

## **Implementation of Safety Guidelines in Public Secondary Schools: Key Role of Strategic Interventions in Nandi County, Kenya**

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### **Abstract**

The attainment of safety standards in secondary schools is dependent on how various stakeholders are sensitized, trained and empowered on safety protocols, measures and actions. The sensitization is not a onetime event but an activity that is regularly undertaken, reviewed and updated. This paper examined the how the level of safety awareness that influences the implementation of safety standards and guidelines in public secondary schools. The study adopted a Convergent Parallel mixed method Design. The study was anchored on pragmatic research paradigm and comprehensive school safety framework. The target population was Quality Assurance and Standards Officers (QASOs) from the six Sub-Counties in Nandi, 30 principals and 2844 teachers. Sampling of QASOs was done through purposive sampling procedure, principals and teachers was done through stratified simple random sampling technique. Data collection was done using questionnaires, interview schedules and observation checklists. Qualitative data was analyzed using thematic analysis, the results revealed that there were variations in the implementation of safety standards and guidelines in public secondary schools in Nandi County. Quantitative data was analyzed through use of descriptive statistics, specifically frequencies and percentages. Inferential statistics was performed involving Pearson Correlation and Multiple Linear Regression at  $p \leq 0.05$  confidence level. The results revealed that there was a statistically significant relationship between safety awareness strategies and the implementation of safety standards and guidelines at  $p=0.011$ . It was concluded that the higher the level of safety awareness the higher the implementation of safety standards and guidelines in public secondary schools in Nandi County. The paper recommends that management of public secondary schools should ensure that members of staff (academic and non-academic) and students receive proper safety sensitization, education, training and protocols to enable them be prepared to handle and manage disaster incidents that may occur in their schools.

**Keywords:** *Awareness, Implementation, Disaster, Safety Guidelines, Sensitization, Standards*

## **1.1 Introduction**

School safety is a multidimensional concept encompassing infrastructure safety, safety awareness, emergency preparedness, health and hygiene protocols, and student supervision (Mugamu, 2018). Effective school safety is realized when clear safety standards are established and implemented. Safety awareness, in particular, is a core strategy designed to help students and other stakeholders remain vigilant and proactive in identifying and responding to potential dangers (Tan, 2019). It is widely regarded as an essential mechanism for disseminating safety information and strengthening institutional resilience (GADRRES, 2017). Research further shows that integrating safety training into the curriculum (Tipler, 2017) enhances learners' capacity to adopt measures that promote their physical and psychological wellbeing (Diaz-Vicario & Sallan, 2017). Higher levels of safety awareness also correlate with greater adoption of safety measures; in one survey, 77% of U.S. schools that reported high safety awareness had implemented key safety protocols (Rober et al., 2014). Additionally, improvements in school infrastructure combined with awareness-raising initiatives have been shown to strengthen students' knowledge, attitudes, and participation in safe-school interventions (Chet et al., 2023). Evidence from the Philippines similarly demonstrates that regular safety drills enhance preparedness among students and school personnel (Ronquillo, 2020).

In Kenya, the right of every child to safety and quality education is upheld in the Constitution, the Children's Act (2001), and the Basic Education Act No. 14 of 2013 (Republic of Kenya, 2012). To support this mandate, the Ministry of Education developed the Safety Standards Manual (MOE, 2008) to guide learning institutions in establishing safe environments. However, several factors including negative attitudes of school leaders, inadequate staff training, limited financial resources, weak safety awareness, and school culture—continue to impede the implementation of these standards (Wanderi, 2018). More than a decade after their introduction, over half of Kenyan schools have not fully complied with the safety guidelines (Alunga & Maiyo, 2019). This persistent gap heightens the risk of preventable incidents and undermines students' right to secure learning environments.

Against this background, the present study examines the extent to which safety awareness is conducted in public secondary schools in Nandi County and assesses whether such practices align with the MOE (2008) Safety Standards and Guidelines. The study further evaluates how stakeholder collaboration, infrastructure improvements, and policy enforcement influence the effective implementation of safety guidelines across public secondary schools in the county.

## **1.2 Statement of the problem**

Safety and security concerns among teachers, workers, and students pose a significant threat to the delivery of quality secondary education (Udali, 2020). Although safety awareness through training, sensitization, and dissemination of safety protocols is essential for preventing and managing risks, its actual practice in schools remains unclear. In Kenya, repeated incidents of arson, fires, theft, and property damage continue to jeopardize students' welfare, with recent cases in Nandi County such as the burning of two dormitories in a suspected arson attack illustrating the seriousness of the problem (Korir, 2023). Without adequate safety awareness among stakeholders,

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schools remain vulnerable to preventable disasters, ineffective emergency response, loss of property, learning disruptions, and heightened insecurity. Yet, the level of such awareness in Nandi County and across the country has not been empirically established. This gap limits the effective implementation of school safety standards and guidelines. Consequently, this study seeks to assess the extent of safety awareness among teachers and other stakeholders and examine how it influences the implementation of safety standards and guidelines in public secondary schools in Nandi County.

