

## SAFETY CULTURE AND SAFETY PERFORMANCE OF OIL SERVICING FIRMS IN RIVERS STATE, NIGERIA

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### Abstract

This paper examines how safety culture relates to safety performance among employees of oil servicing firms in Rivers State, Nigeria. Safety culture was operationalized along two dimensions (safety communication and safety motivation), while safety performance was measured by safety compliance and safety participation. Using a cross-sectional survey, data were collected from the full population of employees (N = 99). Instruments for the study was adapted from established scales and tested for internal consistency. Data was analyzed with the aid of Pearson product moment correlation coefficient statistical tool. Results indicated that the two dimensions of safety culture has a significant positive relationship with the two measures of safety performance. The findings recommends that: Management of oil servicing firms should always update employees about available safety information and allow employees make contributions on safety policies. Furthermore, they should ensure there is good communication about safety issues among employees. Management of oil servicing firms should ensure employees adhere to all the safety procedures in the work place. As a means to trigger safety motivation, management should see the safety of employees as paramount and should always consider safety as important as production.

**Keywords:** Safety Communication. Safety Motivation. Safety Compliance. Safety Participation. Oil Servicing Firms. Nigeria.

### 1. Introduction

The importance of safety for people and organisations has encouraged research on the practical consequences of safety culture, with a strong focus on safety performance. Specifically, safety performance is used to refer to the level of safety that determines the incidences of workplace accidents, injuries and fatalities (Mullen, Kelloway& Teed, 2017; Erdogan, Ozyilmaz, Bauer & Emre, 2018).Consequently, several scholars have suggested that organisations implement practices that are capable of influencing the behaviour of workers to improve safety performance outcomes (Zohar, Huang, Lee, & Robertson, 2014; Kao, Spitzmuller, Cigularov& Thomas, 2017). Hence, this study proposes safety compliance and safety participation (Neal & Griffin, 1997) as important measures for enhancing safety performance in the work environment. It is pertinent to note that, the first factor assessed the extent to which respondents follow safety rules and regulations when working, the second factor was concerned with the extent to which respondents on their own take actions to improve safety of the workplace and of coworkers.

Safety compliance represents the required core safety actions or behaviours that are needed to be implemented in order to retain a safe workplace (Hu, Griffin & Bertuleit, 2016). Neal and Griffin (2006) asserted that these actions or behaviour consists complying with the organisation's safety procedures and using the right personal protective equipment (PPE).

According to Hon, Chan and Yam (2014), safety participation describes actions or behaviours that do not directly contribute to an individual's personal safety, but enhances the development of an environment that bolster safety. These behaviours include: participating in voluntary safety activities, helping coworkers with safety-related issues, and attending or participating in safety meetings.

No doubt, a wide range of studies examining safety culture exist (Cox & Cheyne, 2000; Alrehaili, 2010; Agwu, 2012; Shuen & Wahab, 2016), and several scholars have also investigated safety performance (Griffin & Neal, 2000; Al-Bsheish, Mustafa & Ismail, 2017; Nadhim, Hon, Xia, Stewart & Fang, 2018). However, there seems to be few empirical study to establish the relationship between safety culture and safety performance in Nigerian context, and specifically, among oil servicing firms; which leaves the study with a lacuna in literature. Consequently, this study seeks to investigate the relationship between safety culture and safety performance of oil servicing firms in Rivers State, Nigeria.

### **Statement of the Problem**

The oil industry remains the main stay of the Nigerian economy. This explains the interest in the safety performance of oil servicing firms in Rivers State. Hamilton and Ugorji (2006) revealed that studies by health and safety executives have shown that about 80% of injuries, accidents, near misses or death ought not to happen. According to them, the main problem is the failure to comply and apply that experience in practice, and the failure to participate in safety activities and act when clear warning signs appear.

Low level of compliance to legislations and international standards is a key factor responsible for poor safety performance of oil servicing firms in Nigeria. Legislations and internationally accepted guidelines are in existence and actually referenced in the different acts governing the oil industry in Nigeria but lack of compliance with these guidelines is a major factor in the poor safety performance of the oil industry. According to Steiner (2010), the Nigerian oil industry with its United States of America (US) counterpart revealed that Nigerian oil companies need to comply with accepted international standards such as the American Petroleum Institute (API) standard. According to Steiner (2010):

Similarly, Hammeed, Orifah, Ijeoma and Tijani (2016) submits that employees do not comply with workplace safety, which is evident because they do not use the appropriate personal protective equipment (PPE) and obey the laid down safety procedures when executing tasks.

