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Physical Environmental Determinants of Workers' Occupational Health and Safety in Small and Medium Scale Enterprises in Lagos State, Nigeria

Oluranti Samuel

Department of Sociology, Lagos State University, Nigeria

Abstract

Work environment includes physical work environment, personal health resources, enterprise community involvement and psychosocial work environment. The physical environment of the workplace is not only the building and the offices, but the way the workplace is structured and the various arrangements of things within the premises. The effects of the physical environment of any given workplace to occupational health and safety (OHS) cannot be over emphasized. This paper assesses the physical environmental determinants of workers on OHS in selected sawmills, mechanic, and blacksmith cottages in Lagos State, Nigeria. Adopting the labour process theory, this study uses both qualitative and quantitative methods of data collection in the selected study areas. Simple percentiles and content-analysis of the collected data were used. The results include dirty environment that are hazard-prone, wastes are burnt within premises, open defecation, pollution through smokes, dust, noise and indiscriminate disposal of refuse. The findings could determine poor OHS of workers in the selected workplaces. The paper suggest adequate training for workers on environment and OHS, involvement of the trade associations in the OHS matters; and the government agencies responsible for the issues of environment and OHS should be alive to their responsibilities.

Keywords: Work environment; Physical environment; Sawmills; Mechanic villages;Blacksmith cottages.

Introduction

An environment can be described in terms of their physical and social components, array of independent attributes and in term of their relative scales and complexity [1]. It is also seen as the social context, in which the individual is located with issue of adaptation and adjustment, where human action occurs and itself modified by human agency. Environmental determinants of workers' OHS are those factors within the work environment that can impact greatly on the comfort and productivity of employees and workers of various categories.

The environment can be described in terms of their physical and social components, an array of independent attributes and in term of their relative scales and complexity [1]classifies workplace environment to encompass four major avenues of influence, which include: physical work environment, personal health resources, enterprise community involvement and psychosocial work environment. [2]Further asserts that through these four avenues of influence, workers and employers can take actions through effective processes. [3]Describes the environment of a workplace as "one in which workers and managers collaborate to use a continual improvement process to protect and promote the health, safety and well-being of all workers and the sustainability of the workplace". She further explains the four avenues of influence mentioned by [4] as necessary concerns for all stakeholders in the workplace, based on identified needs. These concerns according to [3] are (a) health and safety concerns in the physical work environment; (b) health, safety and well-being concerns in the psycho- social work environment including organisation of work and workplace culture; personal health resources in the workplace provided by employers; and (d) ways of participating in the community to improve the health of workers, their families and other members of the community. The work environment is acknowledged as a very important determinant of health and its inequalities [5]. The work environment is more hazardous in SMEs than in the formal enterprises. In Europe, the SMEs account for 82 per cent of all occupational injuries and 90 per cent of all fatal accidents (European Agency for Safety and Health at [6]. The environmental condition of a workplace is identified as one of the enabling environments for SMEs [6]. Environmental determinants associated with SMEs in developing countries are complex and vary in scope and magnitude. "This is attributed to the economic and social role that the small-scale sector plays in a developing economy and the consequent articulation of capital, labor and technology under conditions very different to large-scale manufacturing. These relationships also determine the sectors "ability to cope with change" [2].

Investing in the working environment that meets the needs of individual will enhance increase in productivity and economic prosperity [7]. The work environment can impact greatly on the comfort and productivity of employees and workers of various categories. These are physical aspects, such as work-station arrangement, as well as equipment, noise, temperature, lighting and access, with the organisational aspects such as workload, job pace, and task diversity. Sawmills, mechanic villages and blacksmith cottages are hazardous work environments. This is because the work process involves the movement and the usage of heavy equipment, cutting of large pieces of wood, steel and iron in the respective workplaces [8]. Environmental issues associated with these workplaces include disposal of solid waste, air pollution, wastewater, noise and fire and they should be of great concern. The study examines how physical environment can determine the occupational health and safety of workers in sawmills mechanic villages and blacksmith cottages in selected Local Government in Lagos State, Nigeria.

