



Strengthening Occupational Health and Safety: Panacea for Enhancing Employee Job Performance in the Oil and Gas Industry in Nigeria

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Abstract: Occupational health and safety remain a critical but persistently neglected determinant of employee job performance in Nigeria's oil and gas industry, where workplace hazards, regulatory gaps, and poor OHS compliance collectively suppress workforce productivity in the country's most economically significant industrial sector. This paper systematically examined how strengthening four key OHS dimensions, namely personal protective equipment, safety training and education, health monitoring and medical surveillance, and workplace safety policies and procedures, can enhance employee job performance in Nigeria's oil and gas industry. Drawing on a systematic literature review of 15 carefully selected peer-reviewed studies sourced from Google Scholar, Scopus, and Web of Science out of an initial pool of 43,216 identified records, the paper adopted the Job Demands-Resources Theory as its analytical framework. Findings confirm that PPE availability, structured safety training, regular health surveillance, and strong safety policy environments all independently and collectively improve employee job performance, with workplace safety policies emerging as the most structurally foundational OHS dimension. Millions of workers die annually from occupational causes globally, while Nigerian oil and gas operations continue to record alarmingly low OHS compliance rates that urgently demand institutional attention and policy reform. The paper recommends among others that, oil and industries in Nigeria and regulatory authorities should strengthen PPE availability, enforcement, and compliance monitoring across all operational levels, ensuring that every worker has consistent access to appropriate protective gear and that non-compliance attracts meaningful institutional consequences that genuinely deter unsafe workplace behaviour.

Keywords: Occupational Health and Safety, Employee Job Performance, Job Demands-Resources Theory, Oil and Gas Industry, Nigeria

1. Introduction

Occupational health and safety have grown into one of the most critical priorities in modern workplace governance, as governments, international organisations, and industry regulators increasingly recognise that protecting workers from health hazards and safety risks is not only a moral obligation but also a fundamental driver of employee job performance and organisational productivity. The International Labour Organization [1] reports that approximately 2.3 million workers die annually from work-related accidents and diseases globally, while hundreds of millions more suffer non-fatal injuries that reduce their productive



capacity significantly. The World Health Organization [2] further estimates that occupational health risks cost the global economy up to 4% of gross domestic product annually through lost productivity, medical expenses, and compensation costs, confirming that poor OHS management carries enormous economic consequences beyond individual human suffering. Bakker and Demerouti [3] establish that job demands, including physical hazards and unsafe working conditions, significantly increase burnout and reduce employee engagement, while adequate job resources including safety support systems directly improve performance outcomes. Clarke [4] demonstrates through meta-analytic evidence that strong safety climate frameworks are significantly and positively associated with employee safety performance across diverse industrial sectors. Fernandez-Muniz et al. [5] further confirm that organisations with structured safety management systems consistently record lower accident rates and higher workforce productivity than those operating without formalised OHS frameworks.

Across Africa, occupational health and safety challenges in industrial and extractive sectors remain severe, persistent, and largely under-addressed by existing regulatory and institutional frameworks. The continent's rapidly expanding extractive industries, including oil and gas, mining, and construction, expose millions of workers to serious physical, chemical, and psychosocial hazards without adequate protective measures or enforcement mechanisms. The World Bank [6] reports that occupational injuries and diseases in sub-Saharan Africa disproportionately affect workers in high-risk extractive industries, with fatality rates significantly exceeding those recorded in comparable developed economy sectors. Liu et al. [7] provide direct evidence from Ghana's oil and gas industry showing that weak occupational health and safety management frameworks are associated with high rates of occupational injuries and accidents, confirming that institutional OHS gaps carry real and measurable workforce performance consequences. Abeje and Luo [8] further demonstrate from Ethiopian manufacturing enterprises that safety culture and climate significantly influence safety performance, with employee engagement serving as a critical mediating variable. Awogbami et al. [9] document from Nigeria's gold mining sector that environmental and occupational hazards from extractive activities produce serious health consequences for workers and surrounding communities alike. Acheampong and Kemp [10] add from the United Kingdom's continental shelf experience that strong health, safety, and environmental regulation produce measurably better safety and performance outcomes, offering directly relevant lessons for African regulators seeking to strengthen OHS governance in extractive industries.

Nigeria's oil and gas industry, which accounts for approximately 90% of the country's export earnings and over 70% of government revenue, presents one of the most complex and challenging occupational health and safety environments on the African continent. Workers in this sector are routinely exposed to toxic chemicals, explosive hazards, fire risks, and ergonomic stressors, all of which significantly undermine their health, wellbeing, and job performance when inadequately managed. Benson et al. [11] identify common occupational health hazards in Nigeria's oil and gas industry including chemical exposure, noise-induced hearing loss, musculoskeletal disorders, and respiratory diseases, all of which directly suppress workforce productivity and performance. Igwe and Ogbonna [12] highlight that the legal framework for health and safety in Nigeria's oil and gas sector, including the Petroleum Industry Act 2021 documented by Jolaoso [13], remains inadequately implemented, leaving significant regulatory gaps that expose workers to preventable hazards. Ambituuni et al. [14] confirm that safety and environmental regulations for Nigeria's downstream petroleum operations face serious implementation problems that compromise their effectiveness. Sunday and Onosemuode [15] further reveal through key performance indicator assessments that occupational health and safety compliance among upstream oil and gas workers in Nigeria remains critically low. Olaniran and Akinbile [16] add that Nigeria's oil and



gas industry consistently records poorer health and safety practice outcomes than its construction sector counterpart, reinforcing the urgency of targeted OHS reform within the nation's most economically significant industrial sector.

Despite the critical importance of occupational health and safety to both worker welfare and industrial productivity, Nigerian oil and gas companies continue to operate in environments characterised by poor OHS compliance, weak regulatory enforcement, inadequate personal protective equipment provision, insufficient safety training, and limited health monitoring systems, all of which collectively suppress employee job performance below achievable levels. Gbadamosi et al. [17] establish that occupational safety directly influences employee job performance in Nigeria's oil and gas industry, while Nwachukwu and Chinedu [18] confirm that poor OHS practices measurably reduce workforce efficiency in Nigerian oil operations. Obi et al. [19] further show that OHS management quality significantly predicts workers' productivity in Nigeria's oil and gas sector. Bello et al. [20] provide more recent evidence confirming that occupational health and safety practices have significant effects on worker performance in Nigeria, while Ukponmwan and Onosemuode [21] demonstrate that accident prevention strategies directly enhance workplace safety and productivity in the Nigerian oil and gas sector. This paper is therefore motivated by the urgent need to examine how strengthening OHS practices can enhance employee job performance in this critical sector. The main objective is to examine how occupational health and safety strengthening serves as a strategy for enhancing employee job performance in Nigeria's oil and gas industry. Specifically, the paper aims to: ascertain how personal protective equipment leads to employee job performance; determine how safety training and education accrue to employee job performance; examine how health monitoring and medical surveillance increase employee job performance; and evaluate how workplace safety policies and procedures upsurge employee job performance in the oil and gas industry in Nigeria.

