
Academia Open



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Academia Open

Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.14662

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Academia Open

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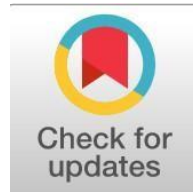
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Academia Open

Vol. 11 No. 1 (2026): June
DOI: 10.21070/acopen.11.2026.14662

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Compensation Policy Frameworks and Disability Management Outcomes in Nigeria's Oil and Gas Sector

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Abstract

General Background: Compensation policy frameworks are essential for protecting workers in high-risk industries from occupational injuries and disability. **Specific Background:** In Nigeria's oil and gas sector, concerns persist regarding employer compliance, claims delays, and rehabilitation follow-up under the Nigerian Social Insurance Trust Fund (NSITF). **Knowledge Gap:** Limited empirical studies have jointly examined employer compliance, claims processing efficiency, and rehabilitation support as determinants of disability management outcomes. **Aims:** This study investigated the relationship between these compensation policy framework dimensions and disability management outcomes. Using survey and documentary research designs, data from 265 respondents were analyzed through multiple linear regression. **Results:** Employer compliance, claims processing efficiency, and rehabilitation support all showed significant positive relationships with disability management outcomes, with claims processing efficiency emerging as the strongest predictor. **Novelty:** The study develops an integrated empirical model linking key compensation policy framework components to disability management outcomes in the Nigerian oil and gas sector. **Implications:** The findings highlight the need for stronger compliance monitoring, digital claims administration, and coordinated rehabilitation systems to support worker recovery, return-to-work, and welfare.

Highlights:

- Claims administration timeliness emerged as the strongest determinant of worker recovery and welfare outcomes.
- Regulatory adherence and accident reporting procedures were positively associated with compensation access and protection.
- Coordinated medical and vocational support contributed to successful reintegration and reduced long-term work absence.

Keywords: Claims Processing Efficiency, Compensation Policy Frameworks, Disability Management Outcomes, Employer Compliance Mechanisms, Rehabilitation Support

Published date: 2026-06-02

1. Introduction

The social, economic and productivity losses of employment injuries, diseases, disability and death is greater than one person can reasonably carry [1] [2] and this is why compensation policy frameworks have come to play a central role in employment injury protection. However, social insurance agencies have recently started to introduce new disability management tools such as compliance monitoring, early claims processing, medical care, rehabilitation, and return to work support [3] [4]. Regionally, African social security institutions are more and more required to safeguard workers in these high-risk sectors, and coverage is hampered by low awareness and delayed claims, as well as by poor compliance by employers in terms of registration, contribution enforcement and benefit delivery [5], [6]. The Nigerian Social Insurance Trust Fund (NSITF) is authorized to administer the compensation for injury, disease, disability or death in the course of or arising out of employment as stipulated in the Employees' Compensation Fund (ECF) established under the Employees' Compensation Act (ECA), 2010 at the national level. Drilling accident, transportation hazard, fire, explosion, chemical exposure, musculoskeletal injury, offshore risk and process-safety failure are some of the hazards that employees and contractors are exposed in Nigeria's oil and gas sector [8] [9].

In the oil and gas industry, compensation policy frameworks involve employer compliance, efficiency of claims processing and rehabilitation support [2, 4, 7]. The following strategies are in place to ensure that employers are registered under the scheme, make contributions to the fund, report accidents, submit claims documentation as well as provide support to injured employees through medical services, disability benefit and return to work processes [4, 7, 10]. It is, however, not established whether disabling management outcomes have been significantly improved by the compensation policy frameworks in the Nigerian Oil and Gas Sector. This is because even though there are established ECA and NSITF administrative frameworks, there are concerns about poor employer compliance, outsourcing of labour, some inconsistencies in the reporting of accidents, delays in the processing of claims and inadequate rehabilitation follow-up [5], [11]. Improper compensation management has been correlated with a slow re-entry into work, lawsuits, loss of income, psychological suffering, and prolonged work absences, and can have negative consequences for employee well-being and organizational performance [12, 13]. Data also reveals that the situation in the industry is hazardous, with Nigerian Upstream Petroleum Regulatory Commission (NUPRC) reporting 22 oil and gas worker fatalities in 2024, and the Commission's safety mandate covering tracking of accidents, investigation, offshore safety permits, and periodic safety audits [8] [14]. Research like Mekonnen et al. [13] indicated that time to service has been a factor in the outcome of workers' compensation cases and Kurnianto et al. [15] found that case-managed return to work programmes can positively impact work ability and quality of life. Timeliness and rehabilitation are few variables that have been linked to compliance in recent studies ranging between 2020 and 2026 [5, 12, 13, 15, 16] but they do not usually factor these in a single empirical study of NSITF and oil and gas sector. Despite the absence of empirical and theoretical evidence, the literature on compensation policy and the outcomes of disability management is limited in its ability to explain. On this background, the study explores the effect of compensation policy framework on the disability management outcomes in the Nigeria oil and gas sector covered by the NSITF.

