

Safety Preparedness of Secondary Schools in Central Highlands of Kenya

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School safety is an essential element of the teaching-learning process because it provides an opportunity for students to exploit and maximize their potential for learning, growth and development. The study aimed to investigate safety preparedness of secondary schools in Embu East Sub County, Kenya. The specific objective for the study was to find out the level of awareness of staff regarding school safety. The quantitative data were analyzed using the Statistical Package for Social Sciences (SPSS) for descriptive statistics, while the qualitative data was obtained through interviewing individuals using questions developed by the researcher touching on safety awareness. The researcher identified three common themes: the need for policy guidelines on safety preparedness, the need to involve all stakeholders in safety preparedness and the need for prioritization of resources towards implementing school safety policies and programs. The qualitative data were analyzed using thematic analysis. The findings from this study showed that there is lack of safety preparedness in schools.

Keywords: awareness, safety preparedness, school safety

INTRODUCTION

Safety is central in every organization hence a key constituent for the teaching and learning process. It is a universal concern and a need for a global platform to deliberate on providing safety in schools and communities (Bastidas, 2011; Paci-Green et al., 2020). Despite the measures and best practices aimed at ensuring safety at schools, incidents resulting in injuries, violation of rules, student unrest, fires, harassment, presence of weapons and firearms, and sometimes deaths have been reported on a disturbing trend (Bell, 2021).

In Kenya, there have been many reports of arson acts or attempts across the schools in the country. These reports give evidence that schools in Kenya, like in other countries, face a lot of challenges related to safety. Undeniably, safety is an important aspect of human life that helps to mitigate risks in any given situation. However, safety can only be guaranteed if some form of preparedness exists in the school system (Schildkraut & Nickerson, 2020). The main objective of every school should be to offer quality education to its learners, something that can only be achieved if the school environment is conducive and safe enough

for learning. School safety can be threatened by factors that emanate within the school environment or externally from the wider community (Opere, Kamere, & Wawire 2019). It is, therefore, imperative that all the educational stakeholders take up the responsibility to ensure that school safety threats are minimized or eliminated to foster safe living in schools (Gallón, 2020).

In Kenya, reports on lack of safety both in and out of school have been featured prominently in the mass media and in government reports (Opere, Kamere, & Wawire 2019). The government, however, has spelled out basic safety standards to comply with as stated by Ministry of Education Science and Technology (Ministry of Education, 2008). Incidences of disaster and unsafe environments in Kenya continue to be experienced in educational institutions (Jagero, 2011; Maoulidi, 2008). Moreover, little has been done to prepare secondary schools in Kenya for fires (Oburu, Coetzee, & Swartz, 2020).

A safe school is the foundation of a good education. Studies have shown that when students feel safe, they learn better (Fitzpatrick & Lussier, 2016; May, 2014). There is a need for all stakeholders in education to be aware of possible threats to school safety and provide a social environment that is supportive for proper teaching and learning processes (Jagero, 2011). In Kenya, many reports on lack of safety in schools have been experienced whenever there is students' unrest., bullying, burglary, and arson, which made the government to enhance compliance (Sigei, Kiplangat, & Tikoko, 2021).

The persistent recurrence of safety problems in secondary schools, even after the release of the Safety and Standards Manual, highlights serious questions that demand answers if similar cases are to be avoided in the future. Among the areas of concern include unapproved building plans, untrained staff and students on handling school emergencies, and lack of inspection by the relevant authorities on safety measures in school. Additionally, most schools lack adequate firefighting capabilities, safety equipment and a Crisis Response Plan.

Some schools remain ignorant of the safety issues or lack the will to enforce even the basic safety regulations. Several studies have been carried out on emergency preparedness and safety influence on teaching and learning process. Still, little has been done regarding safety preparedness, on perceptions and awareness level of staff and students (Gatua, 2015). The findings of this study point to how schools are inadequately prepared in case of emergencies.

MATERIAL AND METHODS

Research Design

This study used a mixed method research design that combined qualitative and quantitative data collection and analysis techniques. It ensured that the study findings were grounded in participants' experiences. Moreover, it had enough provision for protection against bias and maximized reliability.

Location of the Study

The study was undertaken in Embu East Sub County (0.4224° S, 37.5721° E), one of the five Sub Counties in Embu County. The County borders Kirinyaga to the West, Kitui to the East, Tharaka Nithi to the North and Machakos to the South.

Data Collection

The data collection tools for this study were the questionnaires, observation checklist and interview schedule. The design for the interview questions and those for questionnaire extracted enough information from deputy principals, security guards and teachers respectively. The interview questions were designed differently, but all revolved around safety awareness and preparedness in secondary schools. Moreover, an observation checklist was used to assess the safety measures implemented within the schools. The observed areas included; school grounds, classrooms, toilets/ pit latrines and school gates. The respondents for this study included 44 deputy principals, 70 teachers and 44 security guards.

Data Analysis

Quantitative data collected through questionnaires was coded by assigning each question a particular number to enable analysis. The coding process was the initial stage of converting the responses into numerical and later subjected to Statistical Package for Social Sciences (SPSS). The analyzed data was presented largely through frequency distribution tables showing percentages and bar graphs. For the qualitative data obtained through interviews and observation, the descriptive information was analyzed in form of themes and tables.