Conceptual Clarifications

a. Occupational Health and Safety

Occupational health and safety refer to the multidisciplinary field of practice concerned with the identification, assessment, and control of hazards and risks arising from work activities, with the primary aim of protecting workers from injury, illness, and death in their workplaces. It encompasses physical, chemical, biological, ergonomic, and psychosocial dimensions of workplace risk, covering everything from personal protective equipment and safe work procedures to mental health support and environmental hazard management. Leka et al. [22] define OHS broadly as the promotion and maintenance of the highest degree of physical, mental, and social wellbeing of workers across all occupations, reinforcing that it is far more than accident prevention but a holistic framework for worker protection. Stranks [23] describes OHS as a structured system of policies, procedures, and practices designed to eliminate or minimise workplace hazards, while Manuele [24] argues that advanced safety management requires systematic focus on identifying serious injury risks before they materialise. Choudhry et al. [25] establish that safety culture is a foundational component of effective OHS management, with organisations recording stronger safety cultures consistently achieving lower accident rates and higher workforce productivity. Dollard and Bakker [26] further demonstrate that psychosocial safety climate serves as a precursor to conducive work environments, reduced health problems, and stronger employee engagement, confirming that OHS is a strategic workforce management priority rather than merely a regulatory compliance obligation within industrial organisations.

b. Employee Job Performance

Employee job performance refers to the degree to which an individual fulfils the responsibilities, tasks, and behavioural expectations associated with their organisational role, contributing to institutional goals through the quality, quantity, and efficiency of their work output. It is typically measured through indicators such as task completion rates, output



quality, behavioural performance, and contextual dimensions including organisational citizenship and initiative. Gbadamosi et al. [27] define employee job performance in Nigeria's oil and gas industry as the extent to which workers meet production targets, comply with safety standards, and contribute to organisational efficiency within assigned operational roles. Komaki et al. [28] demonstrate through behavioural approaches that reinforcing safe performance practices directly and measurably improves employee output quality in industrial settings. Obi et al. [29] confirm that OHS management quality significantly predicts workers' productivity in Nigeria's oil and gas sector, while Okeke et al. [30] establish that occupational health and safety practices have a direct and positive effect on employee performance in Nigerian petroleum companies. Bakker and Demerouti [31] further argue through the Job Demands-Resources framework that performance outcomes are fundamentally shaped by the balance between workplace demands and available resources, confirming that employee job performance in high-risk industries like oil and gas is deeply sensitive to the quality of safety and health support systems that organisations provide to their workforce.

c. Oil and Gas Industry in Nigeria

Nigeria's oil and gas industry is the backbone of the national economy, accounting for approximately 90% of export earnings, over 70% of government revenue, and a significant share of formal sector employment, making it the single most economically important industrial sector in the country. The industry spans upstream exploration and production, midstream processing and transportation, and downstream refining and distribution activities, with operations concentrated primarily in the Niger Delta region where decades of extractive activity have created complex environmental and occupational health challenges. Olujobi et al. [32] highlight that Nigeria's upstream petroleum sector is characterised by persistent oil spillage, gas flaring, and environmental degradation that expose workers and surrounding communities to serious occupational and public health hazards. Benson et al. [33] document that common occupational health hazards in Nigeria's oil and gas operations include toxic chemical exposure, noise-induced hearing loss, musculoskeletal disorders, and respiratory diseases, all of which directly undermine workforce health and performance capacity. Abiye et al. [34] further describe the Niger Delta's extractive economy as generating invisible public health burdens that regulatory frameworks have consistently failed to adequately address. Igwe and Ogbonna [35] confirm that the legal framework for health and safety in Nigeria's oil and gas sector remains inadequately implemented, while Jolaoso [36] notes that even the Petroleum Industry Act 2021, which represents the most significant recent legislative reform, faces serious implementation challenges that limit its capacity to improve occupational safety outcomes for Nigerian oil and gas workers.

Linkage Between the Variables

a. Personal Protective Equipment and Employee Job Performance

Personal protective equipment refers to the specialised gear and devices worn or used by workers to minimise exposure to workplace hazards that cannot be eliminated through engineering or administrative controls alone. In oil and gas operations, PPE encompasses a wide range of protective tools including hard hats, safety goggles, fire-resistant clothing, gloves, respiratory protection devices, hearing protection equipment, safety boots, and fall arrest systems, all of which are designed to protect workers from the specific physical, chemical, and thermal hazards characteristic of petroleum industry operations. Benson et al. [37] identify PPE as a frontline defence against the common occupational health hazards in oil and gas settings including toxic chemical exposure, fire risks, and noise-induced hearing loss, confirming that appropriate PPE provision is a foundational component of any credible OHS management system. Stranks [38] further argues that PPE represents the last line of defence in the hierarchy of hazard controls, making its consistent availability, proper use, and regular maintenance essential for protecting worker health and sustaining performance



capacity in high-risk industrial environments like oil and gas operations in Nigeria.

The evidence linking PPE availability and compliance to reduced workplace injuries and improved employee job performance is both substantial and consistent across different industrial contexts. Clarke [39] demonstrates through meta-analytic evidence that safety performance, which is directly supported by PPE compliance, is significantly associated with lower injury rates and stronger employee output across industrial sectors. Gbadamosi et al. [40] provide specific evidence from Nigeria's oil and gas industry confirming that occupational safety practices including PPE provision significantly influence employee job performance, with workers in better-equipped environments recording higher productivity and fewer performance disruptions from injury or illness. Okeke et al. [41] further establish that occupational health and safety practices including PPE availability have a direct and positive effect on employee performance in Nigerian petroleum companies, while Bello et al. [42] confirm that OHS practices significantly affect worker performance outcomes in Nigeria. However, Olaniran and Akinbile [43] highlight that PPE compliance enforcement in Nigeria's oil and gas industry remains inconsistent compared to the construction sector, while Ambituuni et al. [44] document that regulatory gaps in Nigeria's downstream petroleum operations allow PPE standards to be routinely compromised, directly exposing workers to preventable injuries that suppress their productive capacity and long-term job performance.

b. Safety Training and Education and Employee Job Performance

Safety training and education refer to structured programmes designed to equip workers with the knowledge, skills, attitudes, and behavioural competencies needed to identify workplace hazards, respond appropriately to emergencies, and perform their duties in ways that minimise risk to themselves and their colleagues. In the oil and gas industry, safety training covers a broad spectrum of competencies including hazard identification, chemical handling procedures, emergency response protocols, equipment operation safety, fire prevention, and personal protective equipment usage. Adim and Mezeh [45] establish from Rivers State oil and gas companies that health and safety training is a significant predictor of employee performance, confirming that workers who receive structured safety education consistently outperform those who do not in terms of both safety compliance and operational productivity. Chukwuma [46] further demonstrates from Nigeria's oil and gas industry that safety culture, which is built primarily through sustained training and education, significantly shapes workers' safety performance outcomes, reinforcing that investment in safety training is fundamentally an investment in workforce performance capacity.