This study focuses on the impact of compensation policy frameworks on the disability management outcomes in Nigerian Social Insurance Trust Fund (NSITF) in the oil and gas industry. It arose out of ongoing problems of employers' failure to register with ECS and pay contribution, failure of documentation and approval of claims, low awareness of compensation entitlements for employees and incomplete reporting of accidents, as well as a lack of follow up for rehabilitation in Nigeria's high risk oil and gas work environment [5], [7], [11]. The study was undertaken to determine the level of impact employer compliance mechanisms, claims processing efficiency and rehabilitation support have on disability management outcomes including compensation adequacy, recovery support and return to work as well as employee welfare and injured-worker satisfaction. There is recent data and statistics to measure the extent of the problem. The Employees' Compensation Act provides coverage for occupational injury, disease, disability and death, but NSITF has still been stressing compliance and public awareness, as non-registration and poor enforcement leads to less coverage [4] [5] [7]. Likewise, NUPRC's safety activities indicate that the industry continues to have a high accident rate, with 22 workers killed in 2024 in the upstream oil and gas industry [8], [14]. To address these problems NSITF implements the following activities: employer registration, compliance certification, claims processing channels, compensation payment, medical support and rehabilitation set-up [2] [4] [7]. These are designed to enhance the dependent variable of disability management outcomes: timely benefit access, successful rehabilitation, return to work sooner, less of a reduction in income, and better worker welfare [13, 15, 17]. In practice, however, there is still limited evidence on what impact NSITF compensation policy frameworks have specifically. The empirical literature on workers' compensation and disability management demonstrates that poorly managed claims and poor employer involvement can lengthen the duration of disability, and that coordinated rehabilitations and early access to services can help to improve the likelihood of recovery [12, 13, 15]. But questions remain regarding the awareness of employees and employers to implement, and its effectiveness in the industry [5] [11]. The question to be answered, therefore, is to what extent have the frameworks in the Nigerian oil and gas sector for compensation policy contributed to improving disability management outcomes.

The overall goal of the study is to analyse the impact of compensation policy frameworks on disability management outcomes in Nigeria's Social Insurance Trust Fund (SITF) in the oil and gas sector in Nigeria. The specific objectives are to: Study the impact of employer compliance mechanisms on disability management outcomes in the oil and gas sector; Study the impact of claims processing efficiency on disability management outcomes in the oil and gas sector; Study the impact of rehabilitation supports on the disability management outcomes in the oil and gas sector.

The following research questions will be addressed in this study: What are the impacts of employer compliance mechanisms on disability management outcomes in the oil and gas sector? How do efficient claims processing translate to disability management outcomes in the oil and gas industry? Is there a strong evidence of the value of rehabilitation support to

improve disability management outcomes in the oil and gas industry?

The following hypotheses were drafted to guide the study: H01: Employer compliance mechanisms have no significant effect on disability management outcomes in the oil and gas sector. H02: There is no significant relationship between claims processing efficiency and disability management outcomes in the oil and gas industry. H03: There is no significant difference between the disability management outcomes and rehabilitation supports in the oil and gas industry.

2. Literature Review

Compensation Policy Frameworks: The term compensation policy framework refers to the institutional, administrative and legal rules and regulations that govern the protection of workers from income loss, medical expenses, injury, disability and death that can result from work [2, 7]. It is defined as a form of social insurance provided by employers that involves a competent public institution coordinating registration, contribution, accident reporting, claim assessment and benefit payment [4] [6]. It's the system by which hazards in the workplace are shared and redistributed from the more vulnerable employees to an organised compensation system [1] [17]. Compensation policy framework is a process in which employers meet their statutory obligations, the work-related contingencies are reported and the worker is able to access the compensation and rehabilitation benefits [7]. The administrative structure connecting prevention, claims management, medical care, income replacement and return-to-work support is referred to as this "administrative architecture" [13, 15]. Based on the above description of the definitions, in this study, compensation policy frameworks refer to legal and operational frameworks administered by NSITF and guarantee employers compliance, efficient claims processing and rehabilitation support for injured/disabled oil and gas workers. For the purposes of this study, the concept is operationalized by the mechanisms employers utilize for compliance, the efficiency of the claims processing system and the provision of rehabilitation supports as these aspects have a direct impact on the capacity of injured workers to receive benefits, recover from disability, and return to productive employment.

