WASTE DISPOSAL METHODS AND HEALTH STATUS OF HOUSEHOLDS IN UYO LOCAL GOVERNMENT AREA IN POST COVID-19 ERA

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Abstract
The study investigated Waste Disposal Methods and Health Status of Households in Uyo Local Government Area in Post Covid-19 Era. Three research questions were raised to guide the study. Descriptive survey research design was adopted in the study. The population comprised of 1,265,000 people made up of all residents in Uyo Local Government Area of Akwa Ibom State. A sample size of 400 respondents was drawn using Taro Yamane sampling formula and used to collect data for the study. Stratified and simple random sampling techniques were employed to select the respondents. A structured questionnaire titled: Waste Disposal Methods and Health Status of Households Questionnaire (WDMHSHQ) was used for data collection. The content of the instrument was validated by three experts in cognate disciplines all in University of Uyo. Cronbach Alpha statistical analysis was used to determine the internal consistency of the instrument and the analysis yielded a reliability coefficient of 0.79. Data collected was analysed using Mean and Standard Deviation. Findings revealed that burning of wastes (cluster mean = 3.49), dumping of wastes (cluster mean = 3.50) and compost wastes (cluster mean = 3.38) all had negative effect on the health status of households in Uyo Local Government Area in the Post Covid-19 Era with varying cluster mean values and standard deviation. Based on the findings, the researchers conclude that waste disposal methods have negative effect on health status of households in Uyo Local Government Area of Akwa Ibom State in the post covid-19 Era and therefore recommend amongst others that households should engage more in the compost wastes disposal method as it has less negative effect on the health status of households in the study area.

Keywords: Waste Disposal, Burning of Waste, Open Dumping of Waste, Composting of Waste, Health Status of Households.

Introduction
Globally, waste disposal is a big issue of discuss as global population grows and industrialization takes central stage in many of the developing economies. The consequence of pollution has been observed to have negative implications on the quality of living, lifespan as well as introduced diverse ailments that were once unknown (Adetola, 2009). Global warming, a result of poor waste disposal is a big issue of concern with respiratory diseases and cancerous ailments increasingly becoming predominate. Household solid waste disposal is a major challenge in developing countries due to poor waste management practices and infrastructure (Oguntoke et al., 2019). Household solid waste is generally defined as unwanted materials generated by human and animals that is solid and usually seen as useless and often disposed of (Chengula et al., 2015). It is all items that people no longer have any use for, which they either intend to get rid of or have already discarded and these include: packing items, garden waste, animal waste, old paint containers, vegetables, metals, bottles, polythene bags, food remnants. (Enete, 2010).

Globally, about 1.2kg/capita/day and almost 1.3 billion tonnes of solid waste are generated annually (World Bank, 2012). It is estimated that an average Nigerian generates 0.65 to 0.95 kg/capita/day and well over thirty-two million tons of solid waste
annually, of which only 20–30% is collected and recycled (Bakare, 2020; Ike et al., 2018). However, the average waste generated in cities varies: 1.5Kg waste per person per day is generated in cities like Lagos and Kano, Abeokuta in Ogun State and Uyo in Akwa Ibom State (0.60Kg/person/day), Ado-Ekiti in Ekiti State (0.71Kg/person/day), Akure in Ondo State (0.45 Kg/person/day), Ile-Ife in Osun (0.46 Kg/person/day), and Ibadan in Oyo State (0.71Kg/person/day) (Gbiri et al., 2019).

