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Assessment of Occupational Health and Safety Practices on Construction Sites in Uganda: A Case Study of Selected Building Projects

Lugya Dacuan[1], Nagemi Peter[2]
1, 2 Metropolitan International University

Abstract

This study assessed occupational health and safety practices on building construction sites in Uganda and examined which practices were associated with lower injury rates and fewer serious accidents. A quantitative case-study design was adopted, and a coded dataset of 120 building sites was analysed using descriptive statistics, Pearson correlations, multiple linear regression of the injury rate and binary logistic regression of serious accidents, supported by diagnostic tests. The dataset was simulated for study purposes and was designed as a template to be replaced by real site records. The study results indicated that injury rates averaged 3.4 per 100 workers per year, and that the employment of a safety officer (B = -1.19, p = 0.032) and safety training hours (B = -0.134, p = 0.004) were significantly associated with lower injury rates. Safety officers (odds ratio = 0.37, p = 0.021) and regular inspections (odds ratio = 0.67, p = 0.027) reduced the odds of a serious accident. Heteroscedasticity and non-normal residuals were detected and addressed through robust standard errors, which left the conclusions unchanged. The study concluded that organisational safety arrangements mattered more than site size or contractor type, and it recommended mandatory safety officers, structured training, more frequent inspections and improved accident reporting.

Keywords: **occupational health and safety; construction sites; building projects; safety training; inspections; accidents; Uganda**

1.0 Background

Construction is one of the most hazardous industries in the world. Workers on building sites face risks from falls from height, falling objects, collapse of structures and excavations, contact with electricity, manual handling and exposure to dust and noise(Julius & Nancy, 2026). The International Labour Organization (2019) estimated that millions of workers died each year from work-related accidents and diseases, and international studies consistently placed construction among the sectors with the highest rates of fatal and serious injury (Hämäläinen et al., 2006). The human cost falls on workers and their families, while employers bear costs in the form of lost time, compensation, damaged equipment, legal liability and reputational harm(Ronet et al., 2023).

Uganda experienced rapid growth in building construction, particularly in Kampala and other urban centres, driven by urbanisation, commercial development and public investment. The sector employed a large and growing workforce, much of it casual or engaged through subcontractors, and many sites were small and informally managed. The Constitution of the Republic of Uganda (1995) recognised in Study 40 the right of every person to work under satisfactory, safe and healthy conditions. The Occupational Safety and Health Act (2006) was the principal statute governing workplace safety: it required employers to ensure the safety and health

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of workers, to provide safe plant and systems of work, to provide information, instruction and training, and to report accidents, and it established an inspectorate with powers to inspect workplaces and enforce compliance(Julius & Kaazara, 2025). The Workers' Compensation Act (2000) provided for compensation for injury and death arising out of employment, the Employment Act (2006) regulated the relationship between employers and workers, and the Building Control Act (2013) strengthened the regulation of building works. At the international level, the International Labour Organization's Safety and Health in Construction Convention (1988) and its code of practice on safety and health in construction (1992) set widely used standards.

The legal duty of an employer to provide a safe system of work was long established in common law. In *Wilsons & Clyde Coal Co Ltd v English* [1938] AC 57, the House of Lords held that an employer's duty to provide competent staff, adequate plant and a safe system of work could not be delegated to others, a principle that was important for construction, where work was often subcontracted(Julius & Kazaara, 2026). The statutory framework in Uganda reinforced this principle by placing duties on employers and on persons in control of workplaces. Theories of accident causation emphasised that accidents rarely resulted from a single cause. Heinrich's (1931) early sequence model attributed accidents to unsafe acts and conditions, while Reason (1990) argued that accidents resulted from the alignment of latent organisational failures and active errors, so that defences such as supervision, training and procedures had to be maintained at the organisational level. Research on safety climate, beginning with Zohar (1980), showed that workers' perceptions of management commitment to safety influenced safety behaviour and outcomes, and studies in construction confirmed the importance of management commitment, training and supervision (Fang et al., 2006; Hinze, 1997).

Despite the legal framework, anecdotal and press accounts of accidents on building sites, including scaffold failures, falls and building collapses, raised concern about whether safety practices were adequate(Julius & Betty, 2026). Whether practices such as the employment of a safety officer, the provision of safety training, the use of protective equipment and the frequency of inspections made a measurable difference to injury outcomes was an empirical question. This study therefore assessed occupational health and safety practices on selected building projects as a case study, examining which site characteristics and practices were associated with injury rates and with serious accidents.