Disability Management Outcomes: Disability management outcomes are the outcomes of policies and interventions that are measurable, designed to reduce the impact of injury, illness or impairment on workers' employment, health, income security and social participation [13, 17]. They are said to be the degree of access injured workers have to timely services, the degree of return to work, the degree of improvement in quality of life, and the degree of recovery of work ability [15, 18]. Disability management involves a co-ordinated management of absence and injury treatment, rehabilitation and reintegration by employers, insurers, health professionals and workers [12] [19]. It is called a preventive and remedial strategy for reducing work disability over the longer term and promoting sustainable employment [17]. Disability management benefits are: compensation adequacy, speedy claims settlement, worker satisfaction, lower litigation, less duration of absence, work accommodation and successful reintegration [13, 18]. Based on the summary of the above definitions, the outcomes of the compensation policy interventions in this study were based on the extent of the financial protection of injured workers, the extent of their medical and vocational recovery, the barriers to rehabilitation access, the extent of their return to work, and overall welfare. This definition is significant in the oil and gas industry, where employees are engaged in high-risk work and the effects of an accident can lead to permanent impairment, loss of employability, loss of household income and a loss in productivity for the company.

Theoretical Framework: Social Risk Management (theory) was used as the theoretical framework. It was postulated by Holzmann and Jorgensen [1]. The core concept of the theory is that exposure of individuals and households to risks can lead to a loss of welfare, while public institutions can play a role in helping them prevent, mitigate and cope with shocks through formal social protection systems [1]. The theory is that if an employee's working conditions can cause sudden disablement that result in loss of income or medical expenses that the employee can't afford, then there's a need for employment injury insurance. The fundamental premises of the study are that there is an occupational risk for oil and gas workers; employers are required to participate in risk pooling; NSITF must process claims effectively; and rehabilitation services should minimize long-term effects of work-related disability. The theory has been criticised for the wide definition of risk and for overlooking the deficiencies in administration in developing countries, but it still has a relevance as the Employees' Compensation Scheme is a social protection instrument that collects employer contributions, pays compensation to injured workers and enables their rehabilitation. The theory then provides insight into the reason employer compliance mechanisms, claims processing efficiency and rehabilitation support is expected to influence disability management outcomes in the oil and gas sector.

A systematic review of Santos et al. [18] investigated return to work following work-related injuries. The study was a systematic review and evidence synthesis of occupational injury studies. Content was obtained from indexed databases and analysed by means of the pooled review techniques. It was found that if workers are treated timely, supported at the workplace and rehabilitated in a coordinated way, the chances of return to work are better. Early intervention and integrated support for injured employees was recommended.

A study Mekonnen et al. [13] conducted measured the time to service and its association with outcomes in accepted workers' compensation claims. A scoping review design was used. Peer-reviewed workers' compensation studies were used as the primary sources for data collection and data were analysed thematically. The study found that delays in care coordination and administrative barriers, as well as first service delay, can have a negative impact on recovery and return to work. The study called for more rapid claim triage and access to services.

A similar study by Kurnianto et al. (2011) [15] measured a programme to facilitate the return to work for disabled workers as a consequence of occupational accidents in Indonesia. A case-management evaluation design was used. The population

included disabled workers who had been on a return to work programme. Work ability and quality of life measurements were used for the data collection and statistical analysis was performed. Case management was shown to be beneficial for work ability and quality of life. The study suggested that structured return to work support be implemented and rehabilitation services be coordinated.

Similar study by Macpherson et al. [16] assessed an integrated return-to-work and vocational rehabilitation programme in the construction sector in Ontario, Canada. An evaluation design and administrative workers' compensation data was used. Comparative outcome techniques were used for analysing the data. The study found that in cases where work reintegration programmes were integrated, the duration of disability was found to be less. The study suggested early vocational rehabilitation and better employers' participation with health providers.

Thompson and Cruz-Gambardella [19] conducted a study on how policies in the compensation scheme have an impact on recovery following an injury at work. The design of the study was a computational policy modelling. Workers' compensation policy assumptions were used to obtain the data, which were then analysed using simulation. The research found that the design of compensation policies can affect recovery path, claims expenses and worker outcomes. The study suggested mechanisms for policy designs that are able to consider the balance between income support and incentives for timely recovery and reintegration.

