

Policy Brief

**The Burning Question of School Fires in Kenya: The
Unexplored Story**

By

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Abstract

Fire hazards occur frequently in Kenya's public secondary schools. Fire causes huge loss of student lives and school properties every year. The study tried to address the problem fire hazards in public secondary schools, which has affected effective teaching and learning in schools. Since promoting safe school environments is one of the key targets of the **Sustainable Development Goals** on education, it seemed a worthwhile venture to investigate the question of School Fires in Kenya This supposition is the rationale for the research presented here. The aim of the research was:

To examine the extent to which the problem of fire hazards is understood in public secondary schools and to explore how school administrators and teachers might be supported in integrating fire safety into school activities and processes using active students as the main focus

Worst School Fire Tragedies - Kenya

- The 2001 tragedy at Kyanguli Secondary School where 67 boys lost their lives;
- Bombolulu Girls Secondary School - 1998
- Nyeri High School - 1999 four school prefects were set on fire
- Endarasha Boys Secondary School - 2010 -Students set ablaze a dormitory killing two of their schoolmates
- St Kizito Secondary School Tigania (Meru) - 19 girls died and many were raped - July 13 and 14, 1991
- Moi Girls high school -2017 - eight students killed

School Fires in Kenya and Sustainable Development Goals



1.3 Objectives of the Study

1. To evaluate students' knowledge, attitudes and practices regarding fire out breaks in public secondary schools.
2. To assess the risk and vulnerability to fire outbreaks that students in public secondary face or are exposed to.
3. To establish what fire disaster preparedness and response mechanisms are available in Kenya's public secondary schools.
4. What precautions are in place to deal with fire outbreak in Kenya's public secondary schools?
5. To establish the level of implementation of the Safety Standard Manual for Schools in Kenya

Methodology

A quantitative survey, semi-structured interviews with key stakeholders in public secondary schools and observation of school buildings and facilities were used to elicit data that could meet the research objectives. The study was carried out in Machakos County. This County was selected because schools in the County have experienced some of the worst fire hazards in Kenya's history. The study interviewed students, teachers, heads of schools and quality assurance and standard officers in the County. The study targeted all categories of public secondary schools, namely single sex and mixed schools; and boarding and day schools.

Findings

Objective 1: Students' Knowledge, Attitudes and Practices Regarding Fire Out Breaks in Public Secondary Schools.

a) Students' Knowledge Regarding Fire Outbreaks in Schools

- Majority of the students had very good knowledge of what fire is, how to detect a fire, the dangers of fire and how to escape from fire.
- 30 % of the students who took part in the study had not been informed about fire hazard or fire disaster.
- The main sources of fire disaster information were: the school, television and home.
- Students' Level of Fire Hazards/Disaster Knowledge was mainly average (49%).
- Fire safety has been omitted from the school curriculum.

b) Students' Attitudes Regarding Fire Outbreaks in Schools

- That majority (65%) of the students do not think about fire hazard or outbreak in their schools. Only 35% think about it.
- The reasons given for thinking about fire hazard or outbreak in schools are: Events that have occurred in their area; Talking to other people about fire hazards/preparedness; Requirements from school to consider fire hazards/preparedness and school activities/discussions
- The respondents indicated that some students in public secondary schools would deliberately set fires in schools.
- The deliberate setting of fires in schools was prevalent in the three categories of schools.
- The reasons why youth set fires in schools were:
 - 1 being influenced by peers, (friends);
 - 2 expressing out their feelings;
 - 3 lacking the ability to concentrate in their studies;
 - 4 having behaviour problems, (indiscipline);
 - 5 showing off for peers, (friends) and refusing to cooperate.



c) Students' Practices Regarding Fire Outbreaks in Schools

- The leading cause of fire occurrence in public secondary schools was **arson**. This is deliberate or intentional setting of fire by students.
- What the students would do in case of fire outbreak: Report to the school management; Raise an alarm (shout); Switch off all electrical equipment; Fight the fire and Evacuate the place
- Students could extinguish fire by Using fire extinguishers, Pouring water and Throwing sand

Objective 2: The Risk and Vulnerability to Fire Outbreaks that Students in Public Secondary Face or Are Exposed to.

a) Risks to fire outbreaks that students in public secondary schools are exposed to or face.

