DETERMINANTS OF SAFETY COMPLIANCE AMONG EMPLOYEES OF A MULTINATIONAL FIRM IN NIGERIA

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Abstract

Extant studies has established that safety behaviour has consequences on organisational performance and effectiveness. However, factors mitigating or exacerbating safety behavior varies from one setting to another. Research is needed to investigate factors influencing safety compliance in the tobacco industry. This study examines determinants of safety compliance among employees of a British American Tobacco, Nigeria. Using triangulation safety sanctions, safety incentive, health locus of control, safety self- efficacy and self-esteem were isolated for the study constructs. Cross-sectional survey design was employed for the study, proportionate and simple random sampling technique was used to draw a sample of n = 200 employees using survey questionnaire designed to elicit data from the respondents. Three hypotheses were stated and the data analyzed using correlation and regression analyses. Result revealed a positive significant relationship between safety sanctions, safety incentive, and health locus of control, safety efficacy, safety climate, and health self-esteem and safety compliance. After controlling for Age, Gender and Tenure, safety climate, safety sanctions, safety incentive, health locus of control, safety efficacy and self-esteem constructs independently and jointly predicted employees safety compliance. The implicationsfor safety behavior, climate and compliance initiatives are discussed.

Keywords*:* Safety compliance, safety sanctions, safety incentive, health locus of control, safety efficacy, self-esteem.

1. Introduction

The increasing incidents of accidents in the workplace have gradually become a major source of concern for organisations, employees and the society at large. For the organization, it represents a huge loss of human capital, for the employees its psycho-social consequences are enormous and to the society at large, the damage to national economic development is colossal. The International Labour Organisation stated that the number of employees lost annually either by death or injuries resulting from accidents in the work environment have become worrisome, and this has negative consequences for organisations and employees leading to a loss of 3.94% in the world gross domestic product yearly (Cornelissen, Van Hoof, & De Jong, 2017).

The situation in Nigeria is gloomier as a result of poor regulatory and monitoring regimes. A concerted effort is needed to identify and intervene on possible causes of unsafe behaviour among employees in Nigeria organisations; regardless of the nature of the job, it is the priority for employers to safeguard the life and well-being of their employees. The assumption is that employees on their part can play a significant role in reducing the rate of occupational accidents through improvement of safety performance.

The level of occupational safety has been found to be lower in developing countries than in developed countries, and this has been attributed to lack of adequate data and proper policies that can help enhance safety issues (Dababneh, Fouad, &Majeed, 2018). Accidents in the workplace are detrimental to employees, organisation and the society at large, not only does it has organisational consequences, but also affect the life of the employees. Therefore, employees' safety behaviour and organisational safety should continuously be given adequate attention.

According to Cornelissen *et al.* (2017), there are two dimensions of safety performance; these are safety compliance and safety participation. Safety compliance refers to the extent to which "employees adhere to safety procedures and carrying out work in a safemanner'' and safety participation, is the process by which organisation motivate ''help employees in promoting the safety programmes within the workplace, demonstrating initiative and putting effort into improving safety in the workplace'' (Neal, Griffin, & Hart 2000.p. 101). Specifically, safety compliance consists of behaviours that are viewed as part of employees' formal job description, while safety participation includes behaviours, which are discretionary and extend beyond employees' formal work role (Neal *et al.*, 2000; Neal & Griffin, 2006). This current study focuses on critical contextual and dispositional factors that determine safety compliance, among employees of the Tobacco processing multinational firm in Nigeria.

Safety compliance represents behaviours that can have a negative impact on the safety record of an organisation and invariably affect the overall performance of such an organisation with attendant huge cost implication. It simply refers to employees' obedience to organisational policies and procedures regarding the safety of employees, with or without supervision (Griffin & Neal, 2000).

However, the extent to which dispositional factors may impact negatively or positively on organisational outcomes has been well documented in the literature (Oluwafemi & Okon, 2017),as no organisation can survive without employees, neither can the organisation perform better than what its employees can offer, therefore dispositional factors cannot be taken for granted. Also, arguments on situational factors within organisational context

has also been well documented in the literature as well, noting that situational factors may possible override the individual factor within the organisational context (Johns, 2006; Oluwafemi & Okon, 2016). This implies that dispositional and organisational factors may be fundamental to employee safety compliance. This study, therefore, intends to investigate safety climate, safety sanction, safety incentives, self-efficacy, health self-esteem, health locus of control as determinants of employee safety compliance.