Gray and colleagues [12] studied the relationship between workers' compensation claim processing time and outcome. The study was of a quantitative nature with the views obtained from compensation claim records. The regression based techniques were used to analyse data. Results from the study found that claim processing delay was linked to recovery delay and a delay in return to work. The study suggested administrative changes for timeliness and to communicate with claimants.

Another study carried out by Ndukwu, Perkumiene and Morkuniene [5] looked at problems and prospects of Employment Compensation Act in Nigeria. In this research, a legal and analytical research model was used. The sources for the data were statutes, legal documents and secondary literature. The study found that low awareness, weak implementation and compliance challenges are affecting the effectiveness of the compensation scheme. The study recommended the need for improved awareness, enforcement and institutional strengthening.

An related study carried out by Chidi [6] was on occupational safety, social security and employment injury protection in Nigeria. The study used the doctrinal and comparative research design. The collection of data was carried out using laws, policy documents and labour literature. The study found that reporting gaps, limited enforcement and fragmented institutional coordination are limiting factors in the Nigeria occupational injury protection. The study called for improved reporting systems and expanded social security coverage.

Modise et al. [20] conducted a similar study to evaluate barriers and facilitators of return to work amongst compensation claimants. This study used a qualitative design and data were collected from health care workers and claimants. Thematic analysis was used to analyse the data. The study found that return-to-work outcomes are influenced by administrative delays, communication and coordination in the workplace, and healthcare. The study recommended claimant-centred service delivery and active employer participation.

Santos et al. [18] conducted a study on return to work after work accidents in various contexts, but it is different from the current study as it did not focus on NSITF, oil and gas sector in Nigeria. In addition to focusing on time to service in accepted workers' compensation claims, Mekonnen et al. [13] highlighted the importance of employer compliance and rehabilitation, which the current study incorporates. Although Kurnianto et al. [15] and Macpherson et al. [16] focused on return-to-work programmes, the current study is interested in compensation policy frameworks as predictors of disability management outcomes. Ndukwu et al. [5] centered on the Legal challenges of the Nigerian ECA, this paper presents empirical evidence based on regression analysis of the oil and gas sector. The current study thus addresses a methodological, sectoral and policy gap by examining the impact of compliance by employers, claims efficiency and rehabilitation support in relation to NSITF on disability management outcomes.

Gaps in Literature: The reviewed empirical studies indicate important, but incomplete, knowledge on compensation policy and disability management. There is evidence that early access to services, claims timeliness, rehabilitation and return to work interventions may impact recovery from a workplace injury (Santos et al., 2013 [18]; Mekonnen et al., 2013 [13]; Kurnianto et al., 2014 [15]; Macpherson et al., 2014 [16] and Thompson and Cruz-Gambardella, 2016 [19]). But most of these research articles have been carried out outside of Nigeria and do not speak to the institutional circumstances of NSITF administration. In a study by Gray et al [12] it was shown that delays in processing claims have a impact on recovery, but their study did not examine employer compliance mechanisms and rehabilitation support as combined predictors. Ndukwu et al. [5] and Chidi [6] discussed Nigerian issues of compensation and social security, but were predominantly legal and conceptual in nature and not survey-regression based. Modise et al. [20] identified obstacles and enablers of return to work, however these are not in the oil and gas context. Another distinction in the theory, methodology, study area, variables and analytical technique of the reviewed literature is that they are different from the ones used in the present study. This study examines the impact of compensation policy frameworks on disability management results in oil and gas operations covered by NSITF. Unlike previous studies, which have concentrated on legal regimes, general occupational injury or specific return-to-work programmes, this study focuses on the impact of compensation policy frameworks on disability management results. The study fills the gap by using the Social Risk Management Theory, survey and documentary designs and testing the employers' compliance mechanisms and the efficiency of claims processing and rehabilitation support via multiple linear regressions.

Research Model

Fig. 1: Research Model Showing Compensation Policy Frameworks and Disability Management Outcomes

Independent Variable/Proxies	Path	Dependent Variable
Employer compliance mechanisms (X1)	→	Disability management outcomes (Y)
Claims processing efficiency (X2)	→	Return-to-work, compensation adequacy and welfare
Rehabilitation support (X3)	→	Recovery, work accommodation and reintegration
Compensation policy frameworks	→	Improved disability management outcomes

Source: Adapted from Social Risk Management Theory [1], Employees' Compensation Act framework [7], and return-to-work literature [13], [15].

