The Effects of Poor Solid Waste Management on Health and Socio-Economic Aspects the Case of Koshe“Lastic Sufer” Area of Addis Ababa

By: - Tsige Mekonnen

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College of Social Science

School of Social Work

Advisor: - Firehiwot Jebessa (PhD)

A Thesis Submitted to the School of Social Work for the Partial Fulfillment of the Requirements of the Degree of Masters of Social Work

Addis Ababa University

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Declaration

I, Tsige mekonnen, hereby declare that the thesis work entitled The Effects of Poor Solid Waste Management on Health and Socio-Economic Aspects The Case of Koshe "Lastic Sufar‘’ Area of Addis Ababa" submitted by me in partial fulfillment of the requirements for the award of the degree of Master of Social work to Addis Ababa University, through the Department of Social work, is original work carried out by myself. The issue raised in this thesis work has not been submitted earlier for award of any degree or diploma to the best of my knowledge and belief.

Name: Tsige Mekonnen

Signature: _____

Date of Submission: May, 2021

Addis Ababa University College of Social Science School of Social Work

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Tsige Mekonnen

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Abstract

Developing countries like Ethiopia, *let alone use their economic resources, they dump wastes in unauthorized sites, which easily expose their citizens to health and environmental hazards, It was the objective of this study to describe and analyze the effects of poor solid waste management on socio-economic and health issues. The study was guided by the basic questions: 1. what is the magnitude of community in Koshe"Lastic sufer" areas to health problem? 2. What are the social effects of Solid waste management in the community of Koshe"Lastic sufer" area? 3. What are the economic effects of Solid waste management in the community of Koshe "Lastic sufer" area? 4. What are the role of stakeholders in managing solid wastage?5.What are the main coping strategies of communities in Koshe"Lastic sufer" area?Data was collected from 100 households, which were selected through multi-stage sampling from dwellers of the area. Descriptive statistics was used to analyze the data. The findings revealed that typhoid and typhus, Diarrhea, common cold and tuberculosis were the main health problems caused by improper solid waste management in Koshe"Lastic sufer" e area, In addition, the study showed that there is a positive link between household's income and waste generation as some of the residents in the area earn their living by engaging themselves in collecting solid waste.. Though all households have temporary storage in their home, they did not store wastes separately based on their nature. Disposing solid wastes in unauthorized sites by the households was highly practiced in Koshe"Lastic sufer" area. The finding further showed that, household head's: sex, educational level, household's location (distance of residents from the main road or center), household's willingness to pay, awareness on solid waste management and access to the private waste collectors' services were the major determinants of effective household solid waste management in the study area. It was concluded that Solid Waste Management at Koshe"Lastic sufer" area lacks integrated waste management approach and the systems were not all so effective that wastes are often improperly disposed in undesignated sites. It was recommended that the city Government has to set maximum efforts to introduce modern techniques of managing solid waste in the existing systems for effective solid waste management in Koshe "Lastic sufer" area.*

Key words: Koshe"Lastic sufer", Effects, Waste, Solid waste, Households, Socio-economic factors, health factors, and household head.

Acronyms and Abbreviations

CBOs	Community Based Organizations
CED	Centre for Environment and Development
DIT	Durban Institute of Technology
GIS	Geographical information system
Hhs	Households
HHSWM	Household Solid Waste Management
ILO	International Labor Organization
KCC	Khulna City Cooperation
LULC	Land use/Land-Cover
MBT	Mechanical biological treatment
MSE	Micro and small enterprise
MSWM	Municipal Solid Waste Management
NGOs	Non-Governmental Organizations
POPs	Persistent organic pollutants
PPP	Public-private partnerships
SMEs	Small and medium-sized enterprises
SMSWG	Sandec`s Municipal Solid Waste Group
SPSS	Statistical Package for the Social Sciences
SWM	Solid Waste Management
UNDP	United Nation Development Program
UNESC	United Nations Economic and Social Council
WHO	World Health Organization

CHAPTER ONE

1. Introduction and Background of the study

In this chapter, introductory remarks and statements of the problem with guiding basic research questions and objectives of the study are presented the significance/importance of carrying out this research. In addition, the scope of the study is elaborated in relation about location, coverage, and units of observation.

1.1. Background of the Study

Rapid urbanization and explosive urban population caused by Rural-Urban migration due to “Urban Lights” pull factors and high natural increase owing to improved health , nutrition , income ,and Medicare facilities are overwhelming national and local municipal authorities as they work to plan for its sustainable development. According to (Kyessi,2005), most cities in developing countries face higher urbanization rates, which are more damaging to low -income people in urban areas. The majority of Low-income people often have difficulty accessing land in planned areas, forcing them to build homes in unplanned settlements that are prone to natural disasters. The situation worsens as people occupy more vulnerable areas (dangerous lands). As population density increases, these unplanned areas become more dangerous to live in. This is due to the risks associated with natural disasters, especially flooding. In addition, unplanned settlement defects in developing countries are exacerbated by many factors, including governmental involvement in environmental protection, particularly risky land management, and community support to reduce risk-related risks.

UN HABITAT, (2004).Most urban slum areas face several economic, social and infrastructural challenges. The slum dwellers lack adequate shelter, water and, sanitation, faces serious health risks, and has limited access to credit and labor because of geographical isolation

stigma, and discrimination. Have no regular market access; they have limited access to social and economic networks. Urban slums are characterized by high population density and high levels of social and economic deprivations, which may include single-parent families, unemployment, and economic, physical, and social exclusion.

However, poor solid Waste Management (SWM) is one of the critical challenges faced by developing countries, including Ethiopia, as a result of poorly managed social, economic, and environmental impacts. One study shows that only 30-50% of the waste generated in developing countries is properly stored and managed(Dawit and Alebel,2003).The rest is burned, dumped outdoors, or thrown into uncontrolled landslides, harming the environment. In addition, a study by (Wendimagegn,2019) shows how easy the environment is for uncontrolled disposal of wastes, especially in low and middle-income countries ,insufficient storage, processing and, open landfills.

According to Rouse (2008), Solid waste is defined as material that no longer has any value to its original owner, and which is discarded. The main constituents of solid waste in urban areas are organic waste (including kitchen waste and garden trimmings), paper, glass, metals, plastics, ash, dust, and street sweepings can also form a significant portion of the waste. Supplementary to this, Rouse defined Solid waste management (SWM) as the collection, storage, transportation, processing, treatment, recycling and final disposal of waste. Waste disposal systems need to be simple, affordable, and sustainable (financially, environmentally, and socially) and should be equitable, providing collection services to poor as well as wealthy households.

To achieve the above-stated means of solid waste management, household members of a given geographical territory, as one of the stakeholders, have their responsibility. But the extent

of their responsibility varies depending on the approach (either conventional based or community based) they follow (Zurbrugg,2002; Rahman, 2016). The responsibility of collecting wastes on temporary storage from household and dump it on the given municipality material or handover to the waste collectors are said to be a conventional approach. In community-based approaches, collecting solid waste is the responsibility of habitats. Hence, these SWM approaches have the advantage to protect the environment from the risk of ineffective disposal systems.

Millions of years ago, the solid waste management system was not the biggest problem in the world. A related study stated “Early humans did not care much about waste management; instead, they left their trash where it fell Ashenafi, H. (2011).This suggests that the alarming increase in population growth rate and the growth of urbanization in the world is a serious concern for the function of waste management. Humans live in settled communities and the problem is the result of this solid waste. And modern people produce more waste than early human did Assefa,B.(2019).Therefore, the rate of urbanization and the growth of a particular city’s population are positively related to the rate of solid waste generation. Therefore, the city, which is showing increasing population growth and urbanization, must take up the question of how to manage solid waste without identifying environmental and human health as an agenda.

Municipal waste generation in developing countries ranges from 174 billion tons in sub-Saharan Africa to 231 billion tons in Latin America and 334 billion tons in South Asia (Kawai and Tasaki,2016). Waste generated in low and lower-middle-income countries is expected to more than triple by 2050 Kaza, S., & Yao, L. (2018). Local authorities are usually responsible for waste disposal in their cities to ensure an efficient and effective system for residents.

When it comes to the management of solid and liquid wastage in Addis Ababa city Administration, the disposal system appears to be poor as one feels stinky odors all along when

walking in the capital every day. In particular, residents in the nearby villages of the dumping areas koshe “lastic sufer”, are facing various health and socio-economic problems. According to the study(Ali and Eyasu,2017) the city’s dump of its waste is an inventory of its material life. In some parts of the city, the rubbish provides a crude and deeply flawed explanation of the poor living standard of dwellers and their health, social, political, and economic contexts. Indeed, some people’s rubbish provides others with the material of their everyday life which displays social, material, and income differences. This case is similar and maybe the best way to think about koshe“lastic sufer” areas.

The way cities handle and manage solid waste shows the content of their existence. It is a major challenge for municipal authorities in Addis Ababa, in which they are only dealing with two-thirds of the rubbish distributed in collection points all over a city. The rest of the garbage collection is left for micro and small enterprises and informal dumping practices either on streets or in rivers. Thus rubbish provides a visual commentary on urban citizens’ behavior as well as the efficacy of municipal governance (UN-HABITAT, 2010).

Although the municipality of Addis Ababa is a pioneer in the country and established institutional systems having local initiatives, and considered as a key player to create sustainable urban development program and solid waste management in the city, the uncollected solid waste management makes the city environment aesthetically unpleasant and affected the health of the city's community. Community-based initiatives, at the neighborhood level, are becoming increasingly prominent as a means of addressing the deficiencies of the formal system Cheru,M (2016).Koshe “lastic sufer” is known as Repi and is a large landfill that receives solid waste from all parts of the city of Addis Ababa. The site is located in the southwestern parts of Addis Ababa within the bounders of Nefas silk-Lafto and kolfe keranio sub-city. The name means dirty in

Amharic, and the dumping of wastes at Koshe started in 1964. Formerly, it was an official site of burning dead animals. Koshe is not a fenced site and also there is no school, market, and other social service providers, the residents are at risk of health, dirty environment, and social aspects (Haile and Abiye,2012).

1.2. Statement of the Problem

The living condition, the socio-economic and health situation of the community in Addis Ababa city highly varies from one sub-city to another, village to village. This is true particularly of settlers in waste disposal areas and their dependence on it directly or indirectly. As one of the communities in developing countries, Sevier poverty, and unemployment have forced most of the settlers in the waste disposal area to stay and make their life miserable. Although the threats related to health remain high on surrounding settlers, they are still living there due to housing problems (Haile and Abiye, 2012).

Addis Ababa city started its solid waste management some three decades back. The service cannot meet changing demands. The social waste collection service is unsatisfactory, and scenes of scattered waste are common in most of the city. The population has the opinion that the municipal solid waste collection service is not functioning properly. As a result of this, people are suffering from a health problem (Regassa,Sudaraa and Seboka,2011).

Currently, the city of Addis Ababa is highly stretching in all directions and urban residents are increasing from time to time due to rural-urban migration in search of jobs and decent living conditions. In addition, industrialization is expanding by local and international investors particularly in the border areas of the city. This rapid urban growth has put Addis Ababa at a level of a Metropolitan and municipal City. However, the capacity of municipal authorities to provide services like managing and disposing solid waste and providing basic

health services is being out surpassed by the volume of waste generated as a result of the urban growth (Ibid).

Studies conducted on the effects of poor solid waste management appear to be meager in the country as well as in Addis Ababa. For example, A study made by Cheru, M (2016), focused mainly on new approaches to managing solid waste in Addis Ababa and found out a lack of knowledge about the importance of protecting the environment and the need for Government-Community partnership in managing urban solid waste. Similarly, Bizuneh,T.(2018) study on solid waste management found out that the existing practice of solid waste management system in Addis Ababa does not fulfill the required conditions for environmental safeguard due to the weak financial status of the municipality, poor awareness of the community, and absence of scientific and sufficient disposal systems. Another study made by Fenta(2017) on the management of urban solid waste showed that institutional, economic, and social factors hinder SWM service in Ethiopia with a particular focus on Bahir Dar city. Also, the results of the study reveal that most of the respondents have low awareness towards appropriate solid waste management.

While there have been extensive studies and debates/ discussions about solid waste management and its impact on the environment, relatively little have been said about the health and socio-economic implications of poor solid waste management. This Thesis provides a specific study of the socio-economic and health effects of poor solid waste management on residents of Koshe “Lastic sufer” area in Addis Ababa city . This study was initiated to assess the socio-economic and health challenges that are caused a result of improper solid waste management in Koshe“lastic sufer” area. The study was guided by the following basic questions:

1.3. Research Questions

1. What is the magnitude of the health problems of the community in Koshe“lastic sufer” areas?
2. What are the socio-economic effects of Solid waste management on the community of Koshe“lastic sufer” area?
3. What is the role of stakeholders in managing solid wastage?
4. What are the main coping strategies of communities in the koshe“lastic sufer” area?

1.4. Objectives

This study has the following general and specific objectives.

1.4.1. General Objective:

The General Objective of this study was to explore the health and socio-economic effect of solid waste management in the koshe“lastic sufer” area of Kolfe Keraniyo Sub-city in Addis Ababa.

1.4.2. Specific Objectives

This research has the following specific objectives:

1. To identify the magnitude of health problems among koshe“lastic sufer” area community.
2. To assess the social effects of Solid waste management in the community of koshe“lastic sufer” area.
3. To assess the economic effects of Solid waste management in the community of koshe“lastic sufer” area.
4. To identify the role of stakeholders in managing solid wastage.

5. To describe the main coping strategies of communities in the koshe“lastic sufer” area.

1.5. Significance of the Study

This study has the following major significances:

1.5.1. Academic Significance

The study has a valuable academic relevance in that researchers may use the findings as a reference for further investigation in the area. New innovative ideas can be inferred from the study. The results of the research intend to fill gaps in current knowledge regarding the living condition of the community living in waste disposal (garbage) areas.

1.5.2. Policy Significance

The study helps policy makers to gain new insight that can shape future policies. It also focuses and informs advocacy, legislation, social mobilization and problem design apparently.

1.5.3. Development Significance

The study accurately serves as ground for further assessment and possible feedback in the implementation of development projects at all levels of intervention to NGOs and development actors in developing their long-term program to reduce life challenge of the target community.

1.6. Scope/Delimitation of the Study

This research is thematically and geographically limited to its intent: how is the living condition of the community around Koshe“lastic sufer” area. The limitations invloves geographical issue, thematic and unit of observation.

1.6.1. Delimitation By Geographical Area

This study was conducted at koshe“lastic sufer” areas of Kolfe Keranio sub-city of Addis Ababa. It is limited to this area because the issue to be adressed which is dry wastage

accumaluation exists in this specific area. The targets are communities living nearer to koshe dry waste garbage area.

1.6.2. Delimitation by Theme

The main theme which was covered by the study was the health and socio-economic impact of solid waste management up on the community living around koshe“lastic sufer” area. The specific theme ideas are where community challenges could be deeply dug, but lack of awareness and shortage of resource to address a broad theme were the major limitations.

