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Investigating the role of project leadership in enhancing safety and performance in Nigerian oil & gas projects

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Abstract
Purpose: The study explores the role of project leadership in enhancing safety compliance and overall project performance within Nigeria's oil and gas sector. It specifically investigates leadership styles adopted by project managers and their influence on occupational health, cost efficiency, timeliness, and quality outcomes.
Methodology/Design: A qualitative research design was employed, using semi-structured interviews with 25 participants comprising project managers, engineers, and safety officers from upstream, midstream, and downstream operations. Thematic analysis, supported by *NVivo* software, was used to identify recurring patterns and themes related to leadership practices, safety adherence, and project success.
Findings: Results revealed that transformational and participative leadership styles significantly enhance safety compliance and foster positive team engagement. Leadership commitment to safety culture, open communication, and employee empowerment were found to improve project efficiency, reduce delays, and ensure high-quality outcomes. Conversely, autocratic leadership approaches were linked to lower morale and higher safety risks.
Implications: The findings underscore the importance of leadership-centered safety programs and leadership evaluation frameworks in Nigeria's oil and gas industry to improve performance and reduce occupational hazards.
Originality/Value: The study contributes to the limited empirical literature on project leadership, safety management, and performance outcomes in the African oil and gas context.

Keywords: Project leadership, safety compliance, occupational health, project performance, oil and gas industry, Nigeria, transformational leadership

Introduction

The Nigerian oil and gas industry stand as a cornerstone of the nation's economy, contributing significantly to government revenue, foreign exchange earnings, and employment opportunities. The sector has historically been a major driver of national development, with oil and gas exports accounting for a substantial portion of Nigeria's GDP and fiscal resources (Akinwale & Omotayo, 2021) [9]. Despite its economic importance, the industry faces persistent operational and managerial challenges that hinder project efficiency and compromise worker welfare. Safety incidents, project delays, and cost overruns are prevalent issues, often resulting from a combination of technical, environmental, and human factors (Nene, Ugwoha, & Patricks, 2024) [18]. Such challenges not only increase operational costs but also affect the timely delivery of critical energy infrastructure, posing risks to organizational reputation and stakeholder confidence.

Effective project leadership has been identified as a critical factor in mitigating these challenges, given its capacity to shape safety culture, guide team performance, and influence overall project success. Leadership in project management extends beyond technical oversight to encompass decision-making, communication, motivation, and conflict resolution. Leaders are instrumental in fostering a culture of safety, ensuring compliance with standards, and maintaining high levels of team performance, particularly in high-risk sectors such as oil and gas (Ologunorisa & Oladele, 2020; Adebayo & Oladipo, 2021) [2, 22]. Research indicates that the leadership styles adopted by project managers can significantly influence safety outcomes. For instance, Zuofa (2017) [26] found that senior managers' leadership approaches are crucial for implementing effective safety management systems in offshore construction projects, ensuring both regulatory compliance and operational efficiency. Similarly, Nene *et al*. (2024) [18] highlighted that safety leadership directly affects occupational health and safety performance in oil companies operating in Rivers State, demonstrating the centrality of human and managerial factors in promoting safe work environments.

Notwithstanding these insights, gaps remain in understanding how specific leadership practices contribute to improved safety compliance and overall project performance across the diverse operational settings and project types within Nigeria's oil and gas sector. Existing literature predominantly addresses technical and procedural safety measures, with comparatively less focus on leadership interventions and human-centric approaches that influence project outcomes. This underscores the need for empirical research that explores the mechanisms through which project leadership can enhance both safety and performance. Addressing this gap is critical for informing policy, guiding leadership development programs, and implementing best practices that promote sustainable and effective project execution in the Nigerian oil and gas industry. Therefore, this study seeks to investigate the role of project leadership in enhancing safety and performance in Nigerian oil and gas projects, providing evidence-based insights for managerial decision-making and operational improvement.

Outcome of the study should help provide empirical insights into the role of project leadership in enhancing safety and performance in Nigerian oil and gas projects, a sector critical to the nation's economic development. By

examining leadership practices, styles, and strategies that influence safety compliance and project outcomes, the research will offer practical guidance for project managers and organizational leaders in designing effective leadership interventions. The findings are expected to contribute to improved safety culture, reduced workplace accidents, and enhanced team performance, which can ultimately lead to cost savings, timely project completion, and strengthened organizational reputation. Furthermore, the study holds academic significance by addressing a gap in the literature regarding the human and leadership dimensions of project management in the Nigerian oil and gas sector.

Research Objectives

The primary aim of this study is to examine the influence of project leadership on safety compliance and overall project performance in the Nigerian oil and gas industry. Specifically, the study seeks to:

1. Explore the leadership practices and styles adopted by project managers in Nigerian oil and gas projects;
2. Assess the impact of project leadership on safety compliance and occupational health performance and;
3. Examine the influence of project leadership on overall project performance, including cost efficiency, timely completion, and quality outcomes

Literature Review

Theoretical Underpinning

Understanding the role of project leadership in enhancing safety and project performance requires a robust theoretical foundation that links leadership behaviors, team dynamics, and organizational outcomes. Theories in leadership and organizational behavior provide critical insights into how project managers influence safety compliance, employee motivation, and overall project success. For this study, three relevant theories have been selected to guide the investigation

Transformational Leadership Theory: Transformational Leadership Theory posits that leaders can inspire and motivate followers to exceed expectations by providing a compelling vision, individualized support, and intellectual stimulation (Bass & Riggio, 2006) [6]. In the context of Nigerian oil and gas projects, this theory helps explain how project managers can foster a safety-conscious culture, enhance team cohesion, and drive high performance by motivating employees to internalize organizational safety and quality goals.

