

## PREPAREDNESS MECHANISMS AND SUCCESS OF FIRE SAFETY PROJECTS AMONG PUBLIC SECONDARY SCHOOLS IN KENYA. A SURVEY OF NAIROBI COUNTY

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### ABSTRACT

The Ministry of Education recognizes fire disasters in schools as a serious challenge to learners' ability to attain their full potential. Fire safety projects in secondary schools have been a serious challenge as depicted by the many fire incidences experienced in secondary schools thus the need of combined efforts in the establishment of fire safety preparedness mechanisms in all learning institutions in Kenya. The purpose of this study was to establish the influence of preparedness mechanisms on the success of fire safety projects in public secondary schools in Nairobi County. Specifically, the study focused on the influence of training, financial resources and Monitoring & evaluation on success of fire safety projects. The study is anchored on the theory of constraints and system theory. Descriptive research design was adopted with a target population of 60 fire safety projects implemented in public secondary schools in Nairobi County. The unit of observation were 60 persons in charge of fire safety projects. Questionnaire was used to collect the data. Piloting was done in 6 public secondary schools in Kiambu County and the data obtained was used to test reliability of the instruments. Multicollinearity, linearity and normality test were done to ensure the Ordinary Least Square (OLS) regression assumptions are not violated. Data was analysed using descriptive statistics, and multiple regression. The study found out that all the factors considered in the study were significant as indicated by high values of mean. Trainings conducted strongly influenced the success of fire safety projects in secondary schools, followed by monitoring and evaluation and financial resources. The study recommended more trainings on fire safety and responsiveness to be carried out not only among the staff but also among the student for quick reaction in case there is an outbreak. The management of the school also need to be keen on the root cause of the fires and put measures to respond on them.

**Keywords:** *Fire safety, financial resources, projects, training, monitoring and evaluation*

### INTRODUCTION

Projects differ in nature, size, uniqueness and complexity, thus the criteria for measuring success vary from project to project (Muller & Turner, 2007) making it unlikely that a universal set of project success criteria can be agreed. Project success is measured based on project management performance. A project is acknowledged successful if it is completed within budget and on schedule, within a pre-specified scope, and if it meets users' expectations, quality requisites, and technical specifications. Time, cost, and quality are the basis of project performance, but also, they are not enough for a fair view of project success (Satankar & Jain, 2015).

Worldwide, notable failed fire safety projects have occurred either by negligence or incompetence. In Texas City Refinery explosion occurred due to negligence injuring over 100 and killing 15 people (NFPA, 2012). In September 2012, 289 people died in fire at the Ali Enterprises garment factory in Karachi, Pakistan which makes ready ready-to-wear clothing for Western export. A similar fire incident occurred in November 24, 2012 in Dhaka Tasreen Fashions fire killing at least 112 people. In April 17, 2013 an explosion occurred at the West Fertilizer Company storage and distribution. This is pointing to the fact that fire safety projects have not been successful in Europe, Asia and North America despite the mitigation measures in place.

In South Africa, the Safe Schools Project was launched in 2000 to create safe and disciplined learning environments. This project is a national initiative by the Education Department to promote safety at schools and involves surveillance of violence and injury at schools, develops discipline and behavior codes and provides learner training and after school safety activities (Otieno, 2019). A study in Nigeria by Makanjuola et al (2009) on the importance of fire safety preparedness through training for occupants of premises is demonstrated. This research focused on the assessment of the level of fire safety provisions in buildings and associated safety awareness of users and occupants. The study considered several scenarios that would affect the success or otherwise of fire safety projects.

Fires have contributed to the toll of manmade disasters in Kenyan Schools with varying losses of property and life. To mention a few cases of fire incidents, a fire blaze in 1998 killed more than 20 schoolgirls in a locked dormitory at Bombolulu Secondary School in Mombasa County. At Kyanguli Secondary School in Machakos County, fifty-eight learners were burned to death. In June 2001, 114 boys were left affected when a fire broke out at Nakuru Boys High School in Nakuru County destroying property worth Sh10 million including a dormitory, a dispensary and staff quarters (Tonui, 2019). In Kenya the School Safety Policies as indicated in the Ministry of Education Circular No. G9/1/169 (Ministry of Education, 2018) requires that drills should be held at least twice a year in all Kenyan schools in order to create awareness among the students and staff on the emergency exits and actions to take in case of fire outbreak. However, according to analysts, Kenya's failure to put in place a comprehensive fire disaster management projects means its response to high-risk events of fire disasters will remain slow, poorly coordinated and unnecessarily expensive (Gicheru, 2021).