- 50% of the schools have never carried out fire safety assessment for their schools and the school buildings. This puts the occupants of such school at very high risk in case of a fire breakout.
- The likelihood of students being affected by fire outbreak in their school was high
- The time of fire occurrence was mainly at night and during school days especially on weekends and schools fire occurred in the last quarter of secondary school term on the months of June and July
- The school fire outbreaks originated mainly from school dormitories.
- Fire risks in school compound are: Faulty electrical appliances and gadgets; flammable substances; firewood; faulty fire equipment; Gas cookers; cigarettes and Electric cookers.
- All schools faced the risk of the likelihood of fire disaster occurrence.

b) Vulnerability to fire outbreaks that students attending public secondary schools face or are exposed to.

- The severity of impact expected from an occurrence of a fire disaster would be varied ranging from terminal, devastating and critical to controllable.

Objective 3: Fire Disaster Preparedness and Response Mechanisms Available in Kenya's Public Secondary Schools

a) Fire Disaster Preparedness in Kenya's Public Secondary Schools

- 40% of the school principals indicated that they were not satisfied with the level of fire outbreak preparedness or mitigation in their schools.
- The general level of school disaster preparedness was either low preparation or moderate preparation.
- 57% of the students indicated that their schools did not have a prepared emergency kit.
- 69% of the students are not informed of the emergency plan of their schools.
- The display of emergency evacuation plans are not posted in all classrooms and meeting rooms
- The resources and procedures that have been put in place to deal with fire outbreaks in schools:
 - Installation of fire extinguishers and emergency lighting
 - school bell
 - creating ways of calling for assistance
 - Training teachers and students in simple first-aid skills
 - creating fire assembly points, safe areas

Since the day that fire occurred they have never kept any procedure or resources that can alert us

- scheduling evacuation (fire) drills
- 51% of the schools have fire escape plan/fire exits; while 45% do not have
- The escape routes were accessible in some schools (46%) and also were reported to be inaccessible by 46% in other schools.
- Very few students (31%) had been taught about disaster preparedness in the classroom (school).
- Those schools that are designed and built according to the current building codes/safety standards for disaster safety have a low likelihood of occurrence of fire disaster in school.
- Schools that are not regularly inspected by a qualified engineer are likely experience impact of fire disaster occurrence which is devastating.
- None of the schools had included fire safety as one aspect to be observed by students in the school rules.
- Schools with fire safety plan for school buildings have low likelihood of occurrence of fire disaster.

Few fire extinguishers that sometimes are empty and workforce doesn't know how to use them.

b) Fire Disaster Response Mechanisms Available in Kenya's Public Secondary Schools

- 74% of the respondents indicated that most schools lacked a fire assembly point.
- Exit doors open to the outside and they are available unobstructed. However, they not clearly marked with appropriate signs.
- Majority reported availability of firefighting equipment. A few reported lack of the equipment.
- Firefighting equipment identified by the students and for use in schools include: fire extinguishers, fire escape routes and Fire alarm systems

Objective 4: Precautions in Place to Deal with Fire Outbreak in Kenya's Public Secondary Schools

- Measures to prevent fire outbreaks were generally lacking in schools and in the case were they were available, they were said not to be adequate.
- Fire extinguishers are located in all school buildings were not sufficient for whole school.
- Fire evacuation notices and compliant signage are not prominently displayed throughout all buildings.
- Schools were not equipped with automatic fire detection and alarm systems.
- The respondents indicated that some exit doors do not open to the outside.
- Exit doors were not marked with appropriate signs.
- The fire exits were reported by half of the respondents to be available unobstructed; while the other half reported they were not.