Physical environment

The physical work environment is defined [9] "as the part of workplace facility that can be detected by human or electronic senses, including the structure, air, machines, furniture, products, chemicals

***Corresponding author:** Oluranti Samuel, Department of Sociology, Lagos State University, Nigeria, Tel:+234802300392; E-mail: oluranti.samuel@lasu.edu.ng

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and processes that are present or that occur in the workplace, and which can affect the physical, mental, safety, health and well-being of workers". Physical working condition constitutes a major cause of ill-health among workers and remains an important factor behind social inequalities in health [5]. Hazard in the physical work environment can easily disable or kill workers. [10]itemizes the hazards in the physical work environment to include: chemical hazards (solvents, pesticides, asbestos, silica, tobacco smoke); physical hazards (noise, radiation, vibration, excessive heat, nano-particles); biological hazards (e.g. hepatitis B, malaria, HIV, tuberculosis, mould, lack of clean water, toilets and hygiene facilities); ergonomic hazards (e.g. processes requiring excessive force, awkward posture, repetition, heavy lifting); mechanical hazards (e.g. machine hazards related to nip points, cranes, forklifts); energy hazards (e.g. electrical hazards, falls from heights); and mobile hazards (e.g. driving on ice or in rainstorms or unfamiliar or poorly maintained vehicles). [5,11]also identify ventilation, lightning, humidification, and physical facilities at work, like, plant lay out, first aid, canteens, rest rooms, conservancy facilities, washing and bathing facilities as the physical work environment that causes ill-health and engender social inequalities in health. Many factors responsible for ill-health in the work environment modify or serve as modifiers of other causes of ill-health, which include the combination of the effects of pollutants at workplace and the environment [12]. The factors identified by [5,11,12] are however feasible mostly in the formal sector of the economy. Most workers in SMEs reside in poor areas, with poor basic health and welfare services, lack of social protection and they work in unhealthy and unsafe and dangerous working environment. For many micro and small scale enterprises, it is difficult to distinguish their homes from their workplaces, as they could both serve the same purpose [13]. The structure and the maintenance of the workplace, as well as the interaction of the workers with the physical environment have a lot to do with OHS of workers in SMEs. Therefore the physical working conditions have the potentials of affecting workers' health [11].

Methodology

The study is 'a cross-sectional survey research design, while the study area is Lagos State, the former capital of Nigeria and the major commercial nerve centre of Nigeria.

The population of this study include masters/journeymen/owners/operators and apprentices in the selected SMEs (sawmills, mechanic villages and blacksmith cottages) in the study area. The samples for the study include representatives of the population in the selected SMEs in the study area. A multi-stage sampling procedure was adopted. Purposive sampling technique was used in selecting the study area. In stage two, three Local Government Areas (LGAs) representing urban and semi-urban areas were selected. In stage three, the researcher adopted purposive sampling technique to select one major sawmill, mechanic village and blacksmith cottage from each of the selected LGAs. Stratified random sampling was adopted in selecting twenty (20) respondents from each of the sectors in selected LGAs. The respondents were stratified into workers/apprentices and masters/journeymen/owners/operators. Sixty respondents were selected from each of the three LGAs totaling 180 in all.

In collecting data, both quantitative and qualitative approaches were adopted. The quantitative data was based on a structured questionnaire adapting Centre for Disease Control and Prevention [CDCP] (2010)'s Global Social Survey: For qualitative data collection, field observation, three focus group discussions (FGDs) each from sawmills, mechanics and blacksmiths from the selected LGAs. Also, interviews were conducted with representatives of the associations of the enterprises in each of the LGAs, representatives of the Lagos State liaison office of the Ministry of Labour, officials of the Ministries of the Environment and Health, and executive members of Federation of Informal Workers of Nigeria (FIWON).