Safety of students in school is a matter of concern to all governments in the world. All organizations and institutions of learning have safety measures put in place. Learning institutions are viewed as havens of peace for learners by many, but in the past few years there has been reported increase in the number of tragic incidences in public secondary schools in Kenya. The resultant trauma, injury loss of lives and property are attributed to failure by schools to strictly implement the safety projects (Siringi, 2014). The Kenya Red Cross Society (KRCS) observes that secondary schools are vulnerable to disasters because of lack of specialized training such as fire drills among other factors (GOK, 2018).

The Government of Kenya (GoK) through the Ministry of Education has been involved in a number of initiatives in trying to ensure the safety within the schools for conducive learning environment. One of such initiatives is the setting up of fire safety projects in all learning institutions (MOEST, 2018). In Nairobi County fire safety projects implementation is not as required by the Ministry of Education school safety policy. The fire safety preparedness projects in most of the schools are not up to the required standards due to inadequate resources and insufficient training, (Ministry of Education, 2018). Wainaina (2021) did a study on safety measures in secondary schools in Kikuyu district, Kiambu County Kenya. The study established that lack of funds, lack of knowledge on fire safety and capacity building were major barriers principals faced in successfully implementation of fire safety projects. The existence of this gap necessitates research on fire safety preparedness influence on success of fire safety projects in public secondary schools in Nairobi County.

### **Statement of the Problem**

In Kenya, reports on lack of safety in learning institutions have been featuring prominently. This made the Government to prepare a safety and standards manual (MOEST, 2018) to create safer schools. Despite the Government's efforts, fire safety projects are still facing challenges resulting to loss of life and property through fire incidences. In Nairobi County, fire safety projects don't meet the requirements by the Ministry of Education school safety policy (MOEST, 2018). There are numerous research studies done in Kenya on the safety in schools but focused different aspects other than specifically looking into influence of fire safety preparedness on implementation of fire safety projects in public secondary schools.

Omolo and Simatwa (2019) study of the assessment of the implementation of safety policies in public secondary schools in Kisumu East and West Districts, Kenya revealed that 86.67 percent of head teachers declined inadequate funds, 26.67 percent lack of skills and 6.67 percent poor coordination from the MOE regarding safety policy issuance. The study further established that 100 percent of QASOs cited lack of cooperation from head teachers and negative perceptions towards QASOs' assessment and Monitoring and Evaluation reports. Gichuru (2018), in a study effect of training on fire disaster reduction, observed that firefighting equipment were not enough in most public secondary schools in Nyeri. Principals, teachers and students were not trained in fire disaster risk reduction. Most of the secondary schools did not have fire safety plans and buildings were not in accordance to the Safety Standard Manual requirements by the Ministry of Education (2008).

Tonui (2019) noted that the high cost of firefighting equipment was the reason why North Rift schools did not install fire safety equipment. Kenyan secondary schools have continued to have frequent fire occurrences. Asumbi Girls Boarding Primary School (2012), Embakasi Girls Secondary School (2015), Stephjoy Boys' High school in Kiambu County (2015), Dagorett High school in Nairobi County, July 2015, Kabianga High school in Kericho County, May 2015 and Jaribuni Boys' High school in Kilifi High County have had fire incidences where properties have been razed down and loss of life in some of the schools. This study focused on the influence of fire safety preparedness and the success of fire safety projects in Nairobi County.

### **Specific Objectives of the study**

The study aimed at achieving the following specific objectives:

- i. To determine the influence of training on the success of fire safety projects in public secondary schools in Nairobi County, Kenya.
- ii. To evaluate the influence of financial resources on the success of fire safety projects in public secondary schools in Nairobi County, Kenya.
- iii. To determine the influence of monitoring and evaluation on success of fire safety projects in public secondary schools in Nairobi County, Kenya.