RESULTS AND DISCUSSION

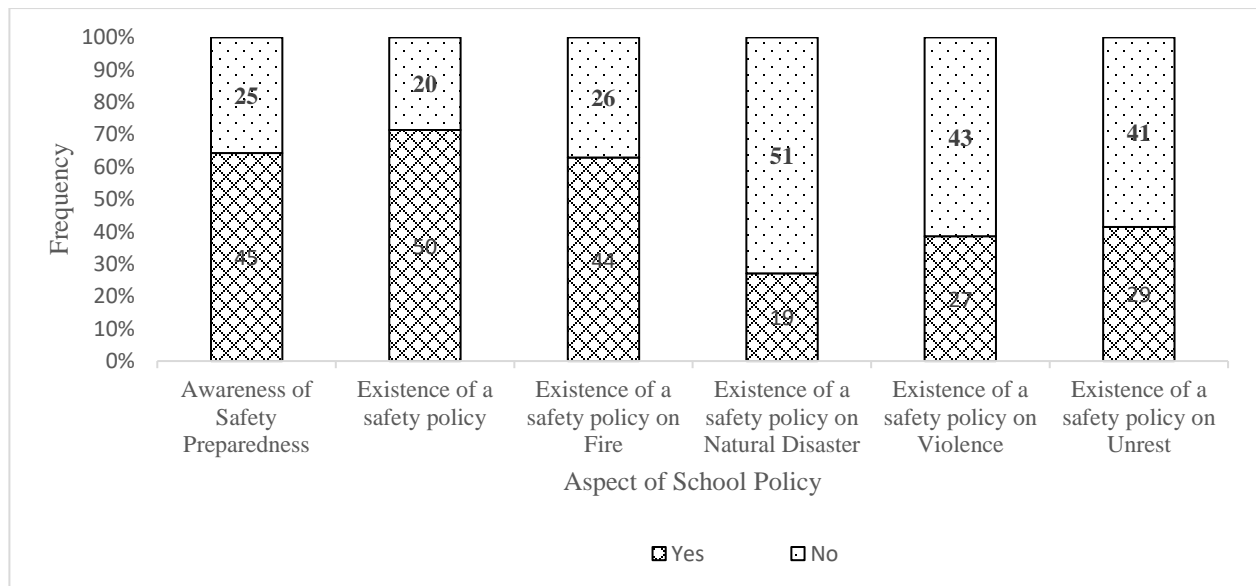
Response Rate and Demographics

The study targeted 44 deputy principals, 44 security guards. The target respondents for teachers were 70 and gender representation was 63% male and 37% female. Moreover response from the guards was 55% female while the male was 45%. The deputy principal response was 34% male and 66% female.

Summary of the Findings

From the quantitative data several, parameters were used to assess teachers' school safety awareness level as shown in figure 1 below.

FIGURE 1
TEACHERS' LEVEL OF AWARENESS REGARDING SCHOOL SAFETY



The figure above shows the level of awareness of teachers regarding school safety. This was done with seventy teachers. Various aspects of school policy were used to inform teachers' level of awareness. They included awareness of safety preparedness and other safety policies such as fire, natural disaster, violence, and unrest. It was also presumed that schools would have a safety policy to address safety needs in case of a threat.

From the quantitative data, 64% of the teachers had some knowledge of safety preparedness. This was attributed to the fact that safety issues had become a concern due to the increased rate of violence and unrest in schools and was in agreement with (Kupchik, 2016). As a result teachers made a personal initiative to seek some awareness from the internet. They further observed that they did not feel safe in school since nothing much was being done regarding their safety by the school administration. Their knowledge was

only theoretical and in the eventuality of a disaster, it would strike, leaving conspicuous damage because their awareness lacked the applicability aspect. In addition, 71% of teachers reported they were in schools that had a copy of the safety policy from the Ministry of Education. This was done as a norm and the routine procedures for inspection purposes which did not involve much expense of time and money. Those copies usually were found in the principals' office and others in the library shelves covered with layers of dust; a teacher said. Only in very few cases would teachers access these copies in the staffroom. It was expected that other than the ministry manual, the school would be expected to customize the policy on safety to fit its needs as a school.

Many of the schools lacked self-tailored policies within which they would operate whenever issues of safety were being addressed. It was not only useful in case of emergency and disaster but also a policy that could facilitate preparedness of the school community in readiness for any internal or external threat. The schools prioritized other goals and found them necessary to fulfill at the expense of safety. Furthermore, teachers' responses showed that 37% of the schools had a customized safety policy on fire. This was embraced because in most of the schools, fire emergencies were more likely to strike since whenever students experienced dissatisfaction they would set the buildings on fire which is in agreement with (Cooper, 2022) that students would always engage in arson to express the discontent through protests. It was also possible that electricity fault would be a major cause of fire in the schools not forgetting that laboratories and kitchens were also potential fire threats. The schools had invested in a number of fire extinguishers that were strategically positioned. There were also demarcations showing the safety paths leading to fire assembly points. A few sand buckets were placed within the school compound, showing some effort to counter fire attacks. Routinely inspections were carried out by the teachers in dormitories and classes to uncover flammable solvents and match sticks which posed a hazard to the schools. In some schools it is illegal to be found in possession of perfumes and sanitizers which were possibly used to light fires whenever students went on rampage.