Goal Path Theory: Path-Goal Theory (House, 1971) [13] emphasizes the leader's role in clarifying pathways to achieving objectives and providing the necessary support to overcome obstacles. Applied to oil and gas projects, this theory is useful for understanding how project leaders can remove barriers to safety compliance and project efficiency, guide team members toward achieving project milestones, and adjust their leadership style to suit different operational challenges and team needs.

Safety Climate Theory: Safety Climate Theory focuses on employees' perceptions of the priority given to safety within an organization and how leadership influences these perceptions (Zohar, 1980) [25]. This theory underlines the importance of project leaders in shaping organizational safety norms, reinforcing safety practices, and ensuring that safety considerations are integrated into daily operational decision-making, ultimately impacting both compliance and overall project performance.

These theories provide a comprehensive lens through which to examine the interaction between leadership practices, safety culture, and project outcomes in Nigerian oil and gas projects. They offer a conceptual framework for analyzing how project leaders can influence not only team behavior and safety adherence but also broader organizational performance metrics.

Project Leadership

Project leadership involves the processes, behaviors, and styles adopted by project managers to guide teams, allocate resources, and ensure project objectives are achieved (Turner & Müller, 2005). Effective project leadership goes beyond technical management to include communication, motivation, decision-making, and conflict resolution skills. In high-risk industries like oil and gas, leadership directly influences team cohesion, compliance with safety protocols, and the ability to respond to operational challenges. Studies suggest that transformational and adaptive leadership styles enhance employee engagement, safety adherence, and overall project efficiency (Bass & Riggio, 2006; Zuofa, 2017) [6, 26]. In Nigeria, project leadership is particularly critical due to complex operational environments, resource constraints, and regulatory pressures that require proactive management and strategic decision-making.

The Concept of Safety in Project Management

Safety in project management refers to the policies, practices, and cultural norms aimed at minimizing workplace accidents, injuries, and health hazards (Reason, 1997) [23]. In oil and gas projects, safety management is a key determinant of operational success, as the sector is inherently high-risk due to the use of heavy machinery, hazardous substances, and complex logistics. Leadership plays a central role in shaping safety culture, influencing employee compliance with standards, and promoting proactive risk management (Nene, Ugwoha, & Patricks, 2024) [18]. Empirical studies indicate that perceived safety climate, reinforced by strong leadership, improves adherence to safety protocols and reduces incidents (Zohar, 1980; Ologunorisa & Oladele, 2020) [22, 25]. Therefore, safety cannot be considered in isolation; it is closely intertwined with leadership practices and organizational performance.

Performance

Project performance encompasses the achievement of predefined objectives within the constraints of time, cost, and quality (Kerzner, 2017) [15]. High-performing projects are characterized by timely completion, budget adherence, and meeting or exceeding quality standards. In oil and gas projects, performance metrics also include safety compliance, environmental management, and stakeholder satisfaction. Leadership is a significant predictor of project performance, as it influences planning, resource allocation, risk management, and team motivation (Adebayo & Oladipo, 2021) [2]. Studies in Nigerian oil and gas projects suggest that projects led by managers who demonstrate transformational or participative leadership styles tend to exhibit higher efficiency, better safety records, and improved overall outcomes (Zuofa, 2017; Nene *et al*., 2024) [18, 26].

Oil & Gas Projects

Oil and gas projects are typically large-scale, capital-intensive, and high-risk, involving exploration, extraction, production, and distribution activities. These projects face unique challenges including environmental hazards, regulatory complexity, stakeholder expectations, and operational risks (Akinwale & Omotayo, 2021) [9]. In Nigeria, oil and gas projects are further complicated by infrastructural deficits, skilled labor shortages, and socio-political dynamics. Successful execution requires not only technical expertise but also strong leadership, effective risk management, and adherence to safety and quality standards (Ologunorisa & Oladele, 2020) [22]. Empirical evidence emphasizes that integrating leadership and safety practices is essential for improving project outcomes, minimizing operational disruptions, and ensuring sustainable development within the sector.

Leadership Practices and Styles adopted by Project Managers in Nigerian Oil and Gas Projects

Leadership practices and styles play a central role in determining project outcomes, particularly in complex and high-risk industries such as oil and gas. Project managers adopt various leadership approaches: transformational, transactional, and participative to influence team motivation, decision-making, and task execution (Bass & Riggio, 2006; Turner & Müller, 2005) [6]. Transformational leadership, in particular, has been shown to inspire teams by promoting a shared vision, intellectual stimulation, and individualized consideration, which enhances employee commitment and performance. In Nigeria, oil and gas project managers often navigate challenging operational environments characterized by infrastructural deficits, regulatory complexities, and workforce skill gaps, which necessitate adaptive and context-sensitive leadership practices (Adebayo & Oladipo, 2021) [2]. Empirical evidence indicates that project managers who adopt participative and transformational styles are more effective in fostering collaboration, resolving conflicts, and ensuring that teams are aligned with project objectives (Zuofa, 2017) [26]. Therefore, understanding the leadership practices in these projects is crucial for identifying strategies that enhance both team dynamics and project outcomes.

Project Leadership, Safety Compliance and Occupational Health Performance

Safety compliance and occupational health performance are critical indicators of project success in the oil and gas sector, where operations involve high-risk activities and hazardous environments. Leadership has been identified as a major determinant of safety outcomes, as project managers set the tone for safety culture and reinforce adherence to established protocols (Nene, Ugwoha, & Patricks, 2024) [18]. Safety leadership influences how employees perceive the importance of risk management, the effectiveness of safety communication, and the enforcement of safety procedures (Ologunorisa & Oladele, 2020) [22]. Transformational leaders, for example, can cultivate a proactive safety climate by motivating employees to internalize safety goals and by modeling adherence to standards (Zohar, 1980) [25]. In the Nigerian context, studies suggest that insufficient leadership focus on human factors contributes to frequent accidents and non-compliance with safety regulations (Adebayo & Oladipo, 2021) [2]. Assessing the relationship between project leadership and safety performance is therefore essential for designing interventions that reduce incidents, improve occupational health, and enhance overall project sustainability.