- Majority (77%) of the student respondents indicated that they did not know what fire drill is and majority (87%) of the students had not practiced fire drill in their school.
- There is a general consensus among the students that fire drills are necessary in schools.
- Students can open their dormitory/ classroom windows if there is a fire in the building.
- The precautions to deal with fire outbreaks in schools are:
 - 1 availability of fire -fighting equipment;
 - 2 fire exits and escape routes;
 - 3 restriction of fire risky items;
 - 4 and fire evacuation procedure/fire emergency plan and
 - 5 CCTV cameras and Counseling
- 33% of the schools were not insured against fire.

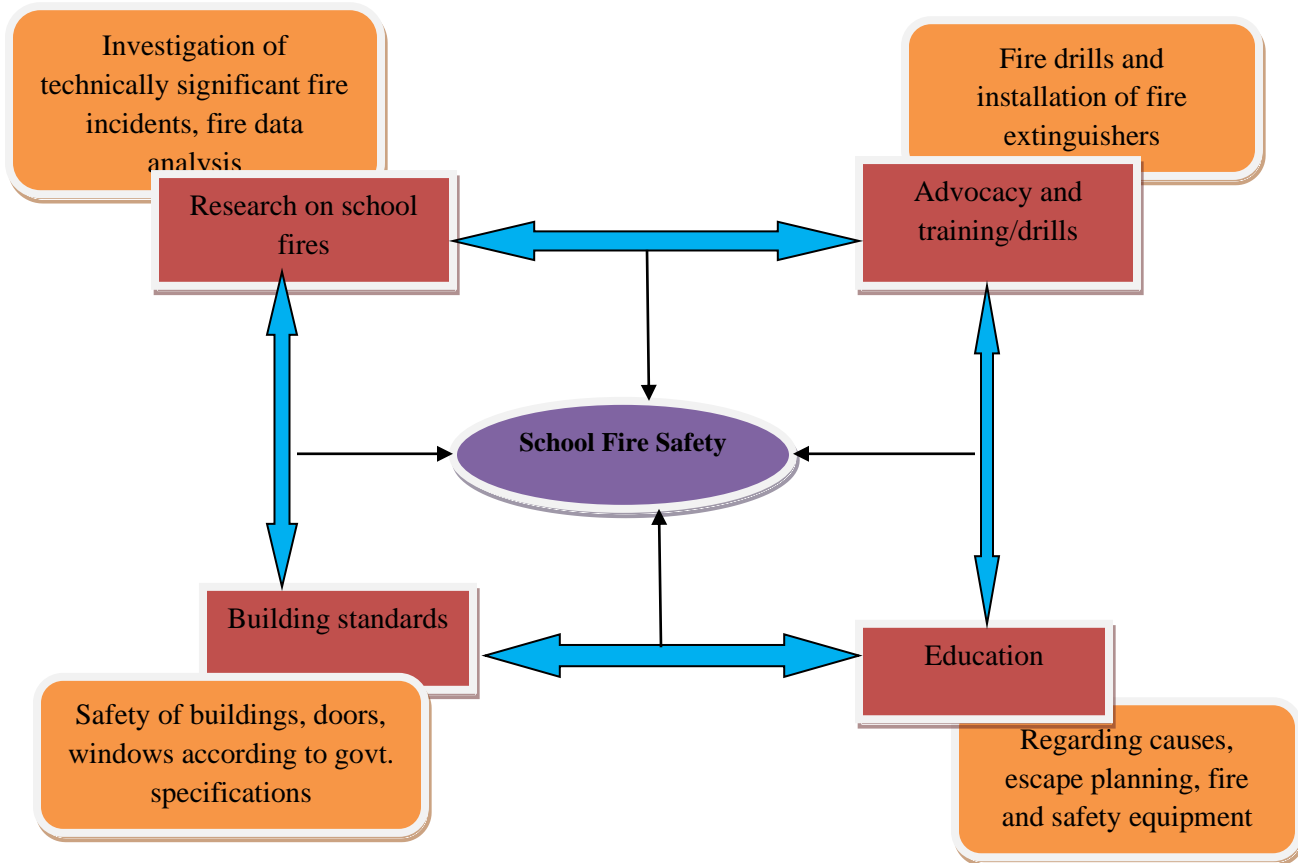
Objective 5: The level of implementation of the Safety Standard Manual for Schools in Kenya

- Many students (49%) were not familiar with the safety standards or safety requirements for schools; only 33% indicated that they were familiar with the safety standards. 17 %of students never heard of it.
- Many research participants (49%) indicated that the fire safety requirements have not at all been made public and known to the students in their school.
- Safety standards manuals had been distributed to all secondary schools in the County
- From the survey the level of compliance by public secondary schools in this area with regard to adherence to the safety requirements was rated as bad.