Furthermore, in addition to low level of compliance, there is also a growing concern of low level of safety participation by employees in oil servicing firms. The Department of Petroleum Resources (DPR) (2019) submitted that most employees seldom participate in tasks that enhance workplace safety and take part in development of safety requirements.

Prior studies by Griffin and Neal (2000), Zohar and Luria (2005), and Hofmann and Mark (2006), evidenced that safety culture influenced the employees' motivation regarding safety performance. Furthermore, research has consistently reported that higher level of safety motivation is an indication for positive relationship with effective organisational safety performance (Christian et al., 2009; Sinclair et al., 2010). Correspondingly, safety- communication and motivation was also found to be positively

related to safety performance in previous studies (Neal & Griffin, 2006; Vinodkumar&Bhasi, 2010). Hence, it is required to measure the level of safety compliance and safety participation as indicators of safety performance, and to know if work safety culture have a relationship with safety performance in oil servicing firms.

### Research Hypotheses

Based on the above research questions that have been posed, the following null hypotheses are hereby formulated for the study:

**Ho1:** There is no significant relationship between safety communication and safety compliance.

**Ho2:** There is no significant relationship between safety motivation and safety compliance.

**Ho3:** There is no significant relationship between safety communication and safety participation.

**Ho4:** There is no significant relationship between safety motivation and safety participation.

## 2. Literature Review

### Safety Culture

The concept of safety culture captured the interest and imagination of researchers and safety practitioners alike, with safety culture research gaining increased momentum in 1980s and 1990s. Frequent research publications and numerous references in major incident/accident investigations illustrate the significance of the concept. Mohamed (2003) averred that safety culture is a subculture of organisational culture, which has an effect on workers' behaviors and attitudes in regards to the safety performance in the organisation.

Safety culture is believed to be a key predictor of safety performance (Advisory Committee for Safety in Nuclear Installations (ACSNI), 1993). According to Choudhry, Fang and Mohamed (2007), safety culture has become the focus of all the industries, intrinsically linked to organisational culture and has recently received much attention. Choudhry et al. (2007) stressed that safety culture is considered to be the main factor that influences employees' attitudes and behaviors in respect to safety performance. Safety culture can be encapsulated in the characteristics of the organisational culture that have impacts on attitudes and behaviors related to hazard control and elimination (Guldenmund, 2000). Although the term "safety culture" has been extensively used for many years, it has no clear definition or measurement (Cox & Flin, 1998; Guldenmund, 2000). The term safety culture was first introduced and defined by the International Nuclear Safety Advisory Group (INSAG) of the International Atomic Energy Agency (IAEA) following the Chernobyl accident (INSAG, 1988). Gaining international recognition over the last decade, it is used to describe the corporate atmosphere or culture in which safety is understood to be, and is accepted as, the number one priority (Cullen, 1990). Unless safety is the dominating characteristic of corporate culture, which arguably it should be in a high-risk industry (like the oil industry), safety culture is a sub-facet of organisational culture, which is thought to affect members' attitudes and behaviour in relation to an organisation's ongoing health and safety performance.

**Safety Communication:** Communication between management and employees is another important aspect of organisations and also is a medium which leaders and followers structure, cultivate, and sustain useful exchanges (Cigularov, Chen & Rosecrance, 2010). However, with the term "safety", communication becomes a tool that helps employers manage safety issues and ensure that members in

an organisation stay away from potential hazards and accidents (Alsamadani, Hallowell & Javernick-will, 2013). Safety communication is not merely a process of exchanging safety information at the workplace; it is also concerned with influencing employees' behaviour and attitudes towards safety (Hofmann & Stetzer, 1998). Siu, Phillips and Leung (2004) defined safety communication as a process of exchanging information between two or more people with regards to safety related issues.

Zohar (2002) summarized that safety communication can be achieved in three ways: (i) through visible behaviour, employer can communicate the importance of safety and health. Employees soon recognize what employer regard as important and will adopt their own behavior accordingly. Thus, through negative behavior employer can undermine the safety and health culture of the organisation, (ii) written communication of health and safety policy statements, statements concerning health and safety roles and responsibilities, performance standards and findings from risk assessments, and (iii) face to face discussions between employer and employee enable employees to make a personal contribution and helps employees feel involved in the safety and health of the organisation.

