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Employees' Role in Health and Safety Committees:

Weakest Link Towards Safety Compliances on Construction Sites in Kenya

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Abstract

The Occupational Safety and Health Act (OSHA) of 2007 which was enacted to provide for the safety, health, and welfare of all persons lawfully present at workplaces, makes provisions for the occupier to establish health and safety committees (HSCs) whose membership is drawn from the occupier's top management representative and the employees engaged in the workplaces. However, while anecdotal evidence suggests that there has been poor performance of the HSCs coupled with inadequate involvement of employees in the HSCs' operations, no previous studies have been able to establish such assertions. Therefore, the purpose of this study was to establish the level of performance of the HSCs and the employees' involvement towards OSHA compliance on construction sites in Kenya. The target population comprised of 250 registered projects being undertaken by NCA5-NCA8 contractors. A sample size of 153 sites was established using the stratified and simple random sampling method. Data was collected via self-administered questionnaires and a response rate of 82% was achieved. The study established the level of performance of HSCs to be at 42% and participation of employees in the HSCs to be 54.2%. The data showed a strong and positive correlation of 0.708 (p=0.01) between the level of performance of HSCs and the level of employees' involvement. The study concluded that the level of performance of HSCs in construction sites in Kenya was inadequate. The level of employee involvement in HSCs was also insufficient. The study recommends increased involvement of employees in HSCs. This could be achieved through capacity building initiatives for employees to enhance their abilities to adequately take up their roles in the HSCs.

Keywords: Employees, health and safety committees, Kenya.

INTRODUCTION

The prevalence of unhealthy and unsafe projects has resulted in a lot of unnecessary anguish to stakeholders in the built environment in Kenya. As an aftermath to these unhealthy and unsafe occurrences, the government with great zeal instituted measures to exterminate these incidences. One of the measures was the enactment of the Occupation Health and Safety Act (2007) in full compliance with the conditions of the International Labour Organization (ILO, 2013) convention, which required member states to domesticate the running of health and safety matters. The Occupation and Health and Safety Act (OSHA, 2007), stipulates roles and obligations of occupiers and employees in a workplace in a bid to assure health and safety (Bernstein, 2013; Muiruri, 2014). Provisions in the OSHA 2007, section 9(1) requires occupiers to establish health and safety committees (HSCs) where the total number of employees engaged in a given work place are more than twenty. The health and safety committee rules (HSC, 2005) guides the formation and running of the committees in the workplace to facilitate the training, accident reporting, inspections and auditing of the health and safety conditions among other functions. The enactment of the (OSHA, 2007), was with the expectations that parties could fully adopt the requirements and hence enhance safety and healthy working conditions in work places. Full adoption of health and safety regulations suppresses incidents/ accidents and grants stakeholders an assurance of attainment of project dateline and minimizeded liability costs (Francis, 2016). Statistics from National Construction Authority (NCA, 2022), indicate that, the number of accidents on Kenya construction sites have been on a rising trajectory as shown in **Figure 1**.

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A study conducted by the NCA (2018) on the causes of building causes of buildings failures in Kenya, established that inter alia, a significant cause of unsafe incidences on construction sites is non-compliance to statutory and safety requirements. This collaborates the observation by Cotton et al. (2005), that institutional and legal governance frameworks on occupational health and safety (OHS) in developing nations have little impact at work places. This is because majority of contractors are small and medium enterprises (SMEs) operating within their domestic markets where enforcement of health and safety standards is lax. Enforcement of health and safety regulations remains a problem due to inadequate resources available to government institutions responsible for occupational health and safety administration.

The responsibility of health and safety in workplaces is assigned in entirety to the contractor and his employees in a bipartite arrangement through health and safety committees, more so, for projects having twenty or more employees. This arrangement calls for the active and competent participation of both the employees and the contractor for the arrangement to fulfil its mandate (OSHA, 2007). A survey carried by the National Construction Authority (2016), revealed that 75% of employees engaged in construction activities were either unskilled or semi-skilled. This cadre of employees are the ones expected to actively and competently participate in the activities of HSCs in a bid to ensure health and safety at workplaces. Limited information exists on the level of involvement of these cadre of employees in the HSCs and the subsequent performance of the HSCs in compliance with OSHA 2007. This lack of documented studies makes it difficult for stakeholders to identify the causes of the persistent reports of unsafe and unhealthy incidences on the small and medium size construction projects that employ the bulk of unskilled and semi-skilled employees in Kenya.