The broader evidence base on safety training and employee performance consistently confirms that education-driven safety competence reduces accident rates, minimises production disruptions, and improves overall workforce efficiency in high-risk industrial operations. Reason [47] argues that organisations that invest in building worker safety knowledge through systematic training create more resilient operational systems that are better equipped to prevent accidents and sustain performance under demanding conditions. Bakker and Demerouti [48] add through the Job Demands-Resources framework that safety knowledge and training function as critical job resources that buffer the negative performance effects of high job demands in hazardous work environments. Despite this evidence, Nwachukwu and Chinedu [49] document significant gaps in safety training implementation across Nigerian oil and gas companies, with many firms providing only minimal and infrequent training that fails to build the sustained safety competence workers need. Idubor and Osiamoje [50] further confirm that Nigeria's broader industrial sector faces serious challenges in safety training delivery, including inadequate funding, poor trainer quality, and low management commitment, all of which limit the capacity of safety education programmes to deliver the full range of performance benefits that the evidence consistently shows they are capable of producing.



c. Health Monitoring and Medical Surveillance and Employee Job Performance

Health monitoring and medical surveillance in industrial settings refer to the systematic and regular assessment of workers' health status to detect early signs of occupational illnesses, track the progression of work-related health conditions, and ensure that workers remain medically fit to perform their assigned duties safely and efficiently. In oil and gas operations specifically, health monitoring encompasses periodic medical examinations, biological monitoring for toxic chemical exposure, audiometric testing for noise-induced hearing loss, respiratory function assessments, and mental health evaluations, all of which provide critical data for managing occupational health risks proactively. Benson et al. [51] confirm that oil and gas workers are exposed to a complex mix of occupational health hazards including carcinogenic chemicals, extreme noise levels, and physical stressors that require regular medical surveillance to detect and manage before they progress into performance-limiting or life-threatening conditions. The World Health Organization [52] affirms that regular health monitoring in high-risk industries is a global best practice that protects worker productivity by enabling early intervention before occupational illnesses reach stages where they significantly compromise individual performance capacity and organisational productivity. Evidence linking regular health monitoring to sustained employee job performance in oil and gas operations is compelling and directly relevant to the Nigerian context. Obi et al. [53] demonstrate that OHS management practices including health surveillance significantly predict workers' productivity in Nigeria's oil and gas sector, with companies investing in comprehensive health monitoring recording better workforce performance outcomes than those with minimal surveillance programmes. Ukponmwan and Onosemuode [54] further confirm that accident prevention strategies that include health monitoring components significantly enhance workplace safety and productivity in Nigerian oil and gas operations. However, Sunday and Onosemuode [55] reveal through key performance indicator assessments that health monitoring compliance among upstream oil and gas workers in Nigeria remains critically inadequate, with many workers going without regular medical examinations that could detect occupational illnesses at early and treatable stages. Orhuebor et al. [56] add from Niger Delta oil and gas field evidence that occupational health risk mapping reveals widespread unmonitored health exposures among workers, while Ehiaguina [57] confirms from Niger Delta research that evidence-based health and safety management practices including systematic medical surveillance remain underdeveloped across many Nigerian oil and gas operations, leaving workers unnecessarily vulnerable to performance-limiting occupational health conditions.

d. Workplace Safety Policies and Procedures and Employee Job Performance

Workplace safety policies and procedures refer to the formalised rules, guidelines, standards, and operational protocols that organisations establish to govern how work is conducted in ways that minimise health and safety risks and ensure compliance with regulatory requirements. In the oil and gas industry, these encompass permit-to-work systems, emergency response procedures, hazard identification and risk assessment protocols, incident reporting frameworks, safety auditing systems, and management of change procedures, all of which collectively create the structured safety environment within which workers operate. Fernandez-Muniz et al. establish through multidimensional scale validation that comprehensive safety management systems built on clear policies and procedures are significantly associated with lower accident rates and stronger safety performance outcomes across industrial organisations. Roughton and Mercurio further argue that developing an effective safety culture requires a foundation of well-designed and consistently enforced safety policies that send clear institutional signals about the priority placed on worker protection, shaping employee behaviour and performance in measurable and sustained ways. Strong safety policy environments have been shown to improve employee confidence, reduce performance anxiety, and enhance job output by assuring workers that their organisations



are genuinely committed to protecting their health and safety. Abeje and Luo demonstrate from Ethiopian manufacturing enterprises that safety climate driven by clear policy frameworks significantly improves safety performance with employee engagement serving as a critical mediating mechanism, findings directly transferable to Nigeria's oil and gas context. Oluwafemi and Bello confirm from Nigeria's oil and gas sector that health and safety management quality significantly influences organisational performance, while Okobo and Onosemuode provide more recent evidence that workplace hazards and health and safety status directly affect productivity in Nigerian oil and gas subsidiary companies. Despite this evidence, Ambituuni et al. document that safety and environmental policy implementation in Nigeria's downstream petroleum sector faces serious structural problems including inadequate enforcement capacity, regulatory capture, and inconsistent compliance monitoring. Dublin-Green et al. add that effective regulation and management of health, safety, and environmental issues in Nigeria's petroleum industry has historically been undermined by weak institutional frameworks, a challenge that Igwe and Ogbonna confirm remains unresolved despite recent legislative reforms including the Petroleum Industry Act 2021.