**Safety Motivation:** Motivating employees to work safely has been recognized as an important factor in preventing workplace safety incidents since the early 1930's (Heinrich, 1931). Motivation is recognized as a crucial thrust that directly or indirectly affects safety behaviour and the success of safety involvement in general (Lund & Aaro, 2004; Ajzen, Czasch & Flood, 2009). It has been identified as a construct in well-known models of accident prevention (Christian, Bradley, Wallace & Burke, 2009; Vinodkumar & Bhasi, 2010). Locke and Latham (2004) views motivation as the intention to do something, and can be intrinsic or extrinsic. When individuals are intrinsically motivated, they engage in an activity they are interested in and enjoy the activity. When extrinsically motivated, individuals connect with activities for other reasons, such as receiving a reward. According to Conchie (2013), understanding what motivates employees to work safely is vital in confronting unsafe behaviour and increasing employees' participation in safety activities at work.

Neal and Griffin- (2000) and (2004) defined safety motivation as "an individual's willingness to exert effort to enact safety behaviours and the valence associated with those behaviours" (p. 34). Latham and Pinder (2005) and Clarke (2010) averred that safety motivation has been conceptualized to determine safety in the workplace across a different range of industrial and organisational contexts and, also a psychological process that directs, energizes and sustains action (Scott et al., 2014). It is related to individual factors of behaviour to attain a certain goal (Ajzen et al., 2009). Individuals should be motivated to comply with safe working practices and to participate in safety activities if they perceive that there is a positive safety culture in the workplace (Neal & Griffin, 2006). Additionally, Conchie (2013) submitted that employees should be motivated to comply with safe working practices and to participate in safety activities if they perceive that there is a positive safety culture in the workplace.

### **Safety Performance**

Safety performance indicates how healthy an organisation is terms of safety. According to Mohammed (2002), a high level of safety performance perfectly explains an organized workplace/worksites. Safety performance is perceived as multi-dimensional. It has been measured by several indicators. The

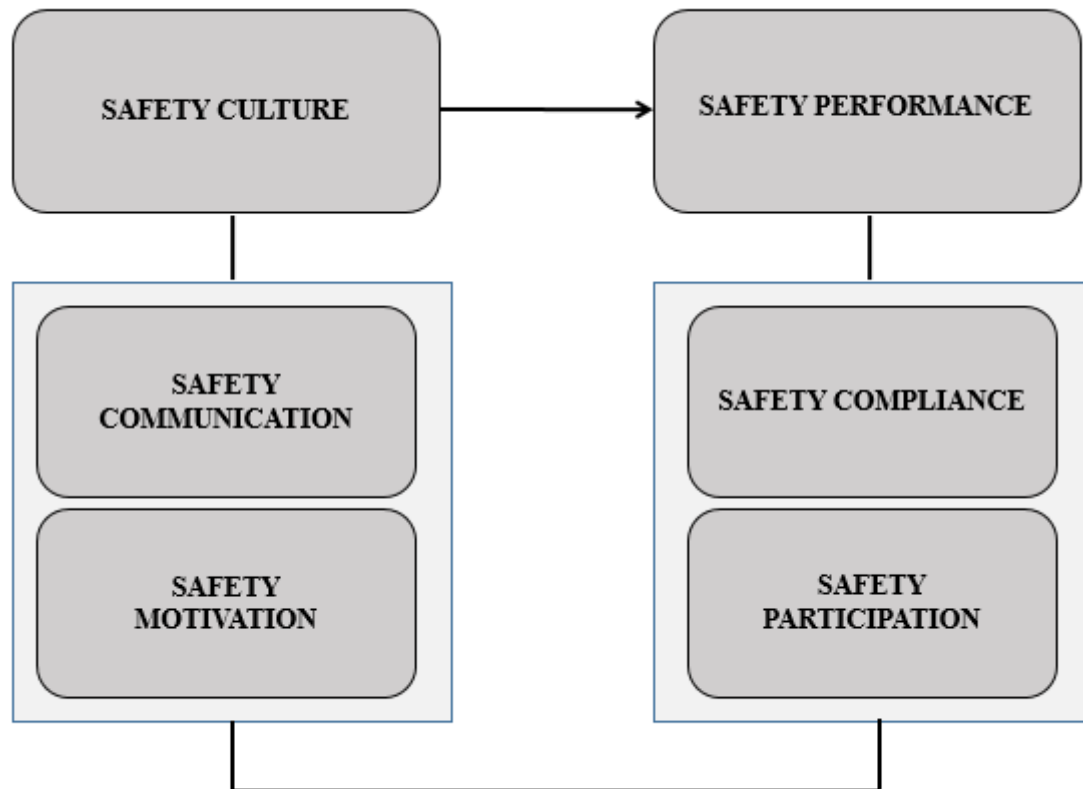
numbers of accidents/injuries and near-misses are the most conspicuous indicators when measuring safety performance (Hinze et al., 2013; Hon et al., 2014).