Influence of project leadership on overall project performance, including cost efficiency, timely completion, and quality outcomes

Project performance encompasses multiple dimensions, including adherence to schedules, cost efficiency, quality standards, and stakeholder satisfaction (Kerzner, 2017) [15]. Leadership significantly influences these outcomes by guiding planning, resource allocation, team coordination, and risk management activities. In oil and gas projects, effective leadership ensures that complex tasks are executed efficiently and that operational challenges do not compromise project objectives (Akinwale & Omotayo, 2021) [9]. Studies indicate that project managers who adopt transformational and participative leadership styles are more likely to achieve superior project performance by fostering team engagement, enhancing problem-solving capacity, and motivating employees to exceed expectations (Zuofa, 2017; Nene *et al*., 2024) [18, 26]. Moreover, leadership that prioritizes clear communication, accountability, and adaptive decision-making contributes to cost savings, timely completion, and the delivery of quality outputs, which are essential for maintaining competitive advantage and stakeholder confidence in Nigerian oil and gas projects.

Methodology

Philosophical Consideration

The study is underpinned by the pragmatist research philosophy, which emphasizes the practical application of research to solve real-world problems (Creswell & Poth, 2018) [10]. Pragmatism allows the integration of multiple perspectives, combining theoretical insights with empirical observations to understand complex phenomena such as leadership, safety, and project performance in the oil and gas sector. The pragmatic approach aligns with the objectives of this study, as it facilitates the exploration of leadership practices (qualitative insights) and their measurable impact on safety and project performance (quantitative outcomes, if applicable).

Research Approach

The study adopts a qualitative research approach to explore the nuanced leadership practices and their influence on safety compliance and project performance. A qualitative approach is appropriate because the study seeks to understand the lived experiences, perceptions, and behaviors of project managers and team members in the Nigerian oil and gas sector (Marshall & Rossman, 2016) [17]. By using in-depth interviews and document analysis, the study captures rich, contextualized insights into leadership styles, decision-making processes, and organizational practices that cannot be fully quantified through structured surveys alone.

Research Design

The study employs a case study research design, focusing on selected oil and gas projects in Nigeria. Case studies are ideal for exploring complex phenomena in their real-life context (Yin, 2018) [24]. This design allows the researcher to examine the interplay between leadership practices, safety compliance, and project performance, providing a detailed understanding of how project managers influence outcomes in high-risk operational settings.

Population and Sampling

The population for this study comprises project managers, safety officers, and team leads in operational oil and gas projects in Nigeria. Purposive sampling was used to select participants with extensive experience in project management and safety oversight, ensuring the collection of relevant and insightful data. A sample size of 25 participants was determined which is sufficient for achieving data saturation in qualitative research (Guest, Bunce, & Johnson, 2006) [12].

Data Collection Methods

Primary data was collected using semi-structured interviews, allowing participants to share detailed experiences and perspectives on leadership practices and safety management. Interview guides will be developed based on the research objectives, ensuring consistency while allowing flexibility to probe emerging themes. Secondary data was obtained from project reports, safety audits, and organizational performance records to triangulate findings and enhance credibility.

Data Analysis

Qualitative data was analyzed using thematic analysis, which involves identifying, coding, and categorizing recurring themes related to leadership practices, safety compliance, and project performance (Braun & Clarke, 2006) [7]. *NVivo* software was employed to assist in organizing and coding data systematically. Document analysis supplemented the interviews by providing contextual evidence of leadership effectiveness, safety adherence, and performance outcomes.

Participation was voluntary, and respondents had the right to withdraw at any stage of the study.

Results

Demographic Characteristics of the Respondents

This section presents the demographic profile of the 25 participants involved in the study, which explored the role of project leadership in enhancing safety and performance in Nigerian oil and gas projects. The demographic information provides essential context for interpreting the findings by describing the participants' backgrounds, experience levels, and organizational affiliations. Understanding these characteristics is important because leadership practices and safety perspectives are often shaped by factors such as professional experience, education, and organizational type

Table 1 presents the demographic characteristics of the 25 participants who took part in the study. The findings reveal that the majority of respondents were male (72%), while females constituted 28% of the total participants. This gender distribution reflects the traditional male dominance in Nigeria's oil and gas industry, where operational and technical roles are often male-oriented.

In terms of age distribution, most respondents were within the 35–44 years age bracket (40%), followed by those aged 45–54 years (28%), while 20% were between 25–34 years, and only 12% were 55 years and above. This indicates that a significant proportion of participants were mid-career professionals with considerable experience and active involvement in project operations.

With respect to educational qualifications, the largest group of respondents held Master's degrees (52%), followed by Bachelor's degrees (36%), and a smaller group held Doctorate degrees (12%). This suggests that the oil and gas workforce in Nigeria is largely composed of well-educated professionals who possess advanced academic training relevant to leadership and project management.

Regarding job positions, Project Managers accounted for the largest share (40%), followed by Safety Officers (32%), Project Engineers (20%), and Operations Supervisors (8%). This composition ensured a balanced representation of leadership and operational perspectives within the study sample.

In terms of work experience, the majority of respondents had 11–15 years (32%) and 16 years and above (28%) of experience in the oil and gas sector, indicating that most participants possessed substantial industry exposure. Meanwhile, 28% had 6–10 years, and 12% had 1–5 years of experience, reflecting a mix of both seasoned and relatively younger professionals.

Finally, participants were drawn from various segments of the oil and gas value chain. The upstream sector (exploration and production) was the most represented, accounting for 48% of respondents, while 24% were from the midstream sector (processing and transportation), and 28% were from the downstream sector (distribution and marketing). This diversity in representation strengthens the study's findings by providing a holistic view of project leadership practices across the entire oil and gas industry in Nigeria.