The purpose of the study was to establish the influence of employee involvement on performance of the HSCs. In order to achieve this, the following specific objectives were formulated; to establish the level of performance of HSCs, to establish the level of employees' involvement in the HSCs, to establish the relationship between the level of performance of the HSCs and the level of employees' involvement, and to establish probable mitigating measures against low performance of the HSCs.

THEORY

The Occupational Safety and Health Act (OSHA, 2007) was enacted with the sole purpose of promoting the safety and well-being of workers at work places. Towards this end, an inspection and enforcement mechanism were formulated to ensure compliance by industry players. The inspections and enforcement wing of the OSHA is domiciled in the Directorate of Occupational Health and Safety Services (DOHSS). The Occupational Health and Safety Act (OSHA, 2007), makes provisions for the formulations of Health and Safety Committees (HSC) at work

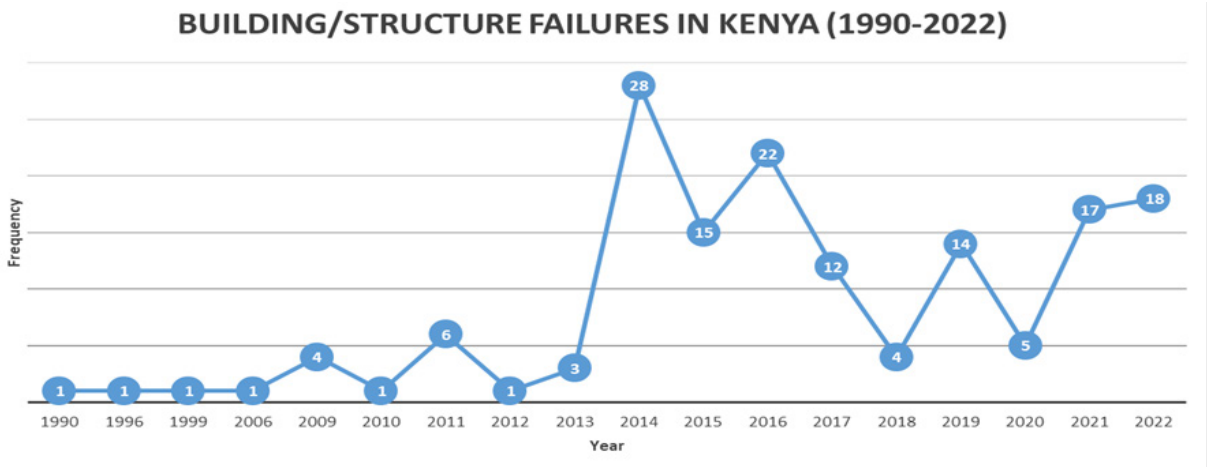

FIGURE 1
Frequency of accidents/ incidences on sites in Kenya
Source: NCA 2021

places consisting of safety representatives from the employer's top management and the workers.

A study by Geldart et al. (2010) on Canadian construction firms established that firms that had policies and practices that encouraged workers to meet safety requirements through their involvement in decision making, greatly reduced the number of incidents in workplaces. Vredenburgh (2002), hints at the existence of many management practices which enhance health and safety at workplaces citing the availability of rewards and training opportunities for employees to enhance their skills. Training and experience are great determinants of safety and health at workplaces. According to Dessler (2008), there are two good reasons why employees should be involved in designing safety Programs. First, the employees are often management's best source of ideas about what the potential hazards are and the best way to eliminate those hazards. Second, employee involvement tends to encourage employees to have a buy-in in the programs lest the programs be seen as being imposed or forced down their throats.

