

Sanitary and Hygiene Conditions of Slaughterhouses and Its Effect on the Health of Residents (A Case Study of Amasaman Slaughterhouse in the Ga West Municipality, Ghana).

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Abstract

This study specifically looked at the sanitary and hygiene conditions of the slaughterhouse and its effect on the health of residents in the community. The sanitary and hygiene conditions of Slaughterhouses are of important due to the fact most of it are located within the community, which can have effect on the health of the residents. A descriptive survey design was used for this study. The target population were staff of the slaughterhouse and residents of the community (Amasaman), irrespective of position, age or gender. The sample size consisted of 150 respondents, comprising; twenty (20) workers of the slaughterhouse, and hundred thirty (130) residents from the community. Questionnaires, consisting of opened and closed ended questions, and interview guide, were the main data collection instruments used to carry out the study. The collected data was analyzed using frequencies, percentages, charts and tables. The study revealed that the operations of the slaughterhouse do have effect on the health of the residents of the community because wastewater was disposed off into the streams and rivers which serve a source of drinking water. The workers of the slaughterhouse also attested to it. 74.2% of the residents representing majority answered no when they were asked if the operations of the slaughterhouse were inspected. This was expected because most (70%) the residents indicated in a follow up question that they have never seen an inspector before. The study recommends that government must compel the Accra Metropolitan Assembly (AMA), to stop the operators of slaughterhouses and abattoir from construction at unauthorized places.

Keywords: Slaughterhouse, Wastewater, Hygiene

1. Introduction

A slaughterhouse, on the other hand known as an abattoir, is a place where creatures are executed to give nourishment as in meat. The butchering of creatures for human utilization is critical in many countries of the world and goes back to the old circumstances (Bello and Oyedemi, 2009). Abattoirs or slaughterhouses exist principally to give the fitting condition to butchering domesticated animals and controlling waste spill. According to Alonge (1991), "an abattoir or slaughterhouse is a premise approved and registered by the controlling authority for hygienic slaughtering and inspection of animals, processing, effective preservation and storage of meat products for human consumption." In abattoir operation, certain prerequisite programmes have to be considered, to provide basic environmental and operating conditions that are necessary for production of safe meat. These prerequisite programmes include; good manufacturing practices, good hygiene practice and standard operating procedures.

More concerns are being expressed over the dangers to the health of residents who are neighbours to abattoirs, especially in developing countries where level of awareness is low. People are expressing dissatisfaction with the location and ways abattoirs in their neighbourhood are being managed. An abattoir should have the following; main portable water and electricity, main sewage, contiguity with uncongested road and rail system, proximity with public transport, proximity to supply of varied labour, freedom from pollution from other industries, odours, dust, smoke and ash (Gracey, Collins & Huey, 1999). In recent times, the human race has been posed with a lot of health issues, it has therefore become very vital for one to stay hygienic as possible. Abattoir waste just like any other waste can be detrimental to humans and the environment if definite precautions are not taken. For hygienic reasons abattoirs use large amount of water in their operations, this results in producing large amount of wastewater. The major environmental problem associated with wastewater from abattoir is the amount of solids matter and the odour generated from it (Gauri, 2006). Water bodies such as streams and rivers are usually the recipients of wastewater from abattoir. This wrongful discharge of wastewater which may contain blood and animal faeces into streams can cause increased rate of toxin accumulation (Nwachukwu, Akinde, Udujih & Nwachukwu, 2011). Humans may also be affected through outbreak of water borne diseases (Mohammed & Musa, 2012).

Abattoir waste transfer in many developing nations including Ghana has been a noteworthy test for a considerable length of time. Much of the time, waste materials are arranged off without respect to great natural administration practices, in this way making them destructive to people and other earthbound and amphibian life. Concentrates from Ghana and Nigeria demonstrated that, numerous abattoirs in the particular nations as a rule store waste materials in the prompt environs or arrange them off straightforwardly into water bodies; some of

which fill in as wellsprings of water for the abattoirs (Weobong, 2001; Adelegan, 2002; Osibanjo, and Adie, 2007). This has been clarified that the training is essentially because of absence of or insufficient waste offices (Adeyemo, Adeyemi and Awosanya 2009).

In many developing countries, similar to Nigeria, numerous abattoirs discard their waste specifically into streams or waterways and furthermore utilize water from a similar source to wash butchered meat (Adelegan 2002). The circumstance is the same in Ghana where most fluid wastes are discharged in to the prompt environs of the abattoir. The Kumasi Abattoir for example dumps its losses into the Subin River about a kilometer upstream of Asago, a little peri-urban group (Weobong, 2001).