2. Statement of the problem

Guaranteed safe work environment remains elusive among organisations in developing nations than the developed nations; and a subject of debate and concern for resource utilization and national development.

Based on anecdotal evidence from preliminary focus group discussion with employees, there are reasons to suggest that employees do not sufficiently comply with safety rules and regulation, despite measures put in place, therefore leading to high rate of industrial accidents and loss of resources. Organisations neither sufficiently improve safety standards nor enforce employees' compliance. Employees are also of the view that employers do not sufficiently care for the physical and psychological safety of employees in the workplace.

This has become worrisome as literature has revealed that many employees and management of organisations in Nigeria pay lip service to safety issues rather than ensuring the safety of their employees. The regulatory authority is not left out in the blame for lack of proper work safety policy (Ishola 2017). This has made the working conditions of employees in Nigeria worse off, employees are exposed to various effluvia chemicals and sensitive industrial machines which can easily lead to work-related accidents. Furthermore, lack of adequate records also constitutes a factor that has led to the deterioration of safety performance of employees in organisations today. It is, however, noteworthy, that the safety of employees remains a fundamental issue that affects employees' performance and psychological well-being in the long run.

The extent to which employees and management of organisations in Nigeria respond to safety issues needs to be re-examined with a view to recommending means for improving the safety of their employees. The thrust of this study, therefore, is to examine determinants of safety compliance among employees,and further expand the scope of organisational research, asa well as safety issues in the work environs which will lead to increase in safety consciousness and safety policy of organisations in Nigeria, especially in the tobacco production industry where there seem to be a dearth in literature to the best of the knowledge of the researchers.

3. Literature Review

Two theoretical frameworks for explaining the possible connection between the independent variables (safety climate, safety sanction, safety incentives, self-efficacy, health self-esteem, health locus of control) and the dependent variable (safety compliance) are proposed: the domino theory and the expectancy theory. Emanating from the work of Heinrich (1930) and further extended by Peterson (1988), this study is underpinned on the domino theory which postulates that two factors contribute to the rate of workplace accidents. Peterson in his extension of the theory was of the view that inadvertently the employer is solely responsible for events in the work environment including accidents. Individual factors such as self-esteem, self-efficacy and locus of control are human acts that according to the theory may thwart safety compliance, while creating a conducive work environment, with incentive and sanctions for non-compliance to safety rule are important organizational factorsthat may have significant effect on safety compliance (Mullen, Kelloway & Teed, 2018)

On the other hand, expectancy theory by Vroom (1964) opined that employees will be motivated to act in a particular way when they know that it will lead to a favorable outcome. In line with this, therefore, employees will comply with safety when they believe it will lead to an explicit valued outcome. In line with this theory, employees are motivated to comply with safety procedures when their expectations are met by the organisation. Formal reward system and recognition can help employees improve safety compliance by simply tying some of the rewards and recognition to specific safety behaviour because the literature has alluded that employees want to be appreciated, recognized, and rewarded for a job well done (Mattson, Torbiorn & Hellgren, 2014). There is a general consensus that an understanding of what employees expect from their employers is pertinent to employee safety compliance.

Jiang and Probst (2016) in their study found that transformational leadership style moderated the relationship between safety participation and safety motivation under high transformational leadership. Also, Dartey-Baah and Addo, (2018) also found a significant relationship between idealised influence and facets of safety performance among employees, while active management-by-exception was also found to have no significant relationship with safety compliance but a significant relationship with safety participation of employees, employing structural equation model

Mullen*et al.* (2018) employing social exchange theory, cross-sectional and longitudinal research design found high transformational leadership style had significant positive relationship with safety participation, safety compliance, and safety attitude. Also, high transformational leadership moderated the relationship between perceived employer safety obligation and safety

participation, safety attitude, and safety compliance than when transformational leadership is low.
In a study of doctors in a large public hospital, Chughtai (2015), found a significant relationship between ethical leadership and safety participation and safety compliance, while this relationship was further found to be moderated by job autonomy and self-efficacy.

