



Occupational Health and Safety Practices among Refuse Collectors in the Cape Coast Metropolis, Ghana

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ABSTRACT

This study sought to explore occupational health and safety practices among refuse collectors in the Cape Coast Metropolis. The study was qualitative in nature and employed the exploratory study design. In all 30 refuse disposal collectors participated in the study. Quota sampling, snowballing and purposive sampling techniques were used to select the various companies, participants and key informants respectively for the study. Interviewing, focus group discussions and observations were the methods used for the study. However, interview guide and focus group discussion guide were the instruments used to collect data for the study. Data generated was put into themes for analysis. The study revealed that most of the refuse collectors in the metropolis do not put on the protective wears at dump site, it is recommended that refuse/waste management companies in the metropolis intensify their training efforts to continue to sensitise refuse collectors on the need to wear those protective clothing in order to safeguard themselves from coming into contact harmful substances at the various dump sites.

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Introduction

As the nature of business varies over time, changes to both the volume and nature of refuse generated have also occurred. Not only are we making more refuse than ever before, the nature of refuse has become more complex, and very repeatedly more precarious to people, property and the environment (WorkSafe Victoria, 2015). Refuse is created in a number of ways and comes in various forms. Improper disposal of refuse can create various health and safety related problems if not dealt with in a safe and responsible manner. These problems can affect everyone - from people who produce refuse to those who transport it, and finally those that receive, treat and store it. Refuse in general irrespective of the kind can also create problems for the overall public and the environment if not handled safely (Huren, Englehardt, Fleming & Bean, 2015). Workplaces need to ensure that hazards and risks associated with refuse collection are considered and dealt with along with other workplace safety and health related issues. At each stage of the refuse chain, employers have major responsibilities to keep their staff safe from the peril associated with it (Ministry of Labour, 2013).

Merriam-Webster Dictionary (2002) defined refuse as the worthless or useless part of something. Other synonyms include trash, garbage, chaff, debris, effluvia, junk and litter. Sometimes refuse may contain faeces. Improper disposal of refuse can create significant health problems and a very unpleasant living environment if not disposed of safely and appropriately (WHO 2012). Municipal refuse more commonly known as trash or garbage consists of everyday items we use and then throw away, such as product packaging, grass clippings, furniture, clothing, bottles, food scraps, newspapers, appliances, paint, and batteries. This comes from our homes, schools, hospitals, and businesses (USEPA, 2012).

Miranda (2012) defined refuse disposal as the act of taking items that no longer have value to be destroyed. Part of refuse disposal is determining if materials have any inherent value that can be used for composting or recycling. (Birdstall Group, 2012) also defined waste management as the collection, transport, processing, recycling or disposal, and monitoring of waste materials. The term usually relates to materials produced by human activity, and is generally undertaken to reduce their effect on health, the environment or aesthetics. Waste management is also carried out to recover resources from it. Waste management can involve solid, liquid, gaseous or radioactive substances, with different methods and fields of expertise for each.

An environment polluted by inadequate treatment of refuse can cause indirect health effects to the community (WHO, 2012). The risk to the community includes intentional and unintentional exposure in the absence of safe waste management systems (WHO, 2012). Frequently, it is the manner in which the refuse is kept that dictates the exposure to health risks. The largest risk to humans comes in the form of diseases associated with unsanitary conditions. Vector borne disease such as malaria, diarrhoea, typhoid and cholera make significant health impact. More than half of these diseases are related to the poor sanitary conditions that exist and the attendant economic and social cost (Ghana's Climate Change Technology Needs and Needs Assessment Report, 2003).

Workforce injury rates emanating from refuse collection and management are increasing at an alarming rate. An employee exposed to the menace arising from work relating refuse collection, reprocessing and management are at jeopardy of severe injury and illness. In 2011, the frequency of injuries associated with workplace health and safety increased by almost

13 per cent from 2010 for workers engaged in these undertakings (Ministry of Labour, 2013).