Mukui (2013) classified waste as biodegradable and non-biodegradable. Oguntoke et al. (2019) submitted that the proportion of biodegradable waste among low, middle and high income areas of Uyo in Akwa Ibom State were 4.07kg, 7.09kg and 9.68kg per week, which constituted 71%, 67% and 66% of the total household waste, respectively. With increase in the global population, change in people's lifestyle, the rising demand and consumption of food and other essentials that are less biodegradable, the amount of waste generated daily by each household has been on the increase (Faraday, 2014). Suleman et al. (2015) opined that rapid improvement in standards of living and technology are major contributors to increased production of solid wastes. These household wastes contain a mixture of both hazardous and non-hazardous materials which are ultimately thrown into municipal disposal sites or buried and due to poor and ineffective management, the dumpsites turn to sources of environmental and health hazards to people living in the vicinity of such dumps (Ndukwe et al., 2019). Hazardous waste has been shown to influence the likelihood of developing lung, brain cancer, bladder and lung cancer (Loredana and Maria 2010; Ogundele et al., 2018). Aderoju et al. (2014) posited that the standard criteria for the selection and location of a dumpsite base on the National Environmental Standards and Regulations Enforcement Agency (NESREA), is that built up areas dumpsites should be placed at least 1000m away from all settlements; watercourse dumpsites should be placed at least 1000m away from water courses to avoid hazardous emission from waste; roads dumpsites should be placed at 2000m away from an existing road so as to prevent reduction in the width of the road and reduce transportation expenses; while elevation dumpsites should be placed on slopes with less than 9% inclination.

Solid waste refers to all sorts of substances arising from human and animal activities, which are unwanted and are discarded as useless. Generally, waste implies substances that have no value that may be required by law to be disposed. Solid waste comprises of domestic refuse; sheet refuse, commercial refuse in the market, agricultural, hospital, industrial waste etc. It could be liquid or solid but hazardous. When waste is disposed of in the bodies of water aquatic lives are deprived of much needed dissolved oxygen. The waste must be collected, stored is the dust bin at producing premises and finally disposed of in such a way that it does not cause a nuisance. Solid waste is any substance or material which requires to be disposed of as being broken, worn out, contaminated or otherwise spilt and as such its usefulness (Anifowose, Omole and Akingbade, 2011).

Solid waste management is an effective collection, keeping, handling, conveying, treatment and disposal of waste. Amasuo and Baird (2016) defined solid waste management as effective collection, keeping, handling, conveying, treatment and disposal of waste. On the other hand, solid waste as described by state of Vermont Agency of Mental Conservation (2012) as any tangible and non-free fluring unwanted materials or substance that results from human activities. The ultimate goal of waste management was to prevent or reduce the impact of waste materials on human health and social amenities (Leblanc, 2019). Over the last thirty years however, the focus was redirected from simply prevention to reducing the environmental impact of waste and to recovering resources from waste materials through various treatment or technologies (Lecere, Mancinelli, and Mazzanti, 2014). Certainly, among household, especially in areas with poor living conditions, there is fear of the negative consequences associated with improper household waste disposal, which include environmental pollution, unpleasant smell and proliferation of disease causing insects (Salem and Wagner, 2020). There is a need for both government and individuals to holistically and sustainably develop waste management strategies in order to safeguard public/environmental health.

Joshi and Ahmed (2016) argued that lack of awareness and technical knowledge, inadequate funding and ineffective implementation of laws and practices are the reason for the failure of municipal solid waste management (MSWM). However, most
of these have failed to achieve their objectives due to a lack of clarity and awareness amongst the stakeholders and poor enforcement by the regulators. Over the past 50 years, the practice, of waste management has emerged and currently it encompasses disposal, treatment, reduction, recycling segregation and modification (2016). One of the practices is by selective collection at source selective collection is the point of contact between generators and disposal operators. Therefore, the model of collection must strike a balance that satisfies both parties. The way forward is by separating urban solid waste into classes such as paper, glass, plastics and metal at the source is very efficient way of collecting waste because it makes recycling reutilization or energy recovery a lot easier. Furthermore, if waste is not properly disposed, it will lead to pollution of the environment and outbreak of vector –borne diseases (disease spread by rodents and insects) like malaria and dengue fever. Therefore proper method of waste disposal has to be undertaken to ensure that it does not affect the environment. Management of waste and health of individuals are inseparable and this is what this study intends to investigate. Therefore, this study seeks to examine the “Waste Disposal Methods and Health Status of Households in Uyo Local Government Area in Post Covid-19 Era”.