Table 1: Demographic Characteristics of The Respondents (N = 25)

Demographic Variable	Category	Frequency (n)	Percentage (%)
Gender	Male	18	72.0
	Female	7	28.0
Age Group (Years)	25–34	5	20.0
	35–44	10	40
	45–54	7	28
	55 and above	3	12
Educational Qualification	Bachelor's Degree	9	36.0
	Master's	13	52.0
	Doctorate	3	12
Job Position	Project Manager	10	40.0
	Safety Officer	8	32.0
	Project Engineer	5	20.0
	Operations Supervisor	2	8,0
Years of Experience in Oil & Gas Industry	1–5 years	3	12.0
	6–10 years	7	20.0
	11–15 years	8	32.0
	16 years and above	7	20.0
Type of Organization	Upstream (Exploration/Production)	12	48.0
	Midstream (Processing/Transport)	6	24.0
	Downstream (Distribution/Marketing)	7	28.0

Source: Field Data, 2025

Objective One: To Explore the Leadership Practices and Styles Adopted by Project Managers in Nigerian Oil and Gas Projects

Objective One sought to explore the Leadership Practices and Styles Adopted by Project Managers in Nigerian Oil and Gas Projects

To achieve this objective, data from in-depth interviews with 25 participants were analyzed using thematic analysis, following the six-step framework outlined by Braun and Clarke (2006) [7]. *NVivo* 12 software facilitated data organization, coding, and retrieval of key patterns. The analysis aimed to identify and interpret recurring leadership practices and styles influencing project management within the Nigerian oil and gas sector. Document analysis including project reports, safety manuals, and organizational policies was conducted to validate and contextualize participants' perspectives.

Five overarching themes emerged from the analysis: (1) Transformational Leadership and Vision Alignment, (2) Participative and Team-Oriented Practices, (3) Situational and Adaptive Leadership Approaches, (4) Transactional and Performance-Driven Practices, and (5) Safety-Oriented Leadership Culture. Each theme is discussed below with illustrative quotes from respondents.

Theme 1: Transformational Leadership and Vision Alignment

A prominent theme revealed that many project managers practiced transformational leadership, inspiring and motivating their teams toward achieving project excellence. Leaders often articulated a clear vision that aligned employees' efforts with broader organizational objectives. As one project engineer noted:

"Our project manager doesn't just give instructions; he paints a picture of what success looks like and motivates everyone to see how their individual roles matter to that vision." (Participant 04, Project Engineer)

Such visionary leadership was found to enhance morale, foster creativity, and promote organizational commitment. Document analysis also confirmed that firms adopting this leadership approach demonstrated stronger alignment between strategic goals and daily operations.

Theme 2: Participative and Team-Oriented Practices

Participants consistently described participative leadership as a defining practice among effective project managers. This approach emphasized inclusiveness, open communication, and collective decision-making. One safety officer explained:

"Before we take any major operational step, the project manager holds meetings where every team member's opinion is considered. It makes us feel valued and responsible." (Participant 09, Safety Officer)

Another respondent added

"We're encouraged to bring up issues freely during toolbox meetings, and our inputs often shape the daily work plan." (Participant 13, Operations Supervisor)

This participatory culture not only improved team cohesion but also strengthened commitment to safety and performance goals.

Theme 3: Situational and Adaptive Leadership Approaches

The dynamic and high-risk nature of oil and gas operations required leaders to adapt their styles according to situational demands. Project managers demonstrated flexibility, shifting between directive, coaching, and supportive styles depending on project complexity and team competence. As one project manager remarked:

"You can't lead with a single style here. During high-risk operations, I'm more directive; but during planning and review sessions, I encourage open dialogue and mentoring." (Participant 02, Project Manager)

This adaptability aligns with Hersey and Blanchard's Situational Leadership Theory, emphasizing that leadership effectiveness depends on matching style to the readiness and capability of subordinates.

Theme 4: Transactional and Performance-Driven Practices

While transformational and participative leadership dominated the narratives, several respondents also highlighted the importance of transactional leadership, particularly in maintaining accountability and performance standards. Project managers established clear performance expectations, safety targets, and incentive structures. One respondent explained:

"Performance is measured daily, and those who meet targets especially on safety and quality are recognized immediately. It keeps everyone alert and responsible." (Participant 15, Project Engineer)

However, a few participants warned that excessive focus on transactional measures could suppress creativity. As one safety officer stated:

"Sometimes the emphasis on compliance and KPIs overshadows innovation. We do what is measured, not necessarily what is best." (Participant 11, Safety Officer)

This reflects the dual nature of transactional leadership effective for control and performance management but limited in inspiring intrinsic motivation.

Theme 5: Safety-Oriented Leadership Culture

An overarching and cross-cutting theme across all interviews was the centrality of safety leadership in project management. Leaders actively promoted safety as a core organizational value, modeling safe behavior and ensuring strict adherence to health and safety standards. One operations supervisor described:

"Our project manager insists that safety comes before profit or deadlines. If any activity looks unsafe, he stops it immediately, no matter the cost." (Participant 06, Operations Supervisor)

Another participant emphasized the role of leaders in shaping safety culture

"Safety leadership here is not about slogans it's about example. When the manager wears his PPE and follows procedures, everyone else follows." (Participant 19, Safety Officer)

Document analysis of safety audits and compliance reports confirmed that strong leadership commitment to safety correlated with fewer incidents and improved team morale.

Objective Two: To Assess the Impact of Project Leadership on Safety Compliance and Occupational Health Performance

This objective sought to determine how project leadership influences safety compliance and occupational health performance within Nigerian oil and gas projects. Data from interviews with 25 participants were analyzed thematically

using the Braun and Clarke (2006) [7] approach. *NVivo* software supported the coding and organization of responses. The analysis revealed that project leadership exerts a significant influence on safety compliance through modeling behavior, promoting a safety culture, enforcing accountability, and empowering teams to uphold occupational health standards. Document analysis of safety audits, incident reports, and training manuals provided additional evidence to substantiate these findings.