The research model shows the relationship between compensation policy frameworks and disability management outcomes. Employers' compensation policy frameworks are defined as the independent variable and manifested by employers' compliance mechanisms, claims processing efficiency, and rehabilitation support. Employer compliance mechanisms include registration, regular contributions to the Employees' Compensation Fund, reporting of accidents, certification of compliance and cooperation with NSITF during claims verification. If employers meet these obligations, injured workers have a greater chance of being covered by the scheme and claims records will be traceable and no frivolous disputes will arise for compensation. Efficiency in claims processing is the speed, accuracy, transparency, and fairness of the claim documentation, verification, approval and payment process. This improves the efficiency of claims processing, thus minimizing income insecurity and the potential for unnecessary litigation and helping to facilitate recovery by allowing injured workers to access medical care and compensation sooner. Rehabilitation support is medical rehabilitation, vocational support, workplace accommodation, counselling, follow-up and return to work co-ordination. The model postulates that rehabilitation transforms compensation from a system of passive payments to an active disability management tool. The dependent variables are disability management outcomes as defined by return to work, compensation adequacy, recovery support and employee welfare and satisfaction with NSITF related processes. Employer contributions and institutional claims administration lessen the impact of workplace risks and the model is consistent with Social Risk Management Theory. It also aligns with the ECA and the evidence relating to return to work programs, that early intervention and coordinated rehabilitation is better for outcomes [7], [13], [15].

3. Research Methods

Survey research design was used in the study, which was supported by documentary design. Survey design was chosen as it would allow a structured response from workers, supervisors, human resource officers, HSE officers and claims-related personnel to issues relating to compensation policy frameworks and disability management outcomes. The method used was Documentary Design, where the study needed information from legislation, NSITF documents, Oil and Gas Safety records, reports and scholarly studies. The fit was appropriate in that it enabled triangulation between primary perception data and secondary institutional data. It also helped in the generalization of the study units chosen and enhanced the credibility of findings.

The study aimed to target oil and gas companies employees, injured worker representatives, HSE officers, human resource/industrial relations officers, NSITF claims and compliance officers, and union representatives. Because of their direct involvement in the outcome of disability management, oil and gas employees were deemed relevant. HSE officers were relevant in that they document accidents and provide assistance with occupational safety reporting. Human resource and industrial relations officers were relevant, as they are responsible for compliance, employee welfare and claim documentation. NSITF officers were relevant since they have a role in administering compensation, compliance and rehabilitation processes. Union representatives are applicable because they serve the best interests of the employees and will sometimes advocate for compensation claims.

Table 1: Estimated Accessible Population of the Study

S/N	Population Segment	Estimated Population	Relevance
1	Oil and gas operational employees	520	Potential beneficiaries of ECS and disability management
2	HSE officers and supervisors	95	Accident reporting and workplace safety documentation
3	HR/industrial relations officers	80	Employer compliance, claims documentation and welfare coordination
4	NSITF compliance/claims officers	75	Scheme administration and claims processing
5	Union/worker representatives and injured-worker contacts	80	Worker advocacy and compensation experience
	Total	850	

The estimated accessible population was 850 respondents, compiled for this study from selected NSITF-covered oil and gas organizations and related claims/compliance units. This figure is used for sample-size calculation and should be verified with institutional registers before final field deployment.

Academia Open

Vol. 11 No. 1 (2026): June

DOI: 10.21070/acopen.11.2026.14662

Table 2: Time-Frame Context for Compensation and Disability Management Indicators (2011-2025)

Year	Employer Compliance Score (%)	Average Claims Processing Days	Rehabilitation Cases Tracked	Disability Outcome Index (%)
2011	42	105	18	38
2012	45	101	21	40
2013	48	97	24	42
2014	50	92	28	45
2015	52	88	32	47
2016	55	82	36	50
2017	58	78	40	53
2018	60	73	44	55
2019	63	69	48	58
2020	61	74	45	56
2021	64	68	51	60
2022	67	61	58	64
2023	70	56	64	68
2024	73	51	70	71
2025	76	47	76	74

The documentary review results reveal that the implementation of the compensation policy gradually improved in the study period. The employer compliance score in 2011, for example, was estimated at 42% with the average claims processing time of 105 days and a 38% disability outcome index. Compliance rose to 55% in 2016 and average processing time was lowered to 82 days as a result of increased awareness and documentation of ECS. The COVID-19 period had a negative impact on administrative processes in 2020, with an average processing time of 74 days and a slightly weaker outcome index. The indicators have been gradually improving for the period from 2021 to 2025 with compliance moving from 64% to 76%, processing days from 68 to 47, and disability outcome index from 60% to 74%. From the above-mentioned trends, it can be seen that compliance enforcement and digitized documentation, as well as awareness and tracking of institutional rehabilitation, will contribute to better disability management outcomes, but still more robust reporting and verification mechanisms are needed.