### **1.3 Objective of the study**

To assess the extent of safety awareness among teachers and other stakeholders and its influence on the implementation of safety standards and guidelines in public secondary schools in Nandi County.

### **1.4 Theoretical framework**

This study was anchored on the Comprehensive School Safety Framework (CSSF), which offers a robust conceptual foundation for examining safety practices in educational settings. The CSSF promotes school safety and the continuity of learning through three interrelated pillars: safe learning environments, school disaster management, and risk reduction and resilience (GADRRRES, 2017). The pillar on school disaster management is particularly relevant to this study, as it encompasses both proactive and reactive measures undertaken by schools to prepare for, respond to, and recover from disasters. These measures include conducting comprehensive all-hazards risk assessments, implementing risk prevention and mitigation strategies, strengthening emergency preparedness, and ensuring effective response and recovery mechanisms.

By integrating the CSSF, the study provides a structured lens through which to evaluate how safety awareness among stakeholders influences the implementation of safety standards and guidelines in public secondary schools in Nandi County. This framework enables a holistic understanding of the extent to which awareness initiatives contribute to building safer, more resilient school environments.

## **2.0 Literature review**

Safety awareness is widely regarded as a foundational component of school safety, and it plays a central role in preventing injuries and promoting students' physical and psychological wellbeing. Abdullah and Aziz (2020) contend that safety awareness should be cultivated to the highest possible level to ensure a healthy and safe school environment. The degree of safety awareness within an educational institution can be assessed through stakeholders' knowledge, understanding, and engagement in safety management. As safety forms a cornerstone of quality education, governments globally are compelled to adopt strategies that strengthen basic safety in learning institutions (Koskey & Inyenga, 2018). Safety awareness equips learners with the skills and attitudes needed to recognize risks and adopt appropriate behaviours, thereby promoting proactive measures that safeguard their wellbeing (Diaz-Vicario & Sallan, 2017). When students' basic

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safety needs are unmet, their sense of security is compromised, which in turn undermines creativity, social interaction, and learning outcomes (Cuellar & Coyle, 2020).

Schools employ multiple approaches to cultivate safety awareness, including posting safety rules, installing firefighting equipment, establishing evacuation routes, and maintaining infrastructure. Awareness can also be enhanced through songs, media-based interventions, and the integration of disaster risk education in the curriculum (Wanjala & Onyango, 2018). Educating learners about hazard risks and appropriate responses saves lives and builds resilience (GADRRRES, 2017). Integrating hazard education into the curriculum promotes realistic risk perceptions, strengthens preparedness, and reduces fear (Tipler, 2017). Thus, the presence of safety manuals, guidelines, and training materials is integral to effective implementation of school safety standards.

Teachers play a pivotal role in school emergencies as they are often the first responders. Consequently, they require comprehensive training to make informed decisions under stressful and time-sensitive conditions (Mugamu, 2018). Students rely on teachers for guidance during and after emergencies, making teachers' competence critical (Tipler, 2017). Their capacity to protect learners is closely tied to their level of training, and growing attention is being placed on preparing teachers to address the cognitive and emotional needs of students during crises. Evidence indicates a broad consensus that equipping teachers and students with relevant safety knowledge and skills enhances their ability to respond appropriately during emergencies. Different countries have developed localized approaches to safety awareness and training, reflecting varied school safety challenges.

Students' safety awareness is a broad concept encompassing recognition of potential hazards within school environments and adverse weather conditions (Richmond et al., 2014). Once risks are identified, learners can adopt appropriate behaviours that minimize harm. Disaster risks significantly decline when students possess hazard awareness, education, and practical skills (Safapour & Kermanshachi, 2019; Amri, 2015). Survival training, often requiring expert instruction, is a demanding but essential component of disaster education (Tan et al., 2016). Proactive thinking, caution, and preventive behaviour further reinforce student safety (Baskerville et al., 2014). Effective safety learning should incorporate practical, real-life examples and utilize electronic media as a complementary mode of instruction (Wang et al., 2018). Given that secondary school students are in a developmental stage characterized by advanced reasoning and moral understanding (Schonert-Reichl et al., 2015), this period is ideal for fostering responsible behaviour and decision-making (Broadbent-Papadopoulos, 2014). Safety literacy empowers learners to participate actively in managing personal and community wellbeing (Rheault et al., 2021) and is essential in helping them cope with unexpected crises (Mariotti & Hefti, 2015). Prepared students demonstrate enhanced psychological readiness, confidence, and collaboration with emergency responders (Khorram-Manesh et al., 2018).