Employees involvement in workplace training during contract implementation, has been identified as a sure way of enhancing health and safety in the respective areas of work (Tsui & Gomez-Mejia, 1988). For these trainings to be held in high esteem, they should be graced by top management (Permana, 2007; Kai et al., 2016; Tan & Razak, 2014). A study by Cheyne et al. (2002) conducted on employee attitudes towards health and safety at workplaces, established that employees play a significant role in establishing a good physical working environment. An investigation into the relationship between employees training and the level of accidents in the manufacturing sector (Vassie & Lucas, 2001) found that the trained workers reported depressed unsafe and unhealthy incidences compared to their counterparts who were not trained. Effective health and safety programs demand for formation of health and safety committees, which calls for participation of all employees within an organization (Gomez-Meja et al., 2010).

A profile of employees engaged in construction activities in Kenya

The findings of a survey carried out by the National Construction Authority (2021), on the status of employees engaged in construction activities is shown on **Figure 2**.

Figure 2 shows that employees in the construction sector fall in three categories namely; skilled, semi-skilled and unskilled. The highest number of employees are unskilled and, in that year, stood at 214,792 while slightly over 100,000 employees in the construction sector were skilled. The same distribution is further articulated as a percentage in **Table 1**.

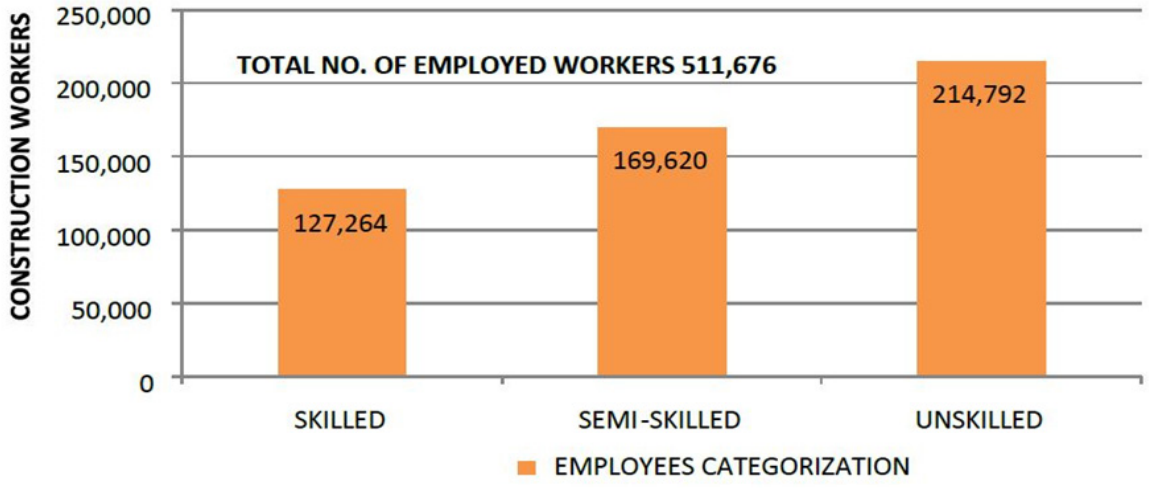

FIGURE 2
Workers Employed in the Kenya construction projects
Source: NCA 2021

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It is worth noting that a majority of employees in the Kenya construction sector fall in the categories of youth as per the Kenya constitution which classifies persons in the ages between 18-35 years as Youths (GoK, 2010). From the above statistics we deduce that the youthful population in the construction sector stands at 84% of the cumulative workforce of which 75% are in the category of unskilled or semi-skilled. These numbers can work both to the advantage and disadvantage of the construction sector in Kenya.

The sector is advantaged to the extent that it has a pool of young people who are willing to take up responsibilities and also in an age bracket that can be trained on new skills. On the other hand, the industry stands at the highest risk of having enhanced OHS challenges because the low literacy/ training levels imply minimal appreciation of basic understanding on work processes which in turn predisposes the workers to higher risk of work place hazards and injuries.

Moreover, the low literacy/training levels of workers in the Kenya construction industry curtail their ability to discharge their roles in the health and safety committees as they are insufficiently endowed with the requisite skills and knowledge. They therefore participate in the health and safety committees at a disadvantaged position to their partner, the contractor, who could be more experienced and endowed with sufficient resources. The distribution of workers as engaged in the various categories of construction companies in the construction sector in Kenya is provided in **Figure 3**.