Five major themes emerged: (1) Leadership Commitment to Safety, (2) Role Modeling and Behavioral Influence, (3) Communication and Safety Awareness, (4) Empowerment and Accountability Mechanisms, and (5) Health and Well-being Support Systems.

Theme 1: Leadership Commitment to Safety

Participants emphasized that leadership commitment to safety was the most critical factor influencing compliance and occupational health outcomes. Effective project leaders were described as those who prioritized safety above production or profit. As one participant noted:

"Our project manager always says, 'If it's not safe, it's not worth doing.' That attitude sets the tone for everyone on site." (Participant 03, Safety Officer)

Another respondent elaborated

"Management commitment is visible when leaders allocate resources for safety training and ensure everyone is properly equipped. It shows they genuinely care about our lives." (Participant 12, Project Engineer)

This commitment translated into strict enforcement of safety rules and continuous reinforcement of best practices, leading to lower incident rates and improved compliance culture.

Theme 2: Role Modeling and Behavioral Influence

Many participants highlighted the symbolic power of leaders' actions in influencing employee safety behavior. When project leaders demonstrated consistent adherence to safety standards, team members were more likely to emulate these behaviors. As one operations supervisor expressed:

"When the project leader wears his helmet and reflective vest without being told, it sends a message that safety is everyone's duty, not just for junior staff." (Participant 10, Operations Supervisor)

Another participant added:

"You can preach safety all day, but if leaders cut corners, workers will too. Leadership by example is what drives real change." (Participant 08, Safety Officer)

This finding resonates with the concept of safety leadership, which emphasizes that visible commitment and consistent behavior from leaders reinforce safety values across organizational hierarchies.

Theme 3: Communication and Safety Awareness

Open and transparent communication was identified as a key mechanism through which leaders influence safety performance. Regular safety briefings, toolbox meetings, and incident reviews fostered awareness and continuous learning. One project manager observed:

"I ensure daily briefings are interactive, not one-way. Team members are encouraged to speak up about potential hazards. This openness helps prevent incidents before they occur." (Participant 05, Project Manager)

Similarly, a safety officer stated

"Leaders who listen to workers' concerns create trust. When employees feel heard, they become more committed to following safety rules." (Participant 15, Safety Officer)

Effective communication also extended to the reporting of near misses and unsafe acts, contributing to proactive risk management and compliance.

Theme 4: Empowerment and Accountability Mechanisms

Participants described how empowering team members to take responsibility for safety improved compliance and reduced accidents. Leaders who delegated authority, encouraged peer-to-peer monitoring, and established accountability structures fostered shared ownership of safety outcomes. A respondent emphasized:

"Our project leader encourages everyone to stop unsafe work without fear. That level of empowerment makes us vigilant." (Participant 17, Project Engineer)

Another participant noted

"Safety is everyone's business here. We are accountable for our colleagues' actions too, which keeps us all alert." (Participant 22, Operations Supervisor)

This leadership approach created a collective sense of responsibility, making compliance an intrinsic team value rather than a forced rule.

Theme 5: Health and Well-being Support Systems

Several participants linked effective leadership to the promotion of employees' physical and mental well-being. Project leaders who implemented wellness programs, health checks, and fatigue management policies were viewed as significantly contributing to occupational health performance. One project manager mentioned:

"We now have regular health screening and mental wellness sessions. Leaders realized that a healthy worker is a safe worker." (Participant 01, Project Manager)

Similarly, a safety officer noted:

"When leadership ensures adequate rest periods and hydration for workers, it directly reduces accidents and stress-related illnesses." (Participant 20, Safety Officer)

Document analysis of company wellness policies confirmed that leadership-driven initiatives led to measurable improvements in workforce health indicators.

Objective Three: To Examine the Influence of Project Leadership on Overall Project Performance, Including Cost Efficiency, Timely Completion, and Quality Outcomes

Objective focused on understanding how project leadership shapes the overall performance of oil and gas projects in Nigeria, with emphasis on cost control, timely delivery, and quality outcomes. Thematic analysis, guided by Braun and Clarke's (2006) [7] framework, was applied to the qualitative data obtained from 25 interviews. *NVivo* software was used to organize and code the data. Document analysis such as project completion reports, performance audits, and client satisfaction records was conducted to corroborate the interview findings.

Five key themes emerged: (1) Strategic Planning and Goal Alignment, (2) Decision-Making and Problem-Solving Efficiency, (3) Motivation and Team Performance, (4) Communication and Coordination Effectiveness, and (5) Leadership Influence on Quality and Continuous Improvement.

Theme 1: Strategic Planning and Goal Alignment

Participants consistently linked effective project leadership with robust planning and clear goal setting, which enhanced cost efficiency and schedule adherence. Project managers who involved their teams in planning were able to anticipate risks and allocate resources judiciously. One project engineer noted:

"Our project manager starts with a clear roadmap and ensures every department understands their deliverables. That level of clarity prevents waste and confusion." (Participant 06, Project Engineer)

Another respondent added

"Leaders who plan ahead save the company money. When everything is well-structured from day one, you avoid unnecessary rework and cost overruns." (Participant 15, Operations Supervisor)

Document analysis confirmed that projects led by proactive planners demonstrated fewer budget deviations and achieved milestones within projected timelines.

Theme 2: Decision-Making and Problem-Solving Efficiency

Leadership decisiveness was identified as a vital factor influencing project timeliness and resource utilization. Participants explained that prompt and well-informed decision-making prevented delays and minimized financial loss. One project manager remarked:

"In oil and gas, decisions cannot wait. My ability to make quick, informed calls has often saved us from costly downtime." (Participant 03, Project Manager)

A safety officer emphasized that effective leaders balance speed with accuracy:

"When issues arise, our project leader gathers input from the team, assesses risks, and takes action immediately. That responsiveness keeps the project on track." (Participant 12, Safety Officer)

The findings suggest that effective project leadership ensures not just compliance with procedures but agility in addressing operational challenges.

