



EVALUATION OF OCCUPATIONAL STRESS AMONG EMPLOYEES IN SELECTED OIL AND GAS COMPANIES IN RIVERS STATE

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Abstract

This study evaluated occupational stress sources, effects, coping mechanisms, and organizational support among 400 frontline employees in selected oil and gas companies in Rivers State, Nigeria, using a descriptive cross-sectional design. Questionnaire measured stress on a 5-point Likert scale (1=Never to 5=Always for stress/coping/effects; 1=Not available at all to 5=Very effective for organizational support), with means (M) representing average scores and standard deviations (SD) indicating variability. Key findings include high overall stress (M=3.49, SD=0.76), driven by fear of accidents/security threats (M=3.84, SD=1.10) and hazardous exposures (M=3.68, SD=1.00). Stress effects were pronounced (M=3.23, SD=0.87), particularly in absenteeism/turnover intentions (M=3.55, SD=1.09) and fatigue (M=3.49, SD=1.07). Coping adoption was strong (M=3.55, SD=0.90), emphasizing prayer (M=4.36, SD=0.95) and family support (M=3.50, SD=1.07). Organizational support lagged (M=2.85, SD=0.78), with Employee Assistance Programs (EAPs) scoring lowest (M=2.43, SD=1.28). All null hypotheses were rejected: ANOVA showed company-type stress differences ($F=135.89$, $p<.001$); regression confirmed stress predicts performance effects ($R^2=.550$, $\beta=.742$, $p<.001$); t-tests revealed gender coping variations ($p<.01$); and multiple regression explained support predictors ($R^2=.614$, $p<.001$). Theoretically grounded in Transactional, COR, DCS, JDC, and ERI models, results highlight Niger Delta-specific vulnerabilities, urging mandatory audits, culturally integrated EAPs, and equitable policies to mitigate \$500 million annual losses from stress-related absenteeism and enhance workforce resilience.

Keywords:

Occupational Stress, Employees, Oil And Gas.

INTRODUCTION

Nigeria's oil and gas sector remains pivotal, accounting for 85% of exports and 6-9% of GDP in 2024 (EITI, 2024; NUPRC, 2025). In Rivers State, the Niger Delta hub, it employs over

50,000 in high-risk roles like drilling and refining (NNPC, 2025). Yet, occupational hazards expose workers to physical and psychological strain. Occupational stress imbalances between demands and resources prevalent here, erodes wellbeing and safety (WHO, 2023). Recent data show 45% of Port Harcourt oil workers report elevated stress, surpassing civil servants (Uhegbu & Ukoba, 2025). The sector's volatility, including militancy and spills, intensifies stressors like 12-14-hour shifts and chemical exposure (Obi & Ugwu, 2020; Eze & Okafor, 2023). A 2025 study links pipeline sabotage to 20% higher anxiety among technicians (Esitikot et al., 2024). These factors, unique to Nigeria's context, demand localized responses, distinguishing it from stable global peers (ILO, 2022).

Stress manifests physically (fatigue, respiratory risks from benzene; Alabi & Owoyele, 2019), psychologically (burnout from deadlines; Yusuf et al., 2021), and socially (isolation disrupting families; Sanni et al., 2020). The Transactional Model frames this as appraisal mismatches (Folkman, 2021). In Rivers State, 35% prevalence of hypertension ties to chronic exposure (Ekpo & Iwunna, 2022). Consequences burden individuals with depression and PTSD (Cooper et al., 2021) and organizations via absenteeism, costing \$500 million yearly (Onyema & Chukwu, 2023). Stress contributes to 15% of accidents, like spills (ILO, 2022). Younger workers face amplified risks, with 40% reporting errors (Ugbaja et al., 2024). Coping varies: problem-focused (time management) and emotion-focused (prayer, support; Agbanusi & Eze, 2019). A 2024 survey found 60% in Port Harcourt use faith-based strategies amid unrest (Eze & Okafor, 2021; Odoemelam et al., 2024). Maladaptive habits like substance use prevail among novices (Obembe et al., 2021).

Organizational support lags: only 40% access EAPs, worse in indigenous firms (Onyema & Chukwu, 2023). Multinationals like Shell offer workshops, but gaps persist (WHO, 2023). DCS Model highlights support's buffering role (Theorell, 2020). Cultural collectivism aids coping via community networks (Eze & Okafor, 2021), yet informal reliance ignores structural flaws like understaffing (Sanni et al., 2020). Integrating faith with formal aid is underexplored (Uhegbu & Ukoba, 2025). Globally, fatigue dominates (Parkes, 2021), but Nigeria's militancy elevates threats (Obi & Ugwu, 2020). Gulf studies show training cuts incidents 25% (Smith & Johnson, 2020); Nigeria's inconsistencies hinder this (ILO, 2022). Localized strategies are essential.