As can be seen in the **Figure 3** the highest numbers of skilled workers are in the categories of NCA 1 - 4. This bracket of contractors are majorly multi-nationals who exhibited imported excellent health and safety practices adopted from their home of origin. Despite their engaging highest numbers of unskilled labor; they report suppressed unhealthy and unsafe incidences largely because of fear of loss of business and credibility arising from reported cases incidences and accidents.

Figure 4 below presents the study's conceptual framework. The variables of this study included performance of HSCs (dependent variable) and employee involvement in HSCs (independent variable). Ten indicators were used to measure the independent variable. It was hypothesized that employee involvement had a statistically significant effect on the performance of HSCs.

TABLE 1
Worker distribution in the construction industry in Kenya

Description	% Population	
Skilled workforce	25%	
Semi-skilled	33%	
Unskilled	42%	
Women	19%	
Age bracket	Below 25 Years	7%
	25- 30 Years	48%
	30-35 Years	29%
	35-40 Years	9%
	40-45 Years	3%
	Above 45 Years	4%

Source: NCA 2021

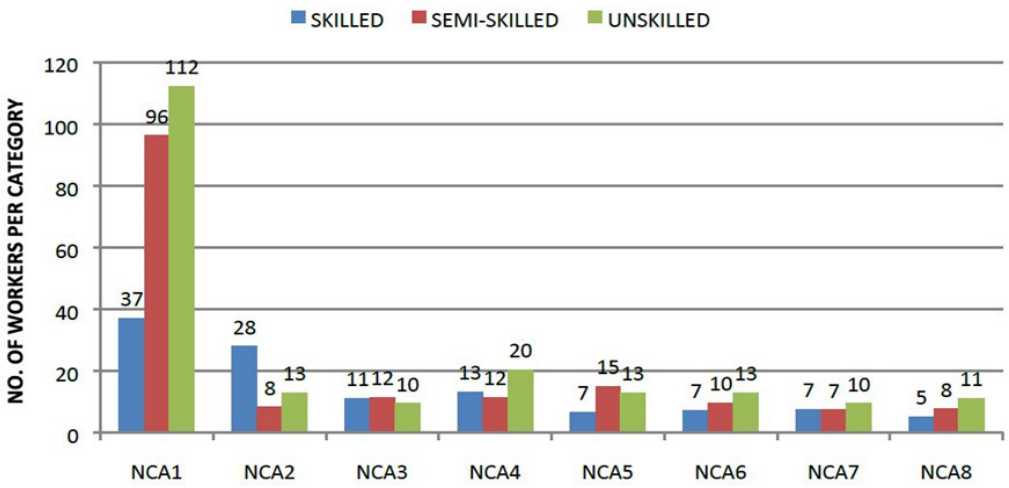

FIGURE 3
Frequency of accidents/ incidences on sites in Kenya
Source: NCA 2022

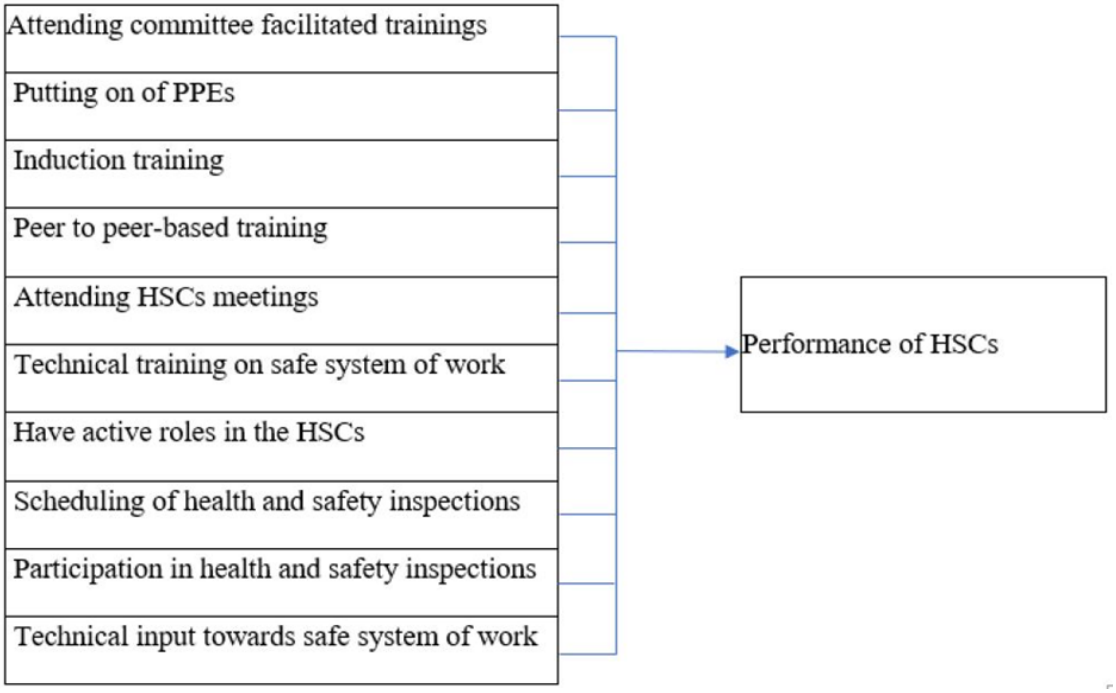

FIGURE 4
Conceptual Framework
Source: Author 2022

RESEARCH METHODS

The research adopted a quantitative research strategy and a survey research design. The rationale behind this approach was to enable generalization of the study findings. The target population was 250 projects which comprised of all registered small and medium size projects underconstruction in Nairobi being undertaken by NCA5-NC8 contractors. The projects' development cost range between Kenya shillings 5 million and 100 million (1USD equals 138 Kenya shillings). The projects are as in the register provided by the NCA Nairobi Region Office for the Financial Year 2021/2022 (i.e., 1st July 2021to

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30th June 2022). Stratified and simple random sampling methods were used in this study. This sample size was established using the Yamane (1967) formula as shown below;

$$n = \frac{N}{1+Ne^2} = \frac{250}{1+250(0.05^2)} = \frac{250}{1.625} = 153$$