Fernández-Muñiz, Montes-Peón, and Vázquez-Ordás, (2017) found no direct relationship between safety leadership and safety participation, also no direct relationship with safety climate. But safety climate comes as a result of co-workers support, environmental condition, occupational hazard, and work pressure. Furthermore, in a study conducted by Park, Park, Han, and Kim (2017), they opined that safety in the work environs is peculiar to micro-organisation in Korea than in larger organisations compared to other countries. However,Wang, Wang, and Xia (2018) in a study of construction workers in China found that job stress had a significant impact on safety participation, but not on safety compliance. But psychological capital had a significant influence on safety compliance than on safety participation

Safety climate and safety compliance
Climate refers to the prevailing conditions within an organisation, while safety climate is a domain-specific component of organisational climate. Safety climate refers to the extent to which an organisation puts in place safetymeasures, policies, and practices for the organisation as well as the employees to ensure that workplace incidents are taken care of within the organisation environs (Zohar & Luria, 2005). Literature has linked safety climate to safety performance across various industries and outcomes (Clarke, 2006). According to Dejoy, Smith, and Dyal, (2017)in a recentmeta-analysisof 200 studies showsthat safety climate has significant influence on employee safety in the work environs. Safety climate has a way of improving the level of employee compliance to safety because without the appropriate climate for employees to work it becomes difficult for the employees to adhere to safety rules and procedures. Thus it is hypothesized that;
H_1- Therewill be a significant relationship between safety climate and safety compliance.

Safety sanction and safety compliance
Safety sanctions are part of the safety procedures of an organisation. Sanctions are made to enable employees to comply with safety rules, sanctions are important to help improve employee compliance to set standards; employees are likely to comply with the safety procedure for fear of sanction. According to Ishola, (2017) having the right safety policies in organisation will help curb the rate of accidents in the work environs. A good safety policy without sanctions will not only be detrimental to the organisation, but also to the well-

being of the employees. Wang *et al.*(2018)opined that employee unsafe behaviour in the work environment is a predominant cause of workplace accidents and cannot be taken for granted. Placing safety sanction on employees is pertinent and also regulatory bodies placing sanctions on organisations may have a positive impact on safety compliance. Thus, it is hypothesized that;

H_2 - Safety sanctions will have a significant relationship with safety compliance.

Safety incentives and safety compliance

The motivation of employees remains pivotal in the success of any organisation. The extent to which employees expect their employers to motivate and encourage their performance at work is also important, and this can be achieved by the introduction of safety incentives system. Safety incentive systems in an organisation such as recognition, compensation, and reward can have a significant effect on the level of safety compliance among employees (Yeow & Goomas, 2014). Though some scholars are of the view that when employees are given safety incentive, it helps reduce the level of workplace accidents, and employees will be willing to comply with safety rules (Saracino *et al.,* 2015). While other scholars are of the view that it should be discouraged, because this may lead to employees not reporting any workplace incident in order to gain safety incentive (Cooper, 2001). The literature opines that safety incentives should focus more on the behaviour of employees to help improve on the compliance level of employees (Mattson, *et al.,* 2014).Studies have, however, found that safety incentive will further increase the awareness level of safety in the work environment as reward systems such as recognition, suggesting to management better ways of improving safety measure and feedback helps in safety behaviour. Thus, it is hypothesized that;

H_3 - There will be a significant relationship between safety climate and safety compliance.

Self-efficacy and safety compliance

Self-efficacy is also expected to enhance employees' safety performance, which includes the compliance level of an employee and also the level of participation in the work. According to Bandura self-efficacious persons have the ability to enhance their job by acquiring the needed skill for such job, bring in their own ideas to improve the work, even in the face of unexpected challenges (Gist & Mitchell, 1992; Bandura, 1997). In line with the above assertions, it is not out of place to say an efficacious employee will be willing to comply with the safety procedures and rules of an organisation and adhere strictly to it. According to Parker (2000), employees who have a high level of self-efficacy will be able and willing to go beyond what is expected of them

by the organisation. Thus, self-efficacy is seen as a major determinant of organisational outcomes (Chughtai, 2015). Thus, it is hypothesized that;
H_4 - There will be a significant relationship between self-efficacy and safety compliance.

Self-esteem and safety compliance
According to Rosenberg (1965), self-esteem is a universal personality trait in which an individual compares his or her characteristics with others; it is the value individual places on his or her self. This trait shows how an individual may have a positive feeling about his or her personality, competency, and uniqueness in terms of the job. An employee with high self-esteem will love challenging work and is likely comply with positive events in the workplace including safety rules, unlike an employee with low self-esteem. Self-esteem is a major tenet of a higher order construct known as the core self-evaluation trait and has been found to be a factor impacting positively on organisational outcomes (Judge, 2009; Oluwafemi & Okon, 2017). Thus, it is hypothesized that;
H_5- Self-efficacy will have a significant positive relationship with safety compliance.