### **Significance of the study**

The study envisioned to create awareness and aid in the success of fire safety projects to a number of stakeholders in the education sector. The study will sensitize the principals in Nairobi County on influence of fire safety preparedness on the success of fire safety projects in the schools. The study will also aid the MOEST and T.S.C to develop policy on fire safety preparedness for teachers and principals on fire safety to ensure successful implementation of fire safety projects. The study will aid Kenya Education Management Institute, Kenya Institute of Curriculum Development, the universities and the Teacher Training Colleges to ensure fire safety projects are successful. This research project might act as a sound basis and foundation on which other scholars can conduct further research on the area of the influence of fire safety preparedness on success of fire safety projects in other institutions and companies.

## **LITERATURE REVIEW**

### **Theoretical Literature Review**

#### **System Theory**

The systems theory was first proposed in 1945 by Ludwig and advanced further by Ross (1956). The theory gives a method of organizing the interaction between component parts of a larger organisation and it seeks to organize information rather than explain observations. A system is an organized whole consisting of various components that interact in a way distinct from their interaction with other entities and which lasts over a given period of time (Ross, 1956). The systems theory enables us to understand the components and dynamics of client systems in order to interpret problems and develop balanced intervention strategies so that the “goodness to fit” between individuals and their environments is maintained. According to Ross (1956) the behaviour of specific complex systems relies on how the components interact and how they relate to each other. This helps in understanding fundamental structure of various systems applying similar underlying issues.

The theory is relevant in this study since in projects the fundamental factors are similar for project managers, project teams competences, funding agencies, consumers, time, budgets, control systems and communication practice. The way in which these factors relate with each other is what makes a project special and unique with its own dynamics. Understanding the dynamics of their critical components of the projects would enable the project to success.

## **Empirical Literature**

### **Training and Project Success**

In a study by Warui (2013) on impact of training on project management effectiveness among secondary schools' principals in Kirinyaga District, Kenya. Secondary schools' principals are looked at as project managers, expected to plan, implement, manage, maintain and evaluate the entire education system: physical facilities, human resource, students, financial inputs and the curriculum (MOEST 2018). As such, there is need for adequate training of school heads and other stakeholders in safety preparedness and project management. The study sought to find the impact project management training of secondary school principals has on success of school projects. A survey among secondary principals established that training plays a great role in the management of projects. However, secondary schools are still facing project management challenges.

A study by Odhiambo (2015) on influence of training on schools' projects success revealed that most principals had not received adequate training. The study was set to establish the influence of management training on the success of schools' projects. A survey on the secondary school principals, cited lack of adequate training, affected principals to a great extent in controlling projects. If this has been taken in to consideration, it means there are other factors contributing to unsuccessful projects as reflected by the unsuccessful fire safety project. Mburu (2018) conducted a study on the viability of Youth Enterprise Development Fund Project as an empowering tool for youth entrepreneurs for youth informal sector in Ruiru Division, Kiambu County. A survey on youth entrepreneurs established that 81 percent of the respondents had some basic training in learning the business and they felt that they needed more training in management of projects. Resources were available but youth projects were still unsuccessful.

Fryer (2020) Study on Fire Safety Management in Government Buildings in Nairobi County. The study assessed fire safety management in government buildings. A survey on the government employees found out that 38 percent of the respondents had no basic training on fire safety. Less than 50 percent had participated in fire drills and 88 percent of the respondents claimed to know how to behave in case of fire outbreak. The study recommended that all the stakeholders to undergo fire safety training. Otieno (2019) study on fire safety management in government training institutions. A survey on various stakeholders found out that 52 percent of those involved had participated in fire drills. 92 percent confirmed availability of firefighting tools in the institutions while 84 percent confirmed that the firefighting equipment are well placed. Fire incidences continue to be experienced.