Burning of waste is one of the common methods adopted by the community and waste management agency in Akwa Ibom State to reduce the volume of waste since there is only one deposited site, excess waste are burnt at the dumped site time to time to reduce it volume, the health implications of waste burning are enormous. According to Samuel (2016), burning of waste causes air pollution, water pollution, excess heat to both the workers and the environment at large. Pollution according to (Ebong, 2019), involves the release of harmful substances in the environment that could cause adverse change. A study conducted in Addis Ababa by Ebong in (2019) revealed that 78.6% of waste collection workers habitually engaged in waste burning and they often experience eye problems such as; burning sensation, watering redness and itching of the eyes, those scavenging the waste to burn also complain of skin burns, skin rashes and dehydration. Burning of waste is one of the oldest and traditional ways of waste management technique; it is one of the most harmful behaviours practiced by waste collection workers to reduce the quantity and heap of waste, especially during the dry season. Many dangerous health conditions can be caused by inhaling or ingesting even small amounts of these pollutants. People with preexisting respiratory conditions can be especially vulnerable to some of these pollutants. The smoke from burning waste produces significant quantities of dioxins. Dioxins are group of compounds found to be highly toxic, they are produced in naturally small quantities, but are primarily the result of human activity and household waste is known to contain traces amount of chlorine. Dioxins are potent toxicants with the potential to produce a broad spectrum of adverse effects in humans dioxins can alter the fundamental growth and development of cells in ways that have the potential to lead to many kinds of impacts. These include adverse effects upon reproduction and development, suppression of the immune system, disruption of hormonal systems, and cancer. Smoke created by garbage burning especially affects people with sensitive respiratory systems, as well as causing the risk of heart disease, causes rashes, nausea, and headaches. Exposure to carbon monoxide can cause impairment to the central nervous system. Poisonous substances are found in which is the remains of burning waste may contain mercury, lead, chrome and arsenic. Incessant burning of waste and improper incineration causes eye irritation, air, soil and water pollution.

Solid waste is disposed of, without any precautions, indiscriminately on the land. It could be either disposed of in a chosen area or dumped openly anywhere. Such dumping causes a lot of nuisance and many health hazards arise as a result of their decomposition, as unsightly attracts insects and vermin disease causing vectors; for example, breeding sites for flies, rats and mosquitoes. Although it is commonly practiced in many urban centres, it is a method which must be discouraged by all means. According to Marshal (2015), open dumpsites are a major problem to the environment, especially on the air that the people inhale. Dumpsites emit obnoxious odours and smoke that cause illness to people living in, around, or closer to them. According to Wrench (2020) dumpsites maybe a source of airborne chemical contamination via off site migration of gases and the particles and chemicals adhering to dust, especially during the period of active operation of the site. Contamination of soil and groundwater may lead to direct contact or pollution of indoor air for example in the case of volatile organic chemicals into basements of nearby residents and in the case of consumption of home grown vegetables as well. Wrench (2020) further
stated that in some sites, volatile organic chemicals have been detected in odoured air of homes nearby dumpsites.

According to Alam and Ahmade (2013), indiscriminate dumping of wastes contaminates surface and ground water supplies, clogs drains, creating stagnant water for insect breeding and floods during rainy seasons. The solid wastes in most cases are being blown around by winds or rainstorm making the environment dirty. Also waste may eventually, get washed away by runoff water to contaminate water bodies (Nwofe, 2015). Greenhouses are generated from the decomposition of organic wastes in landfills, and untreated leachate pollutes surrounding soil and water bodies. Open dumps are associated with bad and unpleasant odours. Insect and rodent vectors are attracted to the waste and can spread diseases such as cholera and dengue fever (Gaya et al., 2018). Ike et al. (2018) reported that a high percentage of those living near disposal sites and workers who handle refuse are usually infected with gastrointestinal parasites, worms, and other related organisms as a result of contamination of subsurface water by the leachate from solid wastes, which contain toxic chemicals and pathogenic organisms.