Regarding policy on natural disasters like earthquakes, floods and lightening, as reported by teachers, only 27% of the schools had such a safety policy. It was noted that such kinds of disasters were rare and thus less likely to occur (Okayo, Odera & Omuterema, 2015). Again this form of preparedness required a colossal sum of money which was a great challenge to the schools. This was in agreement with World Bank Group (2010) which affirmed that there was lack of disaster preparedness policies in schools and if they have to be, then various stakeholders must put into consideration what should be done to build capacity of safety awareness. In any case they would strike once in a period of ten years; a respondent made an observation. It was only in one national and few extra county schools where such preparedness was observed. For policies on violence and unrest, teachers reported that 39% of schools had a policy on violence and 41% on unrest.

This was a relatively small percentage considering that violence and unrest were major safety threats on the increase in secondary schools in Kenya (Njunge, 2015). This revealed that little had been done to prepare the teachers for this safety challenge. It was thus critical to design these kinds of policies because most of the schools had experienced some form of violence or unrest at one point or another ((Opere, Kamere & Wawire 2019). It was a requirement that students would be checked especially whenever they reported to the schools from outside for dangerous weapons such as whistles, ropes and face masks because such exhibited characteristics of violence. It was reported that some schools had banned wearing beanies since they were used to cover the face whenever unrest arose.

Further findings of the study showed it was clear that order of priority varied greatly as per the schools category, the county and sub-county schools were really very limited in addressing the safety needs on general awareness and equipping the security personnel due to financial strain. Most schools lacked the sign in and out documents, visitors' badges, and the necessary routine checks done before any visitor is allowed in. The security personnel was a challenge due to limitations of funds which left many gates unmanned, many schools, especially the day schools, were not able to employ the trained guards due to financial constrictions. In most cases, even if employed, they had to assist in other routine tasks, commonly referred to as 'multi-tasking'. The school driver in one school hinted, 'I did not expect to take up the duty of a day guard. I was surprised when the principal asked me to be in charge of the gate during the day and

assist in stapling of exams whenever I had no safari.’ In fact nothing much was done to ensure strict observance of the safety policies. This was attributed to the challenge given by the deputy principals of inadequate finances and order priorities.

In most schools, 78% of the security guards responded that the only safety gadgets used were fire extinguishers, few CCTV cameras found in Extra County and national schools, and guards who would not effectively perform their duties since they were not adequately equipped. They were not aware of any other measures.

Analysis of the observation data findings pointed to the fact that schools were still struggling in the implementation of safety policies as shown in Table 1 below. An observation schedule was used in all the schools to establish the measures to ensure safety. The study findings showed that some of them were more adhered to in all the schools. For instance, labeled latrines, drug free zone labels, doors and windows opening outwards were well implemented. Out of the schools visited 50% had pastoral care programs, leveled ground, clean latrines, hand washing water sources, fire extinguishers, fences, grill free windows, gates and security personnel at the gates. It was observed that less than half of the schools did not consider the following measures as of great importance due to the limiting financial constraints and others did not find it useful out of ignorance; safety drills, safety committee minutes, smoke detectors, sand buckets, emergency alarms, pass badges, lightening arrestors, fire assembly points, sign in and out records, emergency alarms, guidance and counseling office. Most gates were manned on a 24 hour basis and the lighting systems effectively maintained. To counter violence and unrest, a few schools had planned to mount CCTVs for surveillance in addition to the day guards who monitored every move made by the students.

TABLE 1
OBSERVATION CHECKLIST ON SAFETY MEASURES

Safety measures taken	Frequency	
	Available	Not available
Gate	34	10
Gate security personnel	27	17
Signing in or out	15	29
Pass card or badge	6	38
Doors opening outwards	44	0
Grill free windows	42	2
Spacing of desks	44	0
Ventilations	41	3
Ramps	14	30
Fence	41	3
Fire extinguishers	27	17
Fire assembly point	9	35
Lightening arrestors	3	41
Emergency alarm system	4	40
First aid kit	9	35
Sand buckets	6	38
Smoke detectors	2	42
Safety committee minutes	9	35
Hand washing water sources	29	15

Clean latrines	41	3
Labeled latrines	44	0
Leveled ground	24	20
Drug free zone Label	44	0
Safety drills	9	35
Pastoral care programs	32	12
Guidance & Counseling	14	30

IN REVIEW SCHEDULE RESULTS

Introduction

This report aims to assess the quality and effectiveness of existing policy guidelines within the specified domain. The evaluation covers several key dimensions including comprehensiveness, accessibility, clarity, alignment with objectives, flexibility, stakeholder engagement, implementation support, and monitoring mechanisms.

Availability of Policy Guideline

Yes-14 (31.8%)

No-30 (68.2%)

Comprehensiveness of Policy Guidelines

The evaluation began with an analysis of the comprehensiveness of available policy guidelines. It was found that while 32% of the guidelines covered relevant aspects of the subject matter adequately, the remaining 68% did not meet the standard. This indicates a significant gap that requires attention in future revisions or updates.

Accessibility

Accessibility was identified as another critical aspect evaluated in this report. The assessment considered the ease of access to policy guidelines for various stakeholders. However, it was observed that only 32% of stakeholders found the guidelines easily accessible. Factors such as online availability, language translations, and dissemination strategies must be improved to ensure widespread access.

Clarity and Understandability

The clarity and understandability of policy guidelines were deemed essential for effective implementation. However, the evaluation revealed that only 32% of the guidelines were written clearly and concisely, hindering effective implementation efforts. Ambiguity or overly technical language was identified as areas needing improvement.