### **Financial Resource and Project Success**

Availability of resources is considered to be a factor necessary for the successful completion of projects. Kogi (2013) points that amongst the basic conditions for smooth project activity operations without stoppages and unnecessary disruption, is regular and sufficient funding of the project, Gichuru (2018) study on Fire Disaster Preparedness Strategies in Secondary Schools in Nyeri Central District, Kenya. This study sought to investigate fire disaster preparedness in high schools. Sampling technique was employed and it was observed that in most public secondary schools in Nyeri Central District firefighting equipment were not enough, the principals, teachers and students were not trained in fire disaster risk reduction, most secondary schools did not have

fire safety plans and most of the secondary schools did not build the school buildings in accordance to the Safety Standard Manual requirements by the Ministry of Education (2008). Fire incidences still become one of the serious challenges facing secondary schools' managers.

Fagan and Mihalic (2019), through work done by the University of Colorado at Boulder's Center for the Study and Prevention of Violence identified some key implementation factors. The factors identified such as school readiness, allocation of financial, and human resources and time have the same impact in other countries in the process of implementing of safety projects. Funds are required for the purchase of fire extinguishers, first aid kits, installation of CCTV Cameras, alarm and intruder systems.

Kukali (2020) study on evaluation of the state of fire safety policy implementation in Girls' Boarding secondary schools in Bungoma. The study sought to establish the importance of evaluation of implementation of fire safety policy. The study found that financial resources and its management were the factors influencing implementation of safety policy in secondary schools. The category of teachers and QASOs argued that funds may be adequate but management was wanting. The study did not capture training of the stakeholders on fire safety measures.

### **Monitoring and Evaluation and Project Success**

Monitoring and evaluation are concerned with systematic measuring of variables and processes over time. Management and evaluation are an important instrument for the management of schools' projects and employs quantitative and qualitative measurement tools (Wamahiu, 2014). This contributes to improving the implementation of projects by enabling continuous feedback of their performance allowing for identification of problems as they arise. Monitoring and evaluation of project improves overall efficiency of project planning, management and implementation (Jaylor & Taylor, 2018).

Management of fire safety projects is a continuous process where all the phases of the plan are reviewed and revised constantly. Good plans do not get finished but are updated based on research, new experience and changing vulnerabilities (Sindhvad, 2019). Monitoring and evaluation of school safety projects should be a continuous exercise. It is also understood that monitoring and evaluation of projects is fundamental if the project objectives and success is to be achieved. Monitoring and evaluation are essential components of the school safety programme, MOEST (2018).

Omolo and Simatwa (2019) study on the assessment of the implementation of safety policies in public secondary schools in Kisumu East and West Districts, Kenya. The study assessed whether implementation of safety policies was taking place in secondary schools. A survey was carried out and revealed that head teachers decried inadequate funds, lack of skills and poor coordination from the MOE regarding safety policy issuance. The study also found out that QASOs cited lack of cooperation from head teachers and negative perceptions towards QASOs' assessment and Monitoring and Evaluation reports. The study did not take in to consideration the effects of lack of proper implementation to the projects undertaken in secondary schools.

Nderitu (2019) study on monitoring and evaluation and successful implementation of safety projects in secondary schools in Kiambu secondary schools. The study sought to establish the influence of monitoring and evaluation on the success of safety projects in secondary schools. Sampling technique was used to collect data. The study found out that, all the principal respondents were aware of MOE Safety Standards, but did not implement the Safety Standards on the safety projects in their schools. Secondary schools are still experiencing fire outbreaks. The study therefore established the influence of fire safety preparedness on success fire safety projects in public secondary schools in Nairobi County, Kenya.