The data were analysed in two parts; the quantitative and the qualitative. Descriptive of data in the distribution tables showing the background characteristics of the respondents were used for the quantitative data through the use of Statistical Package for Social Sciences (SPSS).Qualitative information were categorised on the objectives and were content-analysed. For easy description, responses for strongly agreed and agreed were combined as 'Agreed' and those for disagreed and strongly disagreed were also tagged 'Disagreed'. Also, the analyses are presented in terms of cross-tabulations to establish an association or relationship between variables meant to achieve the research objectives

Findings

Physical Environment

Enterprise-based Assessment

On the physical environmental determinants of OHS in each of the selected workplaces as indicated on (Tables 1), and (Figure 1)below, 26 (43.3%) of the respondents from sawmills agreed that surroundings of workplaces are always kept cleaned, while 34 (56.7%) disagreed, 34 (56.7%) of respondents from mechanic villages also agreed while 26 (43.3%) disagreed. However, 28 (46.7%) and 32 (53.3%) of the respondents from blacksmith cottages agreed and disagreed respectively. The responses that the surroundings of workplaces are always kept clean were exaggerated by the respondents who claimed so. The researcher discovered that the workplaces were swept only in the mornings before the commencement of the day's job. No other areas of the workshops were cleaned. What prevails in the workshops after the close of the day's work is the picking of litters from the floor. The waste products from planks were seen littering the floors and the

VARIABLES	n =180											
	SAWMILLS				MECHANIC VILLAGES				BLACKSMITH COTTAGES			
	n = 60				n =60				n = 60			
Physical Environment	SA	A	D	SD	SA	A	D	SD	SA	A	D	SD
The surroundings of the workplace are cleaned enough	11	15	25	9	17	17	23	3	11	17	27	5
The surroundings of the workplace are not hazard prone	6	10	38	6	7	21	31	1	11	0	42	7
Wastes are burn within the same environment	13	36	0	11	6	30	14	10	11	12	26	11
People defecate in the surroundings of the workplace.	6	26	27	1	3	23	20	14	10	16	27	7
Smokes and dusts envelope the environment.	13	42	5	0	8	29	18	5	10	19	23	8
The environment is polluted by the people around	7	35	16	2	3	32	16	9	2	30	23	5

Table 1: Enterprise-based assessments of physical environment on the four-point Likert scale. Source: Field work December 2014-June 2015.

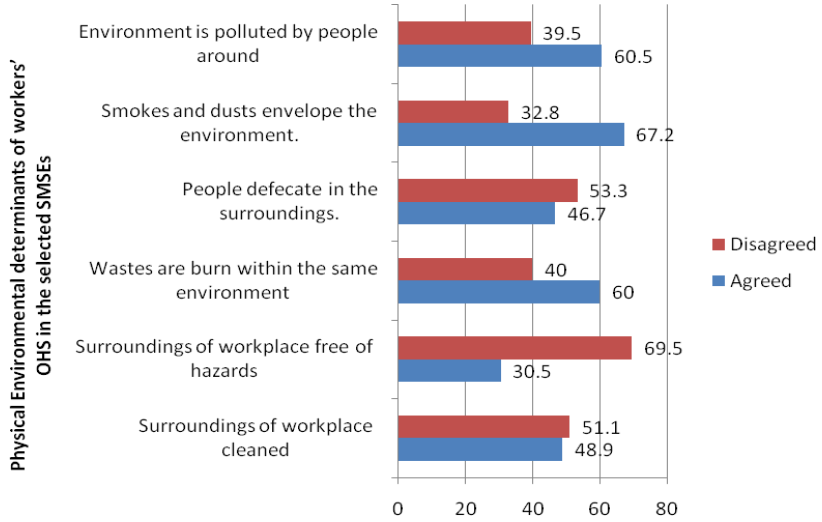

Figure 1: Percentages of the respondents' responses on physical environmental determinants of OHS in the three selected SMEs.