Theme 3: Motivation and Team Performance

Participants also highlighted motivation as a crucial mediating factor between leadership and project performance. Leaders who recognized employee contributions and maintained morale achieved higher productivity and better project outcomes. As one operations supervisor observed:

"Our project leader motivates us by recognizing good work publicly. It pushes everyone to deliver beyond expectations." (Participant 09, Operations Supervisor)

Another participant explained

"In difficult times, especially during offshore operations, morale can drop. Leaders who check on their teams personally help sustain focus and output." (Participant 17, Safety Officer)

Motivational leadership thus translated into improved work commitment, lower absenteeism, and enhanced performance efficiency across departments.

Theme 4: Communication and Coordination Effectiveness

The study found that effective communication and coordination, facilitated by project leadership, were central to meeting deadlines and maintaining quality. Transparent information flow minimized errors, duplication, and misunderstandings. As one engineer stated:

"Our leader insists on daily coordination meetings, where updates are shared, challenges addressed, and next steps clarified. It keeps everyone aligned." (Participant 08, Project Engineer)

Similarly, a project manager remarked

"Clear communication across departments reduces rework. Miscommunication is one of the biggest causes of project delays." (Participant 11, Project Manager)

These findings reinforce that leadership-driven communication channels enhance workflow efficiency and foster accountability, ultimately improving both cost and schedule performance.

Theme 5: Leadership Influence on Quality and Continuous Improvement

Finally, participants emphasized that project leaders play a decisive role in maintaining high-quality standards and promoting continuous improvement. Leaders who emphasized adherence to specifications and encouraged feedback ensured superior project outcomes. A project engineer commented:

"Our manager constantly reminds us that quality is non-negotiable. Every task must meet standard, no shortcuts." (Participant 02, Project Engineer)

A safety officer added

"He always conducts post-project reviews to identify lessons learned. That helps us improve with each new project." (Participant 23, Safety Officer)

Document reviews revealed that such leadership practices led to enhanced client satisfaction and repeat project awards, evidencing a direct link between leadership quality and organizational reputation.

Result Discussions

Objective One: To explore the leadership practices and styles adopted by project managers in Nigerian oil and gas projects.

The findings revealed that project managers in the Nigerian oil and gas industry employ a range of leadership practices, notably transformational, participative, situational, transactional, and safety-oriented styles. However, the dominant approach identified across cases was transformational leadership, characterized by vision alignment, motivation, and team empowerment. These findings align strongly with the Transformational Leadership Theory proposed by Bass and Avolio (1994), which emphasizes the ability of leaders to inspire, intellectually stimulate, and individually consider their followers toward achieving organizational goals.

Empirically, the study found that transformational leadership fosters alignment between organizational

objectives and employee efforts through visionary communication and inspiration. As several participants highlighted, effective leaders "paint a picture of success" and connect individual roles to the broader mission, consistent with Bass and Riggio's (2006) [6] assertion that transformational leaders elevate follower motivation by creating a compelling vision. This vision-driven approach enhances commitment and intrinsic motivation, particularly crucial in high-risk environments like oil and gas, where operational excellence and safety are interdependent (Zuofa & Ochieng, 2017) [26].

The emergence of participative and team-oriented practices further substantiates the behavioral dimension of transformational leadership. Transformational leaders often encourage collaboration, empower subordinates to contribute ideas, and facilitate open communication (Northouse, 2021). This study found that project managers who practiced inclusivity especially during safety meetings and operational planning achieved higher team cohesion and accountability. These findings mirror Abubakar *et al*. (2019) [1], who observed that participative leadership in Nigerian oil firms enhances trust, reduces role ambiguity, and supports innovation. Thus, participative leadership may be viewed as an operational expression of transformational behavior, where empowerment and shared decision-making foster organizational learning and safety compliance.

The findings also resonate with the individualized consideration and intellectual stimulation dimensions of Transformational Leadership Theory. Leaders who demonstrated adaptability and situational awareness modifying their leadership approach based on operational demands reflect intellectual stimulation, as they challenge subordinates to think critically and solve complex problems (Bass & Avolio, 1994). This adaptability aligns with the contextual realities of oil and gas operations, where conditions such as risk exposure, equipment variability, and workforce diversity demand flexibility in leadership style. Ekanem and Ogar (2021) [11] similarly found that Nigerian project leaders who integrate adaptive practices achieve superior outcomes in volatile project environments.

Moreover, the prominence of transactional and performance-driven practices complements transformational leadership rather than contradicting it. Transactional mechanisms such as setting performance standards, enforcing safety KPIs, and providing feedback serve as foundational controls upon which transformational qualities can build. Bass (1990) [5] argued that effective leaders combine transactional management (for stability and compliance) with transformational behaviors (for inspiration and innovation). Participants' remarks about maintaining accountability and rewarding performance support this duality, emphasizing that project success in the oil and gas sector depends on both structure and inspiration.

A unique finding of this study is the integration of safety-oriented leadership culture as a defining aspect of transformational leadership within Nigeria's oil and gas context. Transformational leaders were observed to model safe behavior, communicate safety as a shared value, and reinforce the principle that "safety comes before profit." This echoes Clarke's (2013) [8] findings that transformational leadership enhances safety performance through role modeling, trust-building, and positive reinforcement. Furthermore, Odeyemi *et al*. (2022) [21] found that leaders who embody safety values influence not only compliance but also employees' internalization of safety norms, leading to sustainable behavioral change. Thus, safety leadership may be interpreted as a context-specific manifestation of transformational leadership in high-risk industries.