Alignment With Objectives

An examination of the alignment of policy guidelines with broader objectives and priorities showed that only 32% adequately reflected current best practices, research evidence, and stakeholder perspectives. The assessment also highlighted the need for guidelines to better address emerging challenges and opportunities in the relevant field.

Flexibility and Adaptability

Flexibility and adaptability were crucial for policy guidelines to apply across different contexts. However, the evaluation indicated that only 32% of the guidelines allowed for customization and adaptation to diverse settings and populations. Improvement in providing guidance on monitoring and evaluation for continuous improvement was also necessary.

Stakeholder Engagement

The level of stakeholder engagement in developing and reviewing policy guidelines was assessed. It was found that while 32% of guidelines incorporated diverse perspectives and expertise into the process, there is a need to improve the transparency and inclusivity of decision-making processes to ensure robust stakeholder involvement.

Implementation Support

Evaluation of the availability of resources and support mechanisms to facilitate the implementation of policy guidelines highlighted deficiencies. Only 32% of guidelines had sufficient resources, capacity-building efforts, technical assistance, and funding opportunities to support stakeholders in translating guidelines into practice effectively.

Monitoring and Review Mechanisms

The existence of mechanisms for monitoring and reviewing the implementation and impact of policy guidelines was examined. It was found that improvements in policymakers' responsiveness to feedback and evaluation findings were needed for continuous improvement.

Conclusion

In conclusion, this report assesses policy guidelines within the specified domain, highlighting areas where standards were not met. By evaluating various dimensions such as comprehensiveness, accessibility, clarity, alignment with objectives, flexibility, stakeholder engagement, implementation support, and monitoring mechanisms, opportunities for improvement and optimization are identified to enhance the effectiveness and impact of policy guidelines. Efforts should focus on addressing the identified deficiencies to ensure better policy outcomes in the future.

Areas of Safety Addressed by Policy Guideline

From the above, 62.2% of the respondents reported lacking policy guidelines to address safety issues. 6.16% noted that they have safety policy on fire.

The survey data highlights the extent to which safety concerns are addressed within existing policy guidelines. A significant proportion, specifically 62.2% of the respondents, indicated a lack of comprehensive policy guidelines to address various safety issues. This finding underscores a critical gap in policy coverage, indicating that a substantial portion of the population may be operating without clear guidance on safety protocols and measures.

Conversely, a smaller percentage of respondents, comprising 6.16%, reported the presence of safety policies specifically targeting fire safety. While this indicates some level of attention to safety concerns within certain domains, it also suggests a more limited scope of policy coverage than the broader spectrum of safety issues that stakeholders encounter.

The disparity between the prevalence of fire safety policies and the absence of comprehensive safety guidelines highlights the need for a more holistic approach to safety policy development and implementation. Safety encompasses a wide range of considerations beyond fire prevention, including but not limited to workplace safety, road safety, public health measures, disaster preparedness, and environmental safety.

Addressing the diverse array of safety concerns requires multifaceted policy interventions prioritizing students' and staff's protection and well-being. Comprehensive safety guidelines should be designed to provide clear protocols, standards, and resources to mitigate risks and promote safety in schools.

Moving forward, policymakers, stakeholders, and relevant authorities must prioritize developing and implementing comprehensive safety policies that address the full spectrum of safety concerns. This may involve conducting thorough assessments of existing policies, engaging with stakeholders to identify priority areas, leveraging data and research insights to inform policy decisions, and fostering collaboration across sectors to ensure effective implementation and enforcement of safety measures.

By adopting a proactive and inclusive approach to safety policy development, schools can better safeguard the welfare of their citizens, enhance resilience to emerging threats, and foster environments that promote safety, security, and well-being for all.

Areas Where Safety Equipment Can Be Found in School

The main areas where safety equipment can be accessed are classroom, laboratories, dormitory, dining halls and offices. In all these areas, the main equipment found was fire extinguisher.

Ease of Access

Yes= 10(22.7%)

No=34(77.3%)

Evaluating safety equipment access across various areas within the institution revealed several notable findings. The primary locations where safety equipment could be accessed were classrooms, laboratories, dormitories, dining halls, and offices. Across these spaces, the fire extinguisher was the predominant safety equipment, highlighting its critical role in fire prevention and emergency response protocols.

However, despite the presence of fire extinguishers as the main safety equipment, the ease of access to these resources varied significantly among respondents. The survey data indicated that only a minority, constituting 22.7% of respondents, reported ease of access to fire extinguishers in these areas. Conversely, a substantial majority, representing 77.3% of respondents, expressed challenges or limitations in accessing fire extinguishers when needed.

The disparity in ease of access to safety equipment underscores potential barriers and deficiencies in the institution's safety infrastructure and protocols. Limited accessibility to essential safety resources like fire extinguishers can significantly compromise the institution's ability to effectively respond to fire emergencies and mitigate potential risks to life and property.

Several factors may contribute to the observed challenges in accessing safety equipment. These may include inadequate distribution and placement of fire extinguishers, lack of clear signage or guidance on their location, insufficient training or awareness among staff and students on proper usage and protocols, and maintenance issues that affect the functionality and readiness of the equipment.