1.6.3. Delimitation by Units of Observation

The data collected focused on primary information. This is because there was no enough study that has been conducted in the area. As a result, secondary data were very limited to the general concepts rather than specific to the research target areas.

1.6.4. Organization of the study

This thesis has six Chapters, chapter one introduces the thesis by presenting study background which includes statement of the problem guiding basic questions, objectives of the study, significance of the study, delimitation of the study and organization of the study while chapter two deals with review of literature where empirical review of previous research studies on the effects of poor solid west management have been documented. Chapter three presents Research paradigms, Conceptual frame work of the study and the design and methodology of the research. Chapter four deals with data presentation and discussion of findings, and chapter five deals with research result and discussions the last chapter, chapter six presents conclusion and recommendations followed with References ,Preliminaries and Appendices are also includes in this document.

A number of limitations are acknowledged in this study. The main limitation of the study was related to exclusion of certain households which led to limitation of its scope in that it surely focused on assessing experiences of the community from the health and socio –economic situation as it is expected to be achieved according to the essence. Hence the possibility of some miss-classifications might not be ruled out.

CHAPTER TWO

2. LITERATURE REVIEW

This chapter presents discuss on literature reviews where many secondary documents were reviewed. Based on this conceptualisation of terms, empirical, analytical literatures, the effects of poor solid waste management and conceptual frame work have been included.

2.1. Conceptualization of Terms

2.1.1. Waste and Solid Waste

Waste is often found in liquid or solid form. Solid waste is all kinds of wastes, whether water or liquid solids. For example, used plastic bags, broken bags, leftover food, and kitchen waste (ILO,2007). It is a byproduct of human activity and tends to increase with increasing urbanization rates, consumption patterns, and living standards (Solomon,2018).Rouse(2008) also states: “Solid waste is defined and discarded as a material that is no longer valuable to its original owner. The main components of urban solid waste are organic waste (including food waste and garden cotton cloth) paper, glass, metal, and logistics. Ash, dust and street-cleaning can also make up a significant portion of waste.

However, most people are unaware of their role in solid waste production or the impact of daily human activity on waste production rates. As a result, they do not have time to think about how to properly dispose of their homemade garbage. According to this topic, Ashanafi,H.(2011) also posed a very interesting question, which was worth referring directly to the sight of a flowing garbage can and the rising stench, even the most famous places of a crowded city and there are smells. He hides his nose while looking at her. Have you ever thought that you, too, will play your part in creating this stench? What good is a website if it

simply "blends in" with everything else out there? What good is a website if it simply "blends in" with everything else out there? (Ashanafi,H.,2011)

One hundred thousand years ago, the solid waste management system was not very important in the world.“ The first people didn’t care about waste management; they just left the trash where it fell (Net Industries,2010).This means that the challenge of solid waste management is becoming a major challenge due to alarmingly increasing population growth rates and developing urbanization around the world. This is also supported by an important conclusion of Asefa and Mindahun.(2019) beginning, humanity has produced waste, whether it be bones and other parts of the animals that they sacrifice for food ,or wood that they cut to make their cars with the development of civilization, the resulting waste acquired a more complex character. At the end of the19th century, the industrial revolution led to the flourishing of the consumer world. Not only did the air become more and more polluted, but the land itself became more and more polluted due to the formation of non-biodegradable solid waste. Population growth and urbanization have also contributed greatly to the increase in solid waste Asefa and Mindahun. (2019).

2.1.2. Solid waste management

Human activities that take place in this world produce waste. Waste can be both solid and liquid; and the way they are managed, stored, and dealt with may endanger the environment and public health (Zhu, Asnami,Zurbrugg &Shyamala,2008).SWM includes all activities that seek to reduce the health, environmental and aesthetic effects of solid waste. Managing increasing solids is a major challenge in many cities in developing countries. If solid waste is used properly, it can be a valuable resource, but if not managed effectively, it can cause serious adverse effects on the environment and public health. So waste management is an important

component of urban sanitation and is one of the most important and resource- intensive services provided by municipalities Ashenafi,H.(2011).SWM is a solid waste management system that accepts all activities from generation to disposal. According to Rouse(2008), the basic concept of SWM consists of "collection, storage, transport, processing, recycling and ultimately disposal of waste". He said the management system should be simple, cheap, sustainable, economically efficient, environmentally and socially acceptable, and serve the poor and the rich.

According to (You and Zhang,2017) Solid waste management is connected with sustainable development by operationalizing three broad goals: 1.ecological sustainability, socio-economic equality, and improvement of health, which are quite similar, to major principles.

They argue that there is a gap in the current literature on solid waste management strategies in developing countries that the system is rarely investigated in its entirety. Assessments combining ecological, environmental health, and socio-economic considerations are still largely absent. Moreover, changing institutional arrangements among the public sector, the private sector and civil society, and their implication as a central theme were not sufficiently addressed the expected standard (Ziervogel, 2006).

2.2. Sustaining good solid waste management

A study made by Long and colleagues (2009) on people's perception of household solid waste and the effectiveness of the current poor solid waste management system develop three means to assess or evaluate the public perception of solid waste management in the study: a) public opinion and perception for community living in the garbage area, b) willingness to improve the lives of very poor people in the study area, and c) level of patronage for improvement of SWM service). This research finding showed that demographic factors have a significant impact on the people's perception towards poor solid waste management service in

the study area. They found that gender differences (being male or female) have a significant impact on perception. In addition, the educational levels and income of the respondents have a significant positive relationship, whereas, age of the respondent have a positive relation with settlements of people in this area. Regarding willingness to resettle in another place , the result showed a positive relationship. However, in the study area there is a lack of access to clean water and other services. Therefore, the local authority should give attention to performance monitoring and control of poor solid waste in the study area to minimize the risk hazards of the community.

In general, Long and colleagues (2009) found out that inadequate service coverage and lack of timely household waste collection are the main problems in this particular area. To develop an effective solid waste management system and to sustain the private sector participation in solid waste management activity through avoiding the above-mentioned problems, they suggested the following: modern waste management methods that emphasize on waste reduction, recycling and re-use to be encouraged by the local government and by the state with legislative backing, increase awareness on re-education of household waste minimization and sorting before collection, introduce training and re-training and re-orientation program for the private sectors and the waste generators respectively on issues of waste management techniques as a matter of urgency to enhance the overall success of the current poor SWM system.

Puopiel's (2010) study on solid waste management in Ghana indicated that inadequate skip supply for storing wastes, lack of routine collection of wastes, poor methods of waste management, and inadequate resources for waste management institutions were the main factors that affect the effectiveness of solid waste management in the area. To effectively tackle the

problems, he recommended measures like the Provision of adequate skips and dustbins, regular collection of Waste, use of Integrated Solid Waste Management Model, proper Management of Landfill, and adequate resources of Waste Management Institutions.

Kamar(2006) carried out a study on household participation in domestic waste disposal and recycling in the Tshwane Metropolitan Area of South Africa: The findings confirmed that the main factors that affect household participation in domestic solid waste management are socio-economic factors (income and educational level) and institutional factors. Further the results of the study showed that the wealthier peoples' participation in domestic solid waste management was better than the poor ones. In addition, the people's participation in household solid waste management and their educational level had a positive relationship. Moreover, this study found two other major factors that are related to institutional factors: a low level of awareness on the environmental implication of proper waste management and a low level of household coverage with the provision of waste management facilities. Therefore, it was suggested that there is a need to increase the outreach of awareness creation on households and provide adequate facilities for proper waste management.

Zahur (2007) made a study on solid waste management of Dhaka city regarding public-private community partnership. The results showed that, although municipal officials recognized the importance of such participation, they revealed that it was mostly beyond their resource to deal effectively with the growing amount of solid waste generated by the expanding cities. Consequently solid waste is indiscriminate by dumped on roads and in open drains thus leading to serious health risks and degradation of the living environment for millions of urban people. Through time, however, the importance of community and private sectors' involvement in solid waste management and the use of adapted technologies were recognized for improving the solid waste management system. The implication is that either organized deliberations of the poor

residents by the concerned local government or door access to door solid waste management, by self-organized private sectors by providing resource support was recommended to be very crucial for the improvement of household solid waste management.

A study conducted by (Jenkins,Robin R.,etal,2003), on the Determinants of Household solid waste management established that household income, family size, household head age, and its educational level from socio-economic variables were found to be the main determinants of household solid waste recycling practice. The findings further showed that like household income and education, household size also has a positive and significant relationship with the intensity of recycling of household solid wastes. Its justification was when the family members are increasing it would contribute to the number of occupants. Due to this, with the increasing number of the occupant in a specific area, the intensity of recycling activity in the area would be increased and create resource constraints as all share the resources at hand.

Poswa (2004) conducted a study on the importance of gender in waste management planning. The study found out that women in most homes in the middle and low socio-economic status were more active in the inquiry. It was justified as indicating their active role in family affairs including waste handling in their respective homes. Moreover, the study concluded that there were great differences between men and women on the choice of type of waste collection service system. Women most of the time preferred a door-to-door waste collection system, unlike men whose choice was a drop-off center. Such variation or differences can be attributed to the cultural traditions, which govern gender relations in the households. As the finding of World Bank, (2000), women in most societies are responsible for domestic works, which include many tasks including childcare, shopping, cooking, cleaning, and the wellbeing of their husbands.

(Mengistie and Baraki, 2010) conducted a study on community-based assessment on household management of waste and hygiene practices in kersa woreda, Eastern Ethiopia. The findings indicated the majority of the households (66%) disposed of their solid wastes in open dumps and 6.9% of the households had temporary storage for solid wastes. Concerning sex and solid waste management, the study indicated that about 98.4% of the selected households revealed that the responsibility of waste management is left for women and girls.

The study estimated that demographic factors and institutional factors have a significant impact on the household choice of disposal sites. Finally, he found out that demographic factors such as age, sex, educational level, family size, number of females in the household who are below 15 years old, and years of stay in the city do not have a significant effect on the site selection of the households to dispose their wastes. However, institutional factors like the distance of containers from people's houses and inadequacy of waste storage containers in the city have a significant contribution for households to dispose of their wastes an unauthorized place. Due to this, the researcher concluded that institutional factors are serious causes for the action of households in the case of disposing of wastes in illegal places or sites. It mean that the number of years that the household head stays in the class does not matter; rather the awareness of households about solid waste positive and negative impact through environmental education or changing the household awareness about waste and its management have a strong improvement on disposal system(Mengistie and Baraki ,2010).

Charcterstics of Settlements in the study Area

Lack of access to sanitation facilities and safe water sources is the most important feature, sometimes supplemented by the absence of waste collection systems, power supply,

surfaced roads and footpaths, street lighting and rainwater drainage."(Dessalegn,Pankhurt,and felen,2013,p.67)

Most of the early settlers of Koshe"lastic sufer" leprosy victims largely migrated from various parts of the country to receive medical treatment for leprosy at ALERT hospital known by Zenebework hospital. Though the leprosy victims were supposed to go back to their origin after medical treatment, most of them preferred to remain in this area fearing stigma and discrimination that they could encounter at their respective home villages. The area had largely been covered by forest which the people began settling the area by clearing the forest and this new settlement area was named after Zenenework hospital, established in 1932 as slum settlement areas.(Mesele,2015).

Slums areas are associated with a huge number of substandard housing structures, often built with simply non-permanent materials (made in plastic), in its general context to un acceptable level, which is unsuitable for housing given the local condition of climate and location in the study area. In addition to this factors contributing to a structure being considered were substandard.

The dwellers are characterized by low income, inadequate living condition, and substandard facilities .These communities are usually inhabited by socially disadvantaged people. Slum conditions are the physical and statutory manifestation that creates barriers to human and social development. Thus, we describe a wide range of low-income settlements and poor human living conditions were as slum dwellers are those whose residences are in the slum (Desalegn,T,etal.2014).

Unhealthy living conditions are the major result of a lack of basic services, like clean water , school, and playing space .Particularly with visible, open sewers, lack of pathways,

uncontrolled dumping of waste , disposal of dry wastes in open areas mostly at the center of the village related to the case, polluted environments ,etc. Houses may be built on hazardous locations or land unsuitable for settlement, such as flood plains, in proximity to industrial plants with toxics missions or waste disposal sites, and slums are areas of social exclusion that are often perceived to have high levels of crime and other measures of social dislocation. In some definitions, such as are associated with certain vulnerable groups of the population, such as recent immigrants, internally displaced persons, or ethnic minorities.(Ibid).

There are several homeless people who live in plastic shacks near the waste dump making a living in slams. Most of them depended on aid; most live in the plastic house nearer to the dump in simple, rusted, ribbed iron dwellings. Garbage has provided a source of local settlements and subsistence for generations over its 50-year history and is firmly embedded in local calculations of subsistence and accumulation .The moment of discharge unleashes a tense scramble for the most valuable items; a competition in which masculine physical strength prevails, and young, agile ,women put up a good fight. Scratchers then go on searching or rest until the next truck arrives, or regroup around the bulldozer's earthling new bounty .The social and material relationships of the dump demand skilled navigation. From the vantage point of the dump, the scratchers rework the geographies and hierarchies of the city (Simpson,2001)

2.3. Effects of poor Solid Waste Management

It is a fact that, if solid wastes are not managed properly there are many negative impacts on aesthetics, ecology (water and air pollution), and mainly on health and socio-economic aspects. Therefore, to control the management activity in a good manner and have a proactive measure for such negative impact, one must have a good understanding of the effects and risks that may arise from improperly managed solid wastes.

Improper solid waste management stands as a major threat to the fragile ecology of the human environment which has both short and long-term effects on environmental development (Kuniyal ,and Jain 2003). On top of this, wind, animals, children, waste pickers are dispersal agents. The collection lag time creates vacuums leading to waste congestion and littering. Because of the improper way of waste collection more bulky solid wastes are left behind the study area which could hurt the socio-economic and health of the residents.

(Amipofo,Soyelle &Abanyie,2016), underlining careful storage, collection, treatment and disposal of solid waste, he further stressed that the collection, and disposal of solid waste is an important facet of environmental hygiene and needs to be included in any environmental planning.

