ መጠጣት ጀመሩ?	1ወደዚህ ስራ ከመግባቴ በፊት 2.ወደዚህ ስራ ከገባሁ በኃላ	
608	ጫት ይቅማሉ	1.አዎ 2.የለም	
609	ለጥያቄ ቁጥር 608 መልሰዎ አዎ ከሆነ ጫት መቃም መቼ ጀመሩ	1.ወደዚህ ስራ ከመሰማራቴ በፊት 2.ወደዚህ ስራ ከተሰማራሁ በኃላ	
610	የእንቅልፉ ማጣት ችግር (ሲተኙ ቶሎ አንቅልፊ ያለመዉሰድ ወይም መባነን) አለብዎ?	1.አዎ 2.የለም	
611	ለጥያቄ ቁጥር 610 መልሰዉ እዎ ከሆነ መቼ ጀመሮት?	1.ወደ ዚህ ስራ ከመግባቴ በፊት 2.ወደ እዘህ ስረ ከገባሁ በኃላ	
612	በዚህ ሰራ ደሰተኛ ኖዎት?	1.አዎ 2.የለም	
613	ለጥያቄ ቁጥር 612 መልሰዎ የለም ከሆነ ለምን	----------	

Declaration:

I, the under signed, declared that this is my original work and has not presented in this or any other University and all sources of materials used for this thesis have been duly acknowledged.

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Date : _____

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This thesis work has been submitted for examination with my approval as university advisor

Name: Dr Abera Kumie (MD, MSc, PhD)

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