In Ghana, expanding interest for animal items particularly meat has prompted increment in the waste produced by abattoir and slaughterhouse, subsequently concerns have being raised about the circumstance. An enquiry into exercises of the fundamental abattoir in the Tamale city demonstrated that emanating water from the office was very dirtied, with all the deliberate parameters surpassing adequate benchmarks set by the Environmental Protection Agency (EPA) of Ghana (Weobong and Adinyira, 2011). The examination additionally uncovered that residents of the community where the slaughterhouse is found grumbled of stench from the emanating, contamination of their water sources and continuous malady flare-ups among others. Concerns have likewise been brought about the way up in which bodies are readied and accordingly taken care of on the way to the business sectors.

Over the previous years at Amasaman, medical issues related with Buruli Ulcer, Bilharzias and cholera have expanded strangely. The abattoir, which is nearer to the group, shares practically a similar wellspring of water, from a stream and furthermore as a dumping site for the loss from the butcher. Waste in this setting alludes to; undesirable offals, feaces and the blood that slimes out after the butcher. Butchers who because of absence of water, search for some patches on the area and after that butcher their animals. One would at that point, ask; where does all these water pursue the washing and cleaning of the animals have been finished. The disgusting stench that welcomes any individual who visits the region has likewise been watched and in this way got the consideration of the specialist to survey the operations of the abattoir in Amasaman and the effect on its inhabitants. Henceforth this investigation particularly took a look at the clean and cleanliness states of the slaughterhouse and its impact on the health of the residents.

1.1 Study Area

Amasaman is the capital of Ga West Municipal district in the Greater Accra Region of Ghana. The Amasaman slaughterhouse is privately owned, and located on the main Accra Nsawam road. It slaughters about fifty to seventy cattle a day. The slaughterhouse is not well equipped to meet international standard; due to the fact that there is no running water, no equipment to raise carcasses for dressing. However, the drainage system was good.

The slaughterhouse has two veterinary personnel and two personnel from the Environmental Health Unit of the Local Government Ministry were responsible for inspecting meat, however, these personnel do not have any training in meat inspection.

2. Research Methodology

A descriptive survey design was used for this study. The target population were staff of the slaughterhouse and residents of the community (Amasaman), irrespective of position, age or gender. The research was carried out from January – July 2015. The sample size consisted of 150 respondents, comprising; twenty (20) workers of the slaughterhouse, and hundred thirty (130) residents from the community. All 20 questionnaires for the slaughterhouse workers were completed and returned while for the residents of the community, 120 questionnaires were completely filled and returned. The remaining 10 questionnaires for the residents were either not completed or returned. A simple random sampling technique was adopted for selecting respondents to represent the entire target population and was carried out at the researcher's own discretion. In a simple random sample of a given size, all such subsets of the frame are given an equal probability. The sampling was made in such a way that; the researcher selected management and staff of slaughterhouse purposively for the study, since they understood better, the concept of the study. The residents were conveniently selected in that those who were chanced upon and had relevant information, necessary to aid the successful completion of the research. Questionnaires, consisting of opened and closed ended questions, and interview guide, were the main data collection instruments used to carry out the study. Respondents were allowed two (2) hours to fill the questionnaire while those who could not fill the questionnaires themselves were interviewed with the aided of an interview guide. The collected data was analyzed using frequencies, percentages, charts and tables.

3. Results and Discussion

3.1 Demographic Characteristics

The demographic characteristics of the respondents (Staff of Slaughterhouse) comprises of gender, age, level of education and years worked in the slaughterhouse for the staffs of the slaughterhouse, whiles that of the residents

of the community comprised of gender, age and years lived in the community. The gender distribution of the staffs of the slaughterhouse was male dominated representing 88.1% with only 11.9% being females as shown in Table 1. With regards to age, majority (48.8%) of the abattoir workers were between 20 – 25 years. This was to be expected due to the nature of work in slaughterhouse. In Ghana it is assumed that workers of an abattoir are not very well educated and this was evident in the findings of this study which showed that 49.2% of the workers of the slaughterhouse had only basic education, 34.9% had attained secondary education with just 15.9% having attained tertiary education. The demography characteristics of the residents on the other hand were different as compared to that of the staff. The questionnaires were administered to a total number of 130 people but 120 were completed and returned, out of this, 65% were males while the other 35% females. The age distribution of the respondents was very good because there were more matured people representing 29.2% which will help review the real impact of the operations of the Amasaman slaughterhouse on the residents as shown in Table 1. Most (50%) of the residents had secondary education, also 45% representing majority of the resident who have lived in the community above 6 years.