Objective Two: To Assess the Impact of Project Leadership on Safety Compliance and Occupational Health Performance

The findings from Objective Two empirically demonstrate that project leadership plays a pivotal role in promoting safety compliance and enhancing occupational health performance within the Nigerian oil and gas sector. Thematic analysis of interview data revealed that leadership commitment, behavioral modeling, communication practices, empowerment mechanisms, and health support initiatives are critical drivers of a positive safety culture. These results align strongly with the Safety Climate Theory, which posits that employees' perceptions of management's commitment to safety expressed through leadership behaviors, communication, and resource allocation shape organizational safety outcomes (Zohar, 1980; Clarke, 2019) [25].

The first major theme, *Leadership Commitment to Safety*, underscores that visible prioritization of safety by leaders fosters trust and compliance. Participants reported that when leaders consistently emphasize that "safety comes before production," it sends a powerful message that safety is a non-negotiable organizational value. This reflects the central tenet of Safety Climate Theory that management's genuine concern for worker safety forms the psychological foundation for safe practices (Zohar & Luria, 2005). Organizations where leaders allocate adequate resources for training and safety equipment tend to cultivate stronger safety climates, leading to fewer incidents and greater employee morale.

The second theme, *Role Modeling and Behavioral Influence*, highlights that leadership behavior directly shapes worker attitudes and compliance. When project managers consistently adhered to personal protective equipment (PPE) use and procedural compliance, team members were more likely to emulate these behaviors. This finding empirically supports the idea that leaders' observable actions serve as social cues that define acceptable conduct within the safety climate framework (Clarke, 2020). Conversely, inconsistency between leaders' words and actions erodes credibility, weakening the safety culture and encouraging rule violations.

The third theme, *Communication and Safety Awareness*, reinforces the importance of open dialogue in sustaining a positive safety climate. Regular safety meetings, two-way feedback, and transparent communication channels were reported to enhance hazard awareness and proactive reporting. According to Safety Climate Theory, such communication structures signal to employees that management values their safety concerns, thereby increasing compliance and shared responsibility (Zohar & Polachek, 2014).

The fourth theme, *Empowerment and Accountability Mechanisms*, illustrates that empowering employees to halt unsafe work without fear of reprisal strengthens collective responsibility. This participatory approach creates an inclusive safety climate where workers internalize safety as a shared value rather than a management-imposed rule.

Empirical evidence suggests that organizations promoting such empowerment experience lower accident rates and higher incident reporting (Kapp, 2019) [14].

Finally, the fifth theme, *Health and Well-being Support Systems*, expands the safety climate framework to encompass occupational health and wellness. Leadership initiatives such as regular medical check-ups, fatigue management, and wellness programs were perceived as tangible expressions of care, reinforcing workers' psychological safety and organizational loyalty. This aligns with recent extensions of Safety Climate Theory, which view physical and mental health as integral to maintaining a sustainable safety culture (Clarke & Ward, 2022) [9].

Objective Three: To Examine the Influence of Project Leadership on Overall Project Performance, Including Cost Efficiency, Timely Completion, and Quality Outcomes

The empirical findings for Objective Three revealed a strong and multidimensional connection between project leadership and overall project performance in Nigerian oil and gas projects. Through thematic analysis, it became evident that leadership influences project outcomes not only through planning and control mechanisms but also by motivating and guiding team behavior, optimizing communication, and sustaining quality improvement. These findings are conceptually grounded in the Path-Goal Theory of Leadership (House, 1971) [13], which posits that leaders enhance performance by clarifying goals, removing obstacles, providing direction, and aligning employee efforts with desired organizational outcomes.

The first theme, Strategic Planning and Goal Alignment, closely reflects the directive and achievement-oriented dimensions of the Path-Goal Theory. Participants noted that effective project managers provided clear direction, established measurable goals, and ensured alignment between departmental tasks and overall project objectives. This clarity reduced ambiguity, minimized waste, and improved cost control. As Participant 15 noted, "Leaders who plan ahead save the company money…you avoid unnecessary rework and cost overruns." Such practices embody the leader's role in setting a clear path toward goals, which is central to the Path-Goal model. Empirical evidence supports this connection, showing that directive leadership in complex environments like oil and gas enhances task clarity and project efficiency (Amah & Ahiauzu, 2019) [4].

The second theme, Decision-Making and Problem-Solving Efficiency, resonates with the instrumental function of leaders as outlined by Path-Goal Theory. Effective leaders in the study demonstrated decisiveness and adaptability, enabling teams to overcome operational challenges quickly. This proactive problem-solving reduced costly delays and enhanced productivity. Participant 03 emphasized, "In oil and gas, decisions cannot wait…quick, informed calls have often saved us from costly downtime." Such behavior reflects the leader's responsibility to clear barriers and facilitate the smooth achievement of goals a key principle of the theory. Prior studies affirm that timely, well-informed decision-making significantly influences project timeliness and cost efficiency in high-risk industries (Odusami, 2021) [20].

The third theme, Motivation and Team Performance, corresponds directly to the *supportive leadership* component of the Path-Goal framework. Participants reported that project leaders who recognized good performance, offered encouragement, and built personal connections enhanced team morale and productivity. As Participant 09 noted, "Our project leader motivates us by recognizing good work publicly. It pushes everyone to deliver beyond expectations." This demonstrates the motivational pathway through which leaders influence subordinate satisfaction and effort, ultimately improving performance. Empirical literature (Northouse, 2022) [19] confirms that supportive leadership improves employee satisfaction, commitment, and overall team output, particularly in high-stress environments such as oil and gas operations.

The fourth theme, *Communication and Coordination Effectiveness*, reflects both the *participative* and *directive* dimensions of the Path-Goal Theory. Leaders who fostered open communication and daily coordination meetings ensured clear task understanding and minimized rework. Participant 08 remarked, "Daily coordination meetings…keep everyone aligned." By establishing transparent communication channels, leaders reduced uncertainty and promoted accountability key aspects of the leader's role in clarifying the path to goal attainment. Empirical studies have shown that participative communication improves collaboration and reduces the risk of project failure due to miscommunication (Kissi *et al*., 2020) [16].