In case of fire outbreak, I will take safety precautions to remove the human beings to safety, and then fight the fire using water, soil or fire extinguisher

1.4 School Fire Conceptual Framework

Based on the findings from the study, the researcher has constructed the conceptual framework shown in the figure given below. In order to minimize the possibility and effects of fire and other related risks, a number of related activities are important. These are shown in the figure given below.



The Key Conclusions Arising From This Research Are:

- Some students had not been informed about fire hazards and had low knowledge is a major challenge for the students in handling fire disaster in case it occurs in their schools.
- Fire outbreaks in public secondary schools are as a result of deliberate acts and can be avoided by addressing the reasons behind this negative activity.
- Students are aware of the effective methods of extinguishing fire.

- The timing (at night) and place (dormitory)- when students are asleep) of setting the fire put secondary school students at very high risk of being hurt or injured by fire outbreak.
- The occurrence of a fire disaster in school may lead to deaths, injuries and disability of some people in the school; damage to school buildings and equipment and disruption of teaching learning.
- Most public secondary are ill prepared to deal with fire disasters and they lack emergency kits.
- Fire disaster preparedness is not widely understood or practiced in many public secondary schools in Kenya.
- Many schools have installed fire extinguishers for use in case of fire outbreak.
- Public secondary schools do have adequate precautionary measures to prevent fire outbreaks.
- Fire escape routes, exit doors and unobstructed fire exits precautions are necessary in case of fir outbreak.
- Students lack knowledge of fire drill and no practice of fire drills done in schools.
- The accommodation set in schools is fairly adequate; it gives students an opportunity to escape in case of fire breakout.
- There is lack of information and utilization of safety standards and guidelines in public secondary schools.
- The safety standards manual have not been adhered to in all schools

Recommendations

Fire Prevention and Fire Suppression Measures: Fire prevention and fire suppression measures are maintained and checked regularly.

Standard Operating Procedures for Fire: Education authorities and schools should have and practices, policies and procedures for expected disasters and emergencies.

Fire Drill: Fire drill and practice is encouraged for all schools

Publicity Fire Safety Requirements: All schools should be encouraged to publicize the fire safety requirements among the students.

Fire Exits: Clearly marked fire exits and escape routes should be provided

Potential Fire Hazards in School: should be removed or stored properly in schools.

Design, Construction and inspection of School Buildings: school building should be done according to the current building codes/ safety standards for disaster safety. The school buildings should be regularly inspected by qualified a engineer.

Insurance against Fire: insure all public secondary schools against fire.

School Rules and Fire Safety: include fire safety as a component in their school rules.
Fire Safety and the Curriculum: Fire safety should be incorporated in all subjects to help safe lives of students.

Safety requirement for schools: Enforcement of the use the school safety standards and guidelines

In closing

School fires in Kenya are a serious problem. Student involvement in fire is prevalent and has the potential to cause serious injury and loss of life.

Students clearly lack legal information on the crime of arson and at times are confronted by the truth when it is too late. They need legal education to understand the consequences of burning school structures.

Fire safety should be incorporated in all subjects to help safe lives of students

A fire at Senior Chief Koinange Girls school, Tuesday September 4, 2018.





Kyanguli School

This is perhaps the worst school fire disaster to ever happen in Kenya.

63 boys had lost their lives.



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Action In Case of Fire Outbreak in School



Students at Nyahururu boys trying to fight the fire that gutted down a dormitory at the institution