Locus of control and safety compliance
According to Rotter (1966),locus of control is the extent to which employeesbelieve they are in charge of events around them or the environment has influence over situations in their lives. Those who believe they are in charge of events in their life are said to have an internal locus of control, while employees that believe the environment, is said to have external wok locus of control. Therefore, an individual may either believe he or she is in charge of his or her life events, which is an internal locus of control or the environment is in charge of events in their lives, which is an external locus of control (Oluwafemi &Okon, 2016).It, therefore, implies that employees with an internal locus of control may decide either to comply or not to comply with safety rules. Also, for employees who believe that the environment is in control of situations around them, it, therefore, becomes pertinent for the organisation to ensure safety policies are put in place in the organisation with proper awareness. Thus, it is hypothesized that;
H_6 - There will be a significant relationship between locus of control and safety compliance.

3. Methods
The study employed a cross-sectional research design, while the population of study consists of employees of British American Tobacco company, Nigeria. Confidential voluntary responses of employees in low and middle-level position using a questionnaire, while employees were required to complete the questionnaire anonymously. A total of 300 copies of a questionnaire was

administered to respondents using simple random sampling techniques. A total of two hundred (200) responses were deemed usable for the study out of two hundred and twenty-three (223) questionnaires that were returned.

Validated measures of the study variables were employed for the study. Safety compliance was measured using questionnaire adapted from Nenad, *et al.* (2013), consisting of six items on a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1) and with a coefficient alpha of .80. Employee health locus of control was measured using Rotlers (1966), the scale consisting of five items, with a reliability of value of .90. Employee health self-esteem was measure with Rosenberg self-esteem scale (RSES), consisting of five items on a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1) and with a coefficient alpha of .80. Self-efficacy was measured using Constance et al (2009) scale consisting of nine items with a five-point Likert scale, with a coefficient alpha of .85. Safety incentive was measured using Zohar and Luria (2005) multi-level model with ten itemson a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1), with a coefficient alpha of .90. Safety climate was measured employing the safety climate scale adapted from Nenad *et al.* (2013), with six items on a five-point Likert scale ranging from strongly agree (5) to strongly disagree (1), with a coefficient alpha of .70.The data collected was analysed using correlational and multiple regression analysis with the aid of Statistical Package for Social Sciences (SPSS) version 23

4. Results

Table 1: Analysis of Data showing Correlation Matrix for all the Study Variables

Variables	Mean	SD	1	2	3	4	5	6	7
SC	4.14	.87	1						
SCL	2.41	.88	.19**	1					
SS	1.56	.51	.30**	.11	1				
SI	4.25	.57	.38**	-.11	-.57**	1			
SE	4.18	.59	.51**	.32**	-.24**	.63**	1		
HSE	4.14	.81	.67**	-.01	-.51**	.79**	.62	1	
HLOC	4.63	.50	.64**	-.21	-.35**	.57**	.45**	.63**	1

**Correlation is significant at the 0.05 level, **Correlation is significant at the 0.01* level

Key: ***SC****- Safety Compliance;* ***SCL****-Safety climate;* ***SS****-Safety sanction;* ***SI****-Safety incentive;* ***SE****- Safety efficacy;* ***HSE****- Health self-esteem;* ***HLOC****-Health locus of control Management.*

The result of the correlation table reveals a significant positive relationship between safety climate and safety compliance ($r = .19$; $p < .05$), also a positive significant relationship between safety sanction and safety compliance ($r = .30$; $p < .01$), a positive significant relationship between safety incentives and safety compliance ($r = .38$; $p < .01$), a positive significant relationship between self-efficacy and safety compliance ($r = .52$; $p < .01$), also health self-esteem and safety compliance ($r = .67$; $p < .05$), While a positive significant relationship between health locus of control and safety climate ($r = .64$; $p < .05$).

Further analysis was carried out with a view to determining the extent to which each of the elements of the independent variables (safety climate, safety sanction, safety incentive, safety efficacy, health self-esteem, and health locus of control) has contributed to the amount of variance in safety compliance. A multiple regression analysis of all the study variables was done using the Statistical package for social sciences (SPSS) version 23, and the resulting output generated is summarized in the table below.