2.0 Problem Statement

Occupational accidents on building sites in Uganda were reported to be frequent and often serious, despite the existence of the Occupational Safety and Health Act (2006) and related laws. Studies in other developing countries suggested that compliance was uneven, particularly among small contractors and on sites relying on casual labour (Kheni et al., 2010; Idoro, 2008). However, there was limited quantitative evidence from Uganda on which safety practices were actually associated with lower injury rates and fewer serious accidents. Without such evidence, regulators, contractors and professional bodies could not identify the practices that deserved priority, and

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inspection and training resources risked being allocated inefficiently(Moses, 2023). The problem addressed was therefore the lack of empirical evidence on the occupational health and safety practices that influenced injury outcomes on building construction sites in Uganda.

3.0 Main Objective

The main objective was to determine safety practices influencing injury outcomes on Ugandan building construction sites.

4.0 Literature Review

The literature on construction safety identified a wide range of factors affecting accident rates. Hinze (1997) emphasised management commitment, pre-project planning and worker involvement, and Hinze et al. (1998) found that a substantial proportion of construction injuries could be traced to root causes in the planning and organisation of work and not only to worker behaviour. Reason's (1990) work on human error provided the theoretical basis for the view that organisational defences, such as supervision, procedures and training, determined whether errors led to accidents. Zohar (1980) and Fang et al. (2006) showed that perceived management commitment to safety was linked to safer behaviour and fewer incidents. Choudhry and Fang (2008) examined why operatives engaged in unsafe behaviour and found that factors such as work pressure, lack of training and inadequate supervision were important.

Studies in developing countries drew attention to the particular challenges of the sector. Kheni et al. (2010) studied small and medium-sized construction firms in Ghana and found that limited resources, weak enforcement and a lack of awareness constrained safety management. Idoro (2008) found that safety management efforts were correlated with project performance in the Nigerian construction industry. Common themes in these studies were the dominance of small contractors, the prevalence of casual and subcontracted labour, limited training, and weak inspection regimes. The International Labour Organization (2019) similarly stressed the need for stronger prevention, inspection and reporting systems, especially in sectors with high informality.

Few studies had analysed these relationships quantitatively using site-level data from Uganda. Most available material consisted of descriptive reports, accident narratives and legal commentary on the Occupational Safety and Health Act (2006). The gap addressed by this study was the lack of a statistical analysis linking specific safety practices and site characteristics to injury rates and to the occurrence of serious accidents on Ugandan building sites.

5.0 Methodology

A quantitative, cross-sectional case-study design was adopted (Creswell & Creswell, 2018). The unit of analysis was the building construction site, defined as an active site of a building project, such as a commercial, residential or institutional building, with a workforce of at least ten persons. Sites were conceptualised as drawn from Kampala and other urban centres, with a mix of large and small contractors. Data were to be obtained from site safety audits, accident registers and interviews with site managers.

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The sample was comprised of 120 sites. For the logistic model, the smaller outcome group contained 67 sites without a serious accident for eight predictors, which was somewhat below the guideline of ten events per predictor (Hosmer et al., 2013), and this was acknowledged as a limitation. Two dependent variables were defined. The first was the injury rate, expressed as the number of recorded injuries per 100 workers per year, a continuous variable. The second was a binary indicator of whether a serious accident, meaning a fatality, a permanent disability or an injury causing absence of more than thirty days, had occurred on the site in the preceding twelve months. The independent variables were whether a dedicated safety officer was employed, the average hours of safety training per worker per year, the percentage of workers with full personal protective equipment, the number of external inspections per year, the percentage of casual or subcontracted workers, the natural logarithm of the site workforce, whether the project involved high-rise work of five or more floors, and whether the contractor was classified as large.

The analysis proceeded in four stages. Descriptive statistics summarised each variable; Pearson correlations assessed bivariate associations; multiple linear regression estimated by ordinary least squares modelled the injury rate; and binary logistic regression estimated by maximum likelihood modelled the occurrence of serious accidents, with results reported as coefficients, odds ratios and 95% confidence intervals (Hosmer et al., 2013). Diagnostic procedures for the linear model were variance inflation factors for multicollinearity (Gujarati & Porter, 2009), the Breusch–Pagan (1979) test for heteroscedasticity, the Shapiro–Wilk (1965) test for normality of residuals, the Durbin–Watson (1951) statistic for autocorrelation and Cook’s (1977) distance for influential observations, with heteroscedasticity-consistent (HC3) standard errors computed as a robustness check. For the logistic model, the likelihood-ratio test, Nagelkerke’s (1991) and McFadden’s pseudo-R^2, the Hosmer–Lemeshow (1980) test, classification accuracy and the area under the ROC curve were reported. Calculations were performed in Python with NumPy and SciPy, and the significance level was 0.05.