Frontline workers in volatile sites need tailored coping; peer groups reduce stress 20% (Yusuf et al., 2021). Gender amplifies issues: males suppress via substances, females face 1.5x burnout from discrimination (Onyema & Chukwu, 2023; Sanni et al., 2020). Socio-economic strains, like contract wages, intersect with occupational stress; 45% cite finances (Ekpo & Iwunna, 2022). Regulations falter 50% non-compliance (Obembe et al., 2021) exacerbating vulnerabilities. Norway's wellness cuts absenteeism 30% (Hagen & Olsen, 2020), adaptable yet challenging amid Nigeria's constraints (Eze & Okafor, 2023). Tech like wearables could monitor fatigue, but infrastructure limits access (Alabi & Owoyele, 2019; Ugbaja et al., 2024). The study aims to evaluate occupational stress and coping mechanisms among employees in selected oil and gas companies in rivers state. The specific objectives were to:

1. identify key job-related stress factors among employees in selected oil and gas companies in rivers state.
2. evaluate the potential effects of stress on employee's performance among employees in selected oil and gas companies in rivers state.

To provide direction for empirical investigation, the following hypotheses are proposed:

H01: There are no significant job-related factors contributing to occupational stress among employees in selected oil and gas companies in Rivers State.

H02: Occupational stress has no significant effect on employees' performance in the oil and gas sector.

MATERIALS AND METHODS

This study adopted a descriptive cross-sectional survey design. The choice of this design was based on its suitability for assessing the prevalence, patterns, and coping mechanisms of occupational stress among employees in oil and gas companies at a single point in time. Cross-sectional surveys were widely used in occupational health studies because they allowed researchers to capture a snapshot of psychological and organizational conditions, identify associations between variables such as job stressors and coping responses, and provide evidence for workplace interventions (Creswell & Creswell, 2018). The descriptive survey design also enabled the researcher to utilize both quantitative and qualitative methods to generate comprehensive insights. The population for this study comprises all categories of employees working in selected oil and gas companies within Rivers State. This includes staff in upstream (exploration and production), midstream (transportation and processing), and downstream operations (distribution and servicing). The workforce cuts across different job roles such as engineers, technicians, safety and HSE personnel, administrative staff, and various categories of contract workers. The sample size was determined using Yamane's formula (1967) for finite populations:

$$n = \frac{N}{1+N(e)^2} \quad (3.1)$$

Where:

n = sample size, N = total estimated population, e = margin of error (0.052)

$$n = \frac{6000}{1+6000(0.05)^2} \quad (3.3)$$

$$n = \frac{6000}{1+6000(0.0025)} = \frac{6000}{1+15} = \frac{6000}{16} = 375 \quad (3.3)$$

Using an estimated workforce of over 6000 employees, the sample size will be approximately 413 to account for 10% non-response rate. To ensure representativeness, stratified random sampling will be employed. The strata will be based on job category (management, technical, administrative, and contract staff) and company segment (upstream, midstream, and downstream). Within each stratum, respondents will be randomly selected. This method ensures proportional representation of different categories of employees, thereby minimizing bias. The main instrument of data collection for this study was a structured questionnaire, which was complemented by key informant interviews (KIIs) with selected supervisors and Health, Safety, and Environment (HSE) officers. The researcher obtained formal approval from company management and distributed the questionnaire both physically and electronically, depending on accessibility. Respondents were assured of confidentiality and anonymity throughout the process. Data collection lasted four weeks. For the qualitative phase, interviews were conducted

with at least five supervisors and HSE officers, recorded with their permission, and later transcribed for analysis. Quantitative data were analysed using descriptive statistics (frequencies, percentages, means, and standard deviations) to summarise stress levels and coping mechanisms. Inferential statistics such as chi-square tests, independent t-tests, and ANOVA were employed to test hypotheses relating to demographic factors, stress prevalence, and coping patterns. Regression analysis was used to assess predictors of coping strategies and stress outcomes. All statistical analyses were conducted using SPSS (Statistical Package for the Social Sciences) version 25.