Source: Field work Dec. 2014 – June, 2015.

surroundings of sawmills. Portions of floors in mechanic villages were darkened from engine oil from the process of repairing vehicles, while the surroundings of blacksmith cottages were also dirty. Workers/operators dispose litters indiscriminately as there were no dustbins in the enterprises. What served as the "dustbin" in the selected workplaces included torn-plastic bags placed outside the workplace for the PSP operators, especially in mechanic workshops. The situations in sawmills were different as the waste products were gathered and burnt. The situations of the cleanliness of the environment of the workplaces also show the low level of awareness of OHS among the respondents.

Though, 16 (26.7%) and 44 (73.3%) of the respondents from sawmills agreed and disagreed respectively on the statement that the surroundings of the workplace was free from hazards, 28 (46.7%) respondents from mechanic villages agreed and 32 (53.3%) disagreed, while 11 (18.3%) and 49 (81.7%) of the respondents from blacksmith cottages agreed and disagreed respectively. The responses of the respondents notwithstanding, the environment of the workplaces were not free from hazards. Poor arrangement of premises of the enterprises and equipments, space constraints, the poor cleaning of the environment do not free the enterprises from hazards.

The (Table 1 and Figure 1) below also indicates that 49 (81.7%) of the respondents from sawmills agreed that waste are burnt within the work environment, while 11 (18.3%) disagreed. On the same issue, 36 (60%) of the respondents from mechanic villages also agreed to the statement while 24 (40%) disagreed. On the part of the respondents from blacksmith cottages, 23 (38.3%) agreed while 37 (62.7%) disagreed. Burning of wastes are prevalent in sawmills more than in mechanic villages and blacksmith cottages. Assessing whether people defecate in the surrounding of the selected workplaces, 32 (53.3%) respondents from sawmills agreed while 28 (46.7%) disagreed. Respondents from both mechanic villages and blacksmith cottages, had 26 (43.3%) agreed remarks, while 34 (56.7%) of the respondent had contrary view. Make-shift toilets built on the Lagos lagoon serve as lavatory for workers and operators in sawmills at Okobaba. It is common to see faeces moving on the surface of the lagoon very close to sawmills. This has implication for the health of the workers/operators, and the continual usage of the same method is an indication of their low level of awareness of the implication(s) of such to their safety at work. The bushes around the mechanic villages in Ojo LGA was also used as toilet facilities for workers/operators as there were no toilet facility in the workplace. These situations make the workplace prone to hazard and it demonstrate the low level of OHS awareness among the respondents.

(Table 1 and Figure 1) further revealed that 55 (91.7%) of the respondents from sawmills agree that smokes and dusts envelope the environment, but 5 (8.3%) disagreed. Respondents from mechanic villages indicated 37 (61.7%) agreement and 23 (38.3%) disagreement. However, 29 (48.3%) of the respondents from blacksmith cottages agreed, while 31 (51.7%) disagreed to the issue of smokes and dusts enveloping the environment. The rate at which sawdust are burnt in sawmills make the environment of sawmills smoke-prone. Also, waste from the planks being cut constantly flow with the air and envelop the workplace environment. The situation is not the same in mechanic villages. The smokes in mechanic villages are seldom, and they come from exhaust of the various vehicles being worked on. However, smokes in the environment of blacksmith cottages are much more than that of the mechanic villages, but not as much as in sawmills. Also, 42 (70%) of the respondents from sawmills agreed that the work environment is polluted by people around, while 18 (30%) disagreed. On the same issue of pollution, 35 (58.3%) of the respondents from the mechanic villages agreed, though 25 (41.7%) disagreed. From the respondents from the blacksmiths 32 (53.3%) agreed while 28 (46.7%) disagreed with the statement that environment is polluted by the people around the workplace. Pollutions in the environment of sawmills are much more than what is prevalent in mechanic villages and blacksmith cottages. The contributory factors to the pollution problems in the sawmills include the work procedure, noise, poor management of waste and lack of toilet facilities resulting in the use of make-shift toilets build on the Lagos lagoon, especially in Okobaba sawmills. Pollution in mechanic villages include noise and smokes from vehicles, waste from auto-spray painters, odour from carbide, noise from the process of hitting one iron on the other.