### CONCEPTUAL FRAMEWORK

#### Independent variables

#### Dependent variable

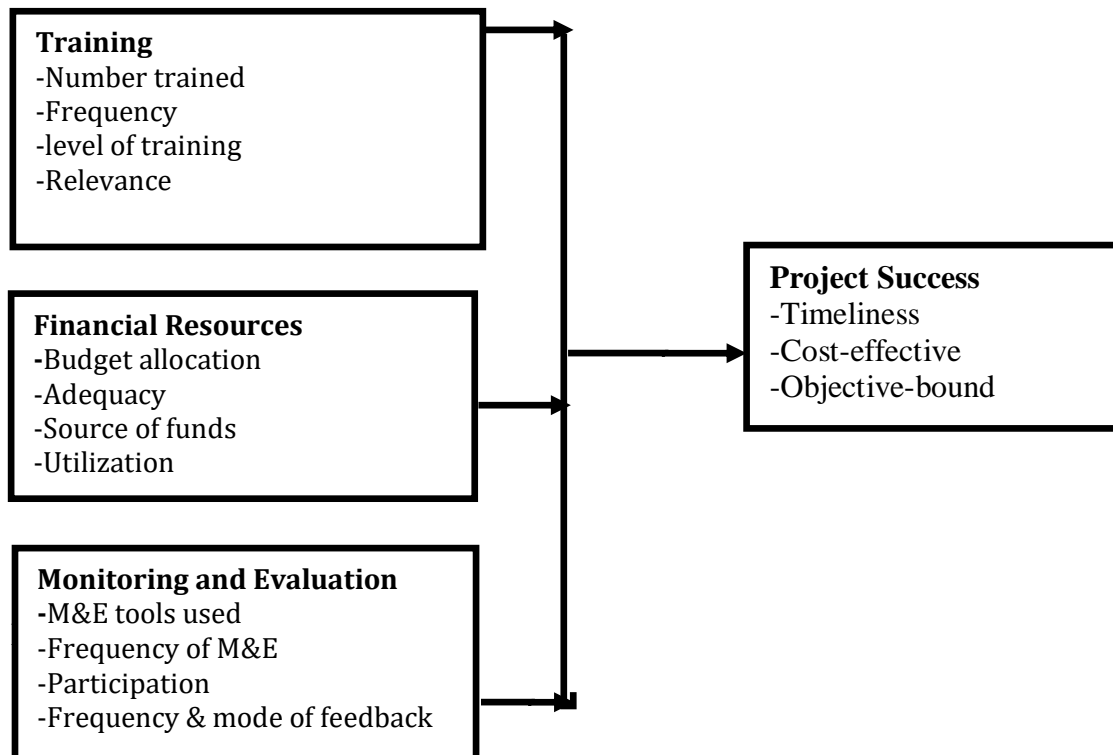


Figure 1: Conceptual Framework

### RESEARCH FINDINGS AND DISCUSSIONS

#### Reliability Test and Background Information

A total of 55 respondents were given questionnaires out of which 48 respondents completed the questionnaires. This gives a response rate of 87 percent. Cronbach's Alpha was adopted to test the reliability in this study and the results are as shown in table 1.



**Table 1:** Reliability test

Variable	Cronbach's Alpha	Judgment
Training	.807	Reliable
Financial Resources	.791	Reliable
Monitoring and Evaluation	.811	Reliable

All the Cronbach's Alpha for the study variables shows that the study was within the acceptable range of reliability. The four variables obtained reliability of 0.7 and above as recommended by Kothari (2004). The study results indicated that most of the respondents were male (62.5 percent) while females made up 37.5 percent of the respondents. This indicates that Starehe sub county has more male administrators than females. The respondents that most of the teachers were above 40-50 and 51 and above where they represented 54.2 percent and 33.3 percent respectively. Those aged 21-30 represented only 2.1 percent while 10.4 percent represented those aged 31-40 years. This indicates that that the most in age responded, therefore their information is highly reliable.

On the education level of the respondents the results indicated that only 2.1 percent of the respondents had PhD while most of the respondents had a Bachelor's degree (52.1 percent). 45.8 percent have a master's degree. This implies that majority of teachers in secondary schools have a degree and above. Due to their level of education, it was expected that they were to take the research seriously and give true information. The respondents were also required to state the time served in the school and the results showed that most of the respondents (62.5 percent) have served in their respective schools for over five years while 20.8 percentage and 16.7 percentage have served for 2-5 years and less than two years respectively. Above 5yrs were the most respondents, thus more conversant with the school's projects.

### Descriptive Statistics

#### Training and success of fire safety projects

Majority of the respondents (85.4 percentage) indicated that they had received fire safety project training while 14.6 percentage said they had received no such training. However, the respondents downplayed the seriousness of the training conducted terming it obsolete and a waste of time. The study used a five pints likert scale to determine the influence of training on the success of fire safety projects. The aggregate mean from five items was 2.96 and it depicts that the majority of respondents generally agreed trainings aspects were important in explain the project's success. The respondents had same opinion about the statements as evident in the small standard deviation of 0.713. The findings agreed with a study by Warui (2013) which pointed out that training is important in the success of any project calling for stakeholders to play their role in planning and executing effective training programs.