In general Solid waste, pollution is caused mainly by urbanization and industrialization. Urban areas like Addis Ababa are facing associated problems in the collection, transportation, and disposal of communal solid waste due to unplanned community settlements and developments in major cities. In particular, settlement areas like Koshe“lastic sufer” are facing a miserable solid waste management crisis due to rapid urbanization, industrialization, migration, and insufficient funding (Boampong,2008)

2.3.1 Effects of poor solid waste management on Health

Inappropriate management of solid waste disposal causes all types of pollution: air, soil, and water. Indiscriminate dumping of wastes contaminates surface and groundwater supplies. In urban areas, Solid waste clogs drains, creating stagnant water for insect breeding and floods during rainy seasons. Uncontrolled burning of solid waste and improper incineration contributes significantly to urban air pollution (Alem and Ahmade,2013). According to Melaku (2008), some of the most hazardous effects of uncontrolled solid waste disposal systems include

uncollected wastes that cause blockage of drains, which result in flooding and unsanitary conditions. Moreover, Flies and Mosquitoes breed in some constituents of solid wastes, and flies are very effective vectors that spread disease. Improperly dumped solid waste becomes a good shelter for rats. Rats consume and spoil food, spread disease, damage electrical cables, and other materials. Poor solid waste management can cause various diseases in humans as bacillary dysentery, diarrhea, and amoebic dysentery, plague, endemic typhus, cholera, jaundice .hepatitis, gastro enteric diseases, and the like (Boadi,2016)

Uncollected wastes degrade the urban environment, discouraging efforts to keep the streets and open places in a clean and attractive conditions. Dangerous items (such as broken glass, razor blades, needles, and other healthcare wastes, aerosol cans, and potentially explosive containers) may pose risks of injury or poison which are dangerous particularly to children and people who reside around the area. Waste items that are recycled without being cleaned effectively or sterilized can transmit the infection to later users (Mattiello,Amalia and et al., 2013).

The association between hazardous waste pressure scores and some health effects at the municipal level was tested in follow-up correlation studies, it also took into account socioeconomic status. A significant increase in the propensity for all causes of death was reported. The mortality rate of household parcels living on the territory has increased.Prevalence of congenital malformations of the nervous system and genitourinary system at birth. Even if the reported causal interpretation of the association was not fully substantiated, it was considered necessary and urgent to help reduce exposure to hazardous waste (Fazzo,Lucia and etal.,2017).

Improper waste management has negative impacts on both environment and public health. Negative impacts can be due to different handling and disposal activities resulting in soil,

water, and air pollution. Inadequately disposed of or untreated waste may cause serious health problems for populations surrounding the area of disposal. Leaks from the waste may contaminate soils and water streams, and produce air pollution through emissions of heavy metals and persistent organic pollutants (POPs), ultimately creating health hazards. Managing waste properly and in an environmentally sound way is therefore important for health reasons. Despite the increasing recycling activities, incinerators are widely used to manage the final phase of waste disposal. Recently information on less severe diseases is available also in relation to waste treatment activities, such as mechanical biological treatment (MBT) plants (Ziraba, A.,2016).

In general, solid waste that is not properly treated can cause serious health hazards and lead to the spread of infectious communicable and non- communicable diseases. Untreated solid Waste lying around attracts flies, rats, and other creatures that in turn spared disease. If the solid waste damped around is wet it decomposes and releases a bad odor. This leads to unhygienic conditions and thereby causes a rise in health problems and environmental pollution.

2.3.2 Socio-economic effects

Socio-economic, also known as social economics, is the social science that studies how economic activity affects and is shaped by social processes. In general, it analyses how modern societies progress, stagnate, or regress because of their local or regional economy or world economy. Socio-economic factors also refer to society-related economic factors. A study made by (Modupeola A. et.al 2015) indicated that socio-economic factors are integrated and influence one another. For example, employment determines income, and income co-relates to one's education level and the education level dictates employment opportunities. That is, someone with a Bachelor in Applied Science, a Masters in Medicine, and a Ph.D in Neurological surgical

techniques is in a prime position to earn a large income as a specialist Neurological surgeon. This then allows them to pay for and usually leads to expectations upon that person's children to achieve a similar level of education, employment, and income. These socioeconomic factors then influence health. He further identified socio-economic issues that can be affected by mismanagement of solid waste to be human health, safety (road accidents on humans and animals), trading/market/economic transaction, income/revenue generation, and people's movement.

A report by the European Commission (Salado, 2008), indicated major socio-economic effects resulting from poor solid waste management to include violation of human rights such as substance abuse, depression, and physical illness. Moreover increasing levels of exposure to violence and toxins and loss of access to educational prospects, and access to services were some of the serious effects. High risks of abnormal behaviors and mortality rates and lack of work security and Labor absenteeism are revealed. Finally, socio-economic issues can increase the rate of unemployment and create economic inequality among the community in the study area.

2.4. The Role of Stakeholders in Solid waste management

Stakeholders are people and organization having the interest to improve poor solid waste management, and participating in activities that make that possible.Identification of the stakeholders and their interests is important in coordinating their participationa and involvement in various waste management activities Alemu,K.T.(2017).Be it the National or the International level,proper solid waste management requires public-private partnerships.It is not something that the government can do alone.

It should be a joint venture. Aachieve sustainable solid waste management requires an integrated approach (Visvanathan and Glawe ,2006) including the use of different collection and

treatment options which include prevention, recycling, energy recovery, and environmentally sound landfilling of solid waste. Involvement and participation of all the stakeholders-waste processors (formal and informal recyclers), waste generators (households, industries, and agriculture) and government institutions (regulators, waste managers, and urban planners). The interactions between the waste system and other relevant systems relating to the product design at the industry which can have a significant impact on the recyclability of the product after its consumption are essential Alemu, K. T. (2017).

In Addis Ababa, the institutional relationships of solid waste management systems have been undergoing and significant shifts have been made by decentralization and micro-privatization policies creating an alternative service delivery mechanism to improve municipal solid waste management (Solomon, 2006). The Addis Ababa city Administration Dry Wastage Management Department annual reports indicated that waste management in the city remains backward that all stakeholders should engage to bring tangible and sustainable changes in technology and resources. This can help to upgrade the coverage of waste management and services and can also increase their efficiency as a precondition for improving the environmental quality of cities. Thus, the involvement and participation of all the stakeholders such as the waste generators, waste processors, formal and informal agencies, non-governmental organizations, and financing institutions is a key factor for sustainable waste management.

2.5. Coping Strategies of Communities

The global agenda 21 has urged poor countries to complement their limited resources by collective action to achieve sustainable solid waste management (de Oliveira,2019). Although this strategy has been adopted by national governments, solid waste management in informal settlements where many of the urban poor life is still critical. Due to the rapid expansion of urban

settlements which in itself increases the volume of waste produced by households, the management, and disposal of solid waste has surpassed the techinical and financial capacity of the manucipalities. As a remedy to this challenge, Schübeler, p. (1996),calls for strong community participation for effective and sustainable solid waste management to be a viable coping strategy.

Community participation in poor solid waste management can cover several forms of local involvement that include awareness-raising and teaching proper sanitary behavior, cost recovery schemes, resource recovery schemes, and participating in consultations, administration, and/management functions. At the lowest household level, participation may be providing separated waste to the waste collector, handing over separated waste at a particular time to the waste collector or granting a space to park waste management vehicles (Ibid). With greater public participation the community can cooperate with public or private agencies to set payment rates for service charges. Local leaders, formal or informal, and women and youths can often have special roles in community-based solid waste management.

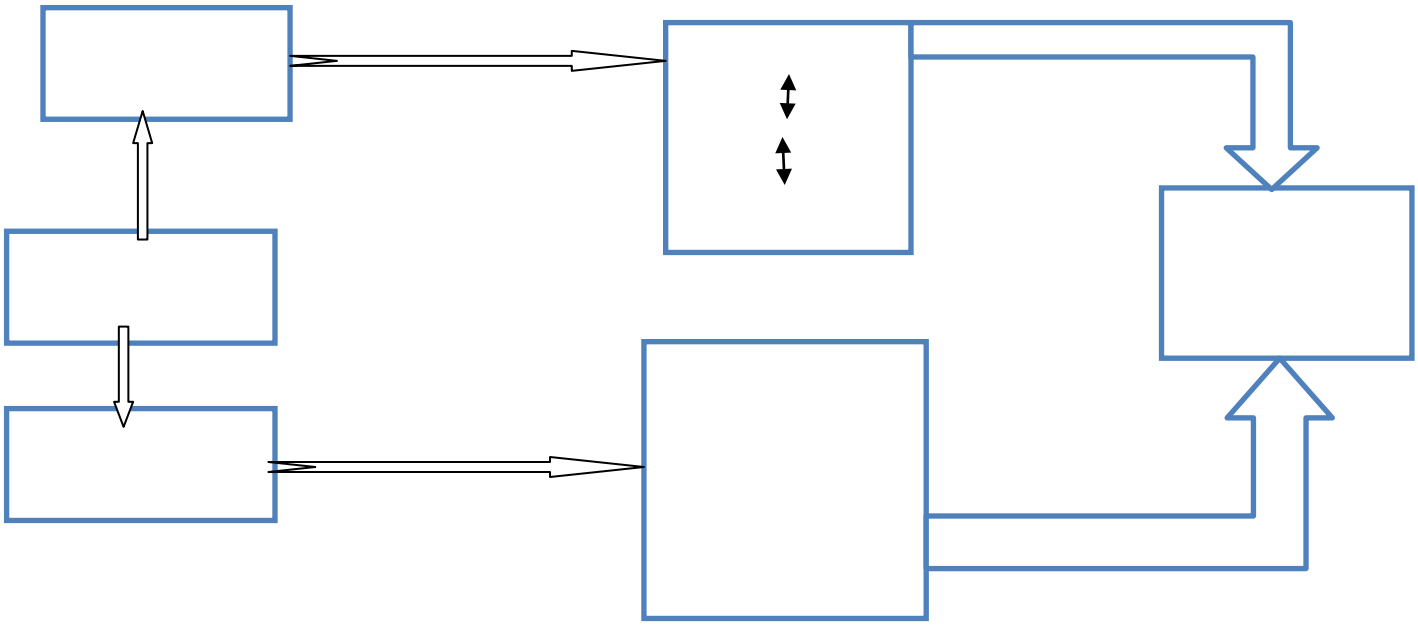
In cities like Addis Ababa, if health and safety issues associated with the poor solid waste collection systems are handled by the residents themselves illegal actions like slaughtering in open areas and throwing waste in the ditches that cause ditches to be clogged and to release an offensive smell can be overcome. According to the health office head and health extension workers, the Addis Ababa city administration is working much on awareness through mass media and basic health education in the morning section of health centers every day has been underway but the situation has not changed (Solomon, 2006).

2.6. Conceptual framework

According to Maxwell (2018), a conceptual framework may be defined broadly as theory or literature review or it may be narrowly defined as the factors and variables addressed in the study. A conceptual framework provides the orientation to the study and assists both the researcher and the reader in seeing how the study contributes to the body of knowledge on the topic, how elements of the study align, and how the study design and methodology meet rigorous research standards. Conceptual frameworks present the overall structure of the study while the theoretical frame work within it explains the relationships that are explored within the study (Ibid). It is based on the concepts which are the main variables in a study and therefore, as Imenda (2014) has underlined, gives life to research.

The conceptual framework for the present study has been presented under figure 1 below based on the knowledge gap as described in the introduction, statement of the problem, and literature review. It shows that poor solid waste management causes Socioeconomic problems which in turn affect employment, Income and education; and health problem which in its part results in different disease like typhoid, typhus diarrhea, and the common cold. These socio-economic and health problems cumulatively create unhealthy life conditions aggravating the poverty situation of the community. The arrows indicate the linkages between the variables and constructs which finally cause poor living situations of the Koshe “Lastic sefer” community under study. The conceptual frame work shows two major variables that originate from poor solid waste management (Socioeconomic & health) which eventually end with poor living conditions of the community.

Figure 1: Conceptual Frame work: The effects of poor solid waste management



Source: By the Author: from Objectives of the research & Literature review (December, 2020)

CHAPTER THREE

3. METODOLOGY

This chapter deals with the research paradigms, description of study area, research design, the study participants, sample size, sample procedure, data collection procedure and data analyst methods. Generally, it looks unto a methodology that helps to measure findings in the study.

3.1 Research Paradigms

With the view to Cleary portray the essence of research paradigms; an effort has been made to consult adequate literature. Consequently, various definitions of research paradigms have been presented. In light of this, the concept paradigm was used for the first time by Brad, K.(2011), an American philosopher who defined the concept as a "philosophical way of thinking", meaning pattern in the Greek language. It is a basic set of beliefs and world view through which the researcher examines the methodological aspects of his research project to determine the research methods that will be used and the data will be analyzed (Mackenzie, N. & knipe, S., 2006), explains, a research paradigm inherently reflects the researcher's beliefs about the world that he lives in or wants to live in. A paradigm is a basic set of beliefs or world view that guides research action or investigation (Guba & Lincoln, 2005). Therefore a paradigm provides suggestions on how researchers can locate their research into a paradigm and the justification needed for the choice of the paradigm.

Epistemology of a paradigm is based on our view of knowledge how we know the truth or reality, what counts as knowledge within the world, the very basis of knowledge its nature, and forms and how it can be acquired and communicated to other human beings (Zinyeka,Onwu & Braun ,2016).In considering the epistemology of one's research, questions like is knowledge

something which can be acquired on the one hand, or is it something that has to be personally experienced. What is the nature of knowledge and the relationship between the knower and the would-be known? What is the relationship between me, as the inquirer and, what is known? These questions help to investigate the fundamental basis of knowing the truth whether there is such a thing as truth (Davidson, 2000).

Among the many research paradigms in literature Candy (1989) grouped them into Three taxonomies namely: Positivist paradigm- which defines a world view in research to be grounded in what is known as the scientific method of investigation: understanding of human behavior through observation, experimentation, and reason based on experience. This school of thought advocates for the use of quantitative research methods in research.

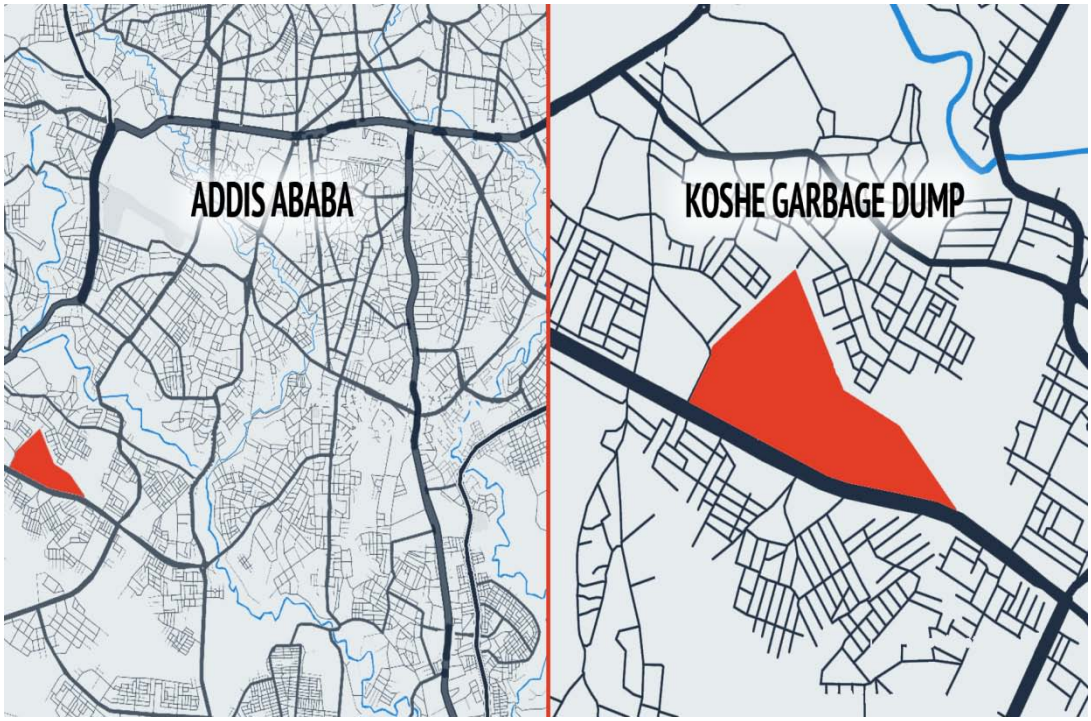
The second research paradigm is the constructivist paradigm which emphasizes on understanding the individuals and their interpretation of the world around them and assumes that … reality is socially constructed Tuli (2010) According to punch (2005), the researcher constructs knowledge society as a result of his or her personal experiences of real-life within the natural settings investigated. There is the assumption that the researcher and their subjects are engaged in interactive processes in which they intermingle, dialogue, question, listen, read, write, and record research data. The emphasis in this paradigm is, therefore the use of interviews, discourses, text messages, and reflective sessions to collect data. The outcomes of the research can reflect the values of the researcher and thus, the researcher is required to present a balanced report of the findings.