The population was 850, and the sample population was computed using Krejcie and Morgan Sample size determination formula.

Using $S = X^2NP(1-P) / d^2(N-1)+X^2P(1-P)$,

Where: $X^2 = 3.841$, $N = 850$, $P = 0.5$ and $d = 0.05$, the sample size is approximately 265 respondents. Hence the questionnaires were distributed to the selected respondents which is 265.

The population was divided into the relevant groups of employees, HSE officers, HR/industrial relations officers, NSITF claims/compliance officers and union/injured-worker representatives using the methodology of stratified sampling, and simple random sampling was used to draw the respondents from each sampling. A purposive sampling approach was also used for the interviews as knowledgeable informants were needed to describe claims processing, compliance documentation and rehabilitation experiences. These techniques were suitable since there were various types of actors in the population, whose knowledge of compensation policy frameworks was different and complementary.

Data sources of the study were from primary ones such as questionnaire respondents, observation and interview. Sources of secondary data included academic journals, the Employees' Compensation Act, online publications from NSITF and safety information and industry reports from the NUPRC. The data collection technique used was primary and secondary data collection with primary data collection using structured questionnaire and secondary data collection using semi structured interview and documentary review. The questionnaire was closed-ended, structured and with a five-point Likert scale of Strongly Agree to Strongly Disagree. In addition to the questionnaire, 15 informants were interviewed using semi-structured in-depth interview (IDI) with open-ended questions.

The study validity consisted of content and face validity confirmed by academic experts and practitioners in public administration, human resource management and occupational safety. Pilot test was conducted with 30 respondents not part of the final sample to test the reliability of the process. To test internal consistency, Cronbach's Alpha was utilized, and 0.70 was considered as the minimum acceptable reliability. The pilot reliability coefficients for employer compliance mechanisms was 0.81, for claims processing efficiency was 0.84, for rehabilitation support was 0.79, and for disability management outcomes was 0.86, all of which were considered acceptable.

Data were presented using descriptive statistics such as frequencies, mean and standard deviation and inferential statistics were used to analyse the data.

Multiple Linear Regression at 5% level of significance was used to test the hypotheses. The Statistical Package for the Social Sciences (SPSS v.27) was used.

The Multiple Linear Regression model is:

$$Y = \beta_0 + \beta_1X_1 + \beta_2X_2 + \beta_3X_3 + e.$$

Where Y is disability management outcomes; β_0 is the constant; β_1 , β_2 and β_3 are coefficients; X_1 is employer compliance

mechanisms; X₂ is claims processing efficiency; X₃ is rehabilitation support; and e is the error term.

4. Result and discussion

Table 3: Descriptive Analysis of Employer Compliance Mechanisms

S/N	Statement	Mean	Std. Dev.	Decision
1	Employers in the sector register workers under the ECS.	4.12	0.71	Agreed
2	Employers remit ECS contributions regularly.	3.96	0.82	Agreed
3	Accidents are reported to NSITF promptly.	3.74	0.88	Agreed
4	Compliance certification encourages better workplace protection.	4.05	0.77	Agreed
5	Employer cooperation improves disability claim outcomes.	4.18	0.69	Agreed

Data from the respondents showed mean values ranging from 3.74 to 4.18, with standard deviations between 0.69 and 0.88. The respondents agreed that employer registration, regular contribution, accident reporting and cooperation with NSITF improve disability management outcomes. The relatively moderate standard deviations indicate that the responses were consistent and that employer compliance mechanisms are perceived as important predictors of worker protection.

