ENVIRONMENTAL SANITATION SITUATION IN ABATTOIRS IN ONITSHA METROPOLIS

Chika Gertrude Nwachukwu, Ph.D

Abstract

This work examines the environmental sanitation situation of Abattoirs in Onitsha Metropolis. The work looked into waste disposal method, sanitary facilities and effective monitoring. Descriptive research design was adopted for the study. The population used was 80 butchers. There was no sample since the population was small. Questionnaire was used to collect data from the 80 butchers which was validated and the reliability found to be 0.78. Mean scores was used to answer the three research questions raised for the study. The findings revealed that modern methods of waste disposal are not implemented in Abattoirs. There was insufficient sanitary facilities though there is effective monitoring and supervision guiding the abattoirs. Recommendations like improvement in waste disposal, inclusion of modern sanitary facilities and general sanitation among others were made.

Sanitation is the hygienic means of promoting health through prevention of human contact with the hazards of waste as well as the treatment and proper disposal of sewage microbiological, biological or chemical agents of disease. Waste that can cause health problems include human and animal excreta, solid waste, domestic water, industrial solid waste and agricultural waste (WHO 2014). The term sanitation has been connected to several descriptors like sustainable sanitation, improved sanitation, ecological sanitation and many others. It involves collection, containment, conveyance/ transport treatment disposal or refuse of waste as stated by Tilley (2014).

Good sanitation should not only involve a sanitation system that is economically viable socially acceptable technically and institutionally appropriate but should protect the environment and the natural resources as cited by Susan (2008) hence environmental sanitation. Environment sanitation refers to all activities aimed improving or maintaining the standard of basic environmental conditions affecting the wellbeing of people. It includes clean and safe water, clean and safe air, efficient and safe animal, human and industrial waste disposal, protection of foods from biological and chemical contaminants and adequate housing in clean and safe surrounding. As cited by Wisegeek (2015) environment sanitation is a set of actions geared towards improving the quality of the environment and reducing the amount of diseases. By doing that there is the hope that living condition will be improved and health problems will decrease.

The management of water, solid waste and industrial waste as well as pollution and noise control all fall under the umbrella of environmental sanitation. Most of the waste collected is usually recycled in the environment. Recycling of waste uses less energy and is a great way of controlling air, water pollution, creates employment and recycles post consumer materials into industrial production as cited by Carl (2005) Abattoirs Act (2001) defined Abattoir as any premises used or in connection with the slaughtering of animals whose meat is intended for human consumption and include a slaughter house but does not include a place suited in a farm. Abattoirs, also called slaughter house is a place where animals are butchered for food (Collin English Dictionary. 2007). The killing of animals for community consumption is inevitable in many nations of the world including Nigeria and dates back to antiquity. In Nigeria nearly every town and neighborhood is provided with slaughter houses or slaughter slabs. National Environment Sanitation policy aptly identified abattoir sanitation as one of the key policies in addressing problems of environmental sanitation in Nigeria. Problems faced in abattoirs include improper refuse disposal, inadequate water supply, inadequate sanitary facilities which results to open defecation and urination, overcrowding, exposure of food and meat to flies and rodents. While the slaughtering of
animals result to meat supply, products like leather and skin, livestock waste spills introduce pathogens and excess nutrients into surface water and can also contaminate ground water (Meadows 2005). Those wastes consists largely of solids, microbial organisms and in special situations chemicals. Shallow wells as well as hand-dug wells are more dangerously polluted (Ifeadi, 2002) when this happens.

Abattoir operations produce a characteristic highly organic waste made up of suspended solid, liquid and fat. The solid waste includes condemned meat, undigested ingesta, bones, horns, hairs and aborted refuse. Liquid waste involves dissolved solids, blood, gut content, urine and water. As urbanization and population increases more water is required and great demand made so underground and surface water are pumped back into water sources making less portable water available (Shuval, 2001). Portable water refers to that water that does not contain chemical substances or microorganisms in amounts that could cause hazards to health according to Alonge (2001). The water that should be used for cleaning purposes should meet above conditions.

According to Aina (2001) of all environmental sanitation situation in abattoirs facing the nation, the most embarrassing is the indiscriminate dumping of cow faeces and inappropriate way of emptying and cleaning stomach and intestines of cows. Slaughterers are expected to dispose their waste at dumping site. Abattoirs as seen in Nigeria, is often a piece of untidy bare land located near the drain. There is a block wall with concrete slabs used as operating tables by the butchers. There is no running water and animals are slaughtered on dusty floor blackened by mixture of blood, ash, smoke and dirt. Many of the time, the butchers set car tyres ablaze and place the animals on top of them to burn off the fur. Meat slaughtered under this condition can cause lots of gastrointestinal problems to humans. The stench that comes out from the abattoirs are unbearable. Nigeria veterinary medical association (NVMA, 2010) state that the country is on the verge of disease outbreak following deplorable state of operation in the abattoirs and slaughter houses across the country. The association calls for closure of illegal abattoirs and those operating in poor state throughout the country. The identified reason for this poor state of abattoirs includes springing up of illegal markets and abattoirs, lacks of provision of adequate facilities, no regulation, monitoring and enforcement and above all, corrupt sharp practices by the supervisors, and health officials of market and abattoir. This therefore prompted this study on environmental sanitation situation of abattoirs in Onitsha Metropolis.