#### Financial Resources and success of fire safety projects

The results showed that majority of the respondents (77.1 percent) had opinion that the ministry does not provides adequate finances for the implementation of the fire safety projects while 22.9 percent state that the ministry provides enough finances. Five statements on Likert scale were provided for the respondents to determine their general belief on the influence of financial resource on success of fire safety projects. The aggregate mean of 2.718 implies that the respondents agreed



that the statements were important. However, high values of standard deviation (1.011) showed that the respondents had diverse opinion. The findings agree with Kogi (2013) who pointed that amongst the basic conditions for smooth project activity operations without stoppages and unnecessary disruption, is regular and sufficient funding of the project.

### **Monitoring and Evaluation and success of fire safety projects**

Parameters of monitoring and evaluation were investigated and the average mean of 2.702 implies that most of the respondents agreed that the items were important. Low levels of standard deviations (0.832) indicated the respondents had similar opinion. The findings agree with the results obtained through a survey conducted by Wamahiu (2014) which asserts that monitoring and evaluation is an important instrument for the management of schools' projects and employs quantitative and qualitative measurement tools.

### **Success of Fire Safety Projects**

The study measures the parameters of the success of fire safety projects and the results from the aggregate mean of 3.211 showed that majority of the respondents agreed the items used were important. Low values of standard deviation (1.071) implies that the respondents' opinion did not vary.

## **REGRESSION MODEL**

### **Regression diagnostics**

Cooper and Schindler (2008) assert that a proper regression model should be able to meet certain assumptions that otherwise would render its results unreliable.

### **Normality test**

Normality test enables the researcher to establish whether data is normally distributed. Since the sample was small Shapiro-Wilk test coefficients were used to determine the significance of normal distribution in this data. The findings show that all the data collected for both independent and dependent variables had significant levels of normal distribution with ( $p=0.000$ ) which is less than the 0.05.

### **Multicollinearity Test**

The study employed Variance Inflation Factor (VIF) procedure to examine whether there was any multicollinearity among the independent variables. According to Bryman (2003), multicollinearity is said to exist when VIF is either less than 1 or greater than 10. Multicollinearity does not exist when VIF is between 1 and 10. From the results showed that none of the variables were collinear. Since all the VIFs were between 1 and 10, therefore independent variables were unique and did not pose any threat of data redundancy.

### **Regression model**

The study employed multiple regression model to establish the influence of the independent variables on the dependent variable. Hypothesis was tested at 5 percent level of significance.

**Table 6:** ANOVA<sup>a</sup>

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	21.443	4	5.361	1.636	.003 <sup>b</sup>
	Residual	140.870	43	3.276		
	Total	162.313	47			

The results in table 6 shows that training, financial resources and monitoring and evaluation significantly predicts the success of the fire safety projects

**Table 7:** Model Summary<sup>b</sup>

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.763 <sup>a</sup>	.632	.510	1.80998

From the model summary, it can be depicted that monitoring and evaluation, training and financial resource predicts 0.51 of the success of fire safety projects. It can further be explained that 0.49 of the success of fire safety projects was predicted by other factors that were beyond the scope of this study.

**Table 8:** Coefficients<sup>a</sup>

Model		Unstandardized		Standardized	T	Sig.
		Coefficients				
		B	Std. Error	Beta		
1	(Constant)	8.778	5.911		1.485	.145
	Training	.092	.212	.063	.435	.046
	Financial Resources	.189	.196	.165	.964	.001
	Monitoring & Evaluation	.208	.221	.153	.943	.000

a. Dependent Variable: Success of fire safety projects

Source: Research data (2022)

$$Y = 8.778 + 0.063X_1 + 0.165X_2 + 0.153X_3 + e$$

Training of teachers, students and the school management was found to be a significant predictor of the success of fire safety projects. A unit increase in training would increase the probability of success of fire safety projects by 0.063. A study by Warui (2013) asserts that schools principals are looked at as project managers, expected to plan, implement, manage, maintain and evaluate the entire education system and as such training was found to significantly affect the way they implemented various projects bestowed to them.