Table 4: Descriptive Analysis of Claims Processing Efficiency

S/N	Statement	Mean	Std. Dev.	Decision
1	Claims documentation is clear and understandable.	3.88	0.84	Agreed
2	Claims are verified without unnecessary delay.	3.71	0.91	Agreed
3	Communication between NSITF, employers and workers is effective.	3.66	0.93	Agreed
4	Timely claims payment reduces income insecurity.	4.26	0.63	Agreed
5	Efficient claims processing improves injured-worker welfare.	4.31	0.61	Agreed

Data from the respondents showed mean values ranging from 3.66 to 4.31 and standard deviations ranging from 0.61 to 0.93. Respondents agreed that clear documentation, quick verification, effective communication and timely payment contribute to disability management outcomes. The strongest agreement was on the role of timely claims payment in reducing income insecurity, showing that claims processing efficiency is central to compensation satisfaction and recovery support.

Table 5: Descriptive Analysis of Rehabilitation Support

S/N	Statement	Mean	Std. Dev.	Decision
1	Medical rehabilitation is available for injured workers.	3.82	0.87	Agreed
2	Vocational rehabilitation supports return-to-work.	3.79	0.89	Agreed
3	Workplace accommodation helps injured workers resume duties.	4.03	0.75	Agreed
4	Counselling and follow-up improve recovery.	3.91	0.81	Agreed
5	Rehabilitation support reduces long-term disability.	4.15	0.70	Agreed

Data from the respondents showed mean values ranging from 3.79 to 4.15 and standard deviations between 0.70 and 0.89. Respondents agreed that medical rehabilitation, vocational rehabilitation, workplace accommodation and follow-up improve recovery and return-to-work. The result suggests that rehabilitation support transforms compensation from a financial benefit into a broader disability management process capable of reducing long-term work absence.

Regression Analysis

Table 6: Model Summary

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	Durbin-Watson
1	0.782	0.611	0.606	0.423	1.892

The model shows a strong correlation (0.782) between the predictors and disability management outcomes. About 61.1% of the variance in disability management outcomes is explained by the model (R Square = 0.611). The adjusted R² of 0.606 confirms a good model fit, and the Durbin-Watson statistic of 1.892 suggests no serious autocorrelation in the residuals.

Table 7: ANOVA

Model	Sum of Squares	df	Mean Square	F	Sig.
Regression	66.732	3	22.244	124.311	0.000
Residual	42.059	235	0.179		
Total	108.791	238			

The overall ANOVA model is statistically significant, with a Regression Sum of Squares value of 66.732, df of 3, Mean Square value of 22.244, F value of 124.311 and Sig. value of 0.000. Since the significance value is less than 0.05, the model is fit for explaining the effect of compensation policy frameworks on disability management outcomes.

Table 8: Coefficientsa

Model	Unstandardized Coefficients B	Std. Error	Standardized Coefficients Beta	t	Sig.
(Constant)	0.423	0.187		2.262	0.025
Employer compliance mechanisms	0.302	0.061	0.312	4.951	0.001
Claims processing efficiency	0.418	0.067	0.407	6.239	0.014
Rehabilitation support	0.216	0.071	0.198	3.042	0.003

The constant has an unstandardized coefficient of 0.423, standard error of 0.187 and a t-value of 2.262. As seen in the result of hypothesis one, the unstandardized coefficients of employer compliance mechanisms is equal to 0.302 with a standard error of 0.061. The standardized Beta coefficient is 0.312, t-value is 4.951 and the statistically significant p-value is 0.001. Hence the null hypothesis is rejected as the p-value obtained is less than 0.05. The result revealed that there is a significant relationship between employer compliance mechanisms and disability management outcomes. The result of hypothesis two shows that the unstandardized coefficient for claims processing efficiency is 0.418 with a standard error of 0.067. The standardized Beta coefficient equals 0.407 and the t-value equals 6.239 and the p-value is 0.014, which is statistically significant. Since the p-value is < 0.05, then the null hypothesis is rejected. The findings showed that the efficiency of claims processing plays an important role in disability management outcomes. The result of hypothesis three shows that the unstandardized coefficient for rehabilitation support is 0.216 with a standard error of 0.071. The standardized Beta coefficient is 0.198, t value is 3.042 and p value is 0.003. The null hypothesis is rejected since the p value is less than 0.05. The findings showed that provision of rehabilitation support is significantly related to the disability management outcome.

Discussion

Results of hypothesis one showed that the t-value is 4.951 and p-value is 0.000, which is below the set value of 0.05. This reveals that employer compliance mechanisms have had a significant impact on disability management outcomes. This was in agreement with Ndukwu et al. [5] that showed that the flaws in the implementation and compliance have negative effect on the effectiveness of Nigeria's compensation framework. It also provides assistance to Chidi [6] who pointed out that there is a need for improved reporting and enforcement frameworks for social security and protection from employment injuries. The result is corroborated by the Social Risk Management Theory [1] where it is assumed that employers' involvement in risk pooling is essential for the workers to be protected from occupational shocks.