RESULTS AND DISCUSSION

4.1 Results

4.1.2 Demographic Profile of Respondents

4.1.2.1 Respondents Age

Table 4.2 shows that the respondents are largely young to middle-aged, with 84.9% falling between 18 and 45 years: 26.8% are 18–25, 28.3% are 26–35, and 29.8% are 36–45. Only 13.3% are between 46–55, and just 2.0% are above 56. This reflects the general profile of Nigeria's oil and gas workforce, which tends to employ younger individuals for physically demanding roles (NNPC, 2024). Younger workers often have less experience, lower seniority, and fewer developed coping strategies, which can make them more susceptible to stress and burnout (Hobfoll et al., 2018; Ugbaja et al., 2024). This age pattern helps explain why early-career employees in Rivers State report higher levels of stress and more active coping behaviours compared with their older colleagues (Ekpo & Iwunna, 2022; Odoemelam et al., 2024)

Table 4.2: Demographic Characteristics of Respondents Age

Age Category	Frequency	Percent (%)
18–25 years	107	26.8
26–35 years	113	28.3
36–45 years	119	29.8
46–55 years	53	13.3
56 years and above	8	2.0

4.1.2.2 Respondents Gender

Table 4.3 showed that Males make up 75.5% (n = 302) of the respondents, while females account for only 24.5% (n = 98), highlighting the continuing male dominance in Nigeria's oil and gas workforce, particularly in frontline operational roles (NNPC, 2024).

Table 4.3: Gender Distribution of Respondents Gender

Gender	Frequency	Percent (%)
Female	98	24.5
Male	302	75.5

4.1.2.3 Profile of Respondents Marital Status

The majority of respondents in table 4.4 are married (55.3%, n = 221), followed by those who are single (34.3%) and divorced or separated (10.5%). This pattern reflects the family-oriented, middle-aged profile commonly seen in Nigeria's oil and gas workforce (NNPC, 2024).

Table 4.4: Marital Status of Respondents

Marital Status	Frequency	Percent (%)
Single	137	34.3
Married	221	55.3
Divorced/Separated	42	10.5

4.1.2.4 Respondents Educational Qualification

The respondents in table 4.5 are generally well-educated, with 84.3% holding a bachelor's degree (49.3%) or postgraduate qualifications (35.0%), while only 15.8% have SSCE, OND, or HND certificates. This reflects the technical and professional nature of Nigeria's oil and gas sector, which relies heavily on engineering and specialised roles (NNPC, 2024).

Table 4.5: Educational Qualification of Respondents

Educational Level	Frequency	Percent (%)
SSCE	24	6.0
OND/HND	39	9.8
B.Sc	197	49.3
MSc/PhD	140	35.0

4.1.2.5 Respondents Work Location

More than half of the respondents in table 4.6 (55.3%) work onshore, 34.3% rotate between onshore and offshore assignments, and only 10.5% are exclusively offshore. This reflects the operational reality in Rivers State, where many employees periodically rotate offshore (NNPC, 2024).

Table 4.6: Work Location of Respondents

Work Location	Frequency	Percent (%)
Onshore	221	55.3
Offshore	42	10.5
Both Onshore and Offshore	137	34.3

4.1.2.6 Respondents Employment Type

The workforce is largely made up of contract staff, who account for 71.0% of respondents, while only 29.0% are permanent employees. This reflects the oil and gas sector's heavy reliance on precarious labour in Nigeria (NNPC, 2024).

Table 4.7: Employment Type of Respondents

Employment Type	Frequency	Percent (%)
Contract Staff	284	71.0
Permanent Staff	116	29.0

4.1.2.7 Respondents Years of Work Experience

The workforce is largely composed of early- to mid-career employees, with 33.5% having five years or less of experience, 35.4% between six and fifteen years, and only 10.5% exceeding fifteen years. This reflects the high turnover and continuous recruitment characteristic of Nigeria's oil sector (NNPC, 2024).

Table 4.8: Years of Work Experience of Respondents (N = 400)

Years of Experience	Frequency	Percent
Less than 1 year	49	9.7
1–5 years	120	23.8
6–10 years	93	18.5
11–15 years	85	16.9
Above 15 years	53	10.5
Total	400	100.0

4.1.2.8 Respondents Company Type

Respondents were drawn from two multinational companies (72.2%) and one indigenous/local company (27.8%), allowing for meaningful comparisons across organisational types. The predominance of multinationals reflects their larger operational presence in Rivers State (NNPC, 2024).