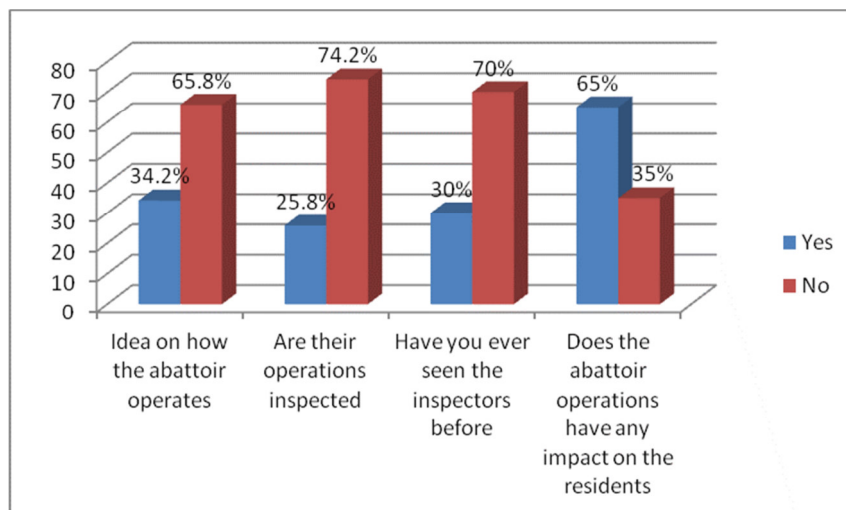
Table 1. Summary of Response on Demographic Characteristics of the Staff of the Slaughterhouse and Residents of Amasaman

Characteristics	Staff of Slaughterhouse		Residence of Amasaman	
	Frequency	Percentage (%)	Frequency	Percentage (%)
Gender				
Male	18	88.1	78	65.0
Female	2	11.9	42	35.0
Age				
20-25	4	48.8	35	21.7
26-30	4	20.2	27	22.4
31-35	2	10.8	32	26.7
36 and above	10	20.2	26	29.2
Level of Education				
Basic	10	49.2	37	30.8
Secondary	7	34.9	60	50.0
Tertiary	3	15.9	23	19.2
Years worked with Slaughterhouse			Years lived in the Community	
1 – 3 years	3	15.9	30	25.0
4 – 6 years	7	34.9	36	30.0
Above 6 years	10	49.2	54	45.0

Source: Field survey, May, 2015

3.2 Operations of Slaughterhouse and its Impact on Residents

The study sought to assess the impact of the operations of the slaughterhouse on the residents of the community as part of its objective, and it was revealed that most (65.8%) of the residents in the Amasaman community did not have an idea of how the slaughterhouse operates. 74.2% of the residents representing majority answered no when they were asked if the operations of the slaughterhouse were inspected. This was expected because most (70%) the residents indicated in a follow up question that they have never seen an inspector before. 65% of the residents responded positive to the fact that the operations of the slaughterhouse affected them, as indicated in Figure 1. It can also be concluded from the above fig. 4.2 that, the residents of Amasaman are aware of the negative impact the operations of the slaughterhouse is having on them, (resident) and the country at large.



Source: Field survey, 2015

Figure 1: Response of Residents on the Operations of the Slaughterhouse

From Figure 1, respondents (residents) were asked on how waste is disposed off by the slaughterhouse. They indicated that 64% and 36% representing the amount of wastewater and blood respectively generated by the slaughterhouse operations were usually disposed off into gutters or reservoirs. Almost all the respondents (residents) also said that unwanted offal and faeces were disposed off at the refuse dump and given to farmers respectively. This is in agreement with a study by Adelegan (2002), where it was found that in many developing nations, many abattoirs and slaughterhouse dispose off their waste directly into streams or rivers and also use water from the same source to wash slaughtered animals. The situation is not any different in Ghana, where, most liquid and gaseous wastes are released into the immediate environs of the abattoir. In some instances, the solid wastes are deposited with other urban wastes some distance from the abattoir, as indicated by Weobong (2001) that the Kumasi Abattoir for instance dumps its solid wastes into the Subin River about a kilometer upstream of Asago, a small peri-urban community.

It was also observed that the unwanted offal which are disposed off at the refuse dump were responsible for the bad stench in the community. Degrading heaps of gut contents at the site served as breeding grounds and sanctuary for pests that become a nuisance for slaughterhouse workers, visitors as well as residents around the facility. It was very interesting to note that, even most of the workers did not know what happens to the waste in the reservoir.