Earlier definitions posit that safety performance is an all-inclusive set of regulations, laws and activities directed towards improving safety in organisations (Kohli, 2007; Xia, Griffin, Wang, Liu, & Wang, 2018), which is customarily self-reported (Andersen, Nørdam, Joensson, Kines, & Nielsen, 2018) but eventually directed towards promoting the safety and health of workers (Zahoor, Chan, Utama, Gao, & Zafar, 2017). Burke et al (2002) defined safety performance as “actions or behaviours that individuals exhibit in almost all jobs to promote the health and safety of workers, clients, the public, and the environment” (p. 12). Siu et al. (2004) considered safety performance as the ability to minimize the quantity of accidents and occupational injuries in the work sites. According to Nevhage and Lindahl (2008) safety performance is defined as the quality of safety related work, and its improvement in organisation can increase its resistance or robustness and lower risk of accidents.

**Safety Compliance:** Borman and Motowidlo (1993) submitted that safety compliance is one of the components of performance (task performance) that is used to differentiate safety behaviours in the workplace. Safety compliance is defined as the core safety activities that need to be carried out by employees to maintain workplace safety (e.g., wearing personal protective equipment (PPE) and obeying tagout and lockout procedures) that employees must engage in to maintain workplace safety (Neal & Griffin, 2006). Neal et al. (2002) defined safety compliance as sticking to safety procedures and performing work in accordance to the required safety standards.

According to DeArmond, Smith, Wilson, Chen and Cigularov (2011), safety compliance are those compulsory behaviours that aid in the development of an environment that supports safety. They include complying with the organisation’s safety procedures and using the appropriate personal protective equipment (Neal & Griffin, 2006). Additionally, Hu, Griffin and Bertuleit, (2016) proposed that safety compliance entails the requisite safety activities that are essential in maintaining a safe workplace.

**Safety Participation:** Safety participation is used to describe behaviours that do not directly contribute to an individual’s personal safety, but helps to develop an environment that supports safety. These behaviours include activities such as participating in voluntary safety activities, helping coworkers with safety-related issues, and attending safety meetings (Borman & Motowidlo, 1993; Neal & Griffin, 2006). Safety participation comprises a number of specific acts, such as helping others, voicing concerns about safety and looking out for the welfare of others (Neal et al., 2000). These acts are presented in the safety as belonging to a single class of behavior, which arguably implies that they are all of equal importance in predicting an organisation’s safety performance (i.e., injuries, accidents and near-miss events). Furthermore, safety participation has a great voluntary element that goes beyond the actual ‘work role’ that an individual has within an organisation (Clarke & Ward, 2006). Neal and Griffin (2006) concluded that if employees participate in safety activities this can lead to an increase of safety performance.



**Figure 1: Conceptual Framework**

**Source:** The dimensions of the independent variable (Safety Communication and Safety Motivation) were adapted from Glendon and Litherland (2001) and Vinodkumar and Bhasi (2009) and the measures of the dependent variable (Safety Compliance and Safety Participation) were adopted from Neal and Griffin (1997).

## Theoretical Foundation

### Social Exchange Theory (SET)

Social exchange theory (SET) is among the most influential conceptual paradigms for understanding workplace behavior. Its existence can be traced back to the 1920s (e.g., Malinowski, 1922; Mauss, 1925), bridging such disciplines as anthropology (e.g., Firth, 1967; Sahlins, 1972), social psychology (e.g., Homans, 1958; Thibault & Kelley, 1959; Gouldner, 1960), and sociology (e.g., Blau, 1964). The keystone of the social exchange theory is that interactions providing more benefits than costs will produce lasting mutual trust and attraction (Blau, 1964). These social relations involve both material benefits (i.e., salaries, bonuses, gratuities and allowances) and psychological rewards (status, loyalty and approval) (Yukl, 1994).