Adei and Kunfaa (2007) in their study in wood processing companies found that personal protective equipment was the leading measure implemented to moderate the effect of hazards in the workplaces. These were safety boots, overall coat, nose masks, ear protectors, goggles and gloves. Usually, besides the personal protective equipment's not being sufficient and not appropriately used, there was nonexistence of enforcement in their use (Adei and Kunfaa, 2007). Jayakrishnan, Cherumandil and Bhaskar (2013) posit that adequate personal protective equipment is vital to the work of waste collectors because of the hazardous nature of the work. Besides, Adei and Kunfaa (2007) in their study found that there were no safety notices on walls and other vantage points that bore instructions or caution about potential hazards particularly in areas where hazard exposure was very high in order to prevent accidents. Management of workplaces perceived occupational hazards in the workplace to be usual with their operations and therefore lacked the commitment to ensure safe and healthy practices.

Ghana has some sections of occupational health and safety legitimate requirements under the jurisdiction of different agencies yet has no national policy and body responsible for controlling and ensuring that requirements and procedures in occupational safety and health are employed (Annan, 2010). One of the major challenges in implementing occupational health and safety practice is that the country does not have any wide-ranging national policy (Annan, Tulasie & Addai, 2015). One most central issue relates to dealing with occupational health and safety challenges in many workplaces. The degree of refuse disposal is growing and this has led to larger percentage of the refuse collectors being exposed to workplace hazards (Kuijer, Shiter, & Frings-Dresen, 2010). Furthermore, there are few investigations on health and safety practices of refuse collectors in Ghana (Kretchy, Dzodzomenyo, Rheinlander, Ayi, Konradsen, Fobil and Dalsgaard 2015). It is in this regard that this study sought to explore occupational health and safety practices among refuse collectors in the Cape Coast Metropolis. The broad objective of the study was to explore occupational health and safety practices among refuse collectors in the Cape Coast Metropolis. The specific objectives were to assess safety practices among refuse collectors, explore the health related challenges associated with refuse collection and assess measures instituted by waste management companies to protect the health and safety of refuse collectors in the metropolis, and to recommend strategies for effective occupational health and safety practices in refuse collection.

Methodology

The study was qualitative. Specifically, it employed the exploratory design. The population of the study was all refuse collectors in the various refuse collection companies/agencies in the Cape Coast Metropolis. The sample size for the study was thirty (30) selected refuse collectors from the various waste/refuse management companies. Quota sampling was used to select participating companies/agencies, snowballing was also used to select waste collectors from the various waste/refuse management companies while purposive sampling technique was used to select 3 key informants (one refuse collection supervisor and two metropolitan coordinators of waste/refuse management companies). Data collection methods used were interviewing, focus group discussion and observations. Specifically, the study used the interview guide and the focus group discussion guide as instruments to solicit the views from respondents. The composition of the focus group discussion was

between 6-8 refuse collectors. Data generated were put into themes for the analysis.

Results and discussions

Safety practices among waste management collectors

The study found that safety practices during refuse handling, collection, assemblage, conveyance and disposal were primarily through the wearing of wellington boots, nose mask, gloves and the use of dustbins and cans. This backs the findings from (Adei and Kunfaa, 2007) that personal protective equipment like safety boots, overall coat, nose masks, gloves was the chief strategy embraced to lessen the consequence of hazards in the workplaces. Though, larger percentage of refuse collectors did not at all times use nose mask. Gloves were foreseen as a safety precaution expected to protect the hands from cuts and other hazardous materials like lead from seeping batteries. Overalls were envisaged to protect the body from injuries and spillovers. Safety boots were intended to protect the feet from cuts stemming from broken glasses, metals and other harmful substance and lastly, nose masks prevented the body from huffing poisonous substances in the air that might have some deleterious consequence to the body metabolism. Habitually, most of these refuse collectors did not wear the nose mask while discharging their duties.

