

## OCCUPATIONAL HEALTH HAZARDS AMONG SMALL SCALE INDUSTRIES IN ONDO STATE NIGERIA

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**ABSTRACT:** One of the major flaws of the Nigerian industrialization is the over emphasis on temporal growth with little or no emphasis on safety of workers in spite of the existence of Factories Act. This study examined the level of compliance to occupational health and safety standard among small scale industries in Ondo state. Data were collected from industrialists, workers and government's supervisory body through three different set of questionnaires. Data collected were analyzed using simple tables and bar graphs. The grand mean weighted values were compared with the mean weighted value in order to isolate the most important responses. The study discovered a very low level of compliance among small scale industries in the study area Out of 250 enterprises sampled, 62% (155) did not provide safety kits to their employees, 43% (108) did not have adequate ventilation, and 54% (135) did not have sanitary conveniences, while 35% (88) had no recreational facilities at all. In spite of this however wood based enterprises were identified to have the most compliance, although the compliance is only slightly above average (score of 37 out of a total of 60). Regional analysis of the pattern of compliance revealed that out of the 55 industries that had some acceptable level of compliance (which is only 22 % of the entire industries sampled), Ondo North region was ahead of the other two regions Ondo North and Ondo South with 62%(34) of industries while others varied from 16%(9) to 22%(12). Reasons for low compliance were sought from proprietors workers and officials in the state ministry of industries which is the supervising body. Reasons given varied from lack of finance to ensure compliance, the belief that OHS was only meant for large scale industries, Proprietors lukewarm attitude to OHS, and fraudulent practices by supervisors.

**KEYWORDS:** Small Scale Industries, Occupational Health Standards, Compliance, Safety.

### INTRODUCTION

There is little doubt on the importance of having a good implementable Occupational Standard to protect industrial workers from hazards. The Nigerian Factories Act of 1987 came about purposely to protect the factory worker from occupational health hazards (OHS) such as injury and death in the work place either from contact with machine or noxious substances provides that every factory in Nigeria big or small must make provision for cleanliness, overcrowding, ventilation, lighting, drainage of floors and sanitary conveniences. Yet empirical observation reveals that many of Nigerian industries are not complying with much of its provisions in spite of the existence of factory inspectors.

Many studies have established the importance of small scale industries (SSI) to economic development, The United Nations Millennium Development Goals (MDGs) sets a critical challenge of halving absolute poverty in the world by 2015, the Nigerian vision 2020, which was launched in 2006, has among its objectives sustainable industrial development by the end of targeted year. Small scale industries have been identified to be capable of making important contribution towards achieving these goals by reducing poverty, and improving other indices of development.

However, studies have shown that they are difficult to control since many of them are operating informally and so they are not registered with the Nigerian Corporate Affairs Commission or the state ministry of industries. Under these

circumstances, they often do not comply with regulations which include occupational standards and safety measures on workers and those living within the areas of location. Records of occupational diseases are poor, primarily because industries do not report cases to the relevant government agency. However, a survey of occupational diseases reported in the literature suggests that conjunctivitis, chronic bronchitis, dermatitis, musculoskeletal disorders and injuries are common workplace health problems which many patients very often do not link with occupation except injuries due to low literacy rate among practitioners. Yet it is important to state here that many of such cases have reasonable grounds to be linked to workers operating environment.

It is important to state here that while many studies have been conducted on OHS in large scale industries (see Dasgupta and others 1998) OHS studies among small scale industries have often been ignored. There is indeed a careless assumption that because they are small and majority are labour intensive their OHS requirements and propensity to cause injury among workers are small compared to large scale industries. It is on these bases that this study examined the state of compliance with occupational safety measures among small scale enterprises in Ondo state

## **RESEARCH METHOD**

In order to make the study representative of the entire state, three (3) major towns Akure, Ikare and Okitipupa, three (3) minor towns Ugbe, Obaile and Odeaye, three (3) major villages; Iboropa Aponmu and Ikoya were investigated. The sample frame covered all the SSI (formal and informal) in the nine settlements selected. There were 1411 in the study area .The sample size for administering the first questionnaire i.e. on proprietors of the SSI was 250. This constitutes 25% of the entire sample frame (1411). The study also sampled one worker per industry making another 250, and 20% of employees in the state ministry of industries which is 100. To collect the needed data three different questionnaires were administered on these categories of stakeholders in small scale industries. Data were analyzed using simple table and bar graph, and other descriptive means

## **LITERATURE**

Planners have always been interested in the outdoor environment .However it is now realized that the indoor environment is as important as the outdoor environment. The health and safety of workers in factories is therefore important if maximum benefits were to be derived from this industrial sub sector.

Although occupational safety and health is a very important issue at individual, social and national levels, it has not received much attention so far. Companies have not lived up to their ethical responsibility to assist workers in decreasing work-related injuries and illnesses. According to Azaroff, Levenstein, and Wegman (2002), Poor Occupational Health and Safety (OHS) standards are feature of small scale enterprise. Sarin (2000) in a study conducted in the Philippines on the OHS of the estimated 3.6 million children working in the informal SSI sector observed that over half were exposed to physical hazards including extreme temperature, humidity, and noise. A quarter said that they were exposed to chemical hazards. Nineteen per cent reported that they were exposed to biological hazards, principally bacteria and fungus. The small scale industries practice of clustering offers clear economic advantages but may also create negative environmental consequences especially when heavy polluters dominate the cluster. Large sections of towns such as Kashur have been seriously damaged by the proliferation of small tanneries in the core of the city, which created significant health problems to workers who are often not protected. This assertion was supported by Oyelakin-Oyelarin (1997) in his study of small scale industrial clusters of Nnewi and Akinbinu (2001) who studied the informal SSI cluster in auto mechanic village in Ibadan. HSE(2013) estimates that 2,000,000 people within the UK currently suffer from an illness caused by or made worse by the working environment. Despite the fact that illhealth can have a significant impact on the productivity of a business OHS standards are not a priority for workers or entrepreneurs struggling to keep their industries afloat. This is very regrettable given that cost effective OHS measures have been proven to increase productivity. Stewart (1996) argues that managerial decisions can result in either harm or benefit to others; thus managers are ethically obliged to use their authority to create benefit rather than cause harm. However, proper attention to workplace safety can result in improved morale, increased job satisfaction, and greater health for the organization as a whole.

The integration of home and workplace can also cause many problems. This is especially the case in Nigeria where many small scale enterprises are conducted at the homes of proprietors, who may not be financially capable of renting shops or factories to produce their products (Fatusin 2009). Apart from OHS standards, there are many ways living spaces can be compromised by entrepreneurial pursuits like so much small industrial activities takes place out of sight. Under most circumstances a foundry or electroplating operation run from an individual's dwelling is impossible to regulate. Yet even a home-based activity such as basket weaving and garri making industry can be conducted in very unsatisfactory

circumstances. It is almost impossible to monitor the environmental dangers opposed by such enterprises because they are so numerous and widely dispersed. It would be difficult to ensure that EIA measures would be respected in such enterprises. In Nigeria many firms do not even conduct EIA at all. To many small scale industries, Environmental Impact Assessment (EIA) is only for large scale industries.

On the other hand, occupational health practitioners are few and are mostly engaged in multinational and large national establishments and medical schools (Omokhodion 2009). There are a few independent consultant firms especially in Lagos and Port Harcourt. They provide services to medium and large-scale industries. Workers in small-scale industries, particularly those in the informal sector have little or no access to occupational health services.

## FINDINGS

### Level of Compliance with Occupational Health Standard by Small-Scale

The law specifically made provision for workers safety. Sadly however, findings show the provisions of these laws were not being adhered to in most of the 250 sampled small-scale industries. The implication of this is that most factory workers in the state were prone to occupational health hazard, perhaps more than large-scale industries whose operation might be under stringent supervision by the authorities. The provision of protection kits and sanitary convenience were abysmally poor among the sampled enterprises. For example, out of 250 enterprises 62% (155) did not provide safety kits to their employees, 43% (108) firms did not have adequate ventilation, and 54% (135) did not have sanitary conveniences, while 35% (88) had no recreational facilities at all. The structure of recreational facilities provided by the 22% who had something akin to recreational facilities was further investigated. The study found out that of the 55 enterprises in this category, over 65% (36) had only food canteens, 18%(10) had common rooms with indoor games while only 10% (6) had outdoor organized recreational facilities such as Table tennis court. The structure of compliance was categorised into seven categories, from very poor to excellent as shown in table 1

The category of enterprises that complied with OHS was investigated among the small scale industries. It was discovered that formal small-scale industries complied with this principles more than informal small-scale industries. For example, though the compliance averaged 15.7% for all categories of small-scale industries, the compliance rate for informal small-scale industries was around 4.6% while that of formal enterprises was around 11.1%. The conclusion that can be drawn under this scenario is that among small firms, formally established firms did protect their workers much more than informal enterprises. This is however not surprising considering the fact that formally established industries would have complied reasonably with provisions on OHS for them to be registered in the first place.

The sectoral analysis of small scale industries in term of protection of workers was analyzed. This was with a view to isolate the sub sector(s) where entrepreneurs contribute most to OHS. Elements of OHS such as provision of safety kits, strict enforcement of ventilation, provision of lights, display of warning signs provision of recreational facilities provision of emergency health services training and retraining of staff members on OHS control of overcrowding provision of sanitary facilities and monitoring on compliance with OHS were evaluated and scored. The average for each sectors were. Points were allocated from 0 to 6 depending on the average level of compliance as shown below

**Table 1. Scores given to small scale industries on the basis of compliance to OHS**

Scores	Points'	Grade	No of enterprises in the category
Above 70%	6 points	Excellent	8
60 to 69%	5 points	Very good	12
50 to 59%	4 points	Good	21
41 to 49%	3 points	Average	14
30 to 39%	2 points	Below Average	40
20 to 29%	1 points	Poor	58
Under 20%	0 points	Very Poor	47

Source: Fieldwork 2014

Table 2: Ranking of average relative compliance of industrial sub-groups to OHS

Categories	Provision of safety kits	Strict enforcement of ventilation	Provision of lighting illumination	Display of warning signs	Provision of recreational facilities	Provision of emergency health facilities	Training and retraining of staff on OHS	Control of overcrowding	Provision of sanitary facilities	Monitoring	Total Score
Food or Agro products	2	3	5	0	1	2	1	3	2	4	23
Industrial / Constructional material	2	5	2	0	2	4	3	2	1	3	24
Consumer Products	3	4	4	2	2	5	0	0	3	4	27
Metal/capital Product	5	4	4	0	0	1	3	2	1	4	24
Wood products	2	3	6	3	4	4	3	3	4	5	37
Textile	0	2	5	2	0	1	3	3	2	3	21

Source; Fieldwork 2014

Sectoral breakdown of enterprises in the above table revealed that enterprises in wood making sector has the highest score of 37 followed by those in consumer products with 27 points and the least being 23 points in the food and agro products sector. The implication of this is that the study established that in spite of the low compliance rate of the industries with OHS wood based enterprises complied most. Others is shown in figure 1

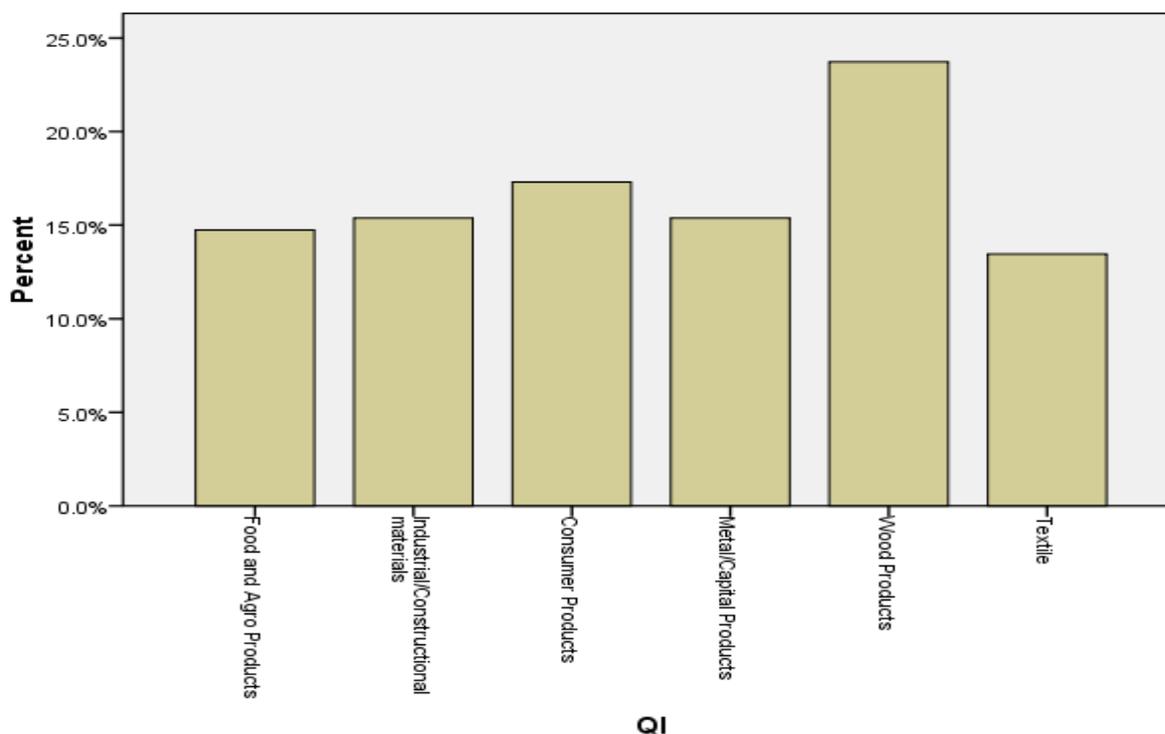


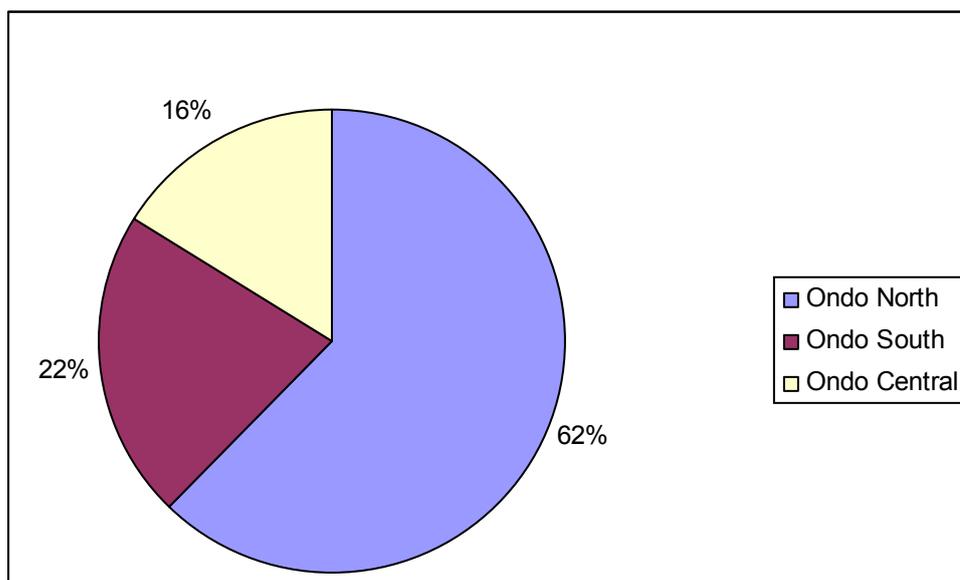
Figure 1 Sectoral breakdown of OHS among small scale industries sampled.

Source: Field Work, 2014.

An analysis of the breakdown of the above table reveals that metal and capital goods industries led with 5 points in the provision of safety kits for their workers, and the next being consumer products industries with 3 points. In the area of ventilation, industrial/constructional materials industries led with 5 points and closely followed by consumer products industries and metal/capital goods industries with 4 points each. In the area of provision of lights, wood products based enterprises led with 6 points followed by food/agro products based small scale industries and textiles with 5 points each. Many wood based industries displayed warning signs in their factories (3) and provided most recreational facilities (4), others being relatively insignificant.

In the same vein, consumer products industries led with 5 points in the provision of emergency health facilities followed by wood based enterprises and industrial/constructional products based industries with 4 points each. The table also shows that wood based enterprises lead in provision of sanitary facilities and monitoring of workers to ensure compliance with OHS, with 4 and 5 points in each of these categories, followed by enterprises in consumer products and food/agro based sectors.

The regional pattern of compliance to OHS was investigated. Out of the 55 enterprises in the categories of excellent, very good, good and average which may be considered as pass mark, 16% were in Ondo North, 22% in Ondo South and 62% in Ondo Central as shown in Fig.2



*Fig.2 Regional pattern of enterprises that comply with OHS.*

Source: Fieldwork 2014

The implication of this is that small scale enterprises in Ondo north region comply more with OHS than anywhere else in Ondo State. This is however not surprising considering the fact that Ondo North the most cosmopolitan in the state as well as the administrative capital where enforcing agency of government is located.

#### **Reasons for Low Compliance**

Reason for low compliance was investigated among proprietors, workers and enforcement bodies like the state ministry of industries. From the proprietors, it can be deduced from their responses that many factors are responsible chief among which are lack of money to ensure compliance, no awareness of need to comply, workers being too many to provide safety kits, government not willing to implement the laws and non registration of firms.

**Table 3: Responses on Causes of low compliance by Proprietors**

Factors	Responses							
	SA	A	DA	SD	Total	TWV	MWV	
No money	151	51	37	11	250	842	3.37	Acc
No awareness of need to comply	90	96	38	26	250	750	3.00	Rej
My workers are too many to provide safety kits	84	78	58	30	250	701	2.80	Rej
Govt. did not implement the safety laws	158	42	38	12	250	846	3.38	Accp
Non registration of firms	78	60	86	26	250	690	2.76	Rej

Source: Field Work, 2014.

$$GMWV = 3.37 + 3.00 + 2.80 + 3.38 + 2.76 = 15.31 / 5 = 3.06$$

The Mean Weight Value (MWV) for the above responses and the General Mean Weight Values (GMWV) or the cut-off point for this grouped responses were calculated. In so doing, two out of the five listed factors were accepted as significant. These are the issue of lack of money to ensure compliance and Government not enforcing safety laws. These two factors are taken as significant in the opinions of proprietors of industries (see table 3)

The perception of workers on necessity of their firms to comply with occupational health standards was investigated. The result showed that out of 250 workers sampled, about 315 or 44% did not see the need to wear protective kits in the works place. Only 207 or 29% emphasized on the necessity of being protected. These were further analyzed to identify the most important of these responses as shown in Table 4.

**Table 4: Responses on causes of low compliance by workers**

Responses.	Responses							
	SA	A	DA	SD				
Proprietors don't value OHS	147	58	40	05	250	847	3.39	Acc.
OHS is optional in Small scale enterprises	155	43	37	15	250	838	3.35	Acc.
Govt. Should assist in providing safety kits	76	66	80	28	250	690	2.76	Re.j
OHS is meant for Large scale industries	139	67	30	14	250	831	3.32	Acc.
Non permanent staff don't need safety kits	48	72	85	45	250	623	2.49	Rej.

Source: Fieldwork 2014

$$GMWV = 3.37 + 3.00 + 2.80 + 3.38 + 2.76 / 5 = 3.06$$

From Table above, some causes of low compliance such as small scale industries not needing OHS, proprietors unwillingness to provide OHS, permanent staff not needing safety kits and OHS being only meant for large scale industries were identified. However the first second and fourth responses were accepted as significant because their respective Mean Weight Values of 3.39, 3.35, and 3.32 are greater than the Grand Mean Weight Value 3.06.

Proprietors of small scale industries therefore needed to do more if workers would not continue to be subjected to work hazards and if the benefits of industries on workers would be maximized and negative impact minimized as it pertains to workers safety.

Table 5: Responses on Causes Related to Supervisory Body (min. of industries)

Factors	Responses							
	SA	A	DA	SD				
The scope of work was too much for the available period	40	29	20	11	100	298	2.98	Acc.
Lack of enough motivation	20	18	32	30	100	228	2.28	Rej.
Lack of qualified manpower	35	35	19	11	100	294	2.94	Acc.
Many entrepreneurs are politically connected	42	28	20	10	100	302	3.02	Acc.
Fraudulent practise by supervisors.	37	33	18	12	100	295	2.95	Acc.

Source: Fieldwork 2014

$$GMWV = 2.98+2.28+2.94+3.02+2.95/5 = 2.82$$

Responses of officials in the state ministry of industries were sought to identify reasons for low compliance with OHS that pertained to supervisory bodies especially the ministry of industries. Some of the reasons given included the fact that their work being too much for the available resources, lack of enough motivation of staff, lack of enough qualified manpower, political connection of entrepreneurs which allowed them to get away with poor OHS, and fraudulent practices by supervisors. These are shown in table 5.

## SUMMARY AND CONCLUSION

The study has been concerned with evaluating the structure and reasons behind the low compliance ratio of small scale industries to occupation safety standard in Ondo state. This was with a view to improving the level of compliance and ensuring high occupational standard among the enterprises. Proprietors, workers and monitoring agency of government which is the state ministry of industries were interviewed through three different questionnaires in order to identify the most significant reasons for poor occupational health standard in the study area. Data collected were analyzed using tables, bar graph and the group mean weighted value were compared with the mean weighted value in order to isolate the most important responses. The study found out an appalling state of compliance. Out of 250 enterprises 62% (155) did not provide safety kits to their employees, 43% (108) firms did not have adequate ventilation, and 54% (135) did not have sanitary conveniences, while 35% (88) had no recreational facilities at all. In spite of this however wood based enterprises were identified to have the most compliance, although the compliance is only slightly above average (score of 37 out of a total of 60) The implication of this is that the OHS policy as enshrined in the Factories Act, Federal Republic of Nigeria has not gone down well with small scale industrialists in the study area

The opinion of proprietors, workers and officials of the state ministry of Industries were sought on the reasons for low level of compliance on occupational safety. The significant reasons given included the issue of lack of money to ensure compliance and government not enforcing safety laws. Others included OHS being optional for small scale industries and proprietors don't value OHS. The officials in the state ministry of industries which is the supervisory body on the other hand gave these reasons; work being too much for the available resources, lack of enough motivation of staff, lack of enough qualified manpower, and political connection of entrepreneurs which allowed them to get away with poor OHS, and fraudulent practices by supervisors.

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