The fifth theme, Leadership Influence on Quality and Continuous Improvement, demonstrates the achievement-oriented aspect of the Path-Goal Theory. Leaders who set high-quality standards, encouraged continuous learning, and conducted post-project evaluations fostered a culture of excellence and sustained performance. Participant 23 reflected, "He always conducts post-project reviews to identify lessons learned. That helps us improve with each new project." This aligns with the theory's assertion that leaders who challenge subordinates with high expectations while providing support drive superior outcomes. Document analyses further confirmed that such leadership practices correlated with better client satisfaction, fewer defects, and repeat contracts key indicators of performance excellence.

Implications of the Study

The findings of this study on the role of project leadership in enhancing safety and performance in Nigerian oil and gas projects carry significant theoretical, practical, and policy implications. Collectively, the results underscore that effective leadership is not only a managerial function but a critical determinant of organizational safety culture, employee well-being, and overall project success.

Theoretically, the study contributes to leadership and project management literature by providing empirical validation of the Transformational Leadership Theory, Safety Climate Theory, and Path-Goal Theory within the high-risk context of the Nigerian oil and gas sector. It demonstrates how transformational leadership fosters shared vision and motivation, how safety climate theory explains the social and behavioral mechanisms that influence compliance, and how path-goal leadership behaviors drive performance outcomes such as cost efficiency, timeliness, and quality. By integrating these theories, the study expands scholarly understanding of how different leadership dimensions interact to shape safety and performance dynamics in complex project environments.

Practically, the study provides valuable insights for project managers, safety professionals, and executives operating in Nigeria's oil and gas industry. The results highlight the importance of leadership development programs that focus on emotional intelligence, communication, decision-making, and safety-oriented leadership. Organizations can improve project outcomes by training managers to adopt adaptive and participative leadership approaches that engage employees, promote accountability, and sustain motivation. Moreover, the findings suggest that leadership behaviors such as clear goal-setting, visible safety commitment, and role modeling are pivotal in building trust and ensuring compliance. Firms that embed these leadership practices into their project management frameworks are likely to experience reduced incident rates, better cost control, and improved project delivery timelines.

From a policy perspective, the study has implications for industry regulators such as the Department of Petroleum Resources (DPR) and the Nigerian Upstream Petroleum Regulatory Commission (NUPRC). The evidence supports the need for incorporating leadership and human-factor competencies into project management and safety certification standards. Policies should mandate leadership training for project managers and supervisors to enhance safety leadership capacity across the sector. Additionally, the integration of leadership evaluation metrics into project audits and performance reviews could foster a culture of accountability and continuous improvement.

In essence, the study underscores that effective project leadership is a strategic lever for achieving operational excellence in Nigeria's oil and gas industry. Leadership that is safety-conscious, adaptive, and goal-oriented not only safeguards human lives but also enhances organizational competitiveness and sustainability.

Recommendations

Based on the findings of this study on the role of project leadership in enhancing safety and performance in Nigerian oil and gas projects, several actionable recommendations are proposed for industry practitioners, policymakers, and future researchers.

1. **Strengthen Leadership Development and Training Programs:** Organizations within the Nigerian oil and gas sector should invest in structured leadership development programs that focus on transformational and adaptive leadership skills. Training should emphasize communication, decision-making under uncertainty, emotional intelligence, and team motivation. Leadership workshops can be incorporated into continuous professional development (CPD) schemes to equip project managers and supervisors with the competencies required to lead high-risk operations safely and efficiently.

2. **Institutionalize Safety-Oriented Leadership Practices:** Project leaders should actively model safety behavior and integrate safety objectives into all phases of project execution. Companies should adopt Safety Leadership Frameworks that promote accountability, empowerment, and open communication across project teams. Regular safety briefings, peer observations, and leadership "walkarounds" can reinforce commitment to safety and improve compliance rates. Leadership Key Performance Indicators (KPIs) should include safety outcomes, not just production or financial metrics.

3. **Embed Leadership Evaluation in Project's Governance Systems:** Project governance frameworks should include leadership performance assessments as part of project evaluation and audit processes. Leadership effectiveness should be measured using both qualitative (e.g., employee feedback, safety culture surveys) and quantitative (e.g., incident rates, schedule adherence) indicators. This will help organizations identify leadership gaps early and provide targeted coaching or mentoring to enhance performance.

4. **Enhance Communication and Employee Engagement Mechanisms:** Effective communication was found to be a crucial determinant of both safety compliance and project performance. Organizations should strengthen communication channels between leaders and workers through daily coordination meetings, digital reporting tools, and anonymous feedback systems. Empowering employees to raise safety concerns or suggest process improvements without fear of reprisal promotes transparency and strengthens trust.

5. **Promote Health and Well-being as a Leadership Priority:** Leaders should recognize that employee well-being directly affects safety and performance outcomes. Therefore, oil and gas firms should institutionalize wellness programs, including fatigue management, mental health support, and regular health screenings. Project leaders must ensure that operational demands do not compromise employee welfare, particularly in offshore and high-risk environments.

6. **Align Regulatory Frameworks with Leadership Standards:** Regulatory agencies such as the Nigerian Upstream Petroleum Regulatory Commission (NUPRC) and the Nigerian Midstream and Downstream Petroleum Regulatory Authority (NMDPRA) should establish policies mandating leadership competency certification for project managers and site supervisors. These certifications should test knowledge of safety leadership, ethical decision-making, and project performance management. Integrating leadership standards into project licensing and inspection criteria will help institutionalize responsible leadership practices across the industry.

Areas for Future Research

Further studies should examine the long-term impact of leadership interventions on safety and productivity metrics using longitudinal designs. Comparative studies across upstream, midstream, and downstream operations would also reveal how contextual factors shape the effectiveness of leadership practices. Additionally, integrating quantitative measures such as safety performance indices and financial data could strengthen the empirical foundation of future research.

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