Social Exchange Theory was developed in 1958, by the sociologist George Homans. After Homans developed the theory, two other theorists; Blau (1964) and Emerson (1976) continued to write about it. Blau focused on economic and utilitarian perspective while Emerson focused on reinforcement principals which believe individual base their next social move on past experiences.

## **Expectancy Theory**

Expectancy theory is a theory developed by Victor Vroom with direct application to work settings, which was later expanded and refined by Porter and Lawler (1968) and Pinder (1987). Vroom (1964) defined expectancy as “a momentary belief concerning the likelihood that a particular act will precede a particular outcome” (p.17). Outcomes in a work context incorporate things like salary increase, illness, injury, promotion, dismissal, peer acceptance, recognition and achievement (Wexley& Latham, 1991). Vroom’s model emphasizes an individual’s maximal strength or capacity, rather than individual willingness, to carry out a specific task (Vroom, 1964). Vroom proposed three variables, which are vital in motivating employees. They are: Expectancy, Instrumentality, and Valence.

## **Review of Empirical Literature**

Previous studies have demonstrated the existence of a positive relationship between safety culture and safety performance on the individual, group and organisational level (e.g., Varonen& Mattila, 2000; Mearns et al., 2003; Siu et al., 2004).

Alrehaili (2010) studied the influence of safety culture on construction’s personnel’s safety performance in Saudi Arabia. With a population of 434 construction personnel comprising of project managers, engineers, and supervisors. Data was analyzed with Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). The findings revealed that safety culture has a significant effect on safety motivation ( $\beta=0.19$ ,  $p<0.001$ ) and personnel’s attitudes toward violations ( $\beta = 0.43$ ,  $p<0.001$ ) and an insignificant effect on construction personnel’s error behavior ( $\beta = -0.31$ ,  $p<0.001$ ). Safety motivation for construction safety has a direct effect on errors behaviors ( $\beta = 0.093$ ,  $p<0.001$ ). It was recommended that Saudi government construction management should provide more considerations for the scopes of safety culture in order to detect, and improve opportunities within the safety culture of these construction sites.

Saad (2016) investigated the influence of safety culture on safety performance in Saudi Arabia. Using a survey approach to get response from 135 participants, comprising of managers, engineers, foremen, and laborers in Saudi Arabian construction companies. Using Statistical Package for Social Sciences (SPSS) software, and with the help of the Analysis of Variance (ANOVA) to test for correlations, the result indicated that management commitment to safety and safety motivation are positively signification to safety performance. The study recommended that in order to improve safety performance in Saudi Arabian construction industry, employees should make it a habit of using PPEs and also applying reward management system in the workplace.

Shaheen, Bashir, Ali Shahid, Yasin, Tariq and Qidwai (2014) examined the relationship between safety climate/culture on safety performance, with safety motivation as moderator in Pakistan. Data was collected using convenient sampling technique, from a sample of 250 participants, while Pearson Correlation regression analysis was used to test the hypotheses. The result shows that safety climate/culture is negatively associated with safety performance ( $\beta=-.011$ ,  $R^2=.014$ ) while safety motivation is significantly associated with safety performance ( $\beta=.927$ ,  $R^2=.864$ ).

Lümker (2012) examined the impact of communication (safety communication) on safety behavior (Safety- compliance and participation) of employees of Salmay Communication and Tata Steel, Ijmuiden, in the Netherlands. Two hundred and thirteen (213) employees were surveyed and hypotheses were tested with multiple linear regression analysis. It was demonstrated from the findings

that safety communication is positively related to safety compliance ( $\beta = .635$ ,  $p = .000$ ). However, there is no significant relation found between safety communication and safety participation ( $\beta = -.015$ ,  $p = .001$ ). It was concluded that organisations should be conscious to communicate about their organisations through the provision of efficient information about the organisational and departmental policies and goals regarding the future, which could lead to better safety participation. Al-Haadir, Panuwatwanich and Stewart (2013) studied the effects of safety motivation and safety culture on safety behavior (safety- compliance and participation). Using a population of 430 employees. Data was analyzed with Confirmatory Factor Analysis (CFA) and Structural Equation Modeling (SEM). The finding shows that safety motivation has a good and positive influence on safety culture (0.62,  $p < 0.001$ ). Safety culture also shows a strong positive influence (0.85,  $p < 0.001$ ) on safety behavior (safety- compliance and participation). It was concluded that safety motivation can influence safety culture, and in turn influence safety- compliance and participation. In particular, a construction workplace in the Saudi context should place an emphasis on creating safety culture as it is the main player that leverages the use of safety motivation to achieve desired safety- compliance and participation.