Where n is the sample size, N is the population from which the sample was drawn and e is the margin of error (0.05).Data was collected using self-administered questionnaires from the sample size of 153 construction sites in Nairobi. The respondents were developers, contractors, and employees or their representatives on the construction sites. The research achieved a response rate of 82%. Target population and sampling has been presented on **Table 2**. The dependent variable was measured using a total of 11 indicators which were presented before the respondents, who were required to indicate in how many of those aspects their sites were compliant. The performance was then measured as a percentage for each site. The independent variable (employee involvement) was measured using a 5-point Likert scale.

RESULTS AND DISCUSSION

Data Analysis and Discussion

The OSHA 2007 provides the tasks that the HSCs need to accomplish hence the implementation of the tasks is deemed the measure of the level of performance of the HSCs. Eleven key itemspicked from the responsibilities of the HSCs were subjected to an inquiry to the respondents to establish their compliance. The results have been presented on **Table 3.** The findings indicate that none of the parameters was full satisfied. Given that compliance is a mandatory requirement, i.e., all parameters are expected to attain 100% compliance the performance of the HSC standing at 42% is comparatively low performance. HSC is the main tool for ensuring compliance on the construction projects and failure in functionality means lowering OSHA compliance levels on the construction projects.

Level of Employee Involvement in HSCs

Ten indicators were used to measure the extent to which employees were involved in the HSCs in compliance with the OSHA 2007. The factors signify the capacity of employees to effectively participate and/or contribute to the successful functioning of HSCs. The level of involvement was measured on a scale of 1-5. The results presented on Table 4 showed that the level of employees' involvement in HSCs stood at an overall mean of 2.71. The low involvement of employees in the HSCs shows that effectiveness of the HSCs is strongly compromised and does not fulfill the mandate of their very establishment.