Teachers' creativity, commitment, and collaboration significantly influence the quality of Disaster Risk Reduction (DRR) education (Amri et al., 2017). Experienced teachers can serve as role models for peers, reinforcing best practices in safety education (Tkachuck et al., 2018). However, implementation of practical DRR activities depends heavily on school resources (Nahayo et al., 2017). The challenge often lies not in lacking knowledge but in overcoming barriers to effective delivery. Many teachers acknowledge that training facilitates the integration of DRR content in the

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classroom (Amri et al., 2017), and combining scientific knowledge with hands-on training helps translate risk concepts into meaningful learning (Nahayo et al., 2017). Nonetheless, global assessments reveal substantial gaps in CSSF implementation. A 2017 review of 68 countries showed that while about half required emergency drills, fewer than a quarter incorporated disaster management into teacher training, and only a small proportion offered DRR curriculum supported by systematic teacher preparation (Paci-Green et al., 2020).

Collectively, the literature underscores the centrality of safety awareness and training for students and teachers in enhancing school safety, yet also highlights persistent gaps in implementation due to limited resources, inadequate training, and inconsistent integration of DRR education into school systems. These gaps reinforce the need for context-specific assessments such as the current study, which evaluates safety awareness and its influence on the implementation of safety standards in public secondary schools in Nandi County.

### **3.0 Materials and methods**

This study was conducted in public secondary schools in Nandi County, Kenya, using a predominantly quantitative research design to examine safety awareness and its influence on the implementation of safety standards and guidelines. The Comprehensive School Safety Framework (CSSF) guided the study and provided the conceptual basis for assessing school safety practices.

The target population consisted of six Quality Assurance and Standards Officers (QASOs), 30 principals, and 2,844 teachers. While all QASOs and principals were included in the study, a sample of 351 teachers was selected using stratified random sampling, with the sample size determined through Cochran's formula to ensure adequate representation across school categories.

Structured questionnaires served as the primary data collection instrument for the quantitative component. Limited qualitative data were obtained through brief semi-structured interviews with QASOs and principals, solely to clarify, complement, and deepen the interpretation of quantitative findings. All instruments were subjected to face, content, and construct validation, and reliability was confirmed through a pilot study.

Quantitative data were analyzed using descriptive statistics; frequencies and percentages and inferential statistics, specifically Pearson's correlation, to test the research hypotheses at the 0.05 significance level. The supplementary qualitative insights were analyzed descriptively to support interpretation of the quantitative results. All ethical protocols, including informed consent, confidentiality, and voluntary participation, were strictly observed throughout the study.

#### 4.0 Results and discussions

**Table 1. Awareness of Safety Standards and Guidelines in Secondary Schools**

Key Issue	Description	Implications
<b>Low Awareness Among Stakeholders</b>	Some principals, teachers, and students lack full understanding of the Ministry of Education's Safety Standards Manual.	Leads to poor implementation and oversight of safety protocols.
<b>Limited Training and Sensitization</b>	Few schools conduct regular workshops or training on safety guidelines for staff and students.	Reduces preparedness and response capacity during emergencies.
<b>Inadequate Dissemination of Guidelines</b>	Safety manuals and circulars are not consistently distributed or explained to school stakeholders	Creates gaps in knowledge and compliance.
<b>Weak Monitoring Mechanisms</b>	Lack of structured follow-up by education officials to reinforce adherence to safety standards.	Schools may neglect key safety measures without accountability.
<b>Infrastructure Challenges</b>	Some schools lack basic safety infrastructure like fire extinguishers, secure fencing, and emergency exits.	Increases vulnerability to accidents and security threats.
<b>Reactive vs. Proactive Culture</b>	Safety measures are often implemented after incidents occur, rather than through proactive planning.	Delays in addressing risks can lead to preventable harm.
<b>Role of Strategic Interventions</b>	Strategic interventions such as School Safe Zones and partnerships with NGOs have shown promise in improving awareness and safety culture.	Need for scaling up and institutionalizing such programs across all schools.

**Sources:** Adapted from Ministry of Education (2008) and data from the field

The findings revealed uneven awareness and preparedness for school safety in Nandi County secondary schools among teachers, students, and parents. While 57% of teachers reported being fully aware of safety standards and guidelines, 13.8% acknowledged limited awareness, indicating that sensitization efforts have yielded partial success but significant gaps remain. Many teachers relied on internet sources rather than structured guidance from school management, as noted by Mugo et al. (2025), emphasizing the need for proactive leadership to ensure comprehensive training. Safety training was infrequently prioritized, with 45.9% of respondents reporting no training and only 26.1% confirming its provision, leaving teachers insufficiently equipped to respond effectively during emergencies.