Financial resource was a significant predictor of the success of fire safety projects. At 95 percent confidence interval, the opinions of the respondents show that resources were important in implementation of these projects. Basically, respondents admitted that without resources, implementation of any project would be futile. Respondents therefore, suggested that resource mobilization should be central to planning about fire safety. A unit increase in resource

mobilization would increase success of fire safety projects by 0.165. Moreover, Kogi (2013) points that amongst the basic conditions for smooth project activity operations without stoppages and unnecessary disruption, is regular and sufficient funding of the project.

Monitoring and evaluation was a significant and positive predictor of success of fire safety projects. The findings show that lack and poor compliance with the provisions of the project was the main reasons for non-attainment of project goals or complete failure. Respondents blamed poor compliance to inadequate and improper monitoring and evaluation. A unit improvement in proper monitoring and evaluation would lead to 0.153 improvements in success of fire safety projects. Furthermore, management of fire safety projects is a continuous process where all the phases of the plan are reviewed and revised constantly (Sindhvad, 2019).

## **SUMMARY, CONCLUSION AND RECOMMENDATIONS**

### **Summary**

The findings of the study shows that training was actually being carried out in the institutions. However, a considerable proportion of the respondents disputed the kind of training taking place provided adequate skills and knowledge in fire safety since it lacked practical bits. Moreover, the findings from the inferential analysis show that coefficient of training was a significant and positive predictor of success of fire safety projects. Respondents associated training with increased awareness, experience and confidence in execution of duties.

The findings of the study show that majority of the respondents admitted that management was actually mobilizing financial resources from different stakeholders. However, financial resources mobilization was not commensurate to the success of the projects in reality. This was blamed on corruption and lack of goodwill from the project managers. The study further established that financial resource was a significant predictor of success of fire safety projects. It can further be explained that fire safety projects are unlikely to succeed because of improper and inadequate financial resources that are required to execute the projects.

Monitoring and evaluation documentations were present an indicator that there are some activities towards the same. However, the respondents indicated that the process lacked seriousness from the management and that the real monitoring and evaluation of the process do not take place. Moreover, the regression findings show that monitoring and evaluation was the most significant predictor of success of fire safety projects. The findings show that majority of the respondents greatly associated monitoring and evaluation with the whole success of projects.

### **Conclusion**

On the influence of training on the success of fire safety projects, this study concludes that training is an important aspect of project success. Although trainings are conducted among the students and staff, it is inadequate and lacked practical bit. Thus, these projects were not successful due to lack of the necessary skills and knowledge. The study also conclude that the fire safety projects lacked trainees in methods of firefighting, signs of fire danger, various equipment's of firefighting and the ways in which they can deal with casualties of fire.

The second objective of this study was to establish the influence of financial resources on the success of fire safety projects. This study concludes that availability of financial resources significantly predicts the success of fire safety projects. Basically, without adequate resources, there is little that can be achieved; hence, projects meant for fire safety needs to be allocated adequate human and physical resources. The financial resources in the study area is required to purchase fire extinguishers of different types of fire, water storage containers, designed fire assembly, signboards to show emergency exits and ambulances.

The study concludes that monitoring and evaluation is an important aspect that was found to be the most significant of the factors of project success studied in this study. Projects that are not well monitored and evaluated from time to time are likely to fail. The study therefore finds monitoring and evaluation as an inevitable practice that must be considered if the planners of fire safety projects are to achieve their objectives.

### Recommendations

The study recommends training of all the staff, management and students on aspects of fire safety; in line with this, the study recommends the ministry of Education to develop a framework that makes training of fire safety programmes especially on practical basis. The study further recommends the government to allocate resources to schools that strictly caters for fire safety projects. The resources should include human resource and physical resources. Finally, the study recommends that a programme be developed through the aid of the ministry of education that compels the management to carry and report from time to time the strategies they have taken to monitor and evaluate the fire safety projects.

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