Analysis of the three selected SMEs combined

Assessing the physical environment as determinants of workers OHS in the study areas (see Figure 1), 88 (48.9%) of the respondents

agreed that the surroundings of the workplace are cleaned enough, while 92 (51.1%) disagreed. The implication of this is that majority of the respondents agreed on the filthiness of the surroundings of their workplaces. Those that disagreed that their working environments are dirty did not see their work environment beyond the early morning sweeping of the workplace. Fifty-five (30.5%) of the respondents agreed that the surroundings of the workplace were not hazard prone, while 156 (69.5%) disagreed, meaning that the surroundings were hazard prone. The respondents who stated that the surroundings of their workplaces are hazard prone must have sensed the occupational hazards looming in their work environment, while those that disagreed are unaware of what OHS entails.

Also, 108 (60%) of the respondents agreed that waste are burnt within the same environment but 72 (40%) disagreed. Waste are burnt in all the workplaces, especially in sawmills where the burning of sawdust is not seen by the operators as constituting any danger to people working in the enterprise. In mechanic villages and blacksmith cottages, waste are gathered and in most cases set burnt. This has implication for the environment of the workplaces. Though 84 (46.7%) of the respondents agreed that workers defecate in the surroundings of the workplace, however, 96 (53.3%) of the respondents disagreed. The workers who disagreed on the issue of defecation were being economical with truth. Furthermore, 121 (67.2%) of the respondents agreed that smokes and dusts envelope the work environment, while 59 (32.8%) were of the contrary. On the pollution of the environment, 109 (60.5%) of the respondents were of the opinion that the workplace environments were being polluted by the workers and the people around but 71 (39.5%) disagreed with this assertion. Those that disagreed on the pollution of the work environment are not aware of what constitute pollution of the environment of the workplace.Further to these, the findings from the FGD and IDI emphasized on the physical, biological, chemical environment, pollution, waste management, that is both human waste and the waste from the production. The physical environment was also described as being in disarray. It was also discovered that despite these situation, the major thing workers do is to sweep the work environment.

On the physical environment of the workplace, an IDI interviewee has this to say:

In term of the environment, we can talk of the physical, biological, chemical environment. Because of the hazards in the environment, there are laws to be followed but it all depends on how the agencies in charge regulate and monitor compliances. The observance of the laws depends on how the agencies monitor the activities of the operators. The waste management, the pollution, the human waste, the waste of the product should have adequate measure to curtail this. There should be a way of avoiding the waste flowing in the air (IDI/Representative of the Ministry of Health/Male/29th April, 2015/Lagos, Nigeria).

A discussant has this to say on the issue of space:

Concentration of the business by the people is one of the problems. There are increased numbers of people in small spaces. The few spaces available for many people could cause problem and this will affect movement (FGD/Sawmills/D7/Male/35years old/Christian/Mainland LGA/Lagos, Nigeria/28th April, 2015).

Another IDI respondent added that:

In term of waste, it is a serious matter because the physical environment where they work is in total disarray. You get to some mechanic villages; you need to get back home to take proper bath because of those things you might have been exposed to in their work environment. Some of the materials they use might have lead, which are also dangerous to the health of workers (Interview with CEO, OHSM, 30th June, 2015, at Ikeja, Lagos).

A focus group discussant has this to say:

We do our best to make our environment neat. At least once in every week, Thursday precisely (that is market environmental) we clean our environment. Then state environmental which is last Saturday of every month, but notwithstanding, that doesn't stop us from sweeping and making sure our environment is neat whenever we get to work every morning. (FGD/Mechanic village/Male/D4/Ojo, LGA/25thFebruary, 2015).

Furthermore, the researcher observed during the fieldwork, that there were no proper structures in most of the workshops. The structures in sawmills, mechanic villages and blacksmith cottages were mostly make-shifts. There were no proper arrangements of the equipment and tools in the workshops, as very few of the workers have tool boxes. Tools littered the floor of the workplace. The environments, especially sawmills and mechanic villages were dirty, notwithstanding the claim of sweeping them regularly. The floors of the workshops were littered with different objects ranging from tools, papers, different types of plastics (known in the local parlance as nylon bags), and dirty water flowing from dirty and uncovered drainages. The way auto vehicles meant for repair were parked or arrange were hazard prone as the arrangements were lopsided and gave no room for easy and smooth movement, in case of emergency. Also, condemned engines and other parts of vehicles that were replaced were not properly disposed. Many of them were loped in a single place and were not properly arranged, giving room to the possibility of breeding rats and other harmful rodents and insects. In some cases, old engines that are removed are left on bare ground and the dirty oil and other chemical elements are left to circulate freely on the floor and workers step on them and inhale the pollution without any fear of its implications. The work environments were noisy in all the three selected workplaces. The noise from the machines in sawmills are not friendly, however, the workers are used to it. It has resulted in a situation, where they shout when talking, even when the machines are not working. In mechanic villages, the noise level, though not measured, is also relatively high. This is due to the noise of the various engines of the vehicles, the hitting, filing and smoothening of irons that are prevalent in the environment. The hitting of iron and the noise of the machines when being used are the main cause of noise in blacksmith cottages. The machine, used by vulcanizers in inflating tyres, is also noise-prone as many of them are manually operated with the use of gasoline engine. There were also smokes, especially from saw-dusts poorly managed through burning in sawmills. Some of the machines used in sawmills and blacksmith cottages emit smokes, especially when they are being operated with the use of diesel engine oil. The engines of the various vehicles being worked on too emit smokes from the silencers, especially if they are being tested to ascertain the work being done on them. Also, poor space management was identified, especially among the mechanics. This was due to abandoned vehicles, which are habitations for rodents.

Physical environment in the selected SMEs reveals the vulnerability of the workers to occupational hazard in the workplace. The physical environment assessed the level of cleanliness of the surroundings of workplace, whether the surroundings of workplace are free of hazards, waste management within the work environment, availability of toilet, or whether or not people defecate in the surroundings, the prevalence of smokes and dust and pollution by the people around. The surroundings of the selected workplaces are very dirty. Apart from sweeping of

the workplaces which is not properly done, other things to keep the surroundings of the workplace cleaned are not given attention. There are cobwebs around the various rooms designated as offices, which also compete with some abandoned equipment and materials. Apart from this, the surroundings were littered with various types of plastics or 'nylon bags' as they are called in Nigeria. Vehicles in mechanic villages were poorly parked and it is not uncommon to see many vehicles that have been abandoned for years. The abandoned vehicles are houses for rats and other rodents. Also, tools and other dangerous equipment littered the floor of the various workplaces. There was poor drainage systems in the selected workplaces and dirty water are seen either flowing to nowhere in particular or converging in some parts of the workshops. These situations make the environment prone to hazards. The occupational hazards that could emerge from such environment are in conformity with what [11]refers to as the combination of the effects of pollutants at workplace and the environment.

Furthermore, the rate at which waste are burnt within the environment of the selected SMEs leave much to be desired. The hazards of smokes emanating from such waste-burning and the possible risk of the fire escalating beyond measure was never taken to consideration, especially among the mechanics (who use fuel constantly) and workers in sawmills (who are prone to burning the sawdust). The lack of toilet facilities in the selected workplaces makes their surroundings the alternative. Though defecation is not done openly, people are however free to urinate along the bush parts or a short distance from the workplaces or drainages. Workers in the sawmills, especially at Okobaba, in Ebute-Metta, Lagos Mainland LGA, use the 'advantage' of the closeness of their workplaces to the Lagos lagoon and defecate through make-shift toilets built on the lagoon or on the bank of the lagoon. This situation shows that most workers in SMEs work in unhealthy, unsafe and dangerous working environment with poor basic and welfare services and lack of social protection. The absence of these facilities corroborate the arguments of [5,11] that non-provision of rest rooms, conservancy facilities, washing and bathing facilities can cause ill-health and engender social inequalities in health. This is an invitation to several air and water-borne diseases, as they inhale the air around the place and also walk inside the polluted lagoon bare-footed to push out logs into their various machines. The findings under the physical environment in the selected SMEs agree with the postulation of [11] that physical working conditions may have the potentials of affecting workers' health.

The health hazard in the physical environment of the selected SMEs is also seen in the level of emission of smokes and dusts, especially in sawmills (Figure 1). This manifest from the noise from the start of auto engine and other machines being used, the smoke from the silencers of vehicles under repair in mechanic villages, the smoke from generator used as alternate power supply, the furnace of traditional blacksmith, as well as that of several re-furbished machines that are used in sawmills and blacksmith cottages. Of greater concern are the several molecules of dusts from sawmills and the smells from auto paints that are not taken cognizance of.

Since workers in the selected SMEs themselves are not conscious of the health hazard their work environment poses, there is little they could do to stop the people living around their workplaces from causing occupational hazards, either directly or indirectly. The environments of the selected workplaces are polluted greatly by the people living in the vicinity of the workplaces. Indiscriminate dumping of refuse, noise pollution from vehicles and music from houses around are of major concern.

Space constraint is also a major physical environmental determinant. There are increased numbers of people in small spaces, especially in Mechanic villages and sawmills. The spaces in mechanic villages are shared by auto mechanics of various specialties, auto-painters, panel beaters, auto-electricians (popularly called: 're-wire'), vulcanizes, battery chargers and others. At the sawmill, apart from creating spaces for the machines to be used, the need to create spaces for the logs, the sliced woods, the planks and the waste products are germane. This is also meant to contend with spaces for other functionaries in sawmills [14-16].

It is instructive to note, however, that the weekly market environmental sanitation exercise that takes place every Thursday from 7am to 10am is the major period used to do any semblance of general cleaning in the selected workplaces. This is a major policy of the Lagos State Ministry of the Environment in collaboration with the Lagos State Marketing Board to sanities the market environment as well as the SMEs and other parts of the informal economy. The observance of this policy however, depends on how the ministry officials or its agencies monitor the activities of the workers in SMEs. Though, no work is expected to be done during this period, some workers talk away the time (rather than cleaning their work environment) till 10am, when the restriction will be over. There is also the monthly environmental sanitation that holds every last Saturday of the month between 7am and 10am, and movements are restricted till the end of the exercise. Workers in SMEs seldom adhere to this to clean their work environment because most of them would be in their various homes as a result of the restriction of movement during this period.

The various avenues by which oil containing several hazardous chemicals are emitted is also dangerous to the health of the workers. The mechanics for instance, remove engines and other oily parts of the vehicle and leave such on the bare floor. The oil from such engines could cause many to slip and fall. The careless ways of handling diesel in sawmills and among the blacksmith whenever there is power outage is also dangerous and could cause occupational hazards. Many workers work barefooted and step on the oily floors. Also, finger nails are darkened and the same hands are used to eat as the use of cutlery is never taken as anything serious.

Generally, there were no proper structures in most of the selected SMEs. The available structures in the selected SMEs were mostly make-shifts. Most of the workers have no tool boxes and tools were scattered and littered on the floor of the various workplaces. The filthiness of the work environment needs much to be desired. The poor parking system of auto vehicles will further endanger workers in case of emergency, unless the mechanics take drastic measure towards the removal of old vehicles in their various garages. The noise pollution from the selected SMEs, though not measured, need to be curtailed as many of the workers could be partially deaf without knowing it.

Conclusion

The analyses of the environmental determinants of OHS in the selected SMEs have revealed the danger inherent in poor physical environment in the workplaces. The nonchalant attitudes of workers in the selected SMEs towards OHS in respect of the physical environment has become traditional as they saw nothing bad in the phenomena, provided their businesses are going on as usual. The OHS situations of the SMEs can be improved through adequate education and awareness program for workers, owners/operators in these enterprises. The Ministry of the Environment should be alive to their responsibilities, while the trade association should take the issue of OHS seriously.

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