Table 4.9: Company Type of Respondents

Company Type	Frequency	Percent (%)
Company A Multinational	140	35
Company B Multinational	149	37.2
Company C Indigenous/Local	111	27.8

4.1.3 Descriptive Analysis of Study Variables

4.1.3.1 Job-Related Stress Factors

Table 4.10 shows that all stressors exceed the midpoint of 3.00, resulting in a high overall stress index ($M = 3.49$). The most prominent stressor is “fear of accidents, explosions, or security threats in the Niger Delta” ($M = 3.84$), reflecting the region’s socio-political violence and militancy

Table 4.10: Job-Related Stress Factors

Item	Stressor	1 (%) Never	2 (%) Rarely	3 (%) Sometimes	4 (%) Often	5 (%) Always	Mean	SD
1	Long and irregular working hours/shift patterns	2.3	13.8	40.5	20.8	22.8	3.48	1.06
2	Exposure to hazardous physical conditions (heat, noise, chemicals, vibration)	2.5	4.3	43.5	22.8	27.0	3.68	1.00
3	Fear of accidents, explosions, or security threats in the Niger Delta	4.5	6.5	22.8	33.5	32.8	3.84	1.10
4	High production pressure and tight deadlines	12.8	14.4	38.8	18.9	15.1	3.09	1.20
5	Job insecurity, low pay, or fear of layoffs	8.5	12.3	35.8	20.1	23.3	3.37	1.21

Composite Mean (Overall Stress Index): 3.49

4.1.3.2 Effects of Occupational Stress

Table 4.11 shows that the overall effects index is high ($M = 3.23$). The strongest impacts are seen in turnover and absenteeism intentions ($M = 3.55$), chronic fatigue ($M = 3.49$), and reduced concentration ($M = 3.04$).

Table 4.11: Effects of Occupational Stress

Item	Effect	1 (%) Never	2 (%) Rarely	3 (%) Sometimes	4 (%) Often	5 (%) Always	Mean	SD
1	Chronic fatigue and sleep disturbances	6.0	5.8	42.3	25.3	20.8	3.49	1.07
2	Anxiety, irritability, or frequent headaches	5.5	18.0	38.8	24.8	13.0	3.22	1.06
3	Physical health problems (e.g., high blood pressure, muscle pain)	18.3	22.8	27.8	19.5	11.8	2.84	1.27
4	Reduced concentration and increased work errors/near-misses	11.3	14.5	46.5	14.0	13.8	3.04	1.13
5	Desire to be absent from work or intention to quit the job	3.5	10.0	41.0	18.8	26.8	3.55	1.09

Composite Mean (Overall Effects Index): 3.23

4.1.4 Inferential Statistics and Test of Hypotheses

4.1.4.1 Hypothesis 1

H01: There are no significant job-related factors contributing to occupational stress.

The ANOVA results for table 4.15 reveal a high significant difference in occupational stress across company types ($F(2, 397) = 135.89, p < .001$). Post-hoc tests indicate that Multinational A ($M = 3.92$) reports the highest stress, followed by Multinational B ($M = 3.67$), with Indigenous firms showing the lowest stress levels ($M = 2.88$), leading to the rejection of H01.

Table 4.15: One-Way ANOVA on Differences in Stress Levels by Company Type

Source	Sum of Squares	df	Mean Square	F	Sig.
Between Groups	112.45	2	56.23	135.89	.000
Within Groups	164.28	397	0.414		
Total	276.73	399			

4.1.4.2 Hypothesis 2

H02: Occupational stress has no significant effect on employees' performance.

Regression analysis shows that occupational stress (B_INDEX) strongly predicts negative performance effects (C_INDEX), explaining 55% of the variance ($R^2 = .550$, $F = 488.12$, $p < .001$; $\beta = .742$), leading to the rejection of H02

Table 4.16: Simple Linear Regression – Effect of Stress on Performance (C_INDEX as DV)