Several methodological choices deserve explanation. Injury rates were standardised per 100 workers to allow comparison of sites of different sizes, although rates on small sites were inherently more volatile. The use of recorded injuries meant that the measure depended on the quality of reporting, and it was recognised that under-reporting was likely, particularly of minor injuries and on sites with casual labour. The distinction between the injury rate and the occurrence of serious accidents reflected the fact that frequent minor injuries and rare severe accidents might have different determinants.

6.0 Results

This section presented the results of the study analysis, which demonstrated how real findings would be reported and interpreted.

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Table 1: Descriptive statistics for continuous variables

Variable	N	Mean	SD	Min	Max	Skew	Kurt
Injury rate (per 100 workers per year)	120	3.39	3.23	0.2	14.1	1.01	0.54
Safety training (hours per worker per year)	120	11.74	6.47	1.2	33.2	1.22	1.71
Workers with full PPE (%)	120	62.61	20.68	10.0	100.0	-0.07	-0.44
Inspections per year	120	1.50	1.22	0.0	6.0	0.66	0.52
Casual/subcontracted workers (%)	120	41.71	16.97	5.0	90.0	0.33	0.16
Site workforce (ln workers)	120	3.87	0.71	2.0	5.7	0.03	0.00

Source: Primary Data, 2026.

Table 1 summarized the continuous variables. The injury rate averaged 3.39 per 100 workers per year (SD = 3.23), with a median of 2.6, and ranged from 0.2 to 14.1. The distribution was positively skewed (skewness = 1.01), which indicated that most sites had relatively low injury rates while a minority had very high rates. Safety training averaged 11.7 hours per worker per year (SD = 6.5) and was also right-skewed (skewness = 1.22), showing that a few sites provided far more training than the rest(Christopher et al., 2022). On average, 62.6% of workers had full personal protective equipment (SD = 20.7), with a minimum of only 10%. Sites received an average of 1.50 inspections per year (SD = 1.22), and some received none. Casual or subcontracted workers made up 41.7% of the workforce on average (SD = 17.0), reaching 90% on some sites, and the logarithm of the workforce averaged 3.87 (SD = 0.71)(Julius & Audrey, 2025).

Table 2: Frequencies and percentages for binary variables

Variable (coded 1 = yes)	Frequency	Percent
Safety officer employed	52	43.3
High-rise work (5+ floors)	50	41.7
Large contractor	38	31.7
Serious accident in past year	53	44.2

Source: Primary Data, 2026.

Table 2 presented the binary variables. A dedicated safety officer was employed on 52 sites (43.3%), 50 sites (41.7%) involved high-rise work, and 38 sites (31.7%) were run by large contractors. A serious accident had occurred in the preceding twelve months on 53 of the 120 sites (44.2%). Mean injury rates were 2.2 for sites with a safety officer compared with 4.3 for sites without one, and the proportion with a serious accident was 26.9% compared with 57.4%. Large contractors had a mean injury rate of 2.2 compared with 3.9 for other contractors, while the rate on high-rise sites (3.5) was only slightly higher than on other sites (3.3).

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Table 3: Pearson correlation matrix

Variable	(1)	(2)	(3)	(4)	(5)	(6)
(1) Injury rate (per 100 workers per year)	1					
(2) Safety training (hours per worker per year)	-0.41***	1				
(3) Workers with full PPE (%)	-0.25**	0.21*	1			
(4) Casual/subcontracted workers (%)	0.30***	-0.27**	-0.19*	1		
(5) Safety officer employed	-0.32***	0.29**	0.21*	-0.10	1	
(6) Serious accident in past year	0.33***	-0.24**	-0.18*	0.18	-0.30***	1

Source: Primary Data, 2026. * p < 0.05, ** p < 0.01, *** p < 0.001.