Disposal sites can also create health hazards for neighbourhood (Mbagwu, 2017; Godfrey and Godwin, 2017). Elena and Godfrey (2017) highlighted that in a number of health surveys a wide range of health problems, including respiratory systems, irritation of the skin, eyes and nose, gastrointestinal problems, psychological disorders, and allergies, have been discovered. In addition, dumpsites closer to residential areas are always feeding places for dogs and cats (Covina and Rowland, 2016; Bodhi and Ketene, 2017; Austin, 2014). These pets, together with rodents, carry diseases with them to nearby homesteads. Composting strategy is a biochemical processes in which degradable organic materials such as lawn clippings and kitchen scraps, etc. are decompose by micro-organisms mainly fungi and bacteria to a rich solid like material. The finished product which looks like soil is high in carbon and nitrogen and is an excellent medium for growing plants. Although composting method takes time and space, it is one of the best methods of waste management as unsafe organic products are turned into safe compost for plant use. This method is not only environment friendly but also keeps unnecessary refuse out of landfills and replenishes the soil with nutrients. In Akwa Ibom State, composting has been practiced as a traditional waste management strategy a long time now and is used by the state Agricultural scheme to improve soil fertility and farm yields.

Composting has an adverse effect on health especially to people and waste workers. The draw back with this method is that it pollute the environment, and affect the entire well-being of the people and workers involved, during the transfer of the compost waste, bad odour (foul smell) is being inhaled directly into the body and is capable of casing upper respiratory tract infection. According to (Samuel, 2016) certain waste if inhaled or touched can equally cause widespread epidemics. The waste collectors are also bare to a number of pathogens (bacteria, fungi, viruses, parasite and cysts). Toxic substances derive from the decomposed waste. The collectors do not wear personal protective clothing, they use shovel while carrying out their duty thereby exposing themselves to musculoskeletal problems, like back pains, shoulder pains, cut by sharp object exposes the worker to fungal spores causes pulmonary diseases, Allergic alveolitis, invasive aspergillosis, lung tumors, nausea, diarrhea, upper airway irritation, headache, fatigue, and skin irritation. The pesticides used in composting plant to eliminate pathogens are toxic and cause allergies.

**Statement of the Problem**

In a bid to make ends meet and high population density of Uyo Local Government Area there is increased in economic activities by humans who has consequently lead to high generation of solid waste among the people of this community. In Uyo Local Government Area, it is observed that there are insufficient vehicles for transportation of refuse. Wrong attitudes and perceptions of the people about sanitation issues contribute to solid waste management problem. Majority of the households do not educate their members on the need to clean their surroundings despite the concerned effort of the government through the introduction of Green Revolution by her Excellency in 2012 in Akwa Ibom State.

There are no facilities for storage of solid waste and provision for recycling purpose which is of economic importance and the effect on those problems are numerous. These waste if not properly managed can pose serious health risk to the people in view of this, there is need to examine the solid
management and health of the people of this community.

Objectives of the Study
The main purpose of this study was to assess the “Waste Disposal Methods and Health Status of Households in Uyo Local Government Area in Post Covid-19 Era”. Specifically, the study sought to determine the effect of:

Research Questions: Three research questions were raised and answered in the study:
1. What is the effect of burning of waste on the health status of households in Uyo Local Government Area in Post Covid-19 Era?
2. What is the effect of open dumping of waste on the health status of households in Uyo Local Government Area in Post Covid-19 Era?
3. What is the effect of compost of waste on the health status of households in Uyo Local Government Area in Post Covid-19 Era?

Methods
The design of the study was descriptive survey design. It was a systematic method for gathering information from a sample of larger population. The study was conducted in Uyo Local Government Area of Akwa Ibom State. The study area is located in the South-South geopolitical zone of Nigeria. Uyo is a Local Government and also serves as the State capital. The study area occupies the south central portion of Akwa Ibom State territorial expanses. It lies between latitudes 4° 58’ N and 5° 04’ N and longitudes 7°51’E and 8°01’E. The population of the study comprised of all residents, business people and workers in Uyo Local Government Area which is estimated at 1,265,000 (NPC, 2022 projected figure). A sample size of 400 respondents was used to collect data for study. The sample size was determined using Taro Yamane sampling formula (Yamane, 1967). Stratified proportionate and simple random sampling techniques were employed to select the respondents for the study. The study area was divided into four on the basis of the clans namely: Etoi, Oku, Offot and Ikono. One hundred respondents were then selected from each of the clans using simple random sampling technique. A structured questionnaire titled: “Waste Disposal Methods and Health Status of Households Questionnaire (WDMHSHQ) was used for data collection. The instrument had three sections and 15 items. The items were rated on a 4-point rating scale. The instrument was content validated by three experts: one from the Department of Home Economics Education, one from the Department of Environmental Studies and a Statistician all from University of Uyo. A pilot test of the instrument was carried out using 30 respondents who were not be part of the main study, but part of the population. The internal consistency of the instrument was determined using Cronbach Alpha statistical method which yielded a reliability coefficient of 0.79. To collect data for the study, the researchers administered the instruments with the help of two trained research assistants. The dumping and collection sites were also visited. The questionnaire was administered to respondents in different households, business places and places of employments across the study area. The respondents completed the questionnaires and returned them immediately.. Data collected were sorted out and analysed using mean and standard deviation to answer research questions. where the sample mean is greater than the criterion mean of 2.5, the phenomenon is regarded as having a negative effect on health status of households whereas where the sample mean is less than the criterion mean of 2.5, the phenomenon is said to have a positive effect on household status.
**Results**