Based on the findings on **Table 4**, employee participation in trainings was found to have a high mean (3.46). This is an indication of the readiness and willingness of employees to participate in any available and relevant training that would build their capacity towards competency in health and safety. Conversely, technical input from employees scoring the lowest at a mean of 1.45is a clear indication that training is highly required for the employees to have any meaningful engagement in the HSCs. This is in concurrence with the study findings by NCA (2016) which established that the literacy levels of most employees on construction sites in Kenya was very low. Most of the employees didn't register any prior training in matters health and safety. This study further establishes that employees have limited participatory roles in the HSCs e.g., employees are not sufficiently engaged in site inspections and scheduling of inspections. This implies that the inspections are done without employees' participation and hence their input on ways or improving health and safety is ignored. This could be arising from the employees' low level of expertise and hence incapable of making any meaningful contributions to the process.

Hypothesis testing

The study had hypothesized presence of a linear relationship between the level of HSC performance and Employees involvement. A linearity test was carried out and the results presented on **Figure 5**. Further, SPSS was used to run the Pearson's correlation test with the aim of determining the nature of the relationship between the dependent and independent variables. As shown on **Table 5**, the employee involvement was found to have a statistically significant relationship with the level of HSC performance. The relationship is described as strong and positive meaning that an increase in the level of the employee involvement results to an increase in the level of HSC performance. The correlation is significant at the 0.01 level.

TABLE 2
Target population and sample size

Stratum	Population	Proportion	Sample Size
NCA5	62	0.254	38
NCA6	124	0.496	76
NCA7	34	0.136	21
NCA8	30	0.120	18
Totals	250	1.000	153

Source: Author 2022

TABLE 3
HSCs performance on construction sites in Nairobi

Compliance Requirement	Yes	No	Total	Missing	% Performance	Rank
Representations in HSCs meets OSHA threshold	72	51	123	2	59%	1
Management spearheaded establishment of HSCs	68	49	117	8	58%	2
Maintained accidents register	61	61	122	3	50%	3
Conducted transparent nominations for committee representations	59	62	121	4	49%	4
Responds to concerns raised by management and employees on matters H&S at workplaces	51	64	115	10	44%	5
Conducts daily safety inspections	53	68	121	4	44%	6
Conducts periodical safety audits	52	70	122	3	43%	7
Has a schedule for HSC meetings for the year	50	68	118	7	42%	8
Facilitates trainings on H&S in workplaces	43	79	122	3	35%	9
Maintained a record of minutes for the past HSC meetings	25	97	122	3	20%	10
Held HSC meetings as per schedule	18	104	122	3	15%	11
	Mean performance				42%	

Source: Author 2022

TABLE 4
Level of employees' involvement in HSCs

No.	Area of employee involvement	N	Mean	Std. Dev.	Rank
1	Attending committee facilitated trainings	124	3.46	1.315	1
2	Putting on of PPEs	124	3.39	1.286	2
3	Induction training	123	3.17	1.458	3
4	Peer to peer-based training	122	2.91	1.521	4
5	Attending HSCs meetings	121	2.71	1.695	5
6	Technical training on safe system of work	122	2.70	1.661	6
7	Have active roles in the HSCs	124	2.64	1.914	7
8	Scheduling of health and safety inspections	124	2.60	1.453	8
9	Participation in health and safety inspections	122	2.07	1.903	9
10	Technical input towards safe system of work	124	1.45	1.698	10
	Overall level of Employees' involvement in the HSCs	**2.71**			