The study also observed that the main implements used for the collection of refuse in the metropolis were mostly brooms, rake, spade or shovels and wheelbarrow.

The study showed that majority of the respondents did not use any gloves to protect their hands from the refuse. The reason assigned for the non-usage of gloves was from the fact that they are usually not been supplied with the material from their respective refuse/waste management companies. Greater proportion of the respondents interviewed stated that they have not used any overalls in their work. Only few of the respondents indicated that they had used overall as a safety precautionary measure before but since those materials got worn-out they have not had any replacement.

In an interview with a refuse collector this is what he had to say:

"There is no work. This is all that I have got to do. Beside I did not go to school. What if they sack me if I complain?"

In the analysis of interview responses, it was established that most of the respondents were not using safety boots as safety measures. The study also showed that most respondents did not use the nose masks in their duties as a safety precaution. Lack of adequate knowledge and the cost implication of the inhaler masks were some of the reasons cited as the low usage of the mask.

In an interview with one refuse collector, this is what he had to say:

"I wear the Wellington boots anytime I come to the site to collect refuse. Sometimes, when I don't have the gloves on my hand, I tie polythene bags around my hand to avoid coming into contact with faeces and other harmful substances".

Another respondent had this to say:

"Usually I cover my nose with my handkerchief anytime I go to the site to collect refuse. This protects me from breathing the unpleasant smell at the refuse dump and also to avoid contracting airborne diseases".

The focus group discussion results also confirmed some of the assertion made by individual participants who were interviewed.

Health related challenges associated with waste collection

Responses from participants revealed that refuse poses a serious threat to their health. Study participants indicated that direct handling of refuse result in coming into contact with

various types harmful substances. These include: faeces presented in nappies, sanitary pads; animal waste produced from litter trays, hutches and pens of normal domestic pets; dead animal carcasses; rodent infestations; blood borne infectious material such as needles/syringes, condoms with semen and broken glass and other sharp items. The results from the interview and focus group discussions revealed that exposure to hazardous refuse affect refuse collector's health. In fact, most interviewed respondents indicated that direct exposure to harmful substances at waste dump sites has caused them several diseases through chemical exposure as the release of chemical waste into the environment leads to chemical poisoning. Infectious diseases like skin diseases, vector borne diseases and blood borne diseases were cited as some of the diseases they contract from direct contact with waste and other chemical deposited at dump sites. In addition, it was observed that ordinarily, refuse collectors cover their nose with either their handkerchiefs or a piece of clean cloth instead of the nose mask to avoid the smell originating from the dump sites.

The study discovered that most refuse collectors specifically those who work at various dump sites and by the roadside stand a higher risk of getting respiratory diseases since they do not have nose mask to prevent the inhaling of unpleasant smell, dust and exhaust fumes from vehicles. Furthermore, refuse collectors who work by the roadside stands the risk of being knocked by vehicles since there were no sign posts or boards to give directions to on-coming vehicles about the presence of a refuse collector. Refuse collectors handling heavy containers get accidents such as bone and muscle disorders. Refuse collectors are at risk of infectious wounds resulting from contact with sharp objects. Other injuries resulting like burns from occupational accidents at refuse disposal sites or from methane gas explosion at landfill sites also affect the health and safety of refuse collectors.

In an interview discussion with one of the participants, she echoed that:

Many at time, I collect toilets from black polythene bags without knowing. Sometimes before I realize then the toilets had splitted on me.

Another discovery ensued from an interview with refuse collector is:

If I get another job elsewhere I will quit collecting refuse. Usually, I experience body rashes especially when I go from house to use to collect refuse. The stench from the refuse alone gives me headache and I have to take in paracetamol very often to reduce the pain. This is creating serious health problems for me.

I have used the same nose mask and gloves for several weeks now and have not had any replacement. Sometimes I have to put them in soapy water in order to remove the dirt from them before I could wear them again. I believe, if the officers could change it for me everyday, it would help me a lot.