Statement of the Problem
There are many problem associated with abattoirs which include improper waste disposal poor water supply, inadequate sanitary facilities and proper sanitation, air pollution, exposure of meat to flies and rodents and springing up of illegal abattoirs and slaughter houses. There is often little or no monitoring of the abattoirs. Practices and ways to improve the status of abattoirs in Onitsha Metropolis has inspired the writer to investigate on the environmental sanitation situation of Abattoirs in Onitsha Metropolis.

Purpose of the Study
The main purpose of this study is to find out the Environmental sanitation situation of Abattoirs in Onitsha Metropolis specifically the research seeks to;

a. Find out the methods of waste disposal in abattoirs in Onitsha metropolis.
b. Find out if there are adequate sanitary facilities at the Abattoirs in Onitsha Metropolis.
c. Find out if there are effective monitoring guiding the Abattoirs in Onitsha.

Research Questions
The following research questions were formulated to guide the study.

1. Are there correct methods of waste disposal in Abattoirs in Onitsha metropolis?
2. Are there appropriate sanitary facilities at the Abattoirs in Onitsha metropolis?
Environmental Sanitation Situation In Abattoirs In Onitsha Metropolis

3. Are there effective monitoring guiding abattoirs in Onitsha metropolis?

Methodology

A descriptive survey research was employed for this study. The population of the study consists of 80 butchers in Ose market Onitsha (Eze 2005). There is no sample since the population is rather small.

The instrument used for the study was a questionnaire with modified four point likert scale of strongly agree (SA) 4 points, Agreed (A) 3 points, Disagreed (D) 2 points and strongly disagreed (SD) 1 point. The validity of the instrument was established by giving the instrument to three experts in health and physical education department of Nwafor Orizu College of Education, Nsugbe. There corrections and suggestions were used in modifying instrument. For reliability of the instrument 20 copies of the instrument was given to 20 respondents who are butchers in Afọ Igwe market Ogidi who were not part of the population used for the study. The items were reshuffled and administered to them after two weeks. The reliability of the instrument was obtained using Pearson product correlation co-efficient and found to be 0.96.

Research question 1, 2, and 3 were weight and answered with mean scores in each of the 15 items. Strongly agree was weighted as 4 point, Agrees 3 points, Disagreed 2 point and strongly 1 point. Means score above 2.5 is interpreted as agreed while below 2.5 interpreted as disagree.

Research Question 1
Are there correct methods of waste disposal in Abattoirs in Onitsha metropolis?

Table 1: Responses on Methods of Waste Disposal in Abattoirs in Onitsha Metropolis.

<p>| N = 80 |
|-----------------------|--------|--------|--------|--------|---------|</p>
<table>
<thead>
<tr>
<th>S/N</th>
<th>Items</th>
<th>SA</th>
<th>A</th>
<th>D</th>
<th>SD</th>
<th>Total</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>The butchers use incinerators to burn all left over bones and skin from all slaughtered animals</td>
<td>2</td>
<td>5</td>
<td>8</td>
<td>65</td>
<td>80</td>
</tr>
<tr>
<td>2.</td>
<td>Liquid and solid wastes from abattoirs are dumped in a trench</td>
<td>4</td>
<td>6</td>
<td>30</td>
<td>40</td>
<td>80</td>
</tr>
<tr>
<td>3.</td>
<td>Liquid and solid wastes are dumped some distance from the abattoir</td>
<td>10</td>
<td>6</td>
<td>30</td>
<td>34</td>
<td>80</td>
</tr>
<tr>
<td>4.</td>
<td>Liquid and solid waste are dumped freely into surface water by butchers</td>
<td>40</td>
<td>25</td>
<td>7</td>
<td>8</td>
<td>80</td>
</tr>
<tr>
<td>5.</td>
<td>Sand is used to cover the waste from the slaughtered animals after disposal</td>
<td>6</td>
<td>9</td>
<td>10</td>
<td>55</td>
<td>80</td>
</tr>
</tbody>
</table>

Grand Mean (x) 1.94

Table 1 showed a grand mean score of 1.94 on the methods of waste disposal in Abattoir in Onitsha Metropolis. The correct methods of Waste which includes use of incinerators and sand filing the waste is not used as shown in items 1 and 5 with mean values of 1.3 and 1.6 respective, while liquid and solid waste are not dumped in a trench, some distance away from abattoirs but freely into water as shown in items 2, 3 and 4. Since the grand mean is below 2.5 it shows that there are poor methods of waste disposal.
Research Question 2
Are there appropriate sanitary facilities at the Abattoirs in Onitsha metropolis.