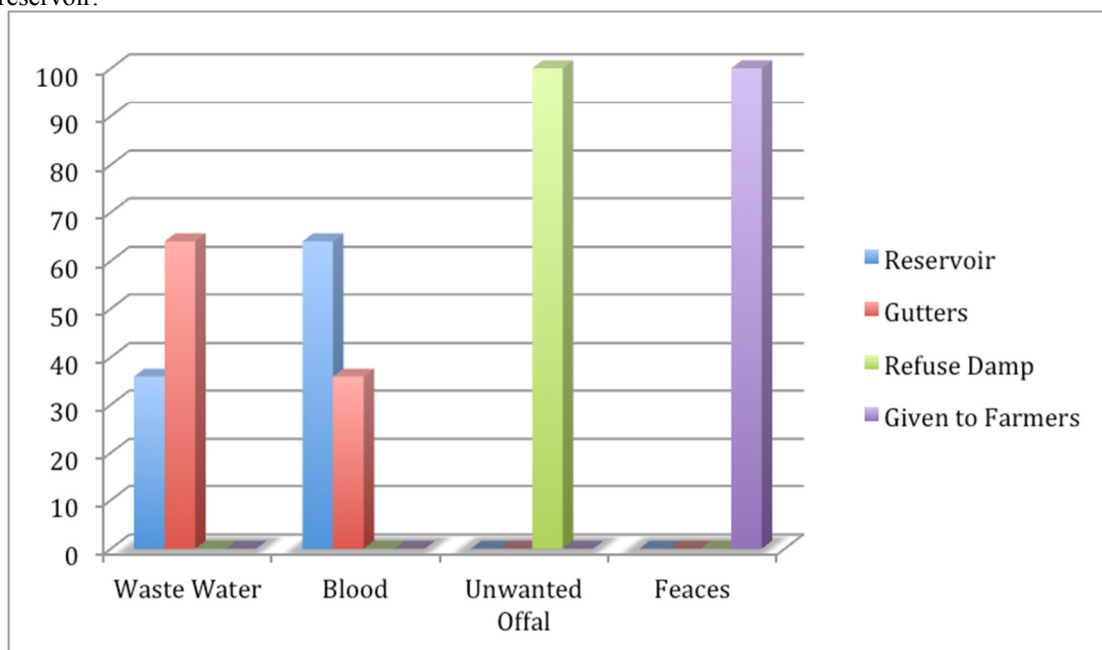


Figure 2: Response by Residents on the Disposal of Waste from the Abattoir

With regards to the staff of the, they said that the abattoir operates were inspected on a monthly bases, which was contrary to what the residents said. It can however be argued that the resident may not know the

inspectors so they were likely not to know when the inspectors come for inspections. It was further indicated by the staff that the slaughterhouse have regulations regarding its operations and the agency that conducts these inspections is the Environmental Protection Agency (EPA).

With respect to the impact of the slaughterhouse operations on the residents, the staff affirmed to the fact that the abattoir operations have an impact on the residents.

During the period for the research, there was a nauseating stench that greeted anyone who visits the vicinity and this was as a result of the Ghana Water Company cutting of water supply to the abattoir. Prior to that, the waste collection company that serviced the area had not collected the refuse over a period, resulting in a pile-up. The recent rains, therefore, provided a catalyst for the production of that stench. This means that the regulations on the operation of the slaughterhouse is not adhered to and the inspectors are not doing their work well.

Conclusion

Based on the research conducted, it can be concluded that the operations of the Amasaman slaughterhouse has a negative impact on the residents, which was confirmed, by both the staff of the abattoir, as well as the residents. The operations of the slaughterhouse regarding how wastewater, blood, unwanted offal and faeces are disposed off all affect the residents and the environment at large. The stench emanating from the slaughterhouse waste is highly repulsive. It is therefore instructive to treat the slaughterhouse wastes appropriately and properly dispose them to avert serious health effects for residents and workers.

Concerning the regulations on the operations of the slaughterhouse, it can be concluded that the observations made were below the requirements and that much was needed to be done to improve the system at the facility. The workers should also be trained in the general rules and regulations regarding EPA-Ghana standards.

With regards to whether the operations is being observed by inspectors, the responses showed that indeed, it is being done, but it should be more frequent, appropriate, and without any favours.

Recommendation

The government must compel the Accra Metropolitan Assembly (AMA), to stop the operators of slaughterhouses and abattoir from construction at unauthorized places.

The Veterinary Services, the Regional Health Services Directorate and other such bodies as Environmental Protection Agency (EPA) must have representative on the slaughterhouse Board to ensure that the necessary legislations are enforced to bring the facility back to life.

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