Addressing the ease of access to safety equipment requires a multifaceted approach that involves collaboration between institutional authorities, safety personnel, and relevant stakeholders. Key strategies may include:

1. **Assessment and Enhancement of Placement:** Conducting comprehensive assessments of the placement and distribution of fire extinguishers in high-risk areas to ensure optimal coverage and accessibility.
2. **Improving Signage and Visibility:** Implementing clear signage and visual indicators to guide individuals to the location of fire extinguishers and other safety equipment.
3. **Training and Awareness Programs:** Providing regular training sessions and awareness programs to educate staff and students on fire safety protocols, including using fire extinguishers and emergency response procedures properly.
4. **Maintenance and Inspection Protocols:** Establish rigorous maintenance and inspection protocols to ensure the functionality and readiness of safety equipment, including regular checks for expiration dates and servicing requirements.
5. **Feedback Mechanisms:** Establishing channels for feedback and reporting to enable stakeholders to raise concerns or issues related to safety equipment accessibility, allowing for prompt resolution and improvements.

By addressing these areas and implementing proactive measures to enhance the ease of access to safety equipment, the institution can strengthen its overall safety preparedness and resilience, fostering a safer and more secure environment for all community members.

Training on Use of Equipment

69.2% responded that they lacked training. 30.8% indicated that they received training, after about five years, which did not guarantee safety preparedness.

The survey findings shed light on the critical aspect of training related to using safety equipment within the institution. A significant majority, comprising 69.2% of respondents, reported a lack of training on the proper usage of safety equipment. This statistic underscores a concerning gap in safety preparedness and highlights the need for proactive measures to address knowledge and skill deficiencies among staff and students.

Moreover, the data revealed that 30.8% of respondents had received training on using safety equipment, albeit after a considerable delay of approximately five years. However, despite this training, there were indications that it did not guarantee adequate safety preparedness. This raises important questions about the effectiveness and sustainability of training initiatives and the need for continuous reinforcement and ongoing skill development to ensure proficiency and readiness in emergencies.

The delayed provision of training and the lack of assurance regarding safety preparedness among trained individuals underscore systemic challenges and shortcomings in the institution's approach to safety education and training programs. These challenges may include insufficient resources for safety training, limited access to qualified trainers or instructors, and a lack of structured and comprehensive training curricula tailored to the institution's specific needs and risks.

To address the identified issues and improve training outcomes, several key strategies can be considered:

1. **Timely and Regular Training Sessions:** Implement regular and timely training sessions on using safety equipment, emergency response protocols, and safety best practices to ensure that staff and students are adequately prepared and informed.
2. **Tailored Training Programs:** Developing tailored training programs that address the unique safety challenges and requirements of different departments, facilities, and job roles within the institution to enhance relevance and effectiveness.
3. **Hands-On Practical Exercises:** Incorporating hands-on practical exercises and simulations into training sessions to provide participants with opportunities to apply theoretical knowledge and develop practical skills in a controlled environment.
4. **Continuous Improvement and Evaluation:** Establishing mechanisms for continuous improvement and evaluation of training programs to identify areas for enhancement, address gaps in knowledge and skills, and ensure alignment with evolving safety standards and best practices.
5. **Promoting a Culture of Safety:** Fostering a culture of safety that prioritizes awareness, responsibility, and accountability among all members of the institution's community, encouraging active participation and engagement in safety initiatives and training efforts.

By prioritizing comprehensive and proactive training initiatives, the institution can empower staff and students with the knowledge, skills, and confidence needed to effectively utilize safety equipment, mitigate risks, and respond appropriately to emergencies, ultimately fostering a safer and more resilient environment for all.

Enough Security Lights

84.6% indicated that the school was well lit, with bulbs and lighting points spread across the classrooms, dormitories, offices, and other premises of the school. 15.4% suggested that the lighting was inadequate.

The survey data provides insights into the availability and adequacy of security lighting across the school premises. A significant majority, comprising 84.6% of respondents, reported that the school was well lit across classrooms, dormitories, offices, and other areas. This indicates a proactive approach by the institution towards enhancing visibility and ensuring a safe and secure environment for students, staff, and visitors.

The widespread distribution of light system across various locations within the school reflects a comprehensive approach to lighting infrastructure, aimed at minimizing dark or poorly illuminated areas that could pose security risks or create safety concerns. Well-lit environments deter potential threats and intruders and contribute to a sense of comfort, visibility, and overall well-being among occupants.

However, despite the majority opinion regarding adequate lighting, a notable 15.4% of respondents suggested that the lighting was insufficient. This minority viewpoint highlights potential areas of concern or disparities in lighting coverage that warrant attention and further assessment by school authorities.

The perception of inadequate lighting may stem from various factors, including uneven distribution of lights, lighting points, malfunctioning or damaged fixtures, areas prone to shadows or blind spots, and insufficient illumination in outdoor or secluded areas. Addressing these concerns requires a proactive and systematic lighting planning, design, and maintenance approach.

To ensure that lighting meets the diverse needs and expectations of the school community, several key considerations can be explored:

1. **Comprehensive Lighting Assessments:** Conducting comprehensive assessments of lighting infrastructure across the school premises to identify areas of insufficient illumination, potential safety hazards, and opportunities for improvement.
2. **Strategic Lighting Upgrades:** Prioritizing strategic lighting upgrades and enhancements in areas identified as lacking adequate illumination, including outdoor pathways, parking lots, entrances, and perimeter areas.
3. **Enhanced Maintenance Protocols:** Implementing proactive maintenance protocols to ensure the ongoing functionality, reliability, and efficiency of lighting fixtures, including regular inspections, repairs, and replacements as needed.
4. **Community Feedback and Engagement:** Soliciting feedback and input from students, staff, and stakeholders regarding their perceptions of lighting adequacy, safety concerns, and preferences, and incorporating this feedback into lighting improvement initiatives.
5. **Integration with Security Measures:** Integrating lighting enhancements with broader security measures and strategies, such as surveillance systems, access controls, and emergency response protocols, to create a comprehensive and layered approach to campus security.