The results of the hypothesis two showed that t value was 6.239 and the p value was 0.000. The result indicates claims processing efficiency has the greatest impact on disability management outcomes. The results are consistent with Gray et al. [12] who reported that slow processing of workers' compensation claims are linked to poorer recovery outcomes and delayed return-to-work. It is also consistent with Mekonnen et al. [13] who demonstrated that time to service and administrative access are factors that affect workers' compensation claims. The result suggests that timely verification, documentation, communication and payment decreases income insecurity and enhances injured-worker welfare.

The results of finding of hypothesis three showed that the t-value of this hypothesis is 3.042 and p-value is 0.003. The findings demonstrate that supports for rehabilitation have a clear impact on disability management outcomes. Our finding is similar to the findings of Kurnianto et al [15] that the quality of life and work ability of disabled workers is improved by case-managed return to work programmes. It is also in line with Macpherson et al. [16] who were able to show a reduction in the duration of work disability in relation to integrated return-to-work and vocational rehabilitation programmes. The finding is used to validate Social Risk Management Theory as rehabilitation will help the worker to cope with the risk and to restore productivity and minimise the long term dependency on compensation benefits [1].

5. Conclusion

The study found that the policy frameworks under which compensation is paid are important factors that affect disability management outcomes in the Nigerian oil and gas industry. It also found that employer compliance mechanisms enhance the coverage, reporting of accidents and access to compensation for workers. The study also found that the most significant factor for disability management outcomes is the claims processing efficiency. Rehabilitation support to improve recovery and workplace accommodation and return to work was also concluded. Hence, all the specific objectives of the study were

realised.

In light of the above, the study recommends the following: NSITF should intensify the audits of employers in relation to compliance, as well as verification of registration and monitoring of contributions in the oil and gas sector and service providers. NSITF should automate the claim submission, verification, communication and payment tracking process to minimize delays in claims processing. Employers of oil and gas workers need to formalize and establish rehabilitation plans, accommodation and return to work coordination for injured workers.

Contribution to Knowledge

The study is novel, as for the first time it brings together employer compliance mechanisms, claims processing efficiency and rehabilitation support and develops an empirical model for disability management outcomes. It expands on the application of Social Risk Management Theory to NSITF-covered oil and gas activities, and offers regression-based evidence that claims processing efficiency is the most significant claim processing factor impacting disability management outcomes in the context studied.

Practical Implications

The take-home is that compensation administration should be thought of as a disability management system, and not as a narrow payment system, by NSITF and oil and gas employers. Quick claims processing, robust compliance and coordinated rehabilitation can minimize worker hardship, litigation, long term absence and loss of organizational productivity.

Limitations

The following limitations were experienced in the study: Limited access to confidential claims files and employer contribution records. This was controlled by means of the documentary review and anonymous questionnaire answers. One potential source of response bias was the potential for employees to identify themselves to the employer. Anonymity and voluntary participation were ensured to counteract this. One of the constraints was the small number of organizations in the oil and gas sector. This was moderated by stratified sampling across the various categories of respondents.

Ethical Considerations

Ethical concerns were taken into account during the study. To begin with, informed consent was secured from all the participants prior to the administration of the questionnaire and the participation in the interview. The respondents were notified of the study's goals and of the right not to respond and to withdraw from the study without penalty. Second, confidentiality was not breached as individual names, claim numbers, employer identifiers and medical information were not included in the report. Third, respondents were anonymous, coding the responses and presenting the results in aggregate form. Fourth, the study was not harmful because it did not force injured workers to report traumatic accident experiences that they did not want to report. Fifth, the sensitive information which related to disability, compensation, income loss and health status was treated in a dignified manner and kept securely. Sixth, institutional research ethics requirements were also adhered to in that the questions were academic and not coercive. Seventh: Documentary data is quoted in an appropriate manner, avoiding plagiarism and misrepresentation. Eighth, respondents were not provided with monetary incentives to shape responses. Ninth, the researcher was neutral and did not manipulate the data in a way that would benefit NSITF, employers or workers. Finally, the study concluded that the figures obtained on the field by instruments should be verified by the concerned organization before publishing or policy making.

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Academia Open

Vol. 11 No. 1 (2026): June

DOI: 10.21070/acopen.11.2026.14662

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