The pragmatic Research paradigm is the third and last paradigm in the research literature. According to this paradigm truth about the real world cannot be accessed solely by a virtue of a single scientific method. Advocates of this school research of thought gave rise to a

paradigm that advocates the use of mixed methods as a pragmatic way to understand human behavior (Alise & Taddlie, 2010). This paradigm assumes that there is no single reality and all individuals have their unique interpretation of reality. Therefore, these paradigms advocate for mixed methods Methodology a combination of quantitative and qualitative research methods. In light of the above discussions on research paradigms, and considering the objectives of the present research, the Pragmatic Research paradigm has been selected as the methodology of this Theses work since it is a descriptive survey study that employed both quantitative and qualitative data, the analysis of which was concocted in the analysis part of the research.

3.2 Description of Study Area

Since the establishment of Addis Ababa in 1887, it has gone through a complete transformation. The city has expanded immensely with a current area of 530.14 km2. The estimated population of the city is 4 million with a growth rate of 6% and a population density of 7,5 inhabitants/km2. There has been a registered high migration from the rural regions to the city; this can be attributed to the leap in population growth. Addis Ababa has the status of the capital and a seat for the federal government of Ethiopia. The city is further sub-divided into 10 sub-cities, which are responsible for their own municipal and non-municipal services; the sub-cities are further divided into woredas (the smallest administrative units of the government) and there are 117 woredas in Addis Ababa.



Source: (Map of the study Area)

Although the Ethiopian government has begun taking steps to address the environmental and social challenges associated with municipal waste, there remains a great deal of inefficiency in, and environmental degradation as a result of current poor waste management systems (Regassa, Sundaraa, & Seboka, 2011).Concerning the effects of solid waste products, both biodegradable and non-biodegradable, can result in harmful environmental, social, and economic effects. Some of the pollutants become extremely difficult to remove once released into the environment (Filaba, 2008).

The study was conducted in Addis Ababa City, Kolfe keranio sub-city, woreda 6, koshe area. It is found at a distance of 8 km to the southwest of the piazza. Koshe area is surrounded by garbage-like hills. Koshe is bordered by Jemo village in the south, Mekanisa village in the North, Zenebework village in the northwest, and Lebu village in the east (Personal discussion with the communication officer of the sub-city). Dwellers that are in radius of 1000m were included in

the study to capture the health, social and economic effects of poor solid waste management. In addition, the geographical accessibility of the site for the researcher and its nearness to his residence area helped to develop interest as she always passed by the Koshe area experiencing bad and stinky odor due to Koshe landfill in the neighborhoods.

3.3 Research Design

The study was designed as community based descriptive survey method to address the effect of poor solid waste management on the community residing around Koshe“Lastic Sufer”.This design was chosen as the post positivist research methodology was selected to be employed in this study where quantitative data were secured through multiple responses to a single predetermine question and also because a descriptive research establishes only associations between variables Loeb,S.etal,(2017). Further, this type of research is concerned with specific predictions, with narration of facts and characteristics concerning individual, group or situation Dyson,B.(2005). In this study, the effects of poor solid waste management were the situation under investigation.

The study was an explanatory type of study; since it explains the relationship between the effects of poor solid waste management at household level and the various explanatory variables. To achieve the pre - stated objective of the thesis, both primary and secondary data were used. Moreover, the researcher also used quantitative data. Quantitative data were obtained from the households via questionnaire, which was designed by the author with the support and supervision of advisor and different stakeholder who are interested the improvement of current poor solid waste management in Koshe“lastic sufer” address through questionnaire.

Primary data were also gathered from the households living in Koshe“lastic sufer” and also different stakeholders from Ider, religious institutions, women’s association ,dwelling

neighbors and staffs from health sectors that are understand the current situation of this area via self- administered questionnaire. In order to collect the required secondary data, documents such as books, journal articles, the institution (municipality) document, and other relevant sources were reviewed.

3.4 Study Participants

The total population of Kolfe Keraneo were estimated to be 72,000.00, while those of the woreda 01 were estimated to be 22,000, which is the source population for this study. The study population that are included under the study area were the community members of Koshe area (woreda 01), which are permanent residents and legally registered in their "kebele" administrative units. The area is very poor and characterized by dependency syndrome where young dependency ratio for the area was estimated to be 63.2% meaning, for every 100 persons in the working age group (15-64years) at least 63 people need family support; which implies that they are not employed and are nonproductive. Similarly, 63% of children whose age is between 0-14 live with the support of the family as it is obvious that they are minors, while the old dependency ratio for the area were estimated to be 6.3% meaning on the average, 6 persons whose age is 65 per 100 persons in the woreda and above live with the support of their family and this indicates that insignificant members of the community are nonproductive due to old age (Labor and Social affairs Biro of Woreda 01, 2020).

3.5 Sample Size Determination:

The sample size is one of the determinant factors of a research output. In this research, great care was given to reduce sampling and systematic biasing errors through increasing the sample size and making the sample to be representative by using probability sampling proven to be scientific (Israel,2013). The sample size was undertaken by considering the proportion of 60%

of settlers in Koshe.. This proportion was considered as large enough to obtain largest sample size in case of each objective. Therefore; the effect of solid waste management was assumed as 60% in the community with 95 % confidence interval (Z (1-α/2) =1.96) and 10% precision level. By using single population proportion estimation method, the result of initial sample size was 100 study subjects for effects identifications. Dividing the estimated sample size by 5 (estimated average number of household members could allow us to obtain the exact number of households to be visited). Basically, In order to extract sample size, the researcher used the following sample size formula that is recommended by scholar for populations that are large and infinite. Cochran (Ibid) sample size calculation formula considered at 95% confidence interval and 10% precision level to yield a representative sample for proportions. Where:

$$n = \frac{Z^2 pq}{e^2}$$

n= number of sample size,

z = Standardized normal distribution curve value for the 95% confidence interval,

p = proportion of socio-economic and health problems in the community,

q = 1-p

e = Precision level,

Therefore, sample size is calculated as follows: The value for Z is found in statistical tables which contain the area under the normal curve at 95% confidence interval and its value is 1.96 and p =60 %(0.6),

q= 1-p (1-.6) =0.4

and e = 10% =0.1

n= $(1.96)^2$ (0.6)(0.4))/((0.1)(0.1))

= (0.92)(0.25)/0.01

n=92.2 need to adjust for non-response rate, which is 10% of the calculated sample size (10%n). To adjust for non-response rate, which is 10% of the calculated sample size (10%n).10%n =10/100x92.2=9.2 Finally, the sample size is: 92.2+9.2=101.4 ≈100With assumption of compensation for the loss of efficiency while using sampling technique, we Therefore, all 100 individuals who provided information within randomly selected HHs was the final sample size. Finally, the sample size formulas provide the number of responses that need to be obtained.

3.6 Sampling Procedures

From 11 Sub cities in Addis Ababa Kolfe Keranio subcity was selected, then from all woredas in Kolfe Keranio woreda 01was selected as this was where Lastic Sefer is found, were undertaken to select 100 participants (Households). This sampling method was used because the chosen study population live in the same area having common socio-economic status facing the same kind of challenges. To obtain the total sample size of 100 Hhs, The village in which koshe "Lastic Sufer" is locate was purposively selected as it is very nearer to koshe area. Thus, Mulity stage sampling was used until the final targets of data sources obtained Households in the selected villages as the whole was visited for filling out a structured questionnaire until the expected 100 sample size was fulfilled. In the absence of the household owners or unwillingness during the field visit, the household in the part of north, south, east and west of the original one were taken as a sample for replacement from nearby village so that there were no non-respondents.

3.7 Data Collection Procedures:

Questionnaire was designed by the author with the support and supervision of advisor. The draft questionnaire was pre-tested on 25 randomly selected households. Thus, on the base of pre-test corrections were made on the actual questionnaire. The household survey questionnaire used in this particular study to collect data focuses with the existing solid waste management practice at household level, attitude towards solid wastes and collection service. In addition to this, issues such as the economic activities and educational background of study participants, the delivery of solid waste collection service given by the private participant prevention factors of effective solid waste management, the role of stakeholders in managing solid wastage and coping strategies of communities were included in the questionnaire. Generally, the sample of respondents was collected by using standard questionnaire through house to house visit. In addition associated factors such as health, economic, and socio-demographic, the effects of dry waste collection practices were collected from 100 Hhs through interview and field observations by well-structured pre-tested questionnaire by trained data collectors. 100 Questionnaire was designed in English language and later on translated in to local language (Amharic) and distributed for 100 Hhs. Moreover the researcher conducted observation in the field visit. The information was collected by three (3) trained data collectors. The required information was collected from the households of dwellers in the study area.

3.8 Data validity and reliability

The researcher checked the data collection tool for completeness and reliability. The complete and reliable data was entered into SPSS statistical software version 21.0 for analysis.

3.9 Data Analysis Procedures:

For quantitative data, descriptive analysis was undertaken for both dependent and independent variables for frequency distribution. Dependent variables are variables affected by external factors, for instance in this study variables such as Lack of work security, Labor absenteeism and Loose social life fall under this category. Independent variables on the other hand are variables, which are not affected by external factors. Diarrhea, Malaria and Common Cold are mentioned as independent variables. Descriptive analysis was used to show association between dependent and independent variables to show the strength of association of out comes with explanatory variables by controlling confounding variables. Moreover data collected through qualitative analysis method where analyzed by organizing in themes as required.

3.10 Quality Assurance

In order to keep the quality of the study, the researcher has used the assistance of additional data collectors who helped on data collection. The analysis was standard based to relate each description with the objective. The study made sure that the research really measured what it intended to measure. In addition to this, the researcher has made sure that all the questions on the questionnaire were filled properly.

3.11 Ethical Consideration

Before doing anything with the data collection process the researcher obtained informed consent from the research participants. The data collector introduced herself to their respondents by using informed concent prepared in mharic version forms that indicated the main purpose of studing the topic in the area. The researcher prepared the consent in Amharic language because she believed that the study participants were comfortable with Amharic language.

CHAPTER FOUR

4. DATA PRESENTATION AND ANALYSIS

This chapter presents and analyses the results of data collected from the field,displaying the data with appropriate tables, graphs and, charts where necessary.The purpose of this study was to examine and assess health and socio-economic problem and their effect on the life of dwellers in koshe “lastic sufer” area of Addis Ababa city. These include background of characteristics of respondents, policy contributions of waste management to solve the problem, and access social services (school and health).

4.1. Demographic Characteristics of Respondents

The socio-demographic characteristics of an individual are very vital in the determination of the behavior, psychological condition, and lifestyle. This data outlined a summary of information about characteristics of respondents .This helped to distinguish the peculiarity of the respondents. The main sources of information included for the study were community members dwelling in the please at least for two years. The background characteristics of the respondents including age, sex, educational background, marital status, and family size were treated.

The background characteristic of the respondents in table 1 below shows about age, marital status and educational background of the respondents who participated in the study. Age is an important social factor in determining the working ability of a person. About the age cohorts, the respondent’s age shows 25% of the respondents were between 30-45 years old,82.0%were between 45-60 years and 1.0% were above 60 years .In sum the age of all respondents lies between 45 years and 60.

Table 1: Demographic characteristics of the respondents

Demographic characteristics	Description	Frequency	Percentage
Age	20-30	0	0.00
	30-45	27	27.0
	45-60	55	55.0
	>60	18	18.0
Sex	Male	11	11.0
	Female	89	89.0
Marital Status	Married	11	11.0
	Unmarri	60	60.0
	Divorced	29	29.0
	Widowe	0	0
Education Level	Noformal education	85	85.0
	1-4	15	15.0
	>4 grade	0	0

Source: Survey Data (September 15, 2020)

As indicated in Table **1** above, most of the respondents are unmarried or single (60.0%). This is because most of them are busy searching for their basic needs and they did not start to think about settled life. According to most of the participants, from the nature of life, they are in, being single is a better opportunity. It lessens family responsibility especially child care after birth was very difficult for the community of Koshe “lastic sufer ”because most of the household income was very less. This is to means that they do not want to have a child to take care of and other duties. In sum, the age of most respondents lies between 45 years and 60 years.All respondents seem capable of giving relevant information for the study. And the information secured from them could be reliable and relevant.

4.2. Family size and house ownership condition

Table 2: Family size * ownership of house Cross tabulation

Count		Ownership of house		
	Plastic made (shade) house	kebele rental house	Other house	Total
family size	2	0	0	
	21	1	0	2
	41	2	3	6
	21	1	2	4
	5	0	1	
Total	**90**	**4**	**6**	**100**

Source: Survey data (September 15-25- 2020)

The table above indicates average family size of the respondents is 4. However, they are living in a plastic-made house (shade) .About 90% of the respondents are living in a plastic-made house (shade) they are not such comfortable and insecure because of the area and their temporary house at risk for both natural and human made problems found that area including bad weather.

Family size and the low-income life of dwellers in koshe“lastic sufer” area are directly related. This is the higher family size of the respondents the less daily income because most of the households living in this area are migrants from different parts of the country.Although they don’t have a kebele ID card ,so they are fewer participants for a permanent and good paid type of

job. Because of this most of them engaged in daily labor and a less paid type of job, this situation are forced most of the households living in this area.

4.3. Income level of respondents

Table 3: Income level of respondents

Level Income	Frequency	Percent	Cumulative Percent
500	24	24.0	24.0
1000	10	10	10
1250	47	57.0	91.0
1500	0	0	0
2000	8	8.0	99.0
>2000	1	1.0	100.0
Total	100	100.0	

Source: Survey data (September 15-25- 2020)

Households with large family size, are not enough monthly income to fulfill their family need. This might be because most of the households living in koshe “lastic sufer ”area are engaged in daily labor work and home to home jobs like cooking foods, washing clothes and other types of jobs.