### 3. Methodology

#### Research Design

The quasi-experimental research design and cross-sectional survey are used for the study. This research design is suitable because it is descriptive in nature and the researcher does not have control over the respondents. The cross-sectional survey design is also suitable for the study because data is collected from different locations and the analysis carried out at the same time.

#### Population of the Study

The population of this study encompasses of all the oil servicing firms with operational/regional administration offices in Rivers State (verifiable from Petroleum Technology Association of Nigeria (PETAN) Member-Directory, website: [www.petan.org](http://www.petan.org)). However, the target population for the purpose of this study consists of employees of eight selected oil servicing firms. These eight firms were selected due to less stress in accessibility to their management and location.

### 4. Results and Discussions

#### Test of Hypotheses

This section is concerned with testing hypotheses stated earlier in chapter one; using Spearman's rank order correlation coefficient statistical tool and the p-values obtained.

**Decision Rule:** reject null hypothesis if p-value obtained is less than the alpha value (0.05/95% level of significance) and accept null hypotheses when p-value is greater than the alpha value.



**Table 1: Test of relationship between safety communication and safety compliance (Ho<sub>1</sub>)**

		Safety Communication	Safety Compliance
Spearman's rho	Correlation Coefficient	1.000	.969**
	Sig. (2-tailed)	.	.000
	N	99	99
	Correlation Coefficient	.969**	1.000
	Sig. (2-tailed)	.000	.
	N	99	99

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 1 shows Spearman's rho correlation analysis to find out the relationship between safety communication and safety compliance among ninety-nine (99) participants. A strong positive correlation coefficient value was reported between the variables which is statistically significant ( $\rho = .969^{**}$ ,  $p = .000 < 0.05$  (alpha value)).

**Decision:** Hence; we reject the null hypothesis (**Ho<sub>1</sub>**) that states that there is no significant relationship between safety communication and safety compliance of employees within the listed firms studied and we accept the alternate; there is significant relationship between safety communication and safety compliance of listed firms studied.

**Table 2: Test of relationship between safety motivation and safety compliance (Ho<sub>2</sub>)**

		Safety Motivation	Safety Compliance
Spearman's rho	Correlation Coefficient	1.000	.809**
	Sig. (2-tailed)	.	.000
	N	99	99
	Correlation Coefficient	.809**	1.000
	Sig. (2-tailed)	.000	.
	N	99	99

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 2 shows Spearman's rho correlation analysis to find out the relationship between safety motivation and safety compliance among ninety-nine (99) participants. A strong positive correlation coefficient value was reported between the variables which is statistically significant ( $\rho = .809^{**}$ ,  $p = .000 < 0.05$  (alpha value)).

**Decision:** Hence; we reject the null hypothesis (**Ho<sub>2</sub>**) that states that there is no significant relationship between safety motivation and safety compliance of employees within the listed firms studied and we accept the alternate; there is significant relationship between safety motivation and safety compliance of listed firms studied.

**Table 3: Test of relationship between safety communication and safety participation (Ho<sub>3</sub>)**

		Safety Communication	Safety Participation
Spearman's rho	Correlation Coefficient	1.000	.885**
	Sig. (2-tailed)	.	.000
	N	99	99
	Correlation Coefficient	.885**	1.000
	Sig. (2-tailed)	.000	.
	N	99	99

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 3 shows Spearman's rho correlation analysis to find out the relationship between safety communication and safety participation among ninety-nine (99) participants. A strong positive correlation coefficient value was reported between the variables which is statistically significant ( $\rho = .885^{**}$ ,  $p = .000 < 0.05$  (alpha value)).