**Research Question 1:** What is the effect of burning of wastes on the health status of households in Uyo Local Government Area in Post Covid-19 Era?

<table>
<thead>
<tr>
<th>Burning of Waste</th>
<th>Mean</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>causes air pollution</td>
<td>3.55</td>
<td>0.527</td>
</tr>
<tr>
<td>causes rashes</td>
<td>3.39</td>
<td>0.700</td>
</tr>
<tr>
<td>causes risk of heart disease</td>
<td>3.27</td>
<td>0.882</td>
</tr>
<tr>
<td>causes disruption of hormonal systems.</td>
<td>3.39</td>
<td>0.582</td>
</tr>
<tr>
<td>causes cancer</td>
<td>3.29</td>
<td>0.714</td>
</tr>
<tr>
<td><strong>Cluster Mean</strong></td>
<td><strong>3.49</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 1, reveals the mean statistics of the effects of burning of wastes on health status of households in Uyo Local Government Area in Post Covid 19 era. Findings revealed that the sample mean scores for items 1 – 5, ranged between 3.27-3.55 and were above the criterion mean of 2.5. The cluster mean of 3.49 was also greater than the criterion mean of 2.5. This implies that burning of waste has negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. The Table also shows that the Standard Deviation of the items ranged between 0.527 - 0.882. This indicates that the respondents were not divergent from one another in their responses.

**Research Question 2:** What is the effect of open dumping of wastes on the health status of households in Uyo Local Government Area in Post Covid-19 Era?

<table>
<thead>
<tr>
<th>Open Dumping</th>
<th>Mean</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>attracts insects and vermin disease causing vectors.</td>
<td>3.52</td>
<td>0.579</td>
</tr>
<tr>
<td>emits obnoxious odours that cause illness to people living around</td>
<td>3.51</td>
<td>0.609</td>
</tr>
<tr>
<td>Indiscriminate dumping of wastes clogs drains, creating stagnant water for insect breeding and floods during rainy seasons.</td>
<td>3.33</td>
<td>0.672</td>
</tr>
<tr>
<td>Insect and rodent vectors are attracted to the waste and can spread diseases such as cholera and dengue fever</td>
<td>3.64</td>
<td>0.507</td>
</tr>
<tr>
<td>can lead to health problems such as irritation of the skin, eyes and nose.</td>
<td>3.49</td>
<td>0.672</td>
</tr>
<tr>
<td><strong>Cluster Mean</strong></td>
<td><strong>3.50</strong></td>
<td></td>
</tr>
</tbody>
</table>

Table 2, discloses the mean statistics of the effects of dumping of wastes on health status of households in Uyo Local Government Area in Post Covid 19 era. The result showed that the sample mean score for items 6–10, ranged between 3.33-3.64, and were above the criterion mean of 2.5. The cluster mean of
3.50 was also greater than the criterion mean of 2.5. This implies that open dumping of wastes has negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. The Table also shows that the Standard Deviation of the items ranged between 0.507 - 0.672. This indicates that the respondents were not divergent from one another in their responses.