The average monthly income of the respondents is 1375 birr, but the highest percentages (91%) of them earn less than this average, showing that their income is below the poverty line. This could imply that these residents have low education level as a good level of education is one way of two enables have good earning. Most of them are engaged in a less paid type of job as the data from an interviewee, and they also engage in a different type of daily labor works to earn more and sustain their living. As table 2 above indicates most of the respondents are living in the

plastic-made houses (shade) they are not such comfortable and insecure because of the area and their temporary house at risk for both natural and human-made problems found in that area including bad weather. It is possible to conclude that their living condition is below the poverty line where they focus only on subsistent life.

4.4. Frequency of House Cleaning and Sanitation Status of Their Dwelling

Table 4: Frequency of cleaning and sanitation status of dwellers

Frequency of Cleaning	Frequency	Cumulative Percent
One Times A	21	21.0
Three Times A	4	4.0
Never Mind	75	75.0
Total	100	

Source: Survey Data (September 15-25- 2020)

As the respondent mentioned 75% of them never mind about cleaning their house .While 21%, clean their house only once a day. However the majority of them cannot clean their house daily because their resident“lastic sufer” was very near to Koshe“lastic sufer” garbage. In Ethiopia, cleaning houses is a day- to-day duty for households. But Koshe “lastic sufer” community never mind about cleaning their house. The cumulative effect of those who clean their house only ones and those who do not mind cleaning their home could result in severe health effects, negative attitude towards the residential area and promote poor sanitation. As result, most dwellers in the area are exposed to communicable and non-communicable diseases. Relatively those who clean their house repeatedly are less exposed to health problems. However their living in koshe “lastic sufer” makes them all be exposed more.

4.5 .Major Health Problem in Koshe“lastic sufer” Area

Table 5: Major health problem

Major health problems	Frequency	Percentage
Common cold	18	18%
Tuberculosis	5	5%
Diarrhea	28	28%
Typhoid &typhus	49	49%

Source: Survey Data (September 15-25, 2020)

The data in the table indicates that the major disease types in Koshe ″lastic sufer″ areas are Typhoid and Typhus which account for 49% of the frequency. A significant percentage of dwellers are exposed to Diarrhea (28%) and common cold (18%). Since the dwellers live very nearer to waste collection center (Koshe garbage) different types of communicable diseases are affecting the community very much. As indicated by interview participants, health centers in the woreda 01 are always busy with treating patients of Typhoid and Typhus, which are caused by very low sanitation situations. The impact of improper solid waste disposal can be direct or indirect. For the general observation around the residence, it has big holes containing stagnant water this is suitable for the breeding of disease vectors, primarily flies, and rates that can cause differently diseased including common cold. The risk is indirect in that arises from this situation the common cold and other respiratory tract infections including sinus are not ignored as part of the effects. These diseases are related to sanitation problems; which are common in the study area.

Because of contamination of water in the area, mostly children and other communities are exposed to Diarrhea. Moreover, 5% of them are caught by tuberculosis and this is not a number that should not be overlooked as tuberculosis is highly contagious and can affect a large number of residents in the study area. Their living area is much suffocated and they are exposed to respiratory tract infections. The respondents of the interviewee mentioned that they are scared always about the seriousness of the problem and look for professionals support. Despite the efforts by health professionals in the woreda 01, the challenges are very large which needs great effort from the concerned bodies. According to health professionals from woreda01 it is very intensive that the problems should be addressed by the nongovernmental institutions and other private health facilities should also be added. With such effort, it could be possible to bring change.

4.6. Socio-Economic Problem

Concerning the socioeconomic problem of the study area, the finding indicates that most of the respondents 60 % are living in slum living status. About 16% of the respondents are living in poor income conditions due to low education level (Table 1). Field observations in the study area have clearly shown that the area is not comfortable to live in. Regarding their social situation, every dweller is busy seeking their daily bread; there is a loose social structure and interaction. They engage themselves in activities that help them to earn income from 11 a.m. to 6 p.m.

Table 6: Socio-economic factors

Major socio-economic problems	Frequency	Percentage
Living in slum living status	60.0	60%
living in poor income condition	20.0	20%
Unemployment	16.0	16%
Stigmatization	4.0	4%

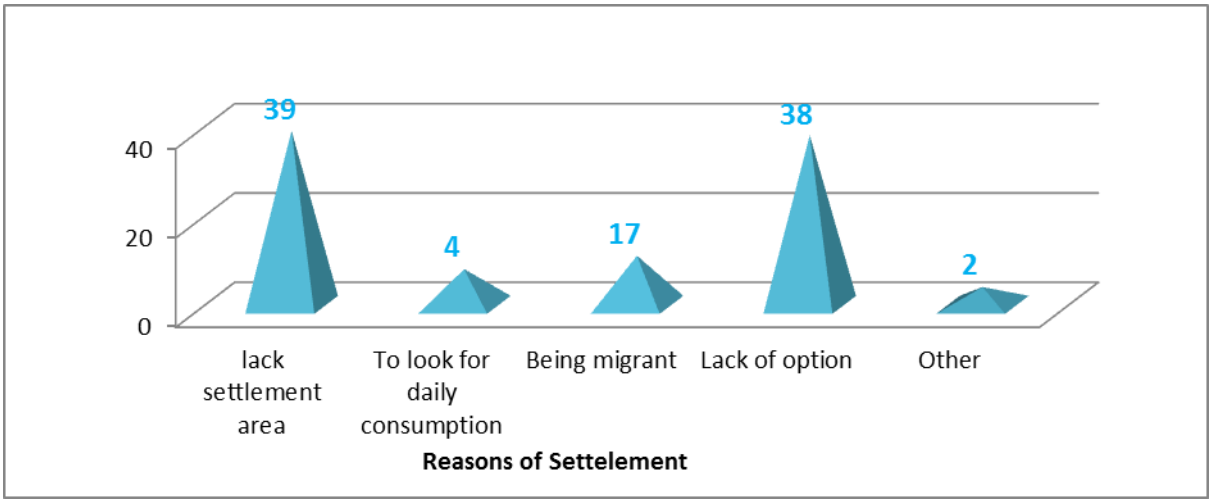
Source: Survey data (September 15, 2019)

As shown in table 5, 60% of the respondents live in slum with low income conditions. Of these 16% are unemployed and the 4% of the respondents are stigmatized and lack of any social interaction. In addition observations have shown that they are psychologically depressed members of the community in Koshe “lastic sufer ”area. In addition 20% of the respondents living in a very poor income condition, they seek for any options which can support their income and sustain their livelihood. They even seek to bagging far from their area to serve their self and their family for survival. This is the cumulative effect of poor living condition in the area as whole. Though life in Ethiopia is under poverty condition the case of settlers in Koshe “lastic sufer ” area is much worsened.

4.7. Reason for settlement around Koshe “lastic sufer”

There are pushing and pulling factors that force the respondents to settle in koshe “lastic sufer ”area. The major reasons why dwellers are settled in koshe“lastic sufer” include lack of optional settlement of another area (39%), to look for daily consumption (4%), being migrant (17%), lack of option (38%) and other reasons like marriage, and education (2%). As the data in figure 2 shows, most of the respondents settled in Koshe“lastic sufer” due to lack of another settlement area.

Figure 2: Reason for settlement



Source: Survey Data (September15-25, 2020)

The settlement area of Addis Ababa city is much tightened and it is not an easy task to have a living space. Moreover, house rent is very expensive in the city. Thus low incomes communities are forced to move to a place were reserved for dirty garbage areas. To cope up with the living condition of the city they preferred the Koshe“lastic sufer” area which is not being selected by a medium-income community. Solid waste management of the city is in the outskirt of the town where no possibilities to include the area as a living site by municipalities. As result, it was left for the waste disposal site.

4.8. Access to Social services (clean water and school)

Access to clean water is a very significant issue for the daily life of the community. Thus settlers of Koshe “lastic sufer ”were asked whether these services are accessed or not. Most of them responded (81%) that these services are not provided as required.

Table 7 Availability of clean water at household level/week

Level of consumption	Fre	Pe
Three Times	0	0.0
Two Times	1	1.0
One Times	11	11.
Once in Two or Three weeks	86	86.
Total	100	10

Source: Survey Data (September 15-25, 2020)

As table 6 above indicates, 86% of the respondents get access to clean water once in two weeks while 11% get only one. The information secured through the interviewee revealed that most dwellers get their daily water provision from community tap by standing more than two hour; although community tap water is not safe due to contamination that could result from leakages, and this can aggravate transmission of water-borne diseases which can add more problems on the health situation of the community.

In the 2nd Growth and Transformation plan, the Ethiopian government has planned to create access to school for every child in different parts of the country. However, some children in Addis Ababa, those living in the study area did not get access to schools.

The data in table 7 below table indicates that 24% of children residing in Koshe“lastic sufer” area have access to education. However, 76% of koshe “lastic sufer” area settlers have no easy access to get closer the government or private schools, especially for kindergarten students. This, as the discussions with the community revealed, the schools are not nearby but located as far distant as a minimum of 3-4 kilometers and parents could not pay for transport because of their less income.

Table 8: Access to closer school

		Frequency	Percent
Valid	yes	24	24.0
	No	76	76.0
	Total	100	100.0

Source: Survey Data (September 15-25, 2020).

Access to closer schools have been very difficult for Koshe“lastic sufer” area settlers and children of these settlers appear to be far from this important social service.

4.9. Availability of Comfortable Playground

A playground is one of the important places for children to get physical strength build their social and psychological makeup and grow strong enough in social relationships with their peer groups.Such a comfortable and clean playground where children can easily play on it and keep themselves from any health hazards. Helps to build a proper attitude towards themselves, the society, and the environment and this facilitates the building of positive thinking. In light of this, most of the respondents indicated (86%) that there is no comfortable playground for their children but around the garbage area, but some children in Koshe“lastic sufer” area use the school fields as playing ground (6%). Few children in the community play in the nearby villages (1%). Though the space is comfortable to play in since it is around garbage they can be exposed to different diseases.

Table 9: Availability of comfortable play ground

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	around the garbage	86	86.0	91.5	91.5
	Only in the school	6	6.0	6.4	97.9
	nearby villages	1	.0	1.1	98.9
	other, specify	1	.0	1.1	100.0
	Total	94	94.0	100.0	
Missing	System	6	6.0		
Total		100	100.0		

Source: survey Date September (15-25, 2020)

4.10. Perception of other community and settlers feeling about koshe“lastic sufer” area

The living standard among the poor and rich communities is different. This difference creates a perception differently from one another. In most case rich and well to do family has the attitude of neglect towards poor. The poor themselves do not feel that they would be welcomed by other communities.

Table 10: perception of other community

Perception	Frequency	Percent
Positive	1	1.00
Negative	85	85.00
Ignorance	10	10.00
No feeling	4	4.00
Total	100	100.0

According to the table above perception of other communities about Koshe“lastic sufer” is very negative. They think settlers in this area a non-valuable and ignored members of the communities. Around 85% of the respondents realized that the perception of other community is negative and their perception focused on about the garbage area not as a human as a whole. As 10% of the respondents mentioned that other communities ignored this area that means no one want to see and try to support the residents. And 4% of the respondents say no feeling about peoples who live in this area; they do not want to think about settled groups in this area. This is added by the groups who do not have any feelings. More portions (85%) of other communities including the government officials have a negative perception about the settlers of the Koshe “lastic sufer” area community .

4.11. Extent of community bondage in the study area

In the traditional community, the bondage they have is very important for their socio-economic network. They share many things useful for themselves and others surrounding them. This adds value to the effort government is doing to solve health problems and other complications. Of course, the community structure which is traditionally bonded can perform much than outsiders.

Regarding table10:-the extent of the community bondage in the study area, as per 81% of the respondents, says weakly. Since there is stigmatization and migration of the community in Koshe“lastic sufer” happed because of this bondage between each other is so loose. However, 11% of them mentioned that they have no community bondage at all. In addition, 8% of the respondents say community bondage between them often relation if sometimes they make a relation between themself may they migrate from a similar place of the country lived before. Due to the perception of the community living in the study area Koshe“lastic sufer ”dweller's social relation and social bondage between themselves are under question. Because of the dwellers poor living status, instability, and temporary settlement area they can’t make strong community bondage between each other.

Table 11: Extent of community bondage

Extent of community	Fre	Per
Strong	0	0.0
Weak	81	81.0
No bondage	11	11.0
Often relation	8	8.0
Total	100	100.

Source: Survey Data (September 15-25, 2020)

4.12. Awareness about Solid Waste Recycling and Reuse

The government is implementing policies and strategies to ease the management of solid waste stakeholders can take part in creating awareness on recycling and reusing dry waste materials. In light of this, the respondents were asked to give responses about their awareness of the management of solid waste. Consequently, their knowledge about solid waste recycling and reusing is found to be low as only 7% of them indicated the yes response while 92% responded by saying no. Although recycling and reusing of solid waste have been practiced at some places in Addis Ababa, this has not been made known to the low-income level community like

koshe“lastic sefer” area settlers. Thus, the knowledge gap on the recycling of solid waste appears to be persistent in the koshe“lastic sefer” area.

Table 12: Awareness level on solid waste recycling and reuse

Awareness about Solid waste Management	Frequency	Percent
Yes	7	7.0
No	92	92.0
Never mind	1	1.0
Total	100	100.0

Source: Survey Data (September-October 2020).

In addition to this Koshe “lastic sufer ” area settlers may get the chance how to recycle and reuse those materials technically that is very good for their income source . But permission is mandatory from the woreda 01 officials after that they will recycle and reuse metallic and nonmetallic materials around their residency.

4.13. Door to Door solid waste collection Service

Addis Ababa city administration is undertaking door - to- door solid waste collection. The city has its enterprise which is managing the process in somewhat acceptable ways. But in Koshe “lastic sefer”this service not yet reach the community sustainable and consistent.

Table 13: door to door waste collection service

	Frequency	Percent
Yes	1	1.0
No	99	99.0
Total	100	100.00

Source: Survey data (September 15-25, 2020)

In response to the question referring to whether such services exist, 1% of the respondents confirmed that known about the service but not yet in this area (Table 12) while 99% of the respondents said they do not use the service. The reason they gave was that because they live very close to Koshe“lastic sefer”, a place many of the city dwellers consider as a disgusting place only for garbage. Most of the settlers who have access to the services are served in 8-15 days. The residents were asked whether there is a waste disposal problem in their neighborhood. The survey revealed that 53% of the respondents said there is a waste littering problem in their surrounding while 46% said no.

Residents interviewed complained about health and safety issues associated with the poor solid waste collection system. Littering was observed during the loading of waste on carts and while transporting. Poor cooperation of residents, poor storage practice of some households resulted in low efficiency of collection and waste remained uncollected on the streets, in open spaces, ditches, roads and rivers and streams.

Littering of waste in the neighborhood is common in the city as citizens drop it during the evening illegally. Furthermore, illegal slaughtering and throwing waste in the ditches is observed and causes ditches to be clogged and release an offensive smell. This caused environmental and health hazards, blockage of sewer lines, outdoor and flies nuisance, and aesthetic degradation.