**Decision:** Hence; we reject the null hypothesis (**Ho<sub>3</sub>**) that states that there is no significant relationship between safety communication and safety participation of employees within the listed firms studied and we accept the alternate; there is significant relationship between safety communication and safety participation of listed firms studied.

**Table 4: Test of relationship between safety motivation and safety participation (Ho<sub>4</sub>)**

		Safety Motivation	Safety Participation
Spearman's rho	Correlation Coefficient	1.000	.791**
	Sig. (2-tailed)	.	.000
	N	99	99
	Correlation Coefficient	.791**	1.000
	Sig. (2-tailed)	.000	.
	N	99	99

\*\* . Correlation is significant at the 0.05 level (2-tailed).

Table 4 shows Spearman's rho correlation analysis to find out the relationship between safety motivation and safety participation among ninety-nine (99) participants. A strong positive correlation coefficient value was reported between the variables which is statistically significant ( $\rho = .791^{**}$ ,  $p = .000 < 0.05$  (alpha value)).

**Decision:** Hence; we reject the null hypothesis (**Ho<sub>4</sub>**) that states that there is no significant relationship between safety motivation and safety participation among employees within the listed companies studied and we accept the alternate; there is significant relationship between safety motivation and safety participation of listed firms studied.

### Discussion of Findings

The findings from the first hypothesis (**H<sub>01</sub>**) reveal that there is strong positive relationship between safety communication and safety compliance. This means that management of the oil servicing firms should often alert employees of the potential risks and hazards, when and if they do not comply with safety procedures or ignore the use of the correct personal protective equipment. Furthermore, management should also incorporate employees when matters of safety arise which should be by operating an open door policy on safety issues. This finding is in agreement with the finding of Michael et al (2006) who stressed that an effective safety communication affects specific employees' behaviour, for example, safety performance (safety compliance).

The finding from the second hypothesis (**H<sub>02</sub>**) reveal that there is strong positive relationship between safety motivation and safety compliance. This implies that management should always acknowledge employees who are safety conscious and stick to safety procedures while performing their jobs and should also see employees and safety as important as the job. Furthermore, employees should adhere to all the safety procedures and use the appropriate personal protective equipment when working in order to increase performance. This finding is parallel with studies of Griffin and Neal (2000), Zohar and Luria (2005), and Hofmann and Mark (2006), who concluded that safety motivation through safety culture will lead to improved safety compliance.

The findings from the third hypotheses (**H<sub>03</sub>**) reveal that there is strong positive relationship between safety communication and safety participation. This means that to improve on performance, management should welcome inputs from employees when making policies on safety by seeking suggestions on how to improve safety. Employees should also freely indulge in task or activities that help to improve workplace safety. This finding is in consonance with the study of Aytac and Dursun (2018) that safety communication, through safety culture influences employees' safety participation to enhance optimal safety performance (safety participation).

Finally, the finding from (**H<sub>04</sub>**) reveals a strong positive relationship between safety motivation and safety participation. This means that employees who pay attention to safety should be adequately rewarded by management, which will spur them to put in extra effort to improve safety at the workplace. Management should as a matter of utmost importance, take the safety of employees serious by ensuring they receive safety training and attend safety meeting in order to enhance safety performance. This finding aligns with the findings of Hofmann and Mark (2006) and Vinodkumar and Bhasi (2010) that safety motivation significantly improve safety participation of the employees.

### Conclusion

The results for this study form the basis for its conclusions about the relationship between safety culture and safety performance. The study affirms that safety culture contribute positively towards the safety performance of oil servicing firms in Rivers State. This is because management and employees have appreciable link with safety performance measures (safety- compliance and participation).

This implies that oil servicing firms should be aware of the positive effect of safety culture on safety performance. Management should collaborate with employees to take part in the development of safety activities and adhere to all safety procedures.

Furthermore, employees should put in extra effort to improve safety by attending safety meeting, ensure that the workplace is hazard free, and always use the correct personal protective equipment for the task assigned to them.

### **Recommendations**

Based on the discussion and conclusion above, the following recommendations are hereby made:

- i. Management of oil servicing firms should always update employees about available safety information and allow employees make contributions on safety policies. Furthermore, they should ensure there is good communication about safety issues among employees.
- ii. Management of oil servicing firms should ensure employees adhere to all the safety procedures in the work place. As a means to trigger safety motivation, management should see the safety of employees as paramount and should always consider safety as important as production.

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