Source: Author 2022

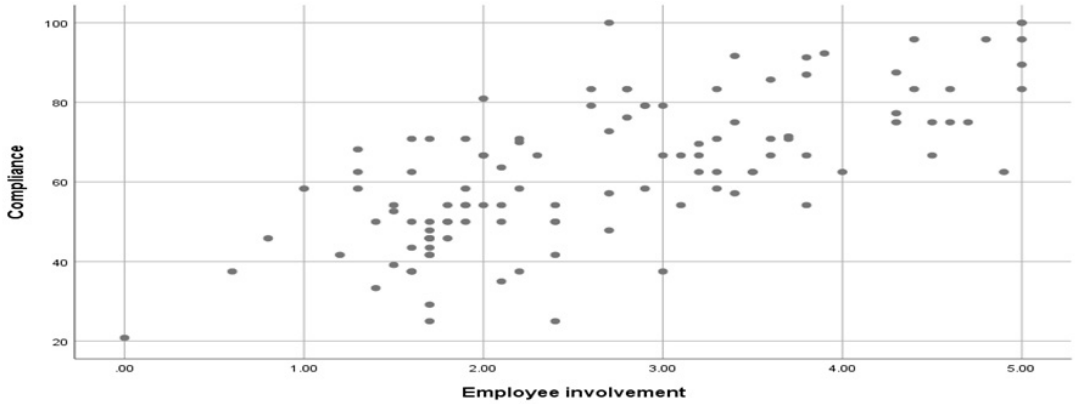

FIGURE 5
Linearity between HSC performance and employees' involvement
Source: Author 2022

TABLE 5
Correlation between HSC performance against employees involvement

		HSC Performance	Employee Involvement
Performance	Pearson Correlation	1	.708**
	Sig. (2-tailed)		.000
	N	125	116
Employee involvement	Pearson Correlation	.708**	1
	Sig. (2-tailed)	.000	
	N	116	116
**. Correlation is significant at the 0.01 level (2-tailed).			

Source: Author 2022

It is conclusively realized that there is a relationship between the independent and dependent variables of the study as it has been proven statistically. This then means that the level of performance of HSC is dependent on the level of involvement of employees. Raliile and Haupt (2020) observe that employee involvement fosters an environment in which people share their knowledge and expertise with other workers, and management encourages them to participate in the identification and reporting of dangers in order to promote a safe working environment for everybody. Workplaces where employees actively contribute to health and safety have reduced risk and accident rates (Raliile & Haupt, 2020).

Probable mitigating measures against low performance of the HSCs

Respondents were also requested to indicate which of the listed probable developer intervention actions were key to promoting enhanced HSCs performance. The results have been presented on **Table 6.** Selection of contractors with good record towards health and safety stands out according to this study as a significant factor (82.5%) towards effective performance of the HSCs. This indeed means that the developer role in enhancing the performance of HSCs starts long before the actual construction activity commences. Picking contractors with good standing could be revolutionary in the construction sector in Kenya. For effective implementation of OSHA regulations, contractors have to be committed and this has to be reciprocated by the involvement of construction workers (Musonda & Smallwood, 2005). Selection of a contractor that has capacity to undertake construction with H&S as a key criterion is the sole responsibility of the developer (Ngata, 2005).

Developers have to conduct a background check on bidding contractors to ascertain that they meet this requirement. This condition compels contractors to have an attitude change towards H&S as only contractors with good standing towards health and safety will be awarded projects. Selection of contractors based on past performance is a positive drive towards enhanced OSHA 2007. The industry has no set criterion for recognition and appreciating good health

TABLE 6

Mitigating measures towards enhanced performance of the HSCs

No.	Contributing parameter	Freq.	N	%	Rank
1	Engaging contractors with good H&S record	103	125	82.5%	1
2	Providing sensitizations and trainings on H & S in the project	102	125	81.6%	2
3	Formulation of contractual provisions between contractor and employer on H&S financing	100	125	80%	3
4	Ensuring engagement of competent employees in HSC matters	98	125	78.4%	4
5	Participationon of developer in H&S management from the inception to handing over of the built facility.	96	125	76.8%	5
6	Establishing continuous improvement strategies towards H&S management	89	125	71.2%	6
7	Establishment of clear roles and H & S responsibilities amongst the stakeholders	89	125	71.2%	6
8	Involvement of developer in the health and safety committee (HSC)	87	125	69.6%	8
9	Encourage employees' involvement and buy-in towards HSCs activities	82	125	65.6%	9
10	Providing incentives and motivations towards enhanced compliance to H&S regulations	82	125	65.6%	9

Source: Author 2022

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and safety performance. Setting such a criterion would cause a cultural change in the construction sector as many contractors will aspire to have excellent standing with health and safety or otherwise risk lose on projects courtesy of past performance. The overall performance of the HSC is a collective responsibility by the contractor and the employees. The findings in **Table 6** ranks employees' sensitization and training at position 2. The NCA (2016) survey did find out that 75% of the industry workers were either semi-skilled or unskilled. This proposal to have enhanced training and sensitization for employees is welcome as a capacity building measure. Employees without training cannot be effective in discharging their respective roles in the HSCs. Provision of training opportunities for employees is closely tied to contractual provisions on health and safety financing by the developer. Contractors will offer training opportunity to employees when contractually bound to do so.