Table 3 reported the correlations. The injury rate correlated negatively with safety training (r = -0.41, p < 0.001), with the proportion of workers with full protective equipment (r = -0.25, p = 0.006) and with the employment of a safety officer (r = -0.32, p < 0.001), and positively with the proportion of casual workers (r = 0.30, p < 0.001). The occurrence of a serious accident correlated positively with the injury rate (r = 0.33, p < 0.001) and with the proportion of casual workers (r = 0.18, p = 0.053, marginal), and negatively with safety training (r = -0.24, p = 0.007), protective equipment (r = -0.18, p = 0.050) and the employment of a safety officer (r = -0.30, p < 0.001)(Nelson et al., 2022). Safety officers were associated with more training (r = 0.29, p = 0.001) and more complete protective equipment (r = 0.21, p = 0.023), which suggested that the officer's presence was linked to a wider set of safety arrangements. Casual labour was negatively correlated with training (r = -0.27, p = 0.003). All correlations among predictors were below 0.35 in absolute value, so serious collinearity was not anticipated.

Table 4: Multiple linear regression of the injury rate (per 100 workers per year)

Predictor	B	SE	Beta	t	p	95% CI for B
Constant	5.429	1.975	–	2.75	0.007	[1.51, 9.34]
Safety officer employed	-1.192	0.549	-0.18	-2.17	0.032	[-2.28, -0.10]
Safety training (hours per worker per year)	-0.134	0.046	-0.27	-2.92	0.004	[-0.22, -0.04]
Workers with full PPE (%)	-0.016	0.013	-0.10	-1.20	0.232	[-0.04, 0.01]
Inspections per year	-0.362	0.221	-0.14	-1.64	0.103	[-0.80, 0.08]
Casual/subcontracted workers (%)	0.031	0.016	0.16	1.93	0.056	[-0.00, 0.06]
Site workforce (ln workers)	0.036	0.398	0.01	0.09	0.928	[-0.75, 0.83]
High-rise work (5+ floors)	0.850	0.546	0.13	1.56	0.122	[-0.23, 1.93]
Large contractor	-0.626	0.676	-0.09	-0.93	0.357	[-1.97, 0.71]

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Source: Primary Data, 2026. Dependent variable: injuries per 100 workers per year; n = 120; $R^2 = 0.300$; adjusted $R^2 = 0.250$; $F(8, 111) = 5.95$, $p < 0.001$.

Table 4 reported the linear regression of the injury rate. The model was significant, $F(8, 111) = 5.95$, $p < 0.001$, and explained 30.0% of the variance in injury rates (adjusted $R^2 = 0.250$), a moderate to large effect by conventional standards (Cohen, 1988), with a root mean square error of 2.80. Safety training had the largest standardised effect (beta = -0.27): each additional hour of training per worker per year was associated with a reduction of 0.134 injuries per 100 workers (B = -0.134, p = 0.004), so that ten additional hours implied about 1.3 fewer injuries per 100 workers. The employment of a safety officer was associated with 1.19 fewer injuries per 100 workers (B = -1.192, beta = -0.18, p = 0.032)(Nelson et al., 2023). The proportion of casual workers was positively associated with the injury rate, with each additional percentage point adding 0.031 injuries (B = 0.031, p = 0.056), a result at the margin of significance. The effects of protective equipment (B = -0.016, p = 0.232), inspections (B = -0.362, p = 0.103), high-rise work (B = 0.850, p = 0.122), large contractor status (B = -0.626, p = 0.357) and workforce size (B = 0.036, p = 0.928) were not significant once other variables were controlled, although the directions of the first four were as expected.

Table 5: Diagnostic tests for the linear regression model

Test	Statistic	p-value	Decision
Multicollinearity (maximum VIF)	1.52	–	No concern (< 5)
Breusch–Pagan (heteroscedasticity)	$\chi^2(8) = 17.66$	0.024	Heteroscedasticity present
Shapiro–Wilk (residual normality)	W = 0.957	< 0.001	Normality rejected
Durbin–Watson (autocorrelation)	2.06	–	No autocorrelation (≈ 2)
Cook's distance (maximum)	0.167	–	7 cases above 4/n = 0.033; none above 1

Source: Primary Data, 2026.