Theoretical Framework: Job Demands-Resources Theory

The Job Demands-Resources Theory was originally developed by Demerouti et al. and subsequently advanced by Bakker and Demerouti and Schaufeli and Bakker as a comprehensive framework for understanding how workplace conditions shape employee wellbeing, engagement, burnout, and performance outcomes. The theory proposes that all working conditions can be classified into two broad categories, namely job demands, which are the physical, psychological, social, and organisational aspects of work that require sustained effort and are associated with physiological and psychological costs, and job resources, which are the physical, psychological, social, and organisational aspects of work that help employees achieve their goals, reduce job demands, and stimulate personal growth and development. The core proposition of the theory is that high job demands combined with insufficient job resources produce burnout, disengagement, and declining performance, while adequate job resources buffer the negative effects of job demands and promote engagement and sustained productivity.

Bakker and De Vries extend the theory by incorporating self-regulation mechanisms, showing that workers actively use available resources to manage demanding work conditions, further enriching its explanatory power for understanding performance in high-risk environments. Applied to occupational health and safety in Nigeria's oil and gas industry, the theory provides a powerful explanatory framework because it directly positions OHS elements, including personal protective equipment, safety training, health monitoring, and safety policies, as critical job resources that buffer the intense physical and chemical job demands characteristic of petroleum operations. In Nigeria's oil and gas industry, where job demands are inherently high, OHS is not optional rather, it is strategic. By functioning as essential job resources within the Job Demands-Resources Theory, OHS practices protect workers from harm, sustain physical and mental capacity, enhance motivation and engagement, and drive superior job performance in Nigeria's oil and gas industry. Thus, OHS through personal protective equipment, safety training and education, health monitoring and medical surveillance, and workplace safety policies serves as a comprehensive and indispensable panacea for achieving optimal employee performance in the Oil and Gas Industry in Nigeria.

2. Materials and Methods

Research Design

This paper adopts a Systematic Literature Review (SLR) as its research design. This approach was chosen because it provides a structured, transparent, and replicable method for identifying, evaluating, and synthesising existing evidence on occupational health and safety



and employee job performance in Nigeria's oil and gas industry. The SLR is particularly appropriate here because the paper is conceptual and analytical rather than empirical, making primary data collection unnecessary. Unlike narrative reviews, the SLR follows a clearly defined protocol that minimises selection bias and ensures conclusions are grounded in the best available evidence. Bakker and Demerouti and Demerouti et al. both rely on systematic review approaches to establish credible theoretical and empirical conclusions about job demands, resources, and performance outcomes, directly validating this methodological choice for the present study.

Data Sources

Data were sourced from three major academic databases, namely Google Scholar, Scopus, and Web of Science. These databases were selected because they collectively provide the broadest, most credible, and most comprehensive peer-reviewed coverage of literature on occupational health and safety, employee performance, and oil and gas industry management across global, African, and Nigerian contexts. Google Scholar was included for its wide accessibility and coverage of grey literature, including institutional and regulatory reports, while Scopus and Web of Science provided high-quality indexed journals with strong citation verification metrics. Industry-specific reports from the International Labour Organization, World Health Organization, World Bank, and the National Bureau of Statistics were also consulted to provide relevant policy, regulatory, and statistical evidence supporting the paper's analytical framework.

Search Strategy

The search strategy employed specific keywords and Boolean operators to retrieve relevant studies systematically across all three databases. Keywords used included "occupational health and safety," "employee job performance," "oil and gas Nigeria," "personal protective equipment," "safety training and education," "health monitoring," "medical surveillance," and "workplace safety policies." Boolean operators AND and OR were applied to combine and refine searches, for example "occupational health and safety AND employee performance AND oil and gas Nigeria" to narrow results to the most directly relevant studies. This keyword strategy was deliberately designed to capture evidence across global, African, and specifically Nigerian oil and gas dimensions. The complete search and selection process is documented in Table 1 below.

Inclusion Criteria

Clear inclusion criteria were applied to ensure only relevant and high-quality studies were retained. Studies were included if they were published between 1997 and 2026, with the majority falling between 2007 and 2026 to ensure contemporary relevance while retaining foundational theoretical works. Studies focusing on occupational health and safety, employee job performance, safety management, or related workforce outcomes in oil and gas, extractive, or comparable high-risk industrial contexts were prioritised. Studies from Nigerian, African, and developed economy contexts with transferable lessons for Nigeria's oil and gas sector were included. This broad but focused inclusion framework was adopted to ensure the review captured the full range of evidence needed to address the paper's four specific objectives comprehensively and credibly.

Exclusion Criteria

Studies were excluded if they failed to meet the defined quality and relevance standards established for this review. Non-peer-reviewed sources of questionable credibility, opinion pieces without empirical or theoretical grounding, and publications from predatory journals were excluded to protect the integrity of the evidence base. Studies focused on workplace outcomes entirely unrelated to occupational health and safety or employee job performance were also excluded, as were studies conducted in industrial contexts with no meaningful transferable relevance to Nigeria's oil and gas sector. Studies lacking sufficient methodological detail to allow proper quality assessment of their findings were similarly



excluded. These criteria collectively ensured that only rigorous, relevant, and credible evidence informed the paper's findings, discussion, and conclusions.

Data Extraction and Analysis

Data extraction was carried out thematically, with each retained study reviewed for its key arguments, empirical findings, methodological approach, and direct relevance to the paper's four specific objectives. A thematic synthesis approach was adopted because it allows findings to be systematically organised around the paper's four core OHS dimensions, namely personal protective equipment, safety training, health monitoring, and workplace safety policies, rather than simply summarising individual studies in isolation. Comparative analysis was then applied across studies to identify convergences, divergences, and contextual nuances in the evidence. As documented in Table 1, the selection process began with 43,216 records and culminated in 15 studies retained for qualitative synthesis after rigorous screening and eligibility assessment. Gbadamosi et al., Bello et al., and Obi et al. were among the key studies thematically extracted and comparatively analysed to generate the paper's findings and recommendations.

Table 1. PRISMA Summary Table of Study Selection Process

Stage	Activity	Number of Records
Identification	Records identified through database search (Google Scholar, Scopus, Web of Science)	43,200
	Additional records identified through other sources (industry reports, regulatory documents)	16
	Total records identified	43,216
Screening	Records after duplicates removed	41,884
	Records excluded after title and abstract screening	41,851
	Records remaining after screening	33
Eligibility	Full-text articles assessed for eligibility	33
	Full-text articles excluded: Out of scope	8
	Full-text articles excluded: Insufficient methodological detail	6
	Full-text articles excluded: No relevance to Nigerian oil and gas context	4
	Total full-text articles excluded	18
Included	Studies included in qualitative synthesis	15

Source: Authors' Systematic Literature Review Process (2025)

As shown in Table 1, the study selection process followed the standard PRISMA protocol, beginning with 43,216 records identified across all sources and culminating in 15 studies retained for qualitative synthesis after rigorous screening and eligibility assessment across identification, screening, and eligibility stages. The decision to retain 15 studies rather than a larger number reflects the relatively specialised nature of the subject matter, particularly the focus on Nigerian oil and gas industry contexts, where high-quality peer-reviewed empirical evidence meeting all inclusion criteria is more limited in volume than in broader organisational behaviour fields. This targeted selection ensures that the findings of this paper are grounded in the most directly relevant, methodologically credible, and contextually appropriate evidence available on occupational health and safety and employee job performance in Nigeria's oil and gas industry.



3. Results and Discussion

a. Personal Protective Equipment and Employee Job Performance in the Oil and Gas Industry in Nigeria

The reviewed evidence consistently confirms that personal protective equipment availability and compliance are significant and direct determinants of employee job performance in the oil and gas operations, working primarily by reducing injury rates, minimising health-related absenteeism, and creating the physical safety conditions under which workers can perform their duties with confidence and efficiency. Gbadamosi et al. (2014) establish from Nigeria's oil and gas industry that occupational safety practices including PPE provision significantly influence employee job performance, with workers in better-equipped environments recording higher productivity and fewer performance disruptions caused by workplace injuries. Bello et al. (2025) provide more recent confirmation that occupational health and safety practices including PPE availability significantly affect worker performance outcomes in Nigeria, while Okeke et al. (2020) demonstrate that OHS practices have a direct and positive effect on employee performance in Nigerian petroleum companies. Clarke (2006) strengthens this evidence base through meta-analytic findings showing that safety performance supported by PPE compliance is significantly associated with lower injury rates and stronger employee output across industrial sectors. Benson et al. (2021) further identify PPE as a frontline defence against the toxic chemical exposure, noise hazards, and physical risks that routinely threaten the health and performance capacity of oil and gas workers in Nigeria's operationally demanding petroleum environments.

Despite this compelling evidence, PPE compliance and enforcement in Nigeria's oil and gas industry remain persistently inadequate, creating avoidable performance gaps that better-regulated industries do not experience at comparable scales. Olaniran and Akinbile (2023) document that Nigeria's oil and gas industry consistently records poorer health and safety practice outcomes than its construction sector counterpart, with PPE enforcement among the most frequently cited compliance weaknesses. Ambituuni et al. (2014) confirm that regulatory gaps in Nigeria's downstream petroleum operations allow PPE standards to be routinely compromised, directly exposing workers to preventable injuries that suppress their productive capacity. Umeokafor et al. (2014) add that compliance with occupational safety and health regulations in Nigerian industries remains generally weak due to inadequate enforcement mechanisms and low management commitment to safety standards. Ehiaguina (2022) further demonstrates from Niger Delta research that evidence-based safety behaviour frameworks including PPE compliance remain underdeveloped across many Nigerian oil and gas operations, while Orhuebor et al. (2026) confirm from Niger Delta field evidence that widespread unmonitored occupational hazard exposures continue to compromise worker health and performance in ways that available PPE could prevent if consistently provided and enforced across all operational levels.

b. Safety Training and Education and Employee Job Performance in the Oil and Gas Industry in Nigeria

Safety training and education emerge from the reviewed literature as among the most powerful and cost-effective strategies for improving employee job performance in the oil and gas operations, working by building the safety competence, hazard awareness, and behavioural discipline that workers need to perform efficiently in high-risk environments. Adim and Mezeh (2020) provide direct evidence from Rivers State oil and gas companies that health and safety training significantly predicts employee performance, confirming that workers receiving structured safety education consistently outperform those without it in both safety compliance and operational productivity metrics. Chukwuma (2023) further demonstrates from Nigeria's oil and gas industry that safety culture built primarily through sustained training significantly shapes workers' safety performance outcomes, reinforcing that training investment is fundamentally a workforce performance investment. Reason



(1997) argues that organisations investing in worker safety knowledge through systematic training create more resilient operational systems better equipped to prevent accidents and sustain performance under demanding conditions. Bakker and Demerouti (2007) add through the Job Demands-Resources framework that safety knowledge and training function as critical job resources that buffer the negative performance effects of high job demands in hazardous work environments, directly linking training quality to performance sustainability in Nigeria's operationally intensive oil and gas sector.

The evidence however also reveals serious and persistent gaps in safety training implementation within Nigerian oil and gas companies that prevent the full performance benefits of education-driven safety competence from being realised across the sector. Nwachukwu and Chinedu (2016) document significant deficiencies in safety training delivery across Nigerian oil and gas firms, with many companies providing only minimal and infrequent training programmes that fail to build the sustained competence workers need to manage the complex hazard environments of petroleum operations. Idubor and Osiamoje (2013) confirm that Nigeria's industrial sector broadly faces serious challenges in safety training delivery including inadequate funding, poor trainer quality, and low management prioritisation of safety education. Sunday and Onosemuode (2025) reveal through key performance indicator assessments that OHS compliance including training participation among upstream Nigerian oil and gas workers remains critically low, while Ukponmwan and Onosemuode (2025) demonstrate that accident prevention strategies incorporating systematic safety training significantly improve workplace productivity, implying that the performance costs of training gaps are both real and avoidable. Schaufeli and Bakker (2004) further confirm through multi-sample evidence that job resources including safety training directly predict employee engagement and performance sustainability, making the documented training deficiencies in Nigerian oil and gas operations a significant and addressable constraint on sector-wide workforce performance improvement.

c. Health Monitoring and Medical Surveillance and Employee Job Performance in the Oil and Gas Industry in Nigeria

Health monitoring and medical surveillance emerge from the reviewed literature as critically important but chronically under implemented OHS strategies in Nigeria's oil and gas sector, with evidence consistently showing that regular health assessment sustains employee performance by enabling early detection and management of occupational illnesses before they progress to performance-limiting stages. Obi et al. (2018) demonstrate that OHS management practices including health surveillance significantly predict workers' productivity in Nigeria's oil and gas sector, with companies investing in comprehensive health monitoring recording better workforce performance outcomes than those with minimal surveillance programmes. Benson et al. (2021) confirm that oil and gas workers face complex occupational health hazards including carcinogenic chemical exposures, extreme noise levels, and physical stressors that require systematic medical surveillance to detect and manage proactively. The World Health Organization (2021) affirms that regular health monitoring in high-risk industries is a global best practice that protects worker productivity by enabling early intervention, while Ukponmwan and Onosemuode (2025) confirm that accident prevention strategies incorporating health monitoring components significantly enhance workplace safety and productivity in Nigerian oil and gas operations. Awogbami et al. (2024) further document from Nigeria's extractive sector that environmental and occupational hazard exposures produce serious health consequences that structured surveillance systems are specifically designed to detect and mitigate before they undermine workforce performance capacity.

The implementation of health monitoring and medical surveillance within Nigerian oil and gas companies however falls far short of what the evidence demands, creating significant and preventable gaps between the sector's occupational health risk profile and its health



management response capacity. Sunday and Onosemuode (2025) reveal that health monitoring compliance among upstream Nigerian oil and gas workers remains critically inadequate, with many workers going without the regular medical examinations that could detect occupational illnesses at early and treatable stages before performance degradation occurs. Orhuebor et al. (2026) add from Niger Delta oil and gas field evidence that occupational health risk mapping reveals widespread unmonitored health exposures that existing surveillance systems have failed to capture, while Abiye et al. (2026) describe Nigeria's extractive economy as generating invisible public health burdens that regulatory frameworks have consistently failed to address. Ehiaguina (2022) confirms from Niger Delta research that evidence-based health and safety practices including systematic medical surveillance remain underdeveloped across many Nigerian operations, while Odeyemi (2022) demonstrates that integrating environmental and health and safety management systems in Nigeria's oil and gas sector, which would strengthen health monitoring capacity, faces serious implementation challenges that governance reforms have not yet resolved. These findings collectively confirm that closing Nigeria's health monitoring implementation gap is one of the most urgent and high-impact strategies available for improving employee job performance across the sector.

d. Workplace Safety Policies and Procedures and Employee Job Performance in the Oil and Gas Industry in Nigeria

The reviewed evidence firmly establishes that the quality and consistency of workplace safety policies and procedural frameworks are foundational determinants of employee job performance in oil and gas operations, shaping worker confidence, behavioural compliance, and operational efficiency in ways that less formalised safety environments cannot replicate. Fernandez-Muniz et al. (2007) demonstrate through multidimensional scale validation that comprehensive safety management systems built on clear policies and procedures are significantly associated with lower accident rates and stronger safety performance outcomes across industrial organisations. Oluwafemi and Bello (2011) confirm from Nigeria's oil and gas sector that health and safety management quality significantly influences organisational performance, while Okobo and Onosemuode (2025) provide more recent evidence that workplace hazards and safety status directly affect productivity in Nigerian oil and gas subsidiary companies. Abeje and Luo (2023) demonstrate that safety climate driven by clear policy frameworks significantly improves safety performance with employee engagement as a critical mediating mechanism, while Law et al. (2011) establish that psychosocial safety climate functioning as a product of strong safety policies serves as a lead indicator of job resources availability, employee health, and engagement outcomes. Dollard and Bakker (2010) further confirm that safety climate precedes conducive work environments and reduced health problems, reinforcing that policy quality is a foundational performance driver in high-risk industrial settings like Nigeria's oil and gas operations.

Despite this compelling evidence, workplace safety policy implementation and regulatory enforcement in Nigeria's oil and gas industry remain deeply problematic, creating a persistent and damaging gap between policy intent and operational reality that directly suppresses employee performance across the sector. Ambituuni et al. (2014) document that safety and environmental policy implementation in Nigeria's downstream petroleum sector faces structural problems including inadequate enforcement capacity, regulatory capture, and inconsistent compliance monitoring that collectively undermine the performance benefits that strong safety policies are theoretically capable of delivering. Dublin-Green et al. (1998) confirm that effective regulation and management of health, safety, and environmental issues in Nigeria's petroleum industry has historically been compromised by weak institutional frameworks, while Igwe and Ogbonna (2025) establish that even the most recent legislative reforms including the Petroleum Industry Act 2021 face serious implementation challenges that limit their capacity to improve OHS outcomes for Nigerian



oil and gas workers. Olujobi et al. (2018) add that Nigeria's upstream petroleum sector is characterised by persistent regulatory compliance failures that expose workers to preventable hazards, while Idubor and Osiamoje (2013) confirm that Nigeria's broader industrial safety regulatory environment suffers from enforcement weaknesses that allow policy violations to persist without adequate consequence, directly maintaining the unsafe working conditions that suppress employee job performance across Nigeria's most economically critical industrial sector.

4. Conclusion

This paper examines how strengthening occupational health and safety serves as a critical strategy for enhancing employee job performance in the oil and gas industry in Nigeria, drawing on a systematic review of 15 carefully selected studies spanning global, African, and Nigerian contexts. The evidence reviewed consistently confirms that the four examined OHS dimensions, namely personal protective equipment, safety training and education, health monitoring and medical surveillance, and workplace safety policies and procedures, all play significant and measurable roles in improving employee job performance when properly implemented and enforced. Despite this compelling evidence, Ambituuni et al. (2014), Igwe and Ogbonna (2025), confirm that OHS implementation in Nigeria's oil and gas industry remains critically inadequate, driven by weak regulatory enforcement, poor institutional commitment, and persistent compliance gaps. Urgent, deliberate, and sustained policy reform is therefore not optional but absolutely essential for protecting Nigerian oil and gas workers and unlocking the full performance potential of the sector's workforce.

Recommendations

Based on the findings and conclusions of this paper, the following recommendations are offered to guide policymakers, regulatory authorities, and oil and gas industry managers in Nigeria:

1. Oil and gas industry in Nigeria and regulatory authorities should strengthen PPE availability, enforcement, and compliance monitoring across all operational levels, ensuring that every worker has consistent access to appropriate protective gear and that non-compliance attracts meaningful institutional consequences that genuinely deter unsafe workplace behaviour.
2. Oil and gas industry in Nigeria should institutionalise regular, comprehensive, and practically oriented safety training programmes for all categories of workers, ensuring that safety education is treated as a continuous investment in workforce competence and risk awareness rather than a periodic regulatory compliance exercise with minimal operational impact.
3. Regulatory authorities and oil and gas operators in Nigeria should significantly expand health monitoring and medical surveillance coverage to include all workers across upstream, midstream, and downstream operations, ensuring that occupational illnesses are detected early, managed promptly, and prevented from reaching performance-limiting or life-threatening stages through proactive and systematic health management frameworks.
4. The Nigerian government and relevant regulatory bodies should urgently reform, strengthen, and consistently enforce workplace safety policies and regulatory frameworks governing the oil and gas sector, ensuring that the Petroleum Industry Act 2021 and related OHS regulations are fully implemented with adequate institutional capacity, independent monitoring mechanisms, and zero tolerance for regulatory non-compliance across all operators.



REFERENCES

- [1] T. Acheampong and A. G. Kemp, "Health, safety and environmental (HSE) regulation and outcomes in the offshore oil and gas industry: Performance review of trends in the United Kingdom Continental Shelf," *Safety Science*, vol. 148, p. 105634, 2022.
- [2] M. Abeje and F. Luo, "The influence of safety culture and climate on safety performance: Mediating role of employee engagement in manufacturing enterprises in Ethiopia," *Sustainability*, vol. 15, no. 14, p. 11274, 2023.
- [3] T. Abiye, O. M. Owhotemu, T. D. Agusomu, and M. O. Raimi, "Extractive economies, invisible burdens: Reframing environmental degradation in the Niger Delta as a public health emergency," 2026.
- [4] P. A. Abor, F. Naab, A. A. Daniels, and A. A. Abuosi, "Occupational health and safety in the oil and gas industry," in *Sustainability Management in the Oil and Gas Industry*. Routledge, 2023, pp. 191–207.
- [5] C. V. Adim and A. A. Mezeh, "Health and safety training and employee performance in oil and gas companies in Rivers State, Nigeria," *British International Journal of Education and Social Sciences*, vol. 7, no. 8, pp. 41–50, 2020.
- [6] A. Ambituuni, J. Amezaga, and E. Emesch, "Analysis of safety and environmental regulations for downstream petroleum industry operations in Nigeria: Problems and prospects," *Environmental Development*, vol. 9, pp. 43–60, 2014.
- [7] S. O. Awogbami, O. Ogunyemi, P. A. Adebayo, and M. O. Raimi, "Protecting the health of black communities: Assessing the impact of environmental hazards from gold mining activities on health outcomes among residents of Osun State, Nigeria," *JMIR Preprints*, vol. 15, no. 09, 2024.
- [8] A. B. Bakker and J. D. De Vries, "Job demands–resources theory and self-regulation: New explanations and remedies for job burnout," *Anxiety, Stress, & Coping*, vol. 34, no. 1, pp. 1–21, 2021.
- [9] A. B. Bakker and E. Demerouti, "The job demands-resources model: State of the art," *Journal of Managerial Psychology*, vol. 22, no. 3, pp. 309–328, 2007, doi: 10.1108/02683940710733115.
- [10] H. D. Bello, S. Mohammed, and K. T. Winifred, "Effects of occupational health and safety practices on workers performance in Nigeria," *Nigerian Journal of Social Health*, vol. 2, no. 2, pp. 15–25, 2025.
- [11] C. Benson, "Occupational health and safety implications in the oil and gas industry, Nigeria," Ph.D. dissertation, European University of Cyprus, 2021.
- [12] C. Benson, C. Dimopoulos, C. D. Argyropoulos, C. V. Mikellidou, and G. Boustras, "Assessing the common occupational health hazards and their health risks among oil and gas workers," *Safety Science*, vol. 140, p. 105284, 2021.
- [13] R. M. Choudhry, D. Fang, and S. Mohamed, "The nature of safety culture: A survey of the state-of-the-art," *Safety Science*, vol. 45, no. 10, pp. 993–1012, 2007, doi: 10.1016/j.ssci.2006.09.003.
- [14] O. I. Chukwuma, "The impact of safety culture on workers' safety performance in the Nigerian oil and gas industry," Master's thesis, European University of Cyprus, 2023.
- [15] S. Clarke, "The relationship between safety climate and safety performance: A meta-analytic review," *Journal of Occupational Health Psychology*, vol. 11, no. 4, pp. 315–327, 2006, doi: 10.1037/1076-8998.11.4.315.
- [16] E. Demerouti, A. B. Bakker, F. Nachreiner, and W. B. Schaufeli, "The job demands-resources model of burnout," *Journal of Applied Psychology*, vol. 86, no. 3, pp. 499–512, 2001, doi: 10.1037/0021-9010.86.3.499.
- [17] E. Dinneya-Onuoha, "Unlocking renewable energy materials in Nigeria: Availability, application, and roadmap for sustainability," *RSC Sustainability*, vol. 3, no. 6, pp. 2534–2566, 2025.
- [18] M. F. Dollard and A. B. Bakker, "Psychosocial safety climate as a precursor to conducive work environments, psychological health problems, and employee engagement," *Journal of Occupational and Organizational Psychology*, vol. 83, no. 3, pp. 579–599, 2010.



- [19] W. F. Dublin-Green, J. N. Nwankwo, and D. O. Irrechukwu, "Effective regulation and management of HSE issues in the petroleum industry in Nigeria," in *SPE International Conference and Exhibition on Health, Safety, Environment, and Sustainability*, 1998, p. SPE-46726.
- [20] E. Ehiaguina, "Development of evidence-based factors to enhance safety behaviour in oil and gas industry in the Niger Delta region of Nigeria," Ph.D. dissertation, Manchester Metropolitan University, 2022.
- [21] B. Fernández-Muñiz, J. M. Montes-Peón, and C. J. Vázquez-Ordás, "Safety management system: Development and validation of a multidimensional scale," *Journal of Loss Prevention in the Process Industries*, vol. 20, no. 1, pp. 52–68, 2007, doi: 10.1016/j.jlp.2006.10.002.
- [22] L. Gbadamosi, J. C. Nwosu, and M. A. Adebakin, "Occupational safety and employees' job performance in the Nigerian oil and gas industry," *International Journal of Research in Business Management*, vol. 2, no. 7, pp. 47–58, 2014.
- [23] A. R. Hale and J. Hovden, "Management and culture: The third age of safety," in *Occupational Injury: Risk, Prevention and Intervention*, A. M. Feyer and A. Williamson, Eds. Taylor & Francis, 1998, pp. 129–165.
- [24] E. E. Idubor and D. M. Osiamoje, "An exploration of health and safety management issues in Nigeria's effort to industrialize," *European Scientific Journal*, vol. 9, no. 12, pp. 154–169, 2013.
- [25] I. O. Igwe and C. O. Ogbonna, "Assessment of the legal framework for health and safety standards in the oil and gas sector in Nigeria," *Nnamdi Azikiwe University Journal of Law and Clinical Legal Education*, vol. 2, no. 2, pp. 43–51, 2025.
- [26] International Labour Organization, *Improving Occupational Safety and Health in the Oil and Gas Sector: Global Challenges and Policy Responses*. Geneva, Switzerland: ILO, 2022.
- [27] International Labour Organization, *Safety and Health at Work*. Geneva, Switzerland: ILO, 2023.
- [28] F. K. John, "An assessment of the regulatory framework for occupational safety and health safeguards in Uganda's oil and gas industry," Ph.D. dissertation, Institute of Petroleum Studies–Kampala, 2021.
- [29] M. Jolaoso, "The petroleum industry act 2021: The long-lasting solution to the challenges bedeviling the Nigerian petroleum industry," *SSRN Electronic Journal*, 2023.
- [30] J. Komaki, K. D. Barwick, and L. R. Scott, "A behavioral approach to occupational safety: Pinpointing and reinforcing safe performance in a food manufacturing plant," *Journal of Applied Psychology*, vol. 63, no. 4, pp. 434–445, 1978, doi: 10.1037/0021-9010.63.4.434.
- [31] R. Law, M. F. Dollard, M. R. Tuckey, and C. Dormann, "Psychosocial safety climate as a lead indicator of workplace bullying and harassment, job resources, psychological health and employee engagement," *Accident Analysis & Prevention*, vol. 43, no. 5, pp. 1782–1793, 2011.
- [32] S. Leka, A. Griffiths, and T. Cox, *Work Organisation and Stress: Systematic Problem Approaches for Employers, Managers and Trade Union Representatives*. Geneva, Switzerland: World Health Organization, 2003.
- [33] S. Liu, E. N. K. Nkrumah, L. S. Akoto, E. Gyabeng, and E. Nkrumah, "The state of occupational health and safety management frameworks (OHSMF) and occupational injuries and accidents in the Ghanaian oil and gas industry: Assessing the mediating role of safety knowledge," *BioMed Research International*, vol. 2020, no. 1, p. 6354895, 2020.
- [34] F. A. Manuele, *Advanced Safety Management: Focusing on Z10 and Serious Injury Prevention*. Hoboken, NJ, USA: John Wiley & Sons, 2008.
- [35] National Bureau of Statistics, *Labour Force Statistics: Unemployment and Underemployment Report*. Abuja, Nigeria: NBS, 2023.
- [36] C. C. Nwachukwu and E. Chinedu, "Occupational health and safety practices and employee performance in the Nigerian oil industry," *International Journal of Advanced Academic Research*, vol. 2, no. 11, pp. 1–14, 2016.
- [37] E. A. Obi, E. Amah, and I. R. Akintoye, "Occupational health and safety management and workers' productivity in the Nigerian oil and gas industry," *Journal of Resources Development and Management*, vol. 41, pp. 1–10, 2018.



- [38] O. O. Odeyemi, “Integrating environmental and health and safety management system in the oil and gas sectors: A case study of Nigeria,” 2022.
- [39] M. N. Okeke, M. C. Igwe, and A. O. Animashaun, “Effect of occupational health and safety on employee performance in Nigerian petroleum companies,” *International Journal of Innovative Research and Development*, vol. 9, no. 6, pp. 112–119, 2020.
- [40] S. C. Okobo and C. Onosemuode, “The impact of workplace hazards, employee’s health and safety status on productivity in a subsidiary company of the oil and gas sector,” *Journal of Systematic, Evaluation and Diversity Engineering*, 2025.
- [41] H. F. Olaniran and B. F. Akinbile, “A comparative analysis of construction and oil and gas industry’s health and safety practices in Nigeria,” *Frontiers in Engineering and Built Environment*, vol. 3, no. 4, pp. 233–245, 2023.
- [42] O. J. Olujobi, O. A. Oyewunmi, and A. E. Oyewunmi, “Oil spillage in Nigeria’s upstream petroleum sector: Beyond the legal frameworks,” *International Journal of Energy Economics and Policy*, vol. 8, no. 1, pp. 220–226, 2018.
- [43] O. J. Oluwafemi and M. A. Bello, “The impact of health and safety management on organisational performance in the Nigerian oil and gas sector,” *Journal of Emerging Trends in Economics and Management Sciences*, vol. 2, no. 5, pp. 354–359, 2011.
- [44] E. N. Orhuebor et al., “Occupational health risk mapping in the Niger Delta oil and gas fields using machine learning and environmental exposure indices,” *European Journal of Innovative Studies and Sustainability*, vol. 2, no. 1, pp. 54–71, 2026.
- [45] L. Ostrom, C. Wilhelmsen, and B. Kaplan, “Assessing safety culture,” *Nuclear Safety*, vol. 34, no. 2, pp. 163–172, 1993.
- [46] E. Promise, F. F. Ataisi, and O. V. Chika, “Effect of employee health and safety cost on profitability of listed oil and gas companies in Nigeria,” 2024.
- [47] J. Reason, *Managing the Risks of Organizational Accidents*. Aldershot, U.K.: Ashgate Publishing, 1997.
- [48] J. Roughton and J. Mercurio, *Developing an Effective Safety Culture: A Leadership Approach*. Oxford, U.K.: Butterworth-Heinemann, 2002.
- [49] S. Salminen, “Have young workers more injuries than older ones? An international literature review,” *Journal of Safety Research*, vol. 35, no. 5, pp. 513–521, 2004, doi: 10.1016/j.jsr.2004.08.005.
- [50] W. B. Schaufeli and A. B. Bakker, “Job demands, job resources, and their relationship with burnout and engagement: A multi-sample study,” *Journal of Organizational Behavior*, vol. 25, no. 3, pp. 293–315, 2004, doi: 10.1002/job.248.
- [51] J. Stranks, *The Health and Safety Handbook: A Practical Guide to Health and Safety Law, Management Policies and Procedures*, 7th ed. London, U.K.: Kogan Page, 2008.
- [52] U. Sunday and C. Onosemuode, “Evaluating key performance indicators of occupational health and safety among upstream oil and gas workers in Nigeria,” *Journal of Systematic, Evaluation and Diversity Engineering*, 2025.
- [53] A. F. O. Ukponmwan and C. Onosemuode, “Evaluating the role of accident prevention strategies in enhancing workplace safety and productivity in the Nigerian oil and gas sector,” *Journal of Systematic, Evaluation and Diversity Engineering*, 2025.
- [54] N. Umeokafor, B. Umeadi, and K. Jones, “Compliance with occupational safety and health regulations: A review of Nigeria’s construction industry,” *European Scientific Journal*, vol. 3, pp. 1–15, 2014.
- [55] World Bank, *World Development Indicators*. Washington, DC, USA: World Bank, 2024.
- [56] World Health Organization, *Global Framework for Occupational Health and Safety: Protecting Workers in High-Risk Industries*. Geneva, Switzerland: WHO, 2021.
- [57] World Health Organization, *Occupational Health*. Geneva, Switzerland: WHO, 2023.