Table 2: Weighted Response on Appropriate Sanitary Facilities of Abattoirs in Onitsha Metropolis

<table>
<thead>
<tr>
<th>N= 80</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/N</td>
</tr>
<tr>
<td>6.</td>
</tr>
<tr>
<td>7.</td>
</tr>
<tr>
<td>8.</td>
</tr>
<tr>
<td>9.</td>
</tr>
<tr>
<td>10.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Table 2 showed a grand mean of 2.1 responses on correct sanitary facilities of Abattoirs in Onitsha Metropolis. The table also showed weighted mean scores of 2.1, 1.6, 1.8 and 3.2 and 1.8 respectively for items 6, 7, 8, 9 and 10 since the grand mean is below the criterion mean of 2.5, it shows that there is poor sanitary condition existing at the abattoirs at Onitsha metropolis.

Research Questions
Are There Effective Monitoring Guiding Abattoirs In Onitsha Metropolis? Table 3: Responses On Effective Monitoring Guiding Abattoirs In Onitsha Metropolis

<table>
<thead>
<tr>
<th>N=80</th>
</tr>
</thead>
<tbody>
<tr>
<td>S/N</td>
</tr>
<tr>
<td>11.</td>
</tr>
<tr>
<td>12.</td>
</tr>
<tr>
<td>13.</td>
</tr>
<tr>
<td>14.</td>
</tr>
<tr>
<td>15.</td>
</tr>
<tr>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows a grand mean of 2.8 Each mean score of the five items were above the criterion mean of 2.5 which indicates a positive response towards effective monitoring guiding Abattoirs in Onitsha Metropolis.
Discussion

The finding in table I shows that appropriate modern methods of waste disposal are not implemented in Onitsha Abattoirs. Mean scores of 1.3 and 1.6 respectively was the indicated response in usage of incinerator to burn left over bones, horns and skin as well as sand filling the waste. The respondents agree that liquid and solid wastes not are dumped in a trench but openly and freely into surface water with means of 1.68 19 and 3.2 respectively. The finding are in line with the report of Shival (2001) who posited that there are many types of waste in Abattoir and also modern methods of waste disposal but the butchers are not making use of those methods of waste disposal as seen from the respondents.

Table 2 shows a grand mean of 2.1 for correct sanitary facilities in Abattoirs in Onitsha Metropolis. Okaka (2008) stated that a good Abattoir should be constructed in a way that the floor must be hard, smooth and sloping sufficiently toward a drain thus allowing cleaning with water. Items 6, 7, 8 and with means' of 2.1, 16, 8 and respectively, 1.8 are all below the criterion mean of 2.5 indication poor sanitary condition of the Abattoirs in Onitsha Metropolis. The findings in table 3 shows that there is effective monitoring of the abattoirs in Onitsha metropolis with means of 3.1, 3.1, 2.8 and 2.8 and with a grand mean of 2.8 for effective monitoring for items 11, 13, 14 and 15 respectively. The finding is in line with that of Mantel (2002) that states that there should be development of policy guideline and effective monitoring for markets and Abattoirs that is feasible and sustainable within the context of Nigeria's economic social, cultural and political situations, produce and circulate the policy guidelines in Abattoirs throughout the country to ensure its implementation, sensitize and mobilize stakeholders to ensure commitment to and compliance with the policy guide lines.

Conclusion

Dump sites of abattoir wastes pose serious health problem to consumers, butchers and general inhabitant around abattoirs. Pollution in Abattoirs through burning of horns, bones and skins in open air poses problems to people because open burning is a wrong method of incineration. Inadequate sanitary facilities and sanitation is a great risk to consumers because Of meat contamination, when the meat is contaminated and taken by consumers it can result to various alimentary diseases.

The work revealed that there is effective monitoring of the Abattoirs by health inspectors in Onitsha metropolis. The point still remains whether the regular checks is for personal gratification of the personnel instead of forcing the butchers to do the right thing.

Sanitation in Abattoirs is a serious issue to be addressed in the country. Most butchers lack knowledge on the dangers associated with unhealthy environment especially where meat that is meant for human consumption is slaughtered.

Recommendations

It was recommended among others that:
1. Waste collection and dump sites should be provided at strategic places to enhance waste disposal in Abattoirs in Onitsha metropolis
2. Potable water supply in Abattoirs should always be emphasized to improve level of sanitation and cleanliness of Abattoirs.
3. The government should budget and release enough fund toward building of modern standard Abattoirs in Onitsha metropolis as well as other Abattoirs in the state as well as create avenue to monitor the personnel.