Table 2. Summary of hierarchical regression analysis showing relative contributions and joint influence of the independent variables on the dependent

Model	***Variables***	***B***	***Beta***	***t***	***Sig***	***R***	***R^2***	***F***	***P***
1.	Age Gender Tenure	-.15 .01 .11	-.16 .04 .07	- 1.58 .05 .77	.12 .96 ..44	.12	.01	.94	>.05
2.	Age Gender Tenure HLOC HSE SE SI SC SS	.05 -.02 -.19 .42 .83 .70 .47 .44 .27	.05 -.01 -.13 .24 .76 .46 .31 .44 .16	 .55 - .19 - 1.31 2.52 5.51 4.95 2.24 4.16 2.00	.58 .85 .19 .01 .00 .00 .03 .00 .04	.60	.36	7.88	< **.**05

Dependent variable: Safety Compliance
***Correlation is significant (p<.01), *Correlation is significant (p <.05), (n.s), not significant*

Key: HLOC-Health locus of control; **HSE**- Health self-esteem; **SE**- Self-efficacy; **SI**-Safety incentive; **CL**-Safety climate; **SS**-Safety sanction.

Table2tells us how much variance of safety compliance is explained by the independent variables. The model 1 shows that the controlled variables independently and jointly had no significant relationship with safety compliance. The model two shows that R is .52 while the R square is .27. Showing that 27% of the variation in safety compliance is caused by the independent variables (safety climate, safety sanction, safety incentive, safety efficacy, health self-esteem, health locus of control) while the remaining 73% is not captured in this study.
Also, in model 2, after controlling for age, gender and tenure, the combined relationship between the independent variables and the dependent variables is significant at ($F=7.88$; $p <0.05$). The result also showed the relative contribution of each of the independent variables on safety compliance. Healthself-esteem has the highest contribution ($\beta= 0.77$; $p <0.05$), followed by self-efficacy ($\beta= .46$; $p < 005$), safety climate ($\beta= .44$; $p< 0.05$), safety incentives ($\beta= .31$; $p < .05$) health locus of control ($\beta= .24$;$p<0.05$), and safety sanction ($\beta= .16$; $p<0.05$) However, safety climate, safety incentive, safety efficacy, health self-esteem, and health locus of control all made a unique statistical contribution to the model

5. Discussion

The study investigated the determinants of safety compliance among employees of British America Tobacco Nigeria. The determinants employed by the study were safety climate, safety sanction, safety incentive, safety efficacy, health self-esteem, health locus of control. The result of the findings showed a significant positive relationship between all the independent variables and safety compliance.
A significant a positive relationship was found between safety climate and safety compliance, which is in line with the findings of Dejoy*et al.*(2017), where they opined that safety climate is important in order for employees to comply with safety measures. Also,there was a positive significant relationship between safety sanction and safety compliance, corroborating the findings of (Wang *et al.* 2018), that employees unsafe behaviour have led to series of accidents in the workplace, therefore, placing safety sanctions is imperative for organisations. A positive significant relationship between safety incentives and safety compliance, which is in line with the study of Saracino *et al.* (2015), that safety incentive can help promote safety compliance and reduce the rate of accidents in the workplace. A positive

significant relationship was found between self-efficacy and safety compliance,in line with Chughtai, (2015), where self-efficacy is seen as a determinant of major organisational factors. Furthermore, a significant positive relationship was found between health self-esteem and safety compliance, and also a positive significant relationship between health locus of control and safety compliance.

6. Conclusion

Occupational safety is aimed at preventing accidents caused by unsafe behaviour of employees or the unsafe work environment, and to create a safe work environment. From the findings of the study, it is clear that individual factors such as self-efficacy, self-esteem, and locus of control employed all have a significant impact on safety compliance of employees. Also, organisational factors such as safety climate, safety sanction, and safety incentives also had a significant influence on safety compliance. This result shows that both individual and organisational factors are important for safety compliance among employees, because both have an independent and joint influence on the safety of employees. According to Ishola, 2017and Wang *et al.* 2018, when employees feel safe they are willing and ready to give their best to the organisation, however, when the reverse is the case employees will exhibit unsafe behavioural tendencies. It is, therefore, pertinent that organisations take into consideration the individual factors of employees and also organisational factors that may impede safety compliance among employees.

7. Recommendations

This study recommends that management should recognise and appraise employees who adhere to safety rules and create a safer work environment. Also, a forum for discussion between management and employees on safety-related issues should be created as this will help enhance compliance of safety issues in the organisation.

No organisation is likely to achieve safety compliance, without safety rules, and this safety rules must be made clear to employees. It is not just important to have safety rules, but every employee must be aware and must constantly adhere to it strictly for accidents in the work environment to be reduced drastically.

Furthermore, engage government on a more appropriate and proactive policy reforms on industrial safety standards, regulations, implementation, monitoring, and control.

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