By prioritizing the availability of sufficient security lighting and addressing areas of concern or inadequacy, the school can create a safer, more secure, and welcoming environment conducive to learning, collaboration, and community engagement

Safety Measures Put in Place for Safety Preparedness

46.2% indicated that there was no safety preparedness in place. 53.8% indicated that they had safety measures in place. Some of them include: CCTVS, ramps, extinguishers, arrestors, and fences.

The survey findings revealed insights into the safety measures implemented by the institution to enhance safety preparedness and mitigate potential risks. While a significant portion, representing 46.2% of respondents, indicated a lack of safety preparedness measures, a majority, comprising 53.8% of respondents, reported the presence of various safety measures in place.

Among the safety measures identified by respondents, several key initiatives and infrastructure enhancements were highlighted:

- **CCTVs (Closed-Circuit Television Systems):** The installation of CCTV cameras serves as a critical surveillance and monitoring tool, allowing for real-time observation of activities and incidents across the campus. CCTVs enhance security by deterring potential threats, assisting in identifying and investigating security breaches, and promoting a safer environment for students, staff, and visitors.
- **Ramps:** Ramps within the school premises indicate a commitment to accessibility and inclusivity for individuals with mobility challenges or disabilities. Ramps facilitate barrier-free access to buildings, classrooms, and facilities, ensuring equal opportunities for all school community members to participate fully in academic and extracurricular activities.

- **Fire Extinguishers:** The availability of fire extinguishers reflects proactive measures to mitigate fire risks and promote fire safety awareness within the institution. Fire extinguishers serve as essential firefighting equipment, allowing for prompt and effective response to incipient fires and helping to prevent the escalation of fire incidents that could endanger lives and property.
- **Lightning Arrestors:** Lightning arrestors play a crucial role in protecting buildings and structures from the damaging effects of lightning strikes. By safely dissipating electrical charges and redirecting lightning currents to the ground, lightning arrestors help minimize the risk of fire, structural damage, and electrical hazards during thunderstorms and adverse weather conditions.
- **Fencing:** Installing fences around the school perimeter enhances security by establishing clear boundaries and controlling access to the premises. Fencing helps deter unauthorized entry, trespassing, and vandalism while providing a sense of safety and containment for students, staff, and visitors within the school environment.

These safety measures collectively contribute to a comprehensive approach to the institution's safety preparedness and risk management. By investing in proactive safety initiatives, infrastructure upgrades, and awareness-raising efforts, the school demonstrates a commitment to fostering a safe, secure, and conducive learning environment for all community members.

Continued evaluation, refinement, and reinforcement of safety measures are essential to adapt to evolving threats, address emerging risks, and ensure ongoing compliance with safety standards and best practices. By prioritizing safety as a core value and integrating safety considerations into all aspects of school operations, the institution can effectively safeguard the well-being and resilience of its students, staff, and stakeholders.

Challenges Towards Safety Preparedness

99.8 % reported that they have financial challenges, which prevent them from boosting school security. 23.07% have a porous fence, which is also an impediment to security. Regarding the untrained personnel, 46.2% reported on the need to train the security guards on areas of security. The students also vandalize the equipment due to lack of enough information about the use of the same. 7.7% of the participants reported that collusion is a major drawback to safety preparedness. The collusion of the surrounding community and non-teaching staff make it easy to sneak in drugs and edibles into the school. In the same vein, they indicated that non-teaching staff do collude with the community and easily smuggle out school items. 46.2% propounded that inadequate personnel and equipment pose a challenge to safety preparedness in school.

The survey findings revealed a multitude of challenges that the institution faces in its efforts to enhance safety preparedness and security measures. These challenges encompass various aspects ranging from financial constraints to operational deficiencies and external factors impacting safety and security within the school environment.

1. **Financial Constraints:** Overwhelmingly, 99.8% of respondents identified financial limitations as a significant barrier to boosting security measures in the school. Insufficient funds restrict the institution's ability to invest in critical security infrastructure, personnel training, and technology upgrades to address emerging threats and effectively enhance safety protocols.
2. **Porous Fence:** Nearly a quarter of respondents, representing 23.07%, highlighted the presence of porous fencing as an impediment to security. Inadequate perimeter security compromises the integrity of the school's boundaries, making it vulnerable to unauthorized entry, trespassing, and external threats.
3. **Untrained Personnel:** A significant portion, 46.2% of respondents, emphasized the need to train security guards on various aspects of security protocols and procedures. The lack of training leaves security personnel ill-equipped to handle emergencies, identify security risks, and implement effective response strategies, undermining overall safety preparedness.
4. **Vandalism by Students:** The survey revealed that students' lack of sufficient information about the proper use of equipment contributes to vandalism. Vandalism compromises the

functionality and integrity of safety equipment and creates safety hazards and financial burdens for the institution.

