

Are school grounds safe for students? An examination of implementation of safety standards and guidelines in secondary schools in Kenya.

Authors.

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ABSTRACT

The objective of this paper was to investigate the relationship between the implementation of safety standards and guidelines for school grounds and student safety in public mixed boarding secondary schools in Nakuru County, Kenya. Invitational Theory and Systems Theory guided the study. The target population included 2130 Form 4 students, 16 principals, 18 deputy principals representing all 16 public mixed boarding secondary schools in Nakuru, Kenya. The study applied a descriptive survey design. A census approach was used. A stratified sampling technique was used in categorising the population into three strata; principals, deputy principals, and Form 4 students. Principals and deputy principals were selected using the purposive sampling technique, while the students were selected using a simple random sampling technique. Questionnaires, interview schedules and observation checklist was used in data collection. Data analysis was performed using tools in the SPSS version 22. The analysis involved computation of descriptive statistics: frequencies and percentages, and inferential statistics: Pearson Correlation. The data was later presented in tables and textually. The study found that implementation of Safety Standards and Guidelines for School Grounds have a statistically significant relationship with student safety in public mixed boarding secondary schools in Nakuru County, Kenya. The study recommended that school management should consider taking inspection and supervision of the school grounds seriously. There should be serious compliance with the Safety Standards and Guidelines for School Grounds. The schools should follow the schools' guidelines on labelling trees showing those that may be poisonous as this had not been done.

Key Terms: Safety Standards and Guidelines for School Grounds, Student Safety, and Public Mixed Boarding Secondary Schools.

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Introduction

Globally, researchers have demonstrated that heads of schools must provide children with a peaceful, safe, secure, and peaceful environment conducive to learning (Ministry of Education, Guyana, 2017; Wanzala, 2017). One of the responsibilities of head teachers is to make sure school resources are efficiently utilised in fostering a caring, secure and safe environment in the school (MOE, 2008). The student's safety refers to a state in school where students are protected from harmful situations such as substance abuse, contaminated food and injuries. A safe school is a place with no violence and represented by an ecosystem in which its disciplinary procedures exist or no perceived fear of the school. The safety of schools is an essential and fundamental component of the learning process. Creating safe schools where teaching and learning can occur is necessary if the school goals are to be met (Grover, 2015).

School officials in Argentina, Canada, Mexico, Honduras, Guatemala, Israel, the United Kingdom, South Africa, Trinidad – Tobago, Kenya and Vietnam all have safety concerns ranging from poisonous centipedes, snakes,

spiders to gang violence, devastating natural disasters and terrorism (Dorn, 2016). Interestingly, all these countries had set safety guidelines, yet student safety was not guaranteed. This is a concern because their educational environment must be safe, secure, and orderly for students to succeed. In Kenya, the schools' Safety Standards Manual was developed in the year 2008 following experiencing unprecedented insecurity, leading to the internal displacement of over 300,000 people and school children the most be (Safety Standards Manual, 2008). Among the concerns that Safety Standards and Guidelines in Kenya address is safety on school grounds.

Despite the Kenya Safety Standards and Guidelines, for student safety is still an issue of concern (Nakuru County Education Office, 2019; Kemunto et al., 2012). Nakuru is one area to have received little attention in research. Yet, the County Education office figures indicate rising cases of lack of safety, and some stem from unsafe school grounds in public mixed boarding secondary schools, as shown in Table 1. The table indicates an increasing trend in the number of incidences reported in public mixed boarding secondary schools in Nakuru County, which is worrisome.

Table 1: Number of Cases on Lack of Safety in Public Mixed Secondary Schools in Nakuru County, Kenya.

Year	No. of incidences	Incidences
2014	11	Rape cases, fires in schools, accidents, food poisoning, drugs and substance abuse, congestion, coupling, fights, injuries in the field, attempted rape, sexual harassment, pregnancies, strangers in the school compound, attacks by outsiders, unsafe disposal of sanitary wear, poor sanitation, poorly cooked meals, theft, contaminated food, and lack of privacy in girls' sanitation areas.
2015	15	
2016	22	
2017	28	
2018	39	
2019	52	

Source: Inspection Reports, Nakuru County Education Office (2019)

This paper's concern relates to the relationship between the implementation of Safety Standards and Guidelines for school grounds and the safety of the student in public mixed boarding secondary schools in Nakuru County,

Kenya. The paper is guided by the complexity of student safety management in mixed boarding schools among the students undergoing adolescent life. Table 1 points out the incidences of unavailability of safety have been reported increasingly from 2014 to 2019. According to the Consumer Product Safety Commission (CPSC) (2010), playgrounds should comprise high-quality spaces that offer children concrete learning environments to complement the formal curricula offered indoors. They should also provide children with experiences that will enhance their physical, emotional, social and intellectual development. However, despite a decade of school Standards and Safety Manual, the UWEZO (2015) report posits that Kenyan schools, including Nakuru, are a distance away from attaining safety standards (Kang'ethe & Cierra, 2017). Therefore, this indicates that the learners' safety in schools in Nakuru County may not be a guarantee. Still, lack of safety in school can result in psychological stress, physical injuries and emotional stress.

LITERATURE REVIEW

Student safety is the situation where the learners feel secure and free from external threats arising from weaknesses related to school grounds. According to Caroll (2018), surveys of not less than 54,000 middle and high school students established that the availability of security officers and outdoor cameras made learners feel safer, according to the research published in the Adolescent Health Journal. But cameras indoors made students feