



## Assessment in a Vegetable Oil Producing Industry in Southwestern Nigeria

Anwen Shao\*

*Department of Environmental Sciences, University of Freiburg, Freiburg, Breisgau, Germany*

\*Corresponding author: Anwen Shao, Department of Environmental Sciences, University of Freiburg, Freiburg, Breisgau, Germany. E-mail: shetty@gmail.com

**Received date:** April 04, 2022, Manuscript No. JEOR-22-58341;

**Editor assigned date:** April 06, 2022, PreQC No. JEOR-22-58341(PQ);

**Reviewed date:** April 15, 2022, QC No JEOR-22-58341;

**Revised date:** May 18, 2022, Manuscript No. JEOR-22-58341 (R);

**Published date:** May 25, 2022, DOI: 10.4172/Jeor.1000112.

### Description

Reportedly, 50-70% of current global labor force is exposed to poor working conditions. This study examined exposure and hazards of workers in a vegetable oil industry and the perceived health effects in Southwestern, Nigeria. A descriptive cross-sectional survey (including environmental monitoring) was employed to assess the workplace hazards and their perceived health effects on workers. The sampling covered 102 respondents across 15 departments within the industry. Data obtained were statistically analyzed using SPSS version 16. Common identified health and safety hazards were backache eye irritation, breathing difficulty, heat exhaustion, bruises, cuts and injuries and skin irritation. Noise levels varied from section to section with the power plant recording the highest maximum mean noise level of 103.7dB though a lower mean noise level of 86.7dB was recorded for the office section. The noise level of 88.6dB was recorded at the boiler section; crushing floor had a noise level of 91.8dB at the work area while the office section had a lower noise level of 80.3dB. A noise level of 96.5dB was recorded at the Solvent Extraction Plant section; the office area had 78.2dB while agro laboratory and margarine section recorded respectively. The study findings reveal that occupational health and safety in the workplace is inadequate with a wide range of hazards, physical, chemical and ergonomic, which suggests implementation of stringent safety measures. Noise level, Occupational, Safety, Working conditions, Respondent, Monitoring.

### Design and Procedure

Work is essential for life, development and personal fulfillment. Unfortunately, work activities such as food production, extraction of raw materials, manufacturing of goods, energy production etc. involve processes, operations and materials which can cause hazards which affect the health of workers. Workplace hazards may be biological, chemical, physical, and psychosocial in nature. These hazards have resulted in a host of health impacts, ranging from catastrophic direct effects to chronic effects. While the identification of workplace hazards has often come from observations of adverse health outcomes among workers, unquestionably it is in the workplace that the impact of industrial exposures is best understood. In the past, the assessment of hazards in the workplace had been concentrated on agricultural workers, health-care workers and laboratory personnel, who are at considerable risk of adverse health effects. Nigeria has a fast

developing agricultural sector where variety of products are produced due to the favorable climatic conditions, good soils, government policies and the fact that over 70% of the entire land mass of the country is arable. Different oil-bearing seeds are produced in Nigeria. Due to the ban on importation of vegetable oil, the nation has witnessed a deficit supply. This calls for increase in local production of vegetable oil in Nigeria, thus leading to proliferation of vegetable oil production in companies across the country. Several studies on occupational health hazards in developing countries like Nigeria have assessed the occupational injuries among occupational groups ranging from professionals (white collar) to manual workers (blue collar). The studies showed high prevalence of occupational injuries among blue-collar workers than their white collar counterparts. These blue collar occupation groups have been identified to include labourers, machine operators, drivers, and technicians who are found in the industry. In Nigeria, workplace hazards and accidents have caused an average annual mortality rate of 1,249 per 100,000 workers in the past decade. According to available literature, risk factors leading to injuries are present in every occupation with industrial and agricultural workers having the highest risks. Governments in developing countries display apathy to occupational health and safety issues; different stakeholders (management, workers and government) do not appreciate the problems that can be solved or mitigated through occupational safety and health. The available literature further identified risk factors leading to injuries which are present in every occupation with industrial and agricultural workers having the highest risks.

### Monitoring System

The job demands of most industries have been reported to be hazardous to the health and safety of workers. Although, some industries have evolved high-tech approaches to minimize workers' exposure to heavy physical workloads, empirical evidence shows that workers in the developing countries still seem to be at high risk of occupational hazards. The number of hours spent at workplace by either white or blue professionals, has resulted in several health issues such as cardiovascular disease, diabetes, hypertension, metabolic syndrome, obesity, subsequently high mortality rate thus, leading to a major health challenge in public. Generation of noise by heavy machines in the companies has become a major menace to the workers. It is estimated that 16 to 24 percent proportion of workers world-wide is exposed to noise at moderately high and high levels and the relative risks of hearing loss at those exposure levels. The choice of these levels was based on the recommended exposure limits for occupational noise exposure around the world 85 dB in most developed countries, and 90 dB in the U.S. and in many developing countries. There is a seeming increase in advocacy on the right to health and safety at work as part of basic human rights. To further strengthen this, it is important to bring research into various production sectors to the fore as the findings will further enlighten the employers and employees on how to create a safe and conducive work environment.

Rom Oil Mill is a subsidiary of Flour Mills Nigeria Plc (FMN) that was incorporated on 29th September, 1960 as a private limited liability company with headquarters at Wharf Road, Apapa, Lagos. It was incorporated in Nigeria on 19 January 2006 by Mr. George Coumantaros, a Greek business man. The company is one of the leading manufacturers of a wide range of oil-based products in Nigeria under the Golden Penny Brand. Wheat milling is the financial

backbone of our diversified company. FMN anchored flour milling in Nigeria that started in Apapa since 1962 with a crushing measure of 500 metric tonnes of wheat per day. At present, Apapa mill turns out a rated measure of over 8,000 metric tons per day making it one of the largest single site mills in the world. The FMN has been in existence for over five decades. The company's products include semovita, masavita, pasta, noodles, refined sugar, margarine, vegetable oils, and a range of snacks and breakfast cereals. The company started (and still continues) the production of a woven polythene sack brand, BAGCO, now popular in packaging of flour, cement, grains, salt, detergent, fertilizer, merchandise, farm harvests, shopping etc. The company also markets cement under the brand, "Burham Cement". The industry uses locally sourced materials to develop and produce unique consumer

products for the local markets. She also went into commercial venture in paramount handling of provincially fill out soybean, palm fruit, cassava, maize and sugar cane; storage, aggregation and distribution of locally sourced grains and export commodities. Assessment of inadequacies in health and safety measures Seventy-one respondents claimed to be provided with Personal Protective Equipment (PPE) needed for their work while thirty-one (30.4%) respondents claimed they were not. Sixty-six claimed to have all the tools needed for their daily task while thirty-six (35.3%) claimed they did not the tools. Seventy (68.6%) respondents claimed to have gone through all trainings needed for their job while 32 claimed had not passed through the necessary training. A similar analysis was recorded for the conducive nature of their workplace.