

**Occupational Safety Practice, Health Hazards and Health  
Problem among Petrol Station Worker in Ibadan, Oyo State Nigeria**

**EJILUDE Dauda Adekunle  
LCU/PG/001518**

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## **Dedication**

This research work is dedicated to the God almighty, the author and finisher of our faith whom by his grace foreknew, predestined and made this work on success and for seeing me through my academic year.

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### **Certification**

This is to certify that **Ejilude D. Adekunle** with matriculation number LCU/PG/001960 carried out this research work titled “**Occupational Safety Practice, Health Hazards and Health Problem among Petrol Station Worker in Ibadan**” in the Department of Public Health, Faculty of Basic Medical and Applied Sciences, Lead City University, Ibadan, Oyo State, for the award of **Doctor of Philosophy Degree (PhD) in Public Health (Occupational and Environmental Health)** and that this has not been previously submitted.

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**Dr. T. A. Olwolafe**  
(Supervisor)

**Date**

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**Dr. Akinsolu Folahanmi**  
(Head of the Department)

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**Date**

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“Even though the above mentioned institutions and persons have assisted in the completion of this research work, I alone stand responsible for the errors, if any found in the work”

## ABSTRACT

Petrol station workers encounter several hazards and health problems while working. Occupational hazards are the risks to life or functioning of an individual that is inherently associated with his occupation or working environment which can have deleterious effect on the individual's health and his working efficiency. Petrol pump attendants are one such category of workers who are constantly exposed to various hazards at their workplace. This study was conducted to determine the occupational hazards, health problems and safety practices of petrol station workers in Ibadan, Oyo state, Nigeria. The research was a descriptive cross-sectional study that employed a multi-staged selection technique. To achieve the required sample size, 650 randomly selected petrol station employees were chosen from 130 petrol stations with an average age of  $29.4 \pm 4.6$  years in the Ibadan metropolitan area. The data was analyzed using the Statistical Package for the Social Sciences (SPSS Version 20.). Based on the results of occupational safety practices, it was discovered that 48.7%, 47.7%, and 48.2% of the respondent's wear face masks, do not eat or drink while working, and do not use personal protective equipment, respectively. The results of the distribution of occupational safety practices showed that 48.7% of the respondents wore face or nose masks 47.7%, of the respondents did not drink or eat while working and 48.2% of the respondents did not use personal protective equipment while working, and do not use personal protective equipment, respectively. The results of the distribution of occupational safety practices showed that 48.7% of the respondents wore face or nose masks 47.7%, of the respondents did not drink or eat while working and 48.2% of the respondents did not use personal protective equipment while working. Hazards reported included inhalation of petrol fumes (61.1%), confrontation from customers (74.6%) and Exposure to noise (75.5%). Health problems reported included headache (71.9%), vertigo (77.9%), slurred speech (76.6%), cough (90.6%), and nausea (88.5%). There was a statistically significant association between having headache, nausea, cough and inhalation of petrol vapour ( $p < 0.01$ ) or car exhaust fumes ( $p < 0.05$ ). Awareness about personal protective equipment was 30.7%, while use was 7.0%. Hand washing after contact with fuel was practiced by 73.5% of the respondents. The result of this study indicated the relationship between occupational safety practices and health hazards of the petrol attendant was positive and significant ( $X^2 = 89.668$ ;  $P\text{-val} < 0.05$ ); the relationship between inhalation of petrol fume and health problems of the petrol attendant was positive and significant ( $X^2 = 89.668$ ;  $P\text{-val} < 0.05$ ); that relationship between inhalation of petrol fume and health problems of the petrol attendant was positive and significant ( $X^2 = 89.668$ ;  $P\text{-val} < 0.05$ ). Petrol station attendants in this study were exposed to various hazards and health problems. Awareness and use of PPE was very low. Efforts should be made by stakeholders to ensure that owners of filling stations take responsibility for the health and safety of their workers.

**Keywords:** Petrol station workers, Occupational Hazards, Health Problem, Safety Practices, Ibadan, Nigeria.

**Word Count:** 499.

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## List of Acronyms

<b>Abbreviation</b>	<b>Meaning</b>
<b>ACGIH</b>	American Conference of Governmental Industrial Hygienists
<b>BTEX</b>	Benzene, Toluene, Ethylene and Xylene s
<b>CAD</b>	Coronary Artery Diseases
<b>COV</b>	Crude Oil Vapor
<b>COPD</b>	Chronic Obstructive Pulmonary Disease
<b>DNA</b>	Deoxyribonucleic Acid
<b>DWH</b>	Deepwater Horizon
<b>ECA</b>	Employees' Compensation Act
<b>EU</b>	European Union
<b>GDP</b>	Gross Domestic Programme
<b>HA</b>	Hippulic Acid
<b>HND</b>	Higher National Diploma
<b>H&amp;S</b>	Health and Safety
<b>HSE</b>	Health and Safety Executive (HSE)
<b>HSP</b>	Health Safety Practices
<b>IARC</b>	International Agency for Research on Cancer
<b>ILO</b>	International Labour Organization (ILO)
<b>IOH</b>	International Occupational Health
<b>IOGP</b>	International Association of Oil & Gas Producers (IOGP)
<b>IPMAN</b>	Independent Petroleum Marketers Association of Nigeria
<b>LCU</b>	Lead City University, Ibadan
<b>LFN</b>	Laws of the Federation of Nigeria (L.F.N)
<b>LGA</b>	Local Government Areas

<b>LPG</b>	Liquefied petroleum gas (LPG).
<b>MA</b>	Mandelic Acid
<b>MDA</b>	Malondialdehyde
<b>MHA</b>	Methylhypuric Acid
<b>NCOHS</b>	National Council for Occupational Health and Safety
<b>NIOSH</b>	Nigerian Institute for Occupational Safety and Health
<b>NNPC</b>	Nigerian National Petroleum Company (NNPC)
<b>NSIT</b>	National Social Insurance Trust (NSIT)
<b>OND</b>	Ordinary National Diploma
<b>OPEC</b>	Organization of Petroleum Exporting Countries ()
<b>OSHA</b>	Occupational Safety and Health Administration
<b>OSH</b>	Occupational safety and health
<b>OHS</b>	Occupational Health and Safety Services
<b>OHSP</b>	Occupational Health and Safety Practices
<b>OSHMS</b>	Occupational Health and Safety Management System
<b>PIB-Draft</b>	Petroleum Industry Bill
<b>PPE</b>	Personal Protective Equipment
<b>RNS</b>	Reactive Nucleus Species
<b>ROS</b>	Reactive Oxygen Species
<b>SDT</b>	Self Determination Theory
<b>SMS</b>	Safety Management System
<b>SOD</b>	Superoxide Dismutase
<b>SPDC</b>	Shell Petroleum Development Company of Nigeria
<b>SSA</b>	Sub-Saharan Africa
<b>TAC</b>	Total Antioxidant Capacity
<b>USEPA</b>	United States Environmental Protection Agency

<b>VOCs</b>	Volatile Organic Compounds
<b>WHO</b>	World Health Organization
<b>WMSS</b>	Work-Related Musculoskeletal Symptoms

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