Another study participant had this to say:

Sometimes, I have to wrap my hands with polythene bags before I could collect the refuse. I have used my gloves for so many months now and it is torn. I have sown it several times and this time, I think I need a replacement. I have told my boss for replacement. Though he has promised to get me another one but for over two months now, I have not had the replacement I requested for. This makes me afraid when collecting the refuse. This is because sometimes, I come into contact with used baby diapers and pad which are contaminated with blood. This makes me afraid that I would contract a disease at work site one day.

Measures instituted by refuse/waste management companies in the metropolis to protect the health and safety of refuse collectors

In an interview with supervisors and some co-ordinators of the waste collection companies about measures put in place to protect the health and safety of refuse collectors showed that management of waste collection companies provide appropriate and adequate equipment e.g. litter picking tongs, shovels, gloves, overalls and suitable protective gloves, shoes, boots, cut resistant trousers, and/or clothing to protect refuse collector at various dump sites. However, some of these refuse collectors would hardly wear the protective especially the overall. However responses from the focus group discussions and interviews with some refuse collectors proved otherwise. Issues ensuing from discussions with one co-ordinator revealed that most of these overalls make refuse collector(s) uncomfortable because of the heat generated from wearing such clothess. Additionally, it was revealed that safety training is usually provided to refuse collectors on regular basis on the need to be extra careful and also wear the protective gears to safeguard themselves against harmful substances at the various dump sites.

Conclusions

Based on the findings from the study, the following conclusions were drawn: Safety practices among refuse collectors included the wearing of wellington boots to refuse site, wearing of gloves and sometimes dresses that protect them from coming into contact with harmful substances at the sites. Most refuse collectors cover their noses with their handkerchiefs or a piece of clean materials to protect themselves from breathing the unpleasant smells from the site. Notwithstanding, refuse collectors are exposed to chronic illness and infectious diseases from their respective dump sites of operation. Waste/refuse management companies have provided dustbins, vehicles and in addition, provided training to refuse collectors regarding the collection of refuse at the various refuse dumps.

Recommendations

Based on the findings from the study, the following recommendations were made:

Management of waste collection companies must endeavour to provide appropriate and adequate equipment e.g. litter picking tongs, shovels, spade, containers and lighting and suitable protective like gloves, shoes, boots, cut resistant trousers, and/or clothing.

Refuse collectors should avoid handling bags and other receptacles accessible to rats without hand and forearm protection.

Management as a matter of urgency must ensure that refuse collectors understand the risks involved through proper information, instruction, training and supervision.

In addition, management of waste collection companies must provide effective skincare programmes to keep the skin moisturised, by using mild cleansers, clean towels and pre-work and after-work skin creams. Also, management must refer workers to an occupational health physician who is familiar with the risks of the process and the principles of health scrutiny.

At the household-level, proper segregation of waste has to be done and it should be ensured that all organic matter is kept aside for composting, which is absolutely an appropriate system for the correct disposal of this segment of the waste.

Refuse collectors should be subject to regular hand inspection. This is likely to include: appointing a responsible person, such as a supervisor, first aider or crew leader, to be trained by an occupational health professional on the symptoms and signs of dermatitis. Set up a system of periodic skin inspections and carry out regular inspections.

Promotion of good personal hygiene: it is essential that waste collection workers wash or clean their hands with soaps before: eating; drinking; smoking; using the phone; taking medication; wearing gloves; using the toilet; or after becoming contaminated with infected material. This is because good personal hygiene is essential to prevent ill health.

Suggestions for further studies

Another study could also expand the scope to other districts and metropolis.

Other studies could also look at occupational health and safety practices in rural communities.

Contribution to knowledge

The study contributes to the existing body of knowledge in occupational health and safety management practice and seeks better ways to improve existing safety and health practices.

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