4.14. Other Dry Wastes Disposal Mechanisms

As mentioned above, majority of Koshe“lastic sefer” dwellers are not connected to the formal waste disposal networks but they use optional disposing means. Some of the disposing means are roadsides, open fields, bridges, inside a compound, riversides, and gullies.

Table 14: different means of waste disposal

Means of disposal	Frequency	Percent
Road Sides and Open Fields	23	23.0
Dumping in Bridges	30	30.0
Burry Inside my Compound	7	7.0
Simply Disposes in my Compound	15	15.0
Dumping in River Side's and Gullies	18	18.0
Burn in my Compound	7	7.0
Total	100	100.0

Source: Survey Data (September 15-25, 2020)

As shown in Table 13 above, 23% of the respondents said that solid waste is disposed of on roadsides and open fields, while a considerable number (30%), confirmed that waste is dumped in bridges. Some of the community bury waste in their compound (7%), There are also some who simply dispose of waste in their compound (15%), Dumping solid waste in river side's and gullies (18%) is considerable while very few of them burn solid waste in their compound (7%). But these options are risky for settlers since burning refuse within dwelling areas may create significant smoke, which can cause health problems like coughing, or fire hazard. Burning may be used to reduce the volume of waste and may be appropriate where there is limited space for burial or landfill. An interview made with the dwellers revealed that the simplest solid waste disposal means, that is, the communal pit where waste can be directly disposed to have been absent. In addition, family pits, which provide a better longer- term option could have been utilized to dispose of waste easily but this has not been practiced at all in Koshe "lastic sefer" area.

4.15 Stakeholders' Participation

In any city, the stakeholders' participation is very important in order to manage solid waste. Although waste management responsibilities primarily lie with cities and municipalities, the key to success is to collaborate with other stakeholders like the private sector, communities, and in some cases with the informal sector (Kunze and Gerhard,2010).

The major stakeholders in Ethiopia could be government, humanitarian organizations, traditional institutions like Iddir, religious institutions ,women's associations, dwelling neighbors and staff from health sector. In connection with stakeholders participation in proper solid waste management, 37% of the respondents indicated (table14) that there are some stakeholders who participate in awareness creation programs 28% while others 19% participated in Training,15% in Education and 37% attend in a social coffee ceremony program in their residency.

Table 14: Stakeholders participation in poor solid waste management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Awareness creation	26	26.0	27.7	27.6
	Trailing	18	18.0	19.1	46.7
	Education	15	15.0	16	62.6
	Social coffee ceremony	35	35.0	37.2	100
	Total	94	94.0		
	System	6	6.0		
Total		100			

Source: Survey data (September 15-25, 2020)

Further, 37% were confirmed to participate in a social coffee ceremony where discussions regarding the disposal of solid waste issues could be points of focus during the stay. The information displayed in table 14 shows evidence for the existence of government, community and private sectors collaborative involved in the management of solid waste management. This collaboration ensures that each and every move fits into an integrated and sustainable system designed to this community for promoting service, housing, clean water, toilet, public health, environmental protection, and good governance.

4.15.1. Coping strategies of communities to major health and socio-economic problems in Koshe“lastic sufer” area

An interview was made with the community on how they endeavor to cop up with the challenges regarding improper solid waste management. Consequently, Communities indicated that they avoid littering during loading of waste on push carts and while transporting. They said started to feel responsible as citizens not to drop wastes during the evening. In order to cope the situation residents suggested that health and safety issues associated with the poor solid waste collection system must be handled by the residents themselves first. Then currently they are giving focus to the effort government is doing. In order to avoid this still awareness is being done by health extension worker and woreda 01 health office. According to the information obtained from health office head and health extension workers, Addis Ababa city administration is working much on awareness through mass Medias. Basic health education in the morning section of health centers every day is bringing a valuable result.

Ultimately, the households living in this area are trying to develop their coping mechanism to question the current bad situation in the area and, therefore, it is due not only the individual or the community, but also to the ability to support mechanisms for the individual and

the community in general. For example, a particular parish might be made up of several new immigrants, but that new parish might enjoy the support of the local church. In itself, the new community may not have cohesion, but its capacity lies in the support it has. Similarly, an impoverished community may not be at the center of development, but due to its internal social and economic structures, it may have significant coping capacity and resilience. Therefore, coping capacity has to do both with what a community has internally and with the external structures on which it depends (Solomon,A,2006).

CHAPTER FIVE

5. RESULT AND DISCUSSION

This chapter presents the main body of the resarch paper.In order to achieve each spacifc objectives of the study,the data obtained from survey are analyzed using different methods of analysis.Descriptive statistics is used mainly the first four objectives.In addition to that the last objectives analyze the main coping stratagies of community living koshe“lastic sufer” area(objective four).The data gathered to the last objectives (key informant interview) are analyzed through qualitative method of analysis with some descriptive statistics.

The magnitude of health problem among Koshe“lastic sufer” area community.This section is designed to analyze and briefly describe how is the magnitude of community health particularly Koshe “lastic sufer ” area because of poor solid waste management. As per the survey result of the study and the researcher's observation, due to poor solid waste management wastes were dumped nearby the residency of Koshe“lastic sufer” area community. Because of this, the householders are affected by different diseases because of lack of pure water, toilet, poor sanitation, and environmental pollution. This is also related to what has been found by (Ziraba,Haregu and Mberu,2016) Solid waste is known to affect health and this is one of the main reasons why solid waste management is an environmental and public health concern. However, while some causal relationships between waste exposure and the health effects of certain types of waste are known, others are unclear or not public health priority. Where causal relationships are known, the full extent of the poor health burden of exposure is not known. In part, the problem of establishing functional relationship is associated with the difficulty in determining the type, amount, and duration of exposure. Regarding health effects, the problem is that it is difficult to exclude other causes, as other influences from the environment can

potentially cause similar effects. Found that the households are living in a slum area similar to Koshe“Lastic Sufer” are at risk of different communicable & non-communicable diseases.

Table 15: Major health problem

Major health problems	Frequency	Percentage
Common cold	18	18%
Tuberculosis	5	5%
Diarrhea	28	28%
Typhoid &typhus	49	49%

Source: Survey Data (September 15-25, 2020)

The selected sample households were also asked what are major health problems(disease) affect the households in koshe“lastic sufer” community. Typhoid and Typhus account 49% of the frequency. A significant percentage of dwellers are exposed to Diarrhea (28%) and common cold (18%). Since the dwellers live very nearer to the waste collection center (koshe garbage) different types of communicable and non-communicable diseases are affecting the community very much. As indicated by interview participants, health centers in the woreda 01 are always busy with treating patients of Typhoid and Typhus, which are caused by very low sanitation situation.

The findings in Table 3 revealed that the income level of the respondents from the survay data Households with large family size, are not enough monthly income to fullfill their family need. This might be because most of the householdes living in Koshe “lastic sufer ”area are engeged in daily labour work and home to home job like cooking foods, washing clothes and other types of job. Socio economic factors also refer to society related economic factors. A study

made by (Modupeola A. et.al 2015) indicated that socio-economic factors are integrated and influence one another.

Table 16: major socio- economic

Major socio-economic problems	Frequency	Percentage
Living in slum living status	60.0	60%
living in poor income condition	20.0	20%
Unemployment	16.0	16%
Stigmatization	4.0	4%

As shown in this table, 60% of the respondents live in slum with low income conditions. Of these 16% are unemployed and the 4% of the respondents are stigmatized and lack of any social interaction. In addition observations have shown that they are psychologically depressed members of the community in Koshe “lastic sufer ”area. In addition 20% of the respondents living in a very poor income condition, they seek for any options which can support their income and sustain their livelihood.

According to the European Commission report by (Salado, 2008), indicated major socio-economic effects resulting from poor solid waste management to include violation of human rights such as substance abuse, depression, and physical illness. Moreover increasing level of exposures to violence and toxins and loss of access on educational prospects, and access to services were one of the serious effects. High risks of abnormal behaviors and mortality rates and lack of work security and Labor absenteeism is revealed. Stakeholder Participation is one of the major objective of this resarch paper.So according to the survay major stakeholders in

Ethiopia specially the community lived in koshe“lastic sufer” municipalities are generally aware of the health risks and environmental problems posed by improper waste management. At the same time, we are looking for new ways to share our traditional responsibilities in these areas with neighboring communities, small and medium-sized enterprises (MSEs), large private entrepreneurs and industries, and other stakeholders. Municipalities are increasingly likely to seek to mobilize the human and human-economic resource of these parties to develop appropriate systems for solid waste management system. Joseph, K. (2006). In addition to this government, humanitarian organization, traditional institutions like Iddir, religious institutions ,women’s association, dwelling neighbors and staffs from health sector. In connection with stakeholders participation in proper management of solid wastes the respondents indicated (table17) that there are stakeholders who participate in awareness creation programs 28% while others 19% participated in Training,16% in Education and 37% are attend in a social coffee ceremony program around the area.

Table 17: Stakeholders participation in poor solid waste management

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Awareness creation	26	26.0	27.7	27.6
	Trailing	18	18.0	19.1	46.7
	Education	15	15.0	16	62.6
	Social coffee ceremony	35	35.0	37.2	100
	Total	94	94.0		
	System	6	6.0		
	Total	100			

Source: Survey data (September 15-25, 2020)

In other wards Stakeholder participation is recognized as a factor contributing to the success of poor waste management in koshe“lastic sufer”. There have been many case studies in developing countries which prove that stakeholder participation in solid waste management plays a vital role in the contribution on the success of the services provided. Nevertheless, stakeholder participation is difficult to achieve even though it is important for solving the problem of poor solid waste management. There are several success factors that have been put forward by researchers that can practically encourage stakeholder participation in poor solid waste management(Shukor, Mohammed,Sani & etal., 2011).

As the discussions with the Interviewee revealed that communities agreed to avoid littering during loading of waste on push carts and while transporting. Moreover strong action is being taken to avoid littering of waste in the neighborhood. They started to feel responsible as citizens not to drop wastes during the evening. In order to cop up the situation residents suggested that health and safety issues associated with the poor solid waste management system must be handled by the residents themselves first. Currently they are giving focus to the effort government is doing. This has been strengthened by awareness creation programs being done by health extension worker and woreda 01 health office. Besides, education through the media and basic health education in the morning trough radio section of health centers every day is bringing a valuable result. Hence the media, the government, and the community have begun playing their part to combat the challenges associated with poor solid waste management.

This study shows that effects of poor solid waste management in the living households in the study area Koshe ″ Lastic sufer″ .Householdes try to develop coping strategies adopted include: reducing negative perception of the area, having a formal job, having higher income ,and appear ,and also try to dream change the residency area and move to other safe space to live.

In the addition dwellers always ask the responsible governmental body full fill their basic needs like; water, toilet, school, appropriate job, and safety issues. For instance, access to low rental kebela houses commonly used by the poor can help implementation of free nearer primary school and health center in the slums is necessary to support the household's income and most importantly reduce the risks "Effects of poor solid waste management" coping strategy that may have adverse long term effect ,Zurbrugg, C. (2002).

CHAPTER SIX

CONCLUSION AND RECOMMENDATION

6.1 Conclusion

This research was conducted in Addis Ababa, Kolfekeranion sub-city, woreda 01 koshe“lastic sufer” to determine the effects of poor solid waste management system the community who are living nearby the solid waste dump. To contribute to show the negative impact of the garbage on their daily life of the community and support in planning and improvement of solid waste management. As field observation result indicated Koshe“lastic sufer” area has a problem of solid waste collection and disposal. The community is living within so many health risks, inadequate income, job, sanitation, clean water ,school and market, the area overflowing with wastes from different municipal containers, and accumulation of a big dry waste dump.

The survey result and the generation rate data together indicate because of poor solid waste management of in Koshe“lastic sufer” area community are under health problems such us,49% of the residence health effects by Typhoid & Typhus and the rest of them affected by Diarrhea, common cold, and other diseases. Since the waste dump generated from residential, commercial, industrial and other sources of all the different districts of the city transported to the only disposal site (Koshe) the existing condition of the area is very difficult especially for the community who are living around this area. This is believed to enable the responsible government Biro work hard to increase the demand for handling poor solid waste management in the area koshe“lastic sufer“.

From the survey result it can be concluded that most of the community members living in Koshe“lastic sufer” households, most of them with large family size, are not enough monthly or daily income to fulfill their family primary need. This might be because most of the households living in koshe “lastic sufer ”area are engaged in daily labor work and home to home jobs like cooking foods, washing clothes, and other types of jobs.The average monthly income of the respondents is 1375 birr, but the highest percentages (91%) of them earn less than this average, showing that their income is below the poverty line. However,the majority of the households have no other life choice to change any residency place to save their life from any risks came related to this place.

In Koshe “lastic sufer” area stakeholder participation is very low to solve this current bad situation of the community challenged to solve the poor solid waste management the area. Municipalities are generally aware of the health risks and environmental problems posed by improper waste management. At the same time, we are looking for new ways to share our traditional responsibilities in these areas with neighboring communities, small and medium-sized enterprises(SMEs), large private entrepreneurs and industries, and other stakeholders. Municipalities are increasingly likely to seek to mobilize the human and human-economic resources of these parties to develop appropriate systems for solid waste management system.

From the survey result in kosha“lastic sufer” In connection with stakeholders contribute to proper management of solid wastes the respondents indicated that there are stakeholders who participate in awareness creation programs only 37% participate, the others not yet participate in any activities.The study result shows that the participation of stakeholders is very low in this area contribute to the improvement of poor solid waste management.

In addition to this coping strategy of communities as the discussions with the Interviewee revealed that communities agreed to avoid littering during loading of waste on pushcarts and while transporting. Moreover, strong action is being taken to avoid littering of waste in the neighborhood. They started to feel responsible as citizens not to drop wastes during the evening. To cope with the situation residents suggested that health and safety issues associated with the poor solid waste collection system must be handled by the residents themselves first. Currently, they are giving focus to the effort government is doing. This has been strengthened by awareness creation programs being done by health extension workers and woreda health office. Besides, education through the media and basic health education in the morning through the radio section of health centers every day is bringing a valuable result. Hence the media, the government, and the community have begun playing their part to combat the challenges associated with solid waste management.

6.2 Recommendation

Based on this paper poor solid waste management in kosha“lastic sufer ” area very difficult to solve the problem of the health and socio-economic effects of the community living around the garbage. Partnership and cooperation of government can be carried out by the private sector due to minimizing all the risks related to poor solid waste management .So the author believes that, government should contract out some of its responsibilities to private partners and also should prepare the ground to work with others. Improving the condition of poor solid waste requires coordinated and collective effect .Efforts by the city government, and policies, of the Ethiopian government show that there is a political well. The regular campaign, education, and training programs should be carried out at the neighborhood level, should be carried out at the neighborhood level, in health institutions, workplaces, schools, etc. to create public awareness.