Table 3: Mean Statistics of the Effect of Compost of Waste on the Health Status of Households in Uyo Local Government Area in Post Covid-19 Era

<table>
<thead>
<tr>
<th>Compost of Waste</th>
<th>Mean</th>
<th>S.D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Toxic substances derive from the decomposed waste can cause back pain.</td>
<td>3.42</td>
<td>0.718</td>
</tr>
<tr>
<td>Cut by sharp object from compost site exposes the worker to fungal spores causes pulmonary diseases</td>
<td>3.40</td>
<td>0.788</td>
</tr>
<tr>
<td>Decomposed waste can cause nausea,</td>
<td>3.22</td>
<td>0.877</td>
</tr>
<tr>
<td>Effect on compost can cause diarrhea, upper airway irritation,</td>
<td>3.73</td>
<td>0.609</td>
</tr>
<tr>
<td>Decomposed waste can lead to headache, fatigue</td>
<td>3.70</td>
<td>0.620</td>
</tr>
<tr>
<td>Cluster Mean</td>
<td>3.38</td>
<td></td>
</tr>
</tbody>
</table>

Table 3, shows the mean statistics of the effects of compost of wastes on health status of households in Uyo Local Government Area in Post Covid 19 era. Findings revealed that the sample mean score for items 11–15, which ranged between 3.22-3.73, were above the criterion mean of 2.5. The cluster mean of 3.38 was also greater than the criterion mean of 2.5. This implies that compost of wastes has negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. The Table also shows that the Standard Deviation of the items ranged between 0.609 - 0.877. This indicates that the respondents were not divergent from one another in their responses.

Discussion of Finding
The result in research question one reveals that burning of waste has negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. The finding is supports the findings of Ebong (2016) who revealed that 78.6% of waste collection workers habitually engaged in waste burning and they often experience eye problems such as; burning sensation, watering redness and itching of the eyes, those scavenging the waste to burn also complain of skin burns, skin rashes and dehydration. It also reveals that compost of waste has negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. The finding also lends credence to the findings of Samuel (2016) who observed that toxic substances derived from decomposed waste cause problems, like back pains, shoulder pains, cut by sharp object exposes the worker to fungal spores, causes pulmonary diseases, allergic alveolitis, invasive aspergillosis, lung tumors, nausea, diarrhea, upper airway irritation, headache, fatigue, and skin irritation.
In view of the negative effects of wastes burning identified in the study, on the health status of households in the study area in the post covid era, it is pertinent that members of households should desist from burning wastes.

The result of research question two also revealed that open dumping of waste has negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. The result supports the findings of Marshal (2015) who reported that open dumpsites are a major problem to the environment, especially on the air that the people inhale. Dumpsites emit obnoxious odours and smoke that cause illness to people living in, around, or
closer to them. The findings is also in line with Wrensh (2020) who asserted that dumpsites may be a source of airborne chemical contamination via off site migration of gases and the particles and chemicals adhering to dust, especially during the period of active operation of the site. The finding also supports Alam and Ahmade (2013) who reported that indiscriminate dumping of wastes contaminates surface and ground water supplies, clogs drains, creating stagnant water for insect breeding and floods during rainy seasons. The result of research question three revealed that compost of wastes has negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. The finding is in agreement with Samuel (2016) who asserted that certain waste if inhaled or touched can equally cause widespread epidemics. The waste collectors are also bare to a number of pathogens (bacteria, fungi, viruses, parasite and cysts).

From the foregoing, the researchers infer that although waste disposal methods investigated in the study, have negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. However, compost wastes disposal method had the least mean value and can be said to have, less negative effect on the health status of households compared to burning and dumping disposal methods.

Conclusion
Based on the findings of this study, it was concluded that Wastes disposal methods have negative effect on the health status of households in Uyo Local Government Area in Post Covid-19 Era. Although, compost wastes disposal method had the least mean value and can be said to have, has less negative effect on the health status of households compared to burning and dumping disposal methods.

Recommendations
Based on the findings the following recommendations were made.
1. The Ministry of Environment should sensitize residents of Uyo Local Government Area on the health risks associated with burning of wastes and laws and regulations governing proper wastes disposal methods should be enacted and offenders disciplined.
2. The government and municipalities should revise laws regarding the locations of dumpsites. These laws should include properly managed sites, which are well fenced in and away from human settlements.
3. Households should engage more in compost wastes disposal method because of the fact that the negative effect of this method on the health status of households is less compared to the other wastes disposal methods.

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