5. **Collusion and Drug Smuggling:** Collusion between the surrounding community and non-teaching staff poses a significant challenge to safety preparedness. This collusion facilitates the smuggling of drugs and other contraband items into the school premises, compromising the safety and well-being of students and staff. Additionally, non-teaching staff colluding with the community may facilitate the unauthorized removal of school items, further undermining security measures.
6. **Inadequate Personnel and Equipment:** Nearly half of the participants, accounting for 46.2%, identified inadequate personnel and equipment as major challenges to safety preparedness in the school. Insufficient staffing levels and outdated or insufficient equipment hinder the institution's ability to respond effectively to security threats and emergencies, leaving students, staff, and visitors vulnerable to harm.

Addressing these multifaceted challenges requires a comprehensive and strategic approach that involves:

- Advocating for increased funding and resource allocation to support security initiatives and infrastructure upgrades.
- Implementing training programs to equip security personnel with the knowledge, skills, and capabilities needed to enhance safety protocols and emergency response.
- Strengthening perimeter security through the installation of robust fencing and access control measures.
- Implementing awareness campaigns and educational programs to promote responsible behavior among students and prevent vandalism.
- Implementing stringent measures to prevent collusion and smuggling activities, including enhanced monitoring and surveillance protocols.
- Prioritizing the recruitment and retention of qualified personnel and the acquisition of modern security equipment to bolster safety preparedness efforts.

By addressing these challenges proactively and collaboratively, the institution can create a safer and more secure environment conducive to learning, growth, and well-being for all school community members.

Ways of Solving Safety Preparedness Challenges

Funding was reported as the greatest concern. The respondents indicated that 61.5% require more funding to improve safety in the schools. 38.5% suggested on the need of training teachers, students, non-teaching staff, and security guards. Notwithstanding 30.8% proposed on the acquisition of safety equipment to enhance the preparedness of safety.

The survey data highlights several key strategies proposed by respondents to address the challenges faced in enhancing safety preparedness within schools. These solutions aim to mitigate financial constraints, improve training and awareness, and enhance the acquisition and utilization of safety equipment to foster a safer and more secure learning environment for students, staff, and stakeholders.

1. **Increased Funding:** A majority of respondents, accounting for 61.5%, identified the need for additional funding as a critical factor in improving school safety measures. Increased funding would enable schools to invest in essential security infrastructure, technology upgrades, personnel training, and maintenance initiatives necessary to address emerging threats and ensure comprehensive safety preparedness.
2. **Training and Education Programs:** A significant portion, comprising 38.5% of respondents, emphasized the importance of training teachers, students, non-teaching staff, and security guards on various aspects of safety and security protocols. Comprehensive training programs would empower individuals within the school community with the knowledge, skills, and

awareness needed to identify potential risks, respond effectively to emergencies, and promote a culture of safety and vigilance.

3. Acquisition of Safety Equipment: Nearly a third of respondents, representing 30.8%, advocated for the acquisition of safety equipment as a key strategy to enhance safety preparedness. This includes investing in essential safety resources such as fire extinguishers, first aid kits, emergency response tools, surveillance systems, and protective gear to equip schools with the necessary resources to mitigate risks and respond promptly to safety incidents.

Implementing these solutions effectively requires a coordinated and multi-faceted approach that involves collaboration between school administrators, policymakers, community stakeholders, and relevant authorities. Key strategies for addressing safety preparedness challenges include:

- Advocating for Increased Funding: Schools can collaborate with government agencies, community organizations, and private donors to secure additional funding and resources dedicated to safety initiatives. This may involve lobbying for increased budget allocations, exploring grant opportunities, and leveraging public-private partnerships to fund critical safety projects and initiatives.
- Developing Comprehensive Training Programs: Schools should develop and implement comprehensive training programs tailored to the specific needs and roles of teachers, students, non-teaching staff, and security guards. Training sessions should cover a range of topics including emergency response procedures, crisis management, conflict resolution, first aid techniques, and safety protocols to ensure that all school community members are prepared to respond effectively to safety threats and emergencies.
- Investing in Safety Equipment: Schools should prioritize acquiring and maintaining essential safety equipment to enhance safety preparedness. This may involve conducting safety assessments to identify equipment needs, sourcing high-quality safety products from reputable suppliers, and implementing regular inspection and maintenance protocols to ensure that safety equipment is in good working condition and readily accessible when needed.

By implementing these proactive measures and prioritizing safety as a fundamental priority, schools can create a secure and supportive learning environment that promotes the well-being, confidence, and academic success of all students and stakeholders. Through collaborative efforts and sustained commitment to safety preparedness, schools can effectively address safety challenges and foster a culture of safety, resilience, and empowerment within their school communities. In furtherance of the same, themes were discerned from the participants' responses to the research questions.

The themes identified during the interviews were: the need for policy guidelines on safety preparedness, the need to involve all stakeholders in safety preparedness and the need to prioritize resources towards implementing school safety policies and programs.