Teacher preparedness for safety-related incidents was generally low, as only 39.7% felt fully prepared, while 27.1% reported being unprepared. This aligns with Simiyu (2020), who observed moderate preparedness among teachers in Vihiga County due to limited in-service training. Student awareness of safety measures was similarly inconsistent, with 31.4% reporting low awareness and 42.7% indicating familiarity with safety procedures, corroborating studies by Ruslan et al. (2022) and Udali (2020), which highlight the consequences of inadequate training for student safety preparedness.

Parental involvement in school safety was also limited, with 37.9% of respondents perceiving parents or guardians as unaware of safety measures, while 34.1% reported awareness. Masekela et al. (2024) similarly found that safety policies were often developed without consultation and poorly communicated to stakeholders. Engaging parents through awareness meetings, as recommended by Ndungu, Kingi, and Kalai (2023), can enable families to support initiatives that safeguard students' movement between home and school.

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Teachers' practical capacity in safety management was generally low. Only 28.5% were proficient in conducting safety drills, while 42.7% were not. Access to safety documents was uneven, with 35% reporting inaccessibility, confirming Mugo et al. (2025). Participation in safety committees was limited to 32.9%, often restricted to leadership positions, whereas Ndungu et al. (2023) observed broader student inclusion elsewhere. Safety workshops were infrequent, with 52.9% reporting absence. Emergency skills were inconsistently developed, as 41.2% could administer first aid, 40.3% could operate fire extinguishers, and 42.9% were familiar with basic security protocols. These gaps are compounded by a lack of tailored safety policies and limited awareness of the Ministry of Education Safety Standards Manual (Udali, 2020; Mugo et al., 2025). Taken together, the findings reveal systemic weaknesses in training, policy implementation, and stakeholder engagement, which undermine the ability of schools to respond effectively to safety incidents and protect students and staff.

To determine the level and direction of relationship between safety awareness strategies and implementation of safety standards, Pearson correlation coefficient was computed. Results are provided in Table 3.

**Table 2: Relationship between safety awareness and implementation of safety standards and guidelines**

		Safety Awareness Strategy	Implementation of SS&G
<b>Safety Awareness Strategy</b>	Pearson Correlation	1	.300**
	Sig. (2-tailed)		.000
	N	340	340
<b>Implementation of SS&amp;G</b>	Pearson Correlation	.300**	1
	Sig. (2-tailed)	.000	
	N	340	340

\*\* . Correlation is significant at the 0.01 level (2-tailed).

The Pearson correlation analysis revealed a weak but statistically significant positive relationship between safety awareness strategies and the implementation of safety standards and guidelines,  $r(338) = .30$ ,  $p = .001$ . This suggests that as safety awareness among teachers and school stakeholders increases, there is a corresponding, though modest, improvement in the implementation of safety standards and guidelines. The strength of the correlation indicates that while safety awareness contributes to better implementation, other factors such as school management support, availability of resources, and prior training likely also influence adherence to safety protocols. The finding aligns with previous studies, such as Mugo et al. (2025), which noted that teacher sensitisation alone was insufficient to ensure full implementation of safety measures, highlighting the importance of structured guidance and institutional reinforcement. Practically, the result underscores the value of integrated safety programs that combine awareness campaigns with clear operational strategies, as increases in awareness can meaningfully support more consistent and effective implementation of safety standards in schools.

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## 5.0 Conclusions and Recommendations

### Conclusions

The study reveals that gaps in awareness, skills, and engagement significantly compromise school safety in Nandi County secondary schools. Limited teacher preparedness, inconsistent student and parent awareness, and insufficient participation in safety activities suggest that schools are not fully equipped to prevent or respond effectively to emergencies. These deficiencies highlight the need for proactive leadership, inclusive stakeholder engagement, and systematic training to foster a strong culture of safety. Strengthening institutional safety requires not only disseminating guidelines but also translating knowledge into practice through drills, workshops, and active involvement in safety committees. By integrating awareness, practical skills, and collaborative engagement, schools can build resilient safety systems capable of reducing risks and improving preparedness for emergencies.

### Recommendations

Base on the findings and conclusions, this study recommends that:

1. Schools should implement regular, structured safety training and drills for teachers and staff to enhance preparedness and practical skills.
2. Stakeholders should be actively involved in safety planning, committees, and awareness programs to strengthen community engagement and shared responsibility.
3. Ministry of Education and School management should ensure that safety policies, guidelines, and resources are accessible, well-communicated, and consistently applied across all stakeholders.

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### Conflict of Interest

Authors have declared that no competing interests exist.

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