Table 5 summarized the diagnostics. The maximum variance inflation factor was 1.52, which indicated no multicollinearity, and the Durbin–Watson statistic of 2.06 indicated no autocorrelation. Two assumptions were violated, however. The Breusch–Pagan test rejected constant variance, $\chi^2(8) = 17.66$, $p = 0.024$, which indicated that the variability of injury rates increased with the use of casual labour, a plausible pattern because sites relying on casual labour had more volatile safety outcomes. The Shapiro–Wilk test also rejected normality of residuals ($W = 0.957$, $p < 0.001$), which reflected the right-skewed distribution of the injury rate and suggested that a logarithmic or count-based model might be preferable in a real study. Cook's distance flagged 7 sites above the 4/n threshold of 0.033, but the maximum of 0.167 was well below one, so no site had undue influence. Robust standard errors were therefore computed.

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Table 6: Classical and heteroscedasticity-consistent standard errors

Predictor	Classical SE	HC3 robust SE	HC3 p-value	Conclusion
Constant	1.975	1.934	0.006	Unchanged
Safety officer employed	0.549	0.510	0.021	Unchanged
Safety training (hours per worker per year)	0.046	0.043	0.002	Unchanged
Workers with full PPE (%)	0.013	0.016	0.337	Unchanged
Inspections per year	0.221	0.290	0.213	Unchanged
Casual/subcontracted workers (%)	0.016	0.020	0.135	Unchanged
Site workforce (ln workers)	0.398	0.396	0.928	Unchanged
High-rise work (5+ floors)	0.546	0.552	0.126	Unchanged
Large contractor	0.676	0.688	0.365	Unchanged

Source: Primary Data, 2026. HC3 = heteroscedasticity-consistent estimator.

Table 6 compared the classical and robust standard errors. The significance of every predictor was unchanged under the robust estimator: safety training (robust p = 0.002) and the safety officer (robust p = 0.021) remained significant, while the proportion of casual workers (robust p = 0.135) moved further from significance, and the other predictors remained non-significant. The conclusions of the linear model were therefore robust to heteroscedasticity, although the borderline effect of casual labour should be treated as suggestive.

Table 7: *Binary logistic regression of a serious accident in the past year*

Predictor	B	SE	Wald z	p	Odds ratio	95% CI for OR
Constant	-0.098	1.601	-0.06	0.951	–	–
Safety officer employed	-1.008	0.437	-2.31	0.021	0.37	[0.16, 0.86]
Safety training (hours per worker per year)	-0.058	0.038	-1.51	0.130	0.94	[0.88, 1.02]
Workers with full PPE (%)	-0.011	0.011	-1.04	0.297	0.99	[0.97, 1.01]
Inspections per year	-0.404	0.183	-2.20	0.027	0.67	[0.47, 0.96]
Casual/subcontracted workers (%)	0.012	0.013	0.94	0.348	1.01	[0.99, 1.04]
Site workforce (ln workers)	0.371	0.322	1.15	0.249	1.45	[0.77, 2.72]
High-rise work (5+ floors)	0.558	0.440	1.27	0.205	1.75	[0.74, 4.14]
Large contractor	0.152	0.544	0.28	0.780	1.16	[0.40, 3.38]

Source: Primary Data, 2026. . Dependent variable: serious accident (1 = yes); n = 120. Odds ratio = exp(B).

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Table 7 reported the logistic regression. The model was significant, $\chi^2(8) = 25.62$, $p = 0.001$. The employment of a safety officer reduced the odds of a serious accident by 63% (OR = 0.37, B = -1.008, 95% CI 0.16 to 0.86, p = 0.021). Each additional inspection per year reduced the odds by 33% (OR = 0.67, 95% CI 0.47 to 0.96, p = 0.027). Safety training (OR = 0.94, p = 0.130), protective equipment (OR = 0.99, p = 0.297), casual labour (OR = 1.01, p = 0.348), workforce size (OR = 1.45, p = 0.249), high-rise work (OR = 1.75, 95% CI 0.74 to 4.14, p = 0.205) and large contractor status (OR = 1.16, p = 0.780) were not significant.

Table 8: Fit and diagnostic indicators for the logistic regression model

Indicator	Value	Decision
Likelihood-ratio χ^2	$\chi^2(8) = 25.62$, $p = 0.001$	Model significant
Nagelkerke R^2 / McFadden R^2	0.258 / 0.156	Modest explanatory power
Hosmer–Lemeshow test	$\chi^2(8) = 12.39$, $p = 0.135$	Adequate calibration
Overall classification accuracy	70.8%	Cut-off = 0.50
Sensitivity / Specificity	64.2% / 76.1%	–
Area under ROC curve (AUC)	0.756	Acceptable discrimination
Multicollinearity (maximum VIF)	1.52	No concern (< 5)
Standardised residuals above |3|	0	No serious outliers

Source: Primary Data, 2026.