Theme 1: The Need for Policy Guidelines on Safety Preparedness

The interview findings indicated that most of the schools had no policy guidelines on school safety preparedness. However, few schools had a customized policy on fire owing to the recent increase in fire incidences in boarding schools (Alunga & Maiyo, 2019). Also, this agreed with a study by Njoki Wachira & Wangethi Waiganjo, Njoki et al (2014) whose findings revealed that fire outbreaks had increased across schools in Kenya recently due to limited safety awareness. Otherwise, other safety areas were not addressed, and in case of an attack, teachers would not know exactly how to respond. Further, it was observed that some knowledge on safety existed prompted by the ministerial requirements and administration. Most of the deputy principals had to acquaint themselves with the manual since it was a requirement especially whenever they attended promotion interviews. Also there was little awareness of the contents of the safety standards manual among the staff members since most of the manuals were kept in the principals' office. This was reliable data from the deputy principals who had over the years participated in policy making processes of the schools. These findings contradict GOK (2013) and GOK (2015) recommendations on child friendly schools regarding safety, which indicate that all children should learn in a safe and inclusive

environment. This therefore showed that without adequately securing the learning environment, students and teachers would suffer a great deal from safety challenges thus fail to maximize their potential.

Theme 2: The Need to Involve All Stakeholders in Safety Preparedness

It was observed that nothing much had been done with regard to training on skills to counter safety threats. For instance, in one station, only one teacher and a few students had been trained by the Red Cross team from the county branch which took place within a span of three years. Similarly, (Alunga & Maiyo, 2019) observed that majority of secondary schools teachers and students were not trained on First Aid measures. In addition, the Ministry of Education (2008) noted that most of the secondary schools rarely provided training on disaster preparedness to students and teachers. As much as the principals occasionally emphasized the need for safety measures in the assembly and whenever they got an opportunity, teachers never seemed serious about the issue since it looked more administrative. Negative attitude and lack of good will by the school management were also highlighted as shortcomings towards implementation of the safety standards manual which agreed with findings of Makau (2016) who established that school heads were not supporting implementation of safety measures. It was noted that the school management lacked good will to use the little funds to promote safety awareness and preparedness posing a great challenge. Due to the conflict of interest of the stakeholders and especially the priorities of the principals and board of management, others did not feel like they were part of the school as opposed to the systems theory that proposes inclusivity for the achievement of organizational goals. Stakeholders disagreed with the core purpose of safety preparedness but seemed to agree on other diverse concerns.

Theme 3: Need for Prioritization of Resources Towards Implementation of School Safety Policies and Programs

The responses showed an acute inadequacy of safety equipment, which was greatly affected by limited finances. This lack of financing affected the training of teachers and other stakeholders on matters affecting safety in schools. In addition to the high turnover of the principals, their varied priorities and attitudes greatly affected safety preparedness. This made it quite challenging to purchase and sustain safety measures equipment since many funds were spent on co-curricular activities and academics. One of them observed that a lot of time and money had been directed towards academics, co-curricular activities, production of quality KCSE grades, and mean scores at the expense of critical areas such as safety.

School safety threats have been an intensifying trend due to lack of seriousness by the school administration to implement safety measures (Maria, 2019). Some deputy principals in sub-county schools argued that most issues threatening safety would only occur over the weekends when most of their students were not in school. From the findings of the study, it was clear that order of priority varied greatly as per the schools' category, the county and sub-county schools were limited in addressing the safety needs in terms of general awareness and equipping of security personnel due to economic strain and the school routine which is in agreement with the findings of (Oluwayemisi and Idowu, 2019).

Regardless of the Safety Standards Manual in public secondary schools in Kenya for the past 10 years, little had been done regarding safety awareness. (Ireru et al, 2020) asserted that teachers felt that they were inadequately prepared to handle various forms of safety threats since they were ineffectually trained and poorly prepared for the same. Similarly, they felt that safety equipment were not accessible in case of any threat to safety and also reported that no training was done on usage. This study agreed with findings of Kemunto et al (2015) who revealed that although teachers were dedicated to provide safe learning environment, they lacked awareness and reliable equipment that would be used to respond to instances of insecure situations.

Financial resources were a great hindrance to safety awareness, thus disrupting the safety implementation process which was in line with a study done by Kirimi (2014) who observed that despite several strides by public secondary schools in Kenya to implement safety standards, shortage of funds had significantly stalled success of the initiative in most of the schools. A study carried out by (Daud, Thinguri & Mugwe, 2023), (Muhumed, Gori, & Rotich, 2022) confirmed that safety standards guidelines had not

been completely implemented in schools owing to insufficient funds, and a lack of principals' personal initiative to adhere to safety standards.

**FIGURE 2
OVERVIEW OF THEMES**



The figure above describes themes generated from the interviews carried out with the deputy principals. They included the need for policy guidelines on safety preparedness, the need to involve all stakeholders in safety preparedness, and the need to prioritize resources towards implementing school safety policies. These themes highlighted the areas that ought to be addressed in order to achieve sufficient awareness level of safety preparedness among teachers, otherwise schools will still suffer decreased safety awareness.

CONCLUSION

The study revealed that most staff had little knowledge regarding school safety preparedness. This resulted from limited accessibility and inefficient use of safety and standards manual in schools. In addition, lack of knowledge to customize the safety and standards manual to fit the school safety needs. The principals had prioritized academic and co-curricular activities at the expense of school safety. The findings of the study also showed that the level of school safety awareness had some limitations ranging from lack of staff training, lack of sufficient funds, negative attitude and lack of good will by the school management to implement the safety standards manual. It is therefore important to sensitize school management and staff on the importance of having a customized school safety policy and implementing it to meet safety needs.

RECOMMENDATIONS

All secondary schools should have customized safety policies in order to effectively handle school based safety threats. In addition, all the stakeholders should be trained on safety measures to optimize performance and attain educational goals. Besides that, further study should be done on how to effectively implement safety standards in schools.

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