Currently no such provision exists as the developer's main interest is the project product and not what goes in to churn out the expected product. Financial implication is the major impediment to such an action. Currently no contractor is contractually bound to offer trainings to its employees towards their effective performance in the HSCs. Understanding that the performance of employees in the HSCs has a direct relationship with the level of health and safety on the construction sites and in return affect the project performance dictates that developers formulate policies and contracts that provide for HSCs financing. The policies so generated to have a greater bias towards the functioning of HSCs in the construction sector due to its uniqueness in the manner in which employees enter and exit construction project. The rules that govern the establishment and functions of the HSCs are generic. They apply to all industries irrespective of the underlying challenges that could be sector specific. Failure to consider the intrinsic challenges that face industries that are compassed with a lot of peculiarity could be an impediment to the success of the otherwise good approach towards OHS compliances. The construction industry for example, has unique features that may not mirror well with other industries like the manufacturing or the hospitality industries. Construction industry is transient and its actors come in and leave as the project progresses. It is a single sector that utilizes the services of nearly all professions and it does open doors to all cadres of employees. It is a single industry that employees' highest number of staffs with low technical competencies. The adoption of the HSC approach based on the generic model could have some negative bearing on the success of the functionality of the OSHA 2007. Studies then have to be done to ascertain whether the generality of the OSHA 2007 as established, does in any way disenfranchise any sector of the society notwithstanding intrinsic peculiarity.

CONCLUSION

This study concludes that HSCs as set up on the small and medium size construction projects have failed to meet their objectives. The performance level of HSCs stands lowly at 42%. This position has to be corrected as the OSHA 2007 regulations are not being complied with as anticipated by the drafters of the Act which expected 100% performance by the HSCs for actualization of the OSHA 2007. The HSC being the main driver of compliance on construction sites in Kenya. The established HSCs lack employee involvement. Employees involvement stands at a mean of 2.71 translating to a 54.2% participation against 100% as per the OSHA 2007. This position is entirely against the letter and the spirit upon which the HSCs were to be established. Developers on the other side have no role to play in the establishment and running of the HSCs. Delegated contractual obligations absolves developers from any responsibilities towards HSCs on projects. They are compelled to watch helplessly as the industry is faced with deplorable working conditions.The study further concludes that the performance of HSCs is dependent on the level of employee involvement in the HSCs' operations. This means that increased involvement of employees will result to an enhanced performance of HSCs. Additionally, the research established that the project developer should also be involved in the HSCs management.The established dismal performance of HSCs can be mitigated in a number of ways. The three most effective of these measures include; engaging contractors with good H&S record, providing sensitizations and trainings on H & S in the project, and formulation of contractual provisions between contractor and employer on H&S financing

RECOMMENDATIONS

There is need for project stakeholders to enhance the level of HSCs performance from 42% to 100% by inter alia enhancing the level of employees' involvement in the functioning of HSCs. This can be achieved through adequate training which includes induction trainings, peer to peer-based training, and technical training on safe systems of work. Further, there is need for employee participation in health and safety inspections. They also need to have active roles in the HSCs and attend meetings of those committees. Further, developers need to provide adequate resources for capacity building of employees towards enhanced participation in the HSCs. Additionally, the government needs to formulate policies that professionalizes the construction sector by stipulating minimum entry qualifications for employees joining the constructions sector. Further, mandatory pre-entry or induction training on health and safety at work places to be conducted for all persons entering the construction industry. The government should also formulate policies that encourage onboarding of all stakeholders in the management of health and safety on the small and medium size construction projects. Finally, the NCA should come up with strategies that enhance mass training of semi-skilled and unskilled construction workers on the small and medium size construction projects in Kenya.

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