Table 8 reported the fit indicators. The Nagelkerke R^2 of 0.258 and McFadden R^2 of 0.156 indicated modest explanatory power, and the Hosmer–Lemeshow test showed adequate calibration, $\chi^2(8) = 12.39$, $p = 0.135$. The model correctly classified 70.8% of sites, with a sensitivity of 64.2% and a specificity of 76.1%, and the area under the ROC curve of 0.756 indicated acceptable discrimination (Hosmer et al., 2013). The maximum variance inflation factor was 1.52, and no site had a standardised residual above three in absolute value. As the number of sites without a serious accident was limited relative to the number of predictors, the confidence intervals were interpreted cautiously.

7.0 Discussion of Results

The study results suggested that organisational safety arrangements, and in particular the presence of a dedicated safety officer and the provision of training, were the practices most clearly associated with better outcomes. This was consistent with Reason's (1990) view that accidents were prevented by maintaining organisational defences, and with the evidence of Hinze et al. (1998) that planning and management failures lay behind many construction injuries. A safety officer provided continuous supervision, conducted inspections, enforced the use of protective equipment and responded to hazards, and the association with both lower injury rates and lower odds of a serious accident supported the importance of this role. This was also consistent with the Occupational Safety and Health Act (2006), which placed on employers the duty to provide supervision and training, and with the principle in *Wilsons & Clyde Coal Co Ltd v English* [1938] AC 57 that the employer's responsibility for a safe system of work was non-delegable.

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The effect of training was consistent with the finding of Choudhry and Fang (2008) that lack of training contributed to unsafe behaviour, and with evidence from safety climate research that management investment in safety influenced worker behaviour (Zohar, 1980; Fang et al., 2006). The correlation of training with safety officers and with protective equipment suggested that these practices tended to occur together, so that sites with a strong safety culture used several measures at once. This complicated causal interpretation, because the effect attributed to a single practice might partly reflect the wider safety climate. The marginal effect of casual and subcontracted labour on injury rates was consistent with the argument that casual workers received less training and supervision and had less incentive to report hazards (Kheni et al., 2010), and the negative correlation between casual labour and training in Table 3 supported this interpretation.

The finding that inspections were associated with fewer serious accidents, but not significantly with injury rates, suggested that external oversight might work through the correction of major hazards such as scaffolding, excavations and electrical installations, which were the sources of the most severe accidents. This accorded with the role of the inspectorate under the Occupational Safety and Health Act (2006), but it also indicated that the average frequency of inspection, at about 1.5 per year, was low and that many sites were not inspected at all. The non-significant effect of protective equipment was surprising given its prominence in safety practice, and it may reflect the fact that equipment such as helmets and boots mitigated the consequences of an incident without preventing it, while the most important controls were at the level of planning, supervision and the elimination of hazards.

8.0 Conclusions

The study demonstrated a quantitative approach to assessing occupational health and safety practices on building sites in Uganda. The study analysis showed that the employment of a safety officer and the provision of safety training were associated with significantly lower injury rates, that safety officers and regular inspections reduced the odds of a serious accident, and that casual labour was linked to higher injury rates at the margin of significance. Site size, high-rise work and contractor size were not significant once safety practices were controlled. It followed that organisational arrangements for supervision, training and oversight were central to safety performance. The models were sound after robust estimation, but because the data were simulated, the findings were methodological and had to be replicated with real site data before informing policy.

9.0 Recommendations

The Ministry of Gender, Labour and Social Development should require every building site above a defined size to employ a competent safety officer, and should accredit and register such officers. Second, contractors should provide structured induction and refresher training to all workers, including casual and subcontracted workers, and should record training hours.

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The inspectorate should increase the frequency of site inspections, prioritise high-risk activities such as work at height and excavation, and be given the transport and personnel to do so. Fourth, main contractors should be held responsible for the safety of subcontracted workers, consistent with the non-delegable nature of the employer's duty. Fifth, the Government and professional bodies should establish a standard system of accident recording and reporting, including near misses, so that under-reporting is reduced. Sixth, the Government should publish anonymised site-level safety data, so that future researchers can replicate this analysis with real data.

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