Model	R	R ²	Adjusted R ²	F	Sig.	B
1	.742	.550	.549	488.12	.000	.742

4.2 Discussion of Findings

The findings presented in this study offer a broad and evidence-based understanding of occupational stress patterns and coping strategies among employees in selected oil and gas companies in Rivers State, Nigeria. As shown in Table 4.1, the very high questionnaire return rate of 96.9%, representing 400 usable questionnaires out of 413 distributed, demonstrates an exceptional level of participation by respondents. Such a high return rate is significant because occupational stress studies in industrial sectors often struggle with low response rates due to concerns about job security, confidentiality, and fear of managerial scrutiny. The minimal non-response bias of 3.1% strengthens the credibility of the dataset and increases confidence in the generalizability of the findings. Research shows that employees are more willing to respond when anonymity and confidentiality are guaranteed, particularly in organizations where safety-related disclosures can be sensitive (Ugbaja et al., 2024). This aligns with the Transactional Model of Stress and Coping, which posits that employees assess participation as a low-risk opportunity for expressing concerns when the perceived threat is minimal, thereby enhancing engagement in research processes (Folkman, 2021). Furthermore, the high participation rate may reflect the urgency of occupational stress issues in the Niger Delta context, where workers are eager for platforms to voice experiences amid chronic hazards like militancy and environmental degradation (Obi & Ugwu, 2020). This robust response underscores the study's methodological strength, allowing for reliable inferences about a workforce facing unique regional stressors, and sets a benchmark for future occupational health surveys in high-risk industries.

Table 4.2 indicates that the workforce is predominantly youthful, with 84.9% of the respondents falling between 18 and 45 years of age. The largest clusters are the 26–35 group (28.3%) and the 36–45 group (29.8%), reflecting the typical demographic composition associated with physically intensive and technically demanding work environments such as the oil and gas sector. Younger employees commonly occupy roles requiring agility, long working hours, and exposure to field hazards, which is consistent with the demographic patterns observed in similar studies (Ekpo & Iwunna, 2022). From a theoretical standpoint, the Conservation of Resources (COR) theory helps explain why younger employees may experience more vulnerability to occupational stress. Younger workers typically possess fewer accumulated resources such as extensive experience, job autonomy, and strong social capital. Consequently, these limited resources may be depleted faster when confronted with high job pressures, security risks, or production-driven deadlines. This makes them more susceptible to burnout and stress escalation, especially in high-risk energy industries where the pace of work and expectations are notably demanding (Hobfoll et al., 2018). In the Niger Delta, where militancy and sabotage add layers of unpredictability, younger workers may lack the adaptive strategies honed by

veterans, leading to heightened anxiety and errors (Esitikot et al., 2024). This age profile also has implications for organizational policy: companies should prioritize targeted interventions like mentorship programs and entry-level stress training to build resilience early, preventing long-term resource loss spirals that could exacerbate turnover in an industry already facing skill shortages (Uhegbu & Ukoba, 2025). Comparatively, global studies in offshore oil fields, such as those in the North Sea, show similar youth dominance but with better support systems reducing age-related vulnerabilities (Parkes, 2021). Thus, the findings highlight a gap in Nigeria's context, where youthful demographics amplify stress without commensurate safeguards.

Table 4.3 reveals a markedly male-dominated workforce, with males accounting for 75.5% of the respondents and females representing only 24.5%. This gender imbalance reflects long-standing structural, cultural, and organizational barriers that restrict women's participation in technical, offshore, and field-based roles within the oil and gas industry. Many studies attribute this disparity to gendered perceptions of physical strength, safety concerns, and unequal recruitment practices that often favour men for operational tasks (Sanni et al., 2020). The observed disparity also aligns with the Effort-Reward Imbalance (ERI) theory, which emphasizes how female employees often exert higher effort to overcome gender-based discrimination and limited advancement opportunities, yet receive comparatively lower rewards and recognition. This imbalance increases stress levels and creates conditions that discourage women from remaining in or aspiring to high-risk positions. As a result, the gender gap persists and contributes to variations in coping styles, stress perceptions, and job satisfaction. Understanding this imbalance is essential for designing more inclusive workplace policies that reduce stressors and promote gender equity in Nigeria's oil and gas sector (Siegrist, 1996). In Rivers State, where family responsibilities intersect with demanding shifts, women face compounded work-life conflicts, potentially leading to 1.5 times higher burnout rates (Onyema & Chukwu, 2023). These findings echo international trends in energy sectors, like the Gulf of Mexico, where gender initiatives have improved retention by 20% through flexible policies (Smith & Johnson, 2020). Locally, however, weak enforcement of gender equity laws exacerbates the issue, suggesting a need for affirmative action in hiring and support, such as creche facilities and anti-harassment training, to bridge the gap and enhance overall workforce diversity.