Educating women should also be given the highest priority since, in Ethiopian society, cleanliness of the family, the housing units, and the immediate surrounding is the responsibility of women. Responsible authorities should work together to plan and execute their programs so that the collective effort towards improvement can be undertaken in poor solid waste management.

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Annexes

Annex-1

Informed consent form for households of Koshe“Lastic Sufer” area kolifa Karnanio sub-city worda 01

አዲስ አበባ ዩኒቨርሲቲ

የሶሻል ሳይንስ ኮላጅ

የሶሻልዎርክ ትምህርት ቤት

ውድተሳታፊ፡- እኔ ፅጌ መኮንን በአዲስ አበባ ዩንቨርሲቲ ሶሻል ወርክ ትምህርት ቤት የሁለተኛ አመት ማስተርስ ተመራቂ ተማሪ ስሆን፤ የመመረቂያ ጹህፈን በመስራት ላይ እገኛለሁ፡፡ ስለሆነም የሚከተሉትን መጠይቆች እንዲሞሉልኝ ስል በአክብሮት እጠይቃለሁኝ፡፡ የሚሰጡትም መረጃ ከጥናቱ አላማ ውጭ እንደማይውልና መረጃውም ሚስጥራዊነቱ የተጠበቀ ይሆናል፡፡

የጥናቱ ዋና አላማ በአዲስ አበባ ከተማ አስተዳደር ኮልፌ ቀራንዮ ክ/ ከተማ ወረዳ 6 ቆሼ አካባቢ ያለውን የማህበረሰብ የጤና "የገቢና የማህበራዊ ችግሮችን መዳሰስና እንዲሁም የመፍትሄ ሀሳቦችን ለማስቀመጥ ጥረት ማድረግ ነው፡፡ ስለሆነም በዚህ ጥናት ላይ እርስዎ በመሣተፍዎ ምንም አይነት አለታዊ ተጥዕኖ የለዉም፡፡ በመሆኑም የዚህ ጥናት ዉጤት ለወደፊት በዘርፉ ላይ ጥናት ለሚያደርጉ አካላት፤ ተመራማሪዎች እና ፖሊሲ ቀራጮች ፋይዳዉ የላቀ ስለሆነ መጠይቁን በሚገባ በማንበብ በጥንቃቄ እንዲሞሉልኝ በአክብሮት እየጠየኩኝ፤ በዚህ ጥናት ለመሣተፍ ፍቃደኛ በመሆንዎና ጊዜዎን ሰዉተዉ መጠይቁን ስለሚሞሉልኝ ከልብ አመሠግናለሁ፡፡

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ፊርማ ቀን

አመሰግናለሁ፡፡

Annex II

Informed Consent

My name is Tsige Mekonnen and I am a postgraduate student at Addis Ababa University in School of Social Work. I am conducting a quantitative study on *the effect of poor solid waste management on health and socio economic aspects the case of koshe"lasticsufer" area of Addis Abeba Kolifa-Karanio subcity as* a partial fulfillment of the master's degree in Social Work.

The study's findings are believed to serve as a way of understanding the effect of poor solid wests management on their daily life and challenges the community of Koshe"lastic sufer" peoples faced different problems. It will also assist concerned bodies who are interested in changing the all over living situations of the community within their health and socio-economic status.

Your participation in the study is much appreciated and will consist of the questioners.

The questioners are also estimated to take from a half hour up to one hour.

The information that you give is kept confidential and your identity will not be revealed in any publication resulting from this study. All information about you will have a number (code) on it instead of your name. However, the rule of confidentiality shall be breached in cases where it is found necessary to prevent serious, foreseeable, and imminent harm to you or others or when laws or regulations require disclosure without your consent.

The participation in this study will be on voluntary base and you may choose to skip any question that you are not interested to respond to or withdraw from the interview your consent to participate at any time. Your participation or not participating in the study will not in any form affect your work in any way, as compensation. If you have any questions or concerns, you may contact the researcher by the following telephone number 0913355040 Tsige Mekonnen or my

Advisor Dr. Firehiwot Jebessa through 0911792131. By signing your consent, you agree that you have read and understood the above information, and would be interested in participating in this study.

Consent

I have read this consent form and have been given the opportunity to ask questions. I give my consent to participate in this study.

Participant's signature_____ Date:_____

If Illiterate

I have witnessed the accurate reading of the consent form to the potential participant, and the individual has had the opportunity to ask questions. I confirm that the individual has given consent freely.

Name of witness_____ Thumbprint of participant

Signature of witness_____

Date: _____

Appendix A

Addis Ababa University

School of graduate studies

School of Social Work

Questionnaire

This research is aimed at describing the Effect of Poor Solid Waste Management: on Health and Socio-Economic aspects. This questionnaire *guide will be answered by Settlers in Koshe"lastic sufer" area.*

This Questionnaire is prepared for an academic purpose for the fulfillment of Master Degree in Social Work. Specifically the objective of the study is the Effect of Poor solid waste management on health and socio-economic aspects in Koshe"lastic sufer" area of Addis Ababa**.** Therefore, your response is very important for the success of the study because all information that you provide determines the analysis and conclusion of the research. Hence, you are kindly requested to give your response by selecting (circling) your answer from the given alternative choice or describing your opinion. Please be informed that your response is kept in confidential and you are not required to write your name. I would like to thank you for your cooperation.

Part one: Background information about the respondents.

Instruction: In order to answer the following questions, put a right sign (√) in the boxes that located in front of your choice.

1. Sex: A. Male B. Female

2. Age A.15-19 B.20-30 C.30-45 D.45-60 E.>60

3. Educational level: A. No formal education B. 1-4 grade complete

C. 5-8 grades complete D. 9-12 grades complete

E. Certificate F. diploma

G. First and above degree

4. House ownership condition:

A. Plastic made house B. kebele rental house C. other type of house

5. Family size: A.1 B.2 C.3 D.4 E. 5 F. 6 G.7

6. Average monthly income (in birr): A.500-1000 birr C.1500-2000 birr

B.1000-1500 birr D. >2000 birr

Part two: Questionnaire prepared for investigating Effect of sustainable solid waste management on health and socio-economic aspects in Koshe"lastic sufer" area, and practice together with their attitude regarding municipal solid waste management of Addis Ababa.

1. How often do you clean your house?

   A.one times a day C. in between two weeks

   B Three times a day D. Never mind about cleaning

2. How is sanitation status of your dwelling? _____

   A Excellent C. Good .

   B. very good D. bad

3. What are the major health problem this area?

   A. Common cold D. Typhoid and Typhus

   B. Tuberculosis E. Hepatitis

   C. Diaharea F. all

4. What are the major socio-economic problems of this area?

   A. Poor income C. unemployment

   B. Stigmatization D. Slum living status

5. What is your reason to be settled in this area?

   A .Lack of settlement area C.. Being migrant

   B. Looking for daily consumption D. Lack of options E. other specify____

6. How many times do you eat food per day?

   A. three times B. two times

   C. one times D. once in two days E. other specify_____

7. Do you have clean water access? A. yes B. no, if your answer is yes how many times Do you get water access A, three times B, two times C, one times D. ones in two weeks

8. If your answer is no for the above question where do you get clean water?

   A. River B. Stream C. Community tap D. other specify_____

9. Is there any school near to your village? A. yes B. No

10. If yes which school is your children are attending?

    A. Government school

    B. Private school

    C. Religious Institutes school

    D. Boarding school

11. Is there any comfortable playground for your children? A. yes B. No

12. If yes where do your children play?

A. around the garbage

B. only in the school

C. Nearby villages

D. other specify_____

13. What is the perception of other community about Koshe "lastic sufer"area?

A. Positive B. Negative C. Ignorance D. no feeling E. other specify_____

14. To what extent the community bondage is there?

A. Strong B. weak C. no bondage D. often relation E. other specify

15. What is you're feeling about your settlement in this area?

A. good B. bad C. no feeling D. stressed E. hopeless

16. Do you know the idea of solid waste recycling and reusing? A. yes b. no

A. yes B. no C, never mind

17. If your answer for question no 16 is 'yes', do you recycle or reuse solid wastes generated from Koshe" Lastic sufer "? A. yes B. no

18.If your answer for question no 17 is 'yes', what type of materials do you reuse and recycle (possible to select more than one)?

A. used Paper B. used glasses, bottles and glass materials. C. used metallic materials d. used plastics and plastic materials E. Textile and others

19. Do you know that compost can be prepared from solid waste?

A. yes B. no

20. If your answer for question no 19 is 'yes' do you prepare compost from solid waste produced in your house? A. yes B. no

21.. Do you use municipal solid waste collection for door to door solid waste collection from your residence? A. yes B.No

22.If your answer for question no 21 is 'yes', in .how many days interval you get this service?

A. 1-3 days B. 4-7 days C. 8-15 days D. 16-30 days

E. Above 30 days F. as available

23. In average how many containers of dry wastage is dumped in your area per day?

A. Ten – fifteen C. One- five

B. Five - ten D. More than twenty

24. Do you use formal sectors such as solid west collector cooperatives, women association and other related people for door to door solid waste collection from your residence?

A. yes B. No

25. If your answer for question no 24 is 'yes', how much do you pay for the service render per month?

A. five birr C. twenty birr

B. ten birr D. free charge

26. What are other means you frequently use to dispose the solid waste of your household?

A. at the road sides and open fields E. dumping in river side's and gullies

B. dumping in bridges F. burn in my compound

C. burry inside my compound G. if other please specify_____

D. simply disposes in my compound

27. Is there any stakeholders cooperation for the solid wests management activities in your Village? A. yes B. no

28. If your answer no 28 is yes what are the stakeholders mostly from _____

A. Government office C. humanitarian organization

B. Ider D. dwelling E. other people

29. Where is the stakeholder participation on solid wastes management? (Choose more than one answer)

A. Awareness creation programs C. education

B. Trailing D. Social coffee ceremony E campaigns.

30. Would you be interested to learn more about solid waste management, environmental impact of waste, and various ways of minimizing risks of hazards?

A. yes B. no

31. If so, what would be your favored method of increasing your knowledge (learning)?

A. open seminars B. Brochures distributed to residents

C. solid waste management campaign D. door to door education E. Educational programs newsletter and magazines F. Educational programs in radio and television

G. Exhibitions presenting good practices in solid waste management, sorting and recycling

32. Have you ever participated in a cleanup campaigns in your Kebele?

A. yes B. no

33. If your answer for question no 34 is “yes”, how many times you participate in the last year_____?

34. Do you know the rules and regulations of solid waste management of the city?

A. yes B. no

35. Does solid waste management service in your area is a burning issue as it compared with other service like road service, water supply etc.

A .yes B.no

36. If your answer for question no 37 is “yes” why the management of solid waste was a burning issue? (circle more than one answer)

A. cause of diseases C. risks for hazards

B. negative feeling D. loss of attention

37. Have you ever obtained training, education or information about solid waste management, and environmental sanitation and other problems created due to carelessly thrown solid waste?

A. Yes B. No C. Other Specify_____

38. If the answer for number 39 is yes who provided the training?

A. Government B. NGO C. Other specify _____

39. Are you interested to learn more about solid waste management, environmental impact of waste, and various ways of minimizing and treating the waste stream? A. Yes B. No

40. If the answer for question 38 is ‘Yes’ what is your reason to be interested?

A. Severity of the problem B. Issue of environmental protection

C. Person hygiene D. Other specify_____

41. Have you ever participated in awareness campaign in your kebele/woreda?

A. Yes B. No

42. If your answer for question no 38 is “yes”, how many times you participate in the last year_____?

A. One times B. Two times C. Three times D. More than three times

43. Do you know the rules and regulations of solid waste management of the city?

A. Yes B. no

44. Have you ever seen the sanitation agent making supervision and control on illegal dumping of solid wastes on the streets, open areas, river side's and other areas?

A. Yes B. No

45. If the answer for the above questions is 'Yes' how did they treat you?

A. In a very professional way B. Informally

C. Providing detergents D. Through awareness creation

46. In general, are you satisfied with the solid waste management service of the town which is delivered by sanitation, beautification and park development of Addis Ababa under the jurisdiction of municipality? A. Yes B. No

47. How do you evaluate the effort made by the government to provide efficient solid waste management service compared with other services of the town such as water supply, electricity, telephone etc?

A. The effort is very satisfactory

B. Unsatisfactory or very unsatisfactory'

C. Strong enough to be continued

D. There is a certain gap

E. Things should start from scratch

48. If your answer for question no 47 is 'unsatisfactory or very unsatisfactory', what would you suggest for the Environment and Sanitation, Beautification and Parks Development Department to do in order to overcome the constraints and improve the service?

A. Create awareness

B. Gave more attention for solid wastes

C. Change other settlements for the society

D. Gave psychosocial support

አዲስ አበባ ዩኒቨርስቲ

የሶሻል ወርክ ትምህርት ቤት

ለጥናታዊ ፅሁፍ የተዘጋጀ መጠይቅ

<u>በኮልፌቀራንዮ ክ/ከተማ ወረዳ 01 በቆሼ "ላስቲክ" ሰፈር ውስጥ ለሚኖሩ ነዋሪዎች የተዘጋጀ መጠይቅ</u>

<u>የተጠያቂው የግልሁኔታ መግለጫ</u>

1. ፆታ ሀ. ወንድ ለ. ሴት
2. ዕድሜሀ.15-19 ለ.20-30 መ.30-45 ሠ.45-60 ረ.>60
3. የትምህርት ደረጃ ሀ. ያልተማረ ለ. 1ኛ-4ኛክፍል መ. 5ኛ-8ኛክፍል ሠ. 9ኛ- 12ኛክፍል

ረ. ሰርትፍኬት ሰ. ዲፕሎማ ሸ. የመጀመሪያድግሪ

4.የጋብቻ ሁኔታ

ሀ.ያገባ ለ. ያላገባ መ.የተፋታ/ች ሠ. በሞትየተለየ/ች

5.የመኖሪያ ቤት ሁኔታ

ሀ. የቀበሌ ለ. የኪራይ መ .የግል

6. የቤተሰብ ብዛት ሀ.1 ለ.2 መ.3 ሠ.4 ረ. 5 ሰ. 6 ሸ.7

7.የወር ገቢ ሀ.ከ500-1000ብር መ.1500-2000ብር

ለ.1000-1500ብር ሠ. >2000 ብር

<u>የሚከተሉትን ጥያቄዎች በሚ□ባ በማጤን ትክክለኛ የሆነውን ጥያቄ በማክበብ የጥያቄ ወረቀቱን እዲሞሉ በአክብሮት እጠይቃለሁ፡፡</u>

1. ቤትዎን በምን ያህል የጊዜ ልዩነት ያጸዳሉ?

ሀ. በየቀኑ መ. በየሶስትቀኑ

ለ. በየሁለት ቀኑ ሠ. በሳምንት

2. አሁን ሚኖሩበት አካባቢ" ላስቲክ ሰፈር" አጠቃላይ የጽዳት ሁኔታ ምን ይመስላል?

ሀ. እጅግ በጣም ጥሩ መ. ጥሩ

ለ. በጣም ጥሩ ሠ. መጥፎ

3. በዚህ አካባቢ ውስጥ የሚገኙ ነዋሪዎች ከሚከተሉት የበሽታ አይነት በብዛት በየትኛው በሽታ ይጠቃሉ?

ሀ.የጉንፋንበሽታ መ. ተቅማጥ

ለ. የቲቢ በሽታ ሠ. ታይፎይድና ታይፈስ

ረ.የጉበት በሽታ ሰ. ሁሉም

4.ዋነኛው የዚህ አካባቢ ቆሼ " ላስቲክ ሰፈር" ነዋሪዎች ማህበራዊና ኢኮኖሚያዊ ችግር ምንድን ነው?

ሀ.አነስተኛ ገቢ መ. አነስተኛ የሆነ የገበያ ትስስር

ለ. ለብቻ ተገልሎ መኖር ሠ.እጅግ በጣም ዝቅተኛ የሆነ አኗኗር

5.በዚህአካባቢ ቆሼ "ላስቲክ ሰፈር" የመኖርዎት ዋነኛ ምክንያት ምንድን ነው?

ሀ. መኖሪያ ቦታ ባለማግኘትዎ መ.ከሌላ ቦታ ለቀው በመምጣትዎ

ለ. ለጊዜው ከሚያገኙት ጥቅም የተነሳ ሠ.አማራጭበማጣትዎ ረ. ሌላ ----------

6.በቀን ምን ያህል ግዜ ምግብ ይመገባሉ?

ሀ. ሶስትጊዜ መ. አንድጊዜ

ለ. ሁለትጊዜ ሠ. በሁለት ቀን አንድ ጊዜ ረ.ሌላ ----------

7. የዚህ አካባቢ ነዋሪ እንደመሆንዎ የንፁህ ውሀ አቅርቦትን ያ□ኛሉ?

ሀ. አዎ አ□ኛለሁ ለ. አይ አላ□ኝም

8. የተራ ቁጥር 7 መልስዎ አዎ ከሆነ ዉሃን ከዬት ይቀዳሉ?

ሀ. ከወንዝ መ. ከማህበረሰብ ቧንቧ

ለ. ከምንጭ ሠ. ሌላ ----------

9. በምትኖሩበት አካባቢ ቆሼ " ላስቲክ ሰፈር" በአቅራቢያችሁ የሚ□ኝ ትምህርት ቤት አለ?

ሀ. አዎ አለ ለ. አይ የለም

10. ለተራ ቁጥር 9 መልስዎ አዎን ከሆነ ትምህርት ቤቱ ከሚከተሉት ውስጥ፡፡

ሀ. የመንግሰት ነው መ.የሀይማኖት ተቋም ነው

ለ.የግል ነው ሠ. አዳሪ ትምህርት ቤት ነው

11. በአካባቢዎ ምቹ የሆነ የህጻናት መጫወቻ ቦታ አለ?

ሀ. አዎአለ ለ. አይየለም

12. ለ11ኛው ጥያቄ መልስዎ አዎ ከሆነ የመጫወቻ ቦታው የት አካባቢ ይገኛል?

ሀ.የቆሻሻ ገንዳዎች በሚከማቹበት አካባቢ መ. በምትኖሩበት አካባቢ

ለ. በትምህርት ቤት ውስጥ ብቻ ሠ.ሌላ

13.ሌሎች የአዲስአበባ ነዋሪዎች ስለዚህ ቦታ ቆሼ “ላስቲክ ሰፈር” ያላቸው አመለካከት ምን ይመስላል?

ሀ. ጥሩ አመለካከት መ . አመለካከታቸውን አላውቅም

ለ. መጥፎ አመለካከት ሠ. ምንም ስሜት የላቸውም ረ. ሌላ--------

14. በዚህ አካባቢ ውስጥያለው ማህበረሰብ እርስ በእርሱ ያለው ትስስር ምን ይመስላል?

ሀ. በጣም ጠንካራ ነው መ. ትስስር የላቸውም

ለ. ደካማ ነው ሠ. ትስስራቸው አልፎ አልፎ ነው ረ. ሌላ--------

15. .በዚህአካባቢ ቆሼ “ላስቲክ ሰፈር” አካባቢ በመኖርዎት በውስጥዎ ምን ይሰማዎታል?

ሀ. ጥሩ ስሜት መ. ምንም ስሜት የለኝም

ለ. መጥፎ ስሜት ሠ. ይጨንቀኛል ረ. ተስፋ መቁረጥ ይሰማኛል

16. ደረቅ ቆሻሻን እንደገና እንዴት ጥቅም ላይ ማዋል እንደሚቻል እውቀት አለዎት?

ሀ. አዎ አለኝ ለ. አይ የለኝም

17. .ለተራ ቁጥር 16 መልስዎ አዎን ከሆነ እንደገና ጥቅም ላይ ለማዋል የሚሰበስቧቸውን ዕቃዎች የሚያገኙት ከቆሼ ነው ?

ሀ. አዎ ለ. አይደለም

18. ለተራ ቁጥር 17 መልስዎ አዎን ከሆነ ምን አይነት ቁሳቁሶችን ነው በድጋሜ የሚጠቀሙት?

ሀ. ወረቀቶችን መ. ብረቶችን

ለ. ጠርሙሶችን ሠ. ፕላስቲኮችን ረ.ጨርቆችን

19. ከተለያዩ የቆሻሻ ብስባሾች ስለሚዘጋጅ ማዳበሪያ /ኮምፖስት/ እውቀት አለዎት?

ሀ. አዎ ለ. አላውቅም

20. ለተራ ቁጥር 19 መልስዎ አዎን ከሆነ በቤትዎ ውስጥ ከተለያዩ ብስባሾች ማዳበሪያ ያዘ□ጃሉ ወይ?

ሀ. አዎ ለ. አይ አላዘጋጅም

21. በመኖሪያ አካባቢያችሁ ቤት ለቤት እየመጡ ቆሻሻን የሚሰበስቡ ሌሎች ሰዎች አሉ?

ሀ.አዎ አሉ ለ. አይ የሉም

22. ለተራ ቁጥር 21 መልስዎ አዎ ከሆነ በየስንት ጊዜው እየመጡ ይሰበስባሉ?

ሀ. 1-3 ቀን መ.16-30 ቀን

ለ. 4-7 ቀን ሠ. ከወር በላይ ረ.እንደ ሁኔታው

23. በአማካኝ በቀን ምን ያህል የቆሻሻ ገንጋዎች ተጭነው ወደ ቆሼ "ላሰቲክ ሰፈር "አካባቢ ይመጣሉ?

ሀ.ከ10-15 መ.ከ1-5

ለ.ከ5-10 ሠ. ከ20 በላይ

24. በዚህ አካባቢ ውስጥ በህጋዊ ሁኔታ በመንግስት ተደራጅተው የደረቅ ቆሻሻን የሚሰበስቡ ማህበራት አሉ ወይ?

ሀ. አዎ አሉ ለ. አይ የሉም

25. ለተራ ቁጥር 24 መልስዎ አዎ ከሆነ ማህበራቱ ለሚሰጡት አገልግሎት በወር ምን ያህል ገንዘብ ይከፍላሉ?

ሀ. 5ብር ለ.10 ብር መ. 20ብር ሠ.ምንም አይነት ክፍያ የለውም

26.ከቆሼ ውጭ የተለያዩ ደረቅ ቀሻሻዎችን ከቤት ውጭ የትቦታ ልትደፉ ትችላላችሁ?

ሀ.በመንገድ አካባቢ ሠ. በምንኖርበት አካባቢ ውስጥ

ለ.በድልድይ ውስጥ ረ.ወንዝ ውስጥ በመጨመር

መ.ከምንኖርበት አካባቢ ውጭ ሸ. በማቃጠል ረ. ሌላ----------

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27. እርስዎ በሚኖሩበት አካባቢ ደረቅ ቆሻሻ በአግባቡ ያለመወገድና ለብዙ ጊዜ የመከማቸት ችግር ከሌሎች መብራት" ውሀና መንገድ ችግሮች ጋር ሲነጻጸር በጣም አሳሳቢ ነው ይላሉ?

ሀ. አዎ ለ. አይ አያሳስብም

28. በመንደራችሁ ውስጥ ባለው የደረቅ ቆሻሻ አወጋገድ ችግርን ለመፍታት የሌሎች የባለ ድርሻ አካላት አስተዋጽዖ አለ?

ሀ. አዎ ለ. አይ የለም

29. ለተ ራቁጥር 28 መልስዎ አዎ ከሆነ እነዚህ የባለድርሻ አካላትበአብዛሀኛው የሚመጡት ከየት ነው?

ሀ.ከመንግስት ቢሮ መ. ከበጎ አድራጎት ድርጅት

ለ. ከዕድር ሠ. ከነዋሪዎች ረ. ሌላ----------

30. በደረቅ ቆሻሻ አወጋገድ ላይ የባለ ድርሻ አካላት ተሳትፎ ትኩረት ምን ምን ላይ ነው?

ሀ. ግንዛቤን በመስጠት መ. ትምህርት በማስተማር

ለ. ስልጠናን መስጠት ሠ.የቡና ጠጡ ፕሮግራምን ማዘጋጀት ረ. የተለያዩ ባዕላትን ማዘጋጀት

3ነ. እርስዎ ስለ ደረቅ ቆሻሻ አወ□□ድ እንዲሁም በአካባቢው ላይ የሚደርሰውን አደ□ ለመቀነስ የሚሰጡ ፕሮ□ራሞች ላይ ለመሳተፍ ፍላጎቱ አለዎት?

ሀ. አዎ ለ.አይ

32. በዚህ አካባቢ የሚኖሩ ነዋሪዎች ስለ ደረቅ ቆሻሻ ክምችትና አስከፊነት □ንዛቤን እንዲያ□ኙ በየትኛው ዘዴ ሰዎችን ብናስተምር የተሻለ ይሆናል?

ሀ. ከፍት በሆኑ ውይይቶች ሠ.ቤትለቤትእየሄዱበማስተማር

ለ. የተለያዩ በራሪ ወረቀቶችን በመበተን ረ.መፅሔትና,ጋዜጣንበመጠቀም

መ.በአላትን በማክበር ሸ. በቴሌቪዥንና ሬዲዮን መጠቀም ቀ.ኤግዚብሺንበማዘጋጀት

33. ከዚህ በፊት በአካባቢዎት ላይ በሚደረግ የፅዳት ዘመቻ ላይ ተሳትፈው ያውቃሉ?

ሀ. አዎ አውቃለሁ ለ. አላውቅም

34. ለተራ ቁጥር 33 መልስዎ አዎን ከሆነ ባለፈው ዓመት ለምን ያህል ግዜ ተሳትፈዋል?

ሀ. 3 ጊዜ ለ. 4 ጊዜ መ. 5 ጊዜ ሠ. ነ0 ጊዜ ረ. ከነ0 ጊዜ በላይ

35. በከተማችን ስላለው የቆሻሻ አወጋገድ ህግና ደንብ ያውቃሉ?

ሀ. አዎ አውቃለሁ ለ. አይ አላውቅም

36. ለተራ ቁጥር 36 መልስዎ አዎን ከሆነ የደረቅ ቆሻሻ አወጋገድ ችግር አንገብጋቢችግርየ ሆነው?

ሀ.ለተለያዩ በሽታዎች መንስኤ ስለሆነ መ.ለድንገተኛ አደጋ መንስኤ ስለሆነ

ለ.መጥፎ ገጽታን ስለሚፈጥር ሠ. ትኩረትን ስላላገኘ

37. በዴለሽነት የትም ቦታ የሚጣሉ የደረቅ ቆሻሻ ክምችቶች በአካባቢ ላይ የሚያደርሰውን ብክለትና የንፅህና ድለት በተመለከተ ከዚህ በፊት ያጉት ስልጠና ትምህርት ወይም የንዛቤ ማስጨበጫ ፕሮራም አለ?

ሀ. አዎ አለ ለ. አይየለም

38. ለተራ ቁጥር 37 መልስዎ አዎ ከሆነ ስልጠናውን ወይም የግንዛቤ ማስጨበጫ ፕሮግራሙን የሰጠው ማን ነው?

ሀ. መንግስት ለ. የምግባረ ሰናይ ድርጅት መ.ሌላ ----------

39.በአካባቢ የተጠራቀመ የቆሻሻ ክምችት ሊያደርስ ስለሚችለው አደና ሌሎች የአካባቢውን ችሮች ለመቀነስ በመደረ ስልጠናዎች ላይ ለመሳተፍ ፍላጎት አለዎት?

ሀ. አዎ ለ.አይ መ. ሌላ----------

40. ለተራ ቁጥር 40 መልስዎ አዎ ከሆነ ምክኒያቱ ምንድነው?

ሀ.የችግሩመጠን መ.ከግልንጽህናአንጻር

ለ. አካባቢን ከመንከባከብ አንጻር ሠ. ሌላ

41. በሚኖሩበት ቀበሌ ውስጥ የግንዛቤ ማስጨበጫ ፕሮግራሞች ላይ ተሳትፈው ያውቃሉ?

ሀ. አዎ ለ. አይ

42. ለተራ ቁጥር 42 መልስዎ አዎ ከሆነ ለምን ያህል ግዜ ተሳትፈዋል?

ሀ.ነ ጊዜ ለ.2 ጊዜ መ. 3ጊዜ ሠ.ከ3 ጊዜ በላይ

43. ህ ወጥ በሆነ መልኩ በየትኛውም ቦታ ቆሻሻን በሚያከማቹ ሰዎች ላይ ከትትል የሚያደርአካላትን በሚኖሩበት አካባቢ አይተው ያውቃሉ?

ሀ.አዎ ለ.አይ

44. ለተራ ቁጥር 43 መልሱ አዎ ከሆነ በምን መልኩ ክትትል ያደርጋሉ?

ሀ. ሙያዊ ድጋፍ በመስጠት መ.ዲተርጀንት በመስጠት

ለ.ሙያዊ ባለሆነ መልኩድጋፍ በመስጠት ሠ. የግንዛቤ ማስጨበጫ በመስጠት

45. በመን□ስት በኩል በደረቅ ቆሻሻ አወ□□ድ ዙሪያ የሚሰጠው አ□ል□ሎት ከሌሎች አ□ል□ሎቶች ማለትም ከውሀ፤ መብራትና ስልክ አንፃር ሲታይ ምን ይመስላል?

ሀ.በጣምአጥጋቢ መ. አጥ□ቢ

ለ. በጣም ዝቅተኛ ሠ. ጥቂት ክፍተት አለው ረ. እንደገና መታየትአለበት

46. ለጥያቄ ቁጥር 45 መልስዎ በጣም ዝቅተኛ የሚል ከሆነ በምን መልኩ ይሻሻላል ብለው ያስባሉ?

ሀ .ግንዛቤን በመፍጠር መ. ነዋሪዎችን ሌላ አካባቢማስፈር

ለ. ትኩረትን በመስጠት ሠ.የስነ- ልቦና ድጋፍን ማድረግ