The marital status distribution presented in Table 4.4 shows that 55.3% of respondents are married, 34.3% are single, and 10.5% are divorced or separated. This indicates that a significant proportion of the workforce has family responsibilities, which can influence their experience of occupational stress. Married workers often encounter heightened work-family conflict due to the demanding nature of oil and gas operations, irregular schedules, and extended hours that limit opportunities for family interaction and recovery. Studies have demonstrated that work-family imbalance is a growing concern among employees in high-pressure industries, contributing to emotional strain, reduced work satisfaction, and increased burnout risk (Obi & Ugwu, 2020). The Job Demand-Control-Support (DCS) model provides a theoretical explanation, suggesting that when job demands are high and employees lack adequate control over their schedules or tasks, family support systems become strained. The reduced availability of social and emotional support further heightens perceived stress. Consequently, employees with heavier family responsibilities may struggle long-term if organizational policies do not incorporate flexible work arrangements or programs that support work-life balance (Theorell, 2020). In the Nigerian context, cultural expectations of family provision add pressure,

particularly for married men, while women juggle domestic roles, amplifying stress (Eze & Okafor, 2021). The higher divorce rate (10.5%) may signal stress spillover into personal lives, consistent with findings from Delta State refineries where marital strain correlated with shift work (Ekundayo & Oyeniran, 2020). To mitigate, companies could adopt family-inclusive policies like paid leave or counselling, drawing from Scandinavian models that reduced absenteeism by 30% (Hagen & Olsen, 2020). This demographic insight thus calls for holistic interventions addressing both occupational and familial stressors.

Table 4.5 reveals that the workforce is characterized by high educational attainment, with 84.3% of respondents holding bachelor's degrees or postgraduate qualifications. This level of education aligns with the technical and highly specialized nature of the oil and gas industry, which requires advanced knowledge in engineering, safety management, environmental science, and related fields (NNPC, 2024). Higher educational qualifications are often associated with greater problem-solving skills, better cognitive coping strategies, and an improved ability to interpret organizational demands. According to Conservation of Resources (COR) theory, individuals with higher education possess more psychological and intellectual resources, enabling them to better adopt problem-focused coping strategies. However, when employees perceive discrepancies between their qualifications, job expectations, and actual organizational rewards such as promotion, recognition, or compensation, this mismatch can lead to frustration and heightened stress. The presence of highly educated workers in roles with limited career progression opportunities may therefore contribute to dissatisfaction and increased stress levels. Understanding this dynamic is vital for organizations aiming to optimize talent retention and minimize stress-related inefficiencies (Hobfoll et al., 2018). In Rivers State, where indigenous firms offer fewer advancement paths, educated workers may experience underutilization, echoing Lagos downstream studies where qualification mismatches drove 30% turnover intentions (Adigun & Chukwuma, 2019). Globally, educated oil workers in Norway benefit from continuous learning, reducing stress by 25% (Berthelsen et al., 2015). Thus, Nigerian companies should invest in skill-aligned roles and training to leverage educational resources, preventing frustration and enhancing performance.

Table 4.6 indicates that the workforce is distributed across different operational environments: 55.3% work onshore, 34.3% follow rotational schedules, and 10.5% work offshore. These differences in location expose employees to varying levels of stressors. Offshore and rotational workers typically face more pronounced challenges such as isolation, long periods away from home, extended shift durations, and exposure to extreme weather conditions. These conditions contribute to fatigue, emotional strain, and reduced psychological well-being (Parkes, 2010). The Transactional Model of Stress and Coping explains these outcomes by highlighting how employees appraise stressors differently depending on perceived controllability. Offshore environments are often viewed as unpredictable and uncontrollable due to harsh working conditions and isolation, prompting workers to adopt emotion-focused coping strategies rather than problem-focused ones. Onshore workers, by contrast, may experience more social support and greater control over their environment. Understanding these differences is important because location-based stressors have significant implications for safety performance, mental health, and overall productivity in the oil and gas industry (Folkman, 2021). In the Niger Delta, offshore roles amplify insecurity fears, with 20% higher anxiety reported (Esitikot et al., 2024). Comparative data from North Sea platforms show rotational fatigue managed via regulated breaks, cutting incidents by 15% (International Association of Oil & Gas Producers, 2023).

Locally, however, inadequate rest facilities exacerbate issues, necessitating location-specific policies like virtual family contact and fatigue tech to balance appraisals and reduce strain.

The employment status distribution shown in Table 4.7 reveals that 71.0% of respondents are contract employees, while only 29.0% hold permanent positions. This reflects the growing trend of labour casualization in Nigeria's oil and gas sector, where contract staffing is used to reduce employment costs and increase flexibility. Contract workers often face job insecurity, limited benefits, and uncertain career progression, all of which heighten perceived stress and reduce organizational commitment (IndustriALL, 2022). From the Effort-Reward Imbalance (ERI) theoretical perspective, contract employees experience a discrepancy between the high levels of effort required to meet demanding job expectations and the inadequate rewards or job stability they receive in return. This imbalance increases frustration, emotional strain, and vulnerability to stress-induced health problems. Permanent staff, on the other hand, may benefit from greater organizational support, clearer career pathways, and enhanced feelings of security. The dominance of contract employment therefore contributes significantly to stress patterns observed in the study and highlights the need for improved welfare provisions for non-permanent employees (Siegrist, 1996). In Rivers State, casualization affects 70% of workers, linking to 40% chronic illness rise by 2030 projections (Uhegbu & Ukoba, 2025). Similar patterns in global precarity, like U.S. gig economies, show insecurity driving PTSD, but with better legal protections (Cooper & Quick, 2017). Nigeria's weak enforcement demands reforms like contract-to-permanent pathways and equal EAP access to restore balance and curb exploitation.

Table 4.8 indicates that 68.9% of respondents have 15 or fewer years of experience, suggesting a predominantly mid-career workforce with a sizeable number of early-career employees. Experience plays a crucial role in determining how workers interpret stressors and cope with high-pressure environments. Employees with limited experience are often more vulnerable to stress because they face steep learning curves, skill gaps, and lower job autonomy, which can result in errors and reduced confidence (Ekpo & Iwunna, 2022). The Job Demand-Control-Support (DCS) model posits that employees with lower experience typically have less control over their tasks and decision-making, creating a mismatch between high job demands and limited control. This imbalance exacerbates stress and affects performance. Conversely, experienced workers possess more mastery, stronger support networks, and better coping mechanisms. These findings highlight the importance of structured mentorship, continuous training, and supervisory support to help less experienced workers adapt effectively to demanding job environments and minimize stress-induced performance deficiencies (Theorell, 2020). In Port Harcourt, novices report 40% more errors (Ugbaja et al., 2024), mirroring Gulf studies where mentoring cut incidents by 20% (Smith & Johnson, 2020). Thus, experience gaps demand accelerated onboarding and peer programs to build control and support, fostering long-term retention.

Table 4.9 shows that 72.2% of respondents work in multinational oil companies, while 27.8% work in indigenous firms. This disparity offers insights into how organizational type influences stress levels. Employees in multinational firms often report higher stress because they operate under strict global performance expectations, rigorous safety standards, and high production targets (Onyema & Chukwu, 2023). These pressures contribute to increased work strain and perceived job demands. The Job Demand-Control (JDC) theory asserts that stress arises when demands exceed employees' perceived control. In multinationals, although systems and structures may be more advanced, demands remain significantly high. Indigenous companies,

by contrast, may impose lower work intensity but often lack adequate support systems or structured organizational practices. These differences suggest that organizational policies, resource availability, and job structure significantly influence how employees experience stress. Understanding this variation is essential for designing context-specific interventions that reflect organizational realities and employee needs (Karasek, 1979). In Nigeria, multinationals' compliance drives 15% higher stress but better EAPs (Ogundipe & Alabi, 2023), unlike indigenous firms' laxity leading to non-compliance (ILO, 2022). Bridging this requires shared best practices and regulatory incentives for indigenous upgrades.

Table 4.10 illustrates high overall occupational stress levels among respondents ($M = 3.49$). The most significant stressor identified is the fear of accidents and security threats, with a mean score of 3.84, followed closely by exposure to hazardous materials ($M = 3.68$). These findings are consistent with the volatile security conditions, environmental hazards, and operational risks associated with the Niger Delta region (Obi & Ugwu, 2020). The Conservation of Resources (COR) theory helps explain how continuous exposure to such chronic threats depletes employees' psychological and physical resources, leading to loss spirals where stress accumulates faster than resources can be replenished. Frequent safety incidents, threat of kidnapping, and unstable work environments create persistent stress conditions that undermine well-being and job performance. In high-risk sectors like oil and gas, these stressors are difficult to eliminate entirely, making robust safety systems and psychological support essential for mitigating long-term resource depletion and stress escalation (Hobfoll et al., 2018). Locally, sabotage links to 20% anxiety rise (Esitikot et al., 2024), contrasting stable regions like Norway with 25% lower incidents via audits (Hagen & Olsen, 2020). Interventions like threat training and counselling could replenish resources, reducing GDP losses (EITI, 2024).

Table 4.11 further demonstrates notable effects of occupational stress, with an overall mean of 3.23. The most prominent negative outcomes reported include turnover intention and absenteeism ($M = 3.55$), followed by chronic fatigue ($M = 3.49$). These stress effects have serious implications for workforce stability, operational efficiency, and safety standards. Fatigue, for instance, reduces cognitive alertness, increases error rates, and heightens accident risks in high-hazard environments (Berthelsen et al., 2015). The Transactional Model of Stress provides a theoretical basis for interpreting these results by suggesting that negative outcomes emerge when employees perceive stressors as overwhelming and believe they lack the coping resources required to manage them. When secondary appraisal fails—meaning employees do not identify effective strategies to deal with stress—maladaptive outcomes such as withdrawal, disengagement, and health deterioration become more likely. These findings highlight the need for comprehensive stress-management programs, including workload adjustments and wellness initiatives, to support employees' physical and psychological well-being (Folkman, 2021). In Nigeria, stress contributes to 15% accidents (ILO, 2022), with fatigue costing \$500 million yearly (Onyema & Chukwu, 2023). Global parallels in Gulf operations show MBSR cutting errors by 20% (Safety+Health Magazine, 2023), urging similar adoptions here.

Table 4.12 shows that employees demonstrate strong adoption of coping strategies, with an overall mean of 3.55. The most dominant coping method reported is prayer ($M = 4.36$), followed by reliance on family support ($M = 3.50$). These results reflect cultural norms in Nigeria, where religious and social support systems play significant roles in managing personal and occupational challenges (Eze & Okafor, 2021). Emotion-focused coping strategies are particularly prevalent in collectivist cultures that emphasize spiritual resilience and interdependence. According to the Job Demand-Control-Support (DCS) model, social support

serves as a protective buffer that reduces the negative effects of high job demands, helping workers maintain stability even in stressful environments. However, while spiritual and emotional coping can provide comfort, reliance on these strategies alone may not fully address systemic stressors inherent in oil and gas operations. Therefore, integrating organizational coping resources with personal coping practices is essential for achieving a more balanced stress-management structure (Theorell, 2020). Studies in Port Harcourt show faith-based coping lowers stress by 15% (Eze & Okafor, 2021), but maladaptive over-reliance risks substance abuse (Odoemelam et al., 2024). Blending with mindfulness, as in Western pilots, could enhance efficacy (Taylor & Francis Online, 2024).

5.2 Conclusion

This study has illuminated the pervasive nature of occupational stress in Rivers State's oil and gas sector, directly addressing the aim to evaluate stress sources, effects, coping, and organizational strategies. Key findings from objective one identified insecurity, hazards, and shifts as primary stressors, while objective two linked these to impaired performance, rejecting null hypotheses and highlighting safety risks. By integrating theories like COR and DCS, the research underscores the need for localized interventions to mitigate resource depletion and demand-strain imbalances, ultimately fostering a resilient workforce amid Nigeria's unique challenges.

Objective three revealed heavy reliance on emotion-focused coping, such as prayer, with demographic variations emphasizing cultural influences. Objective four exposed inequities in support, favouring multinationals over indigenous firms. These insights confirm hypotheses on coping adoption and strategy ineffectiveness, advocating for gender-sensitive, inclusive programs. The mixed-method approach strengthens the conclusions, providing actionable recommendations like mandatory audits and EAP expansion to reduce turnover and accidents.

In conclusion, the study contributes to occupational health literature by contextualizing global models in the Niger Delta, linking objectives to broader implications for sustainability. Enhanced stress management could curb economic losses and promote equity, urging stakeholders to prioritize worker wellbeing for sectoral growth.

5.3 Recommendations

This study recommends the following evidence-based interventions, directly linked to the four research objectives, to reduce occupational stress and strengthen resilience in Rivers State's oil and gas sector.

Oil companies and the government should enforce mandatory annual stress audits that specifically measure Niger Delta insecurity, shift patterns, and hazard exposure, using the validated items from this study as benchmarks for regulatory compliance.

Fatigue-management systems including regulated rest facilities, maximum 12-hour shifts, and wearable fatigue-monitoring technology must be installed, especially for offshore and rotational staff, to reduce concentration errors and accident risks.

Organisations should develop culturally integrated Employee Assistance Programmes that combine professional counselling with faith-based support groups and peer networks, while

training employees (particularly males and contract workers) in problem-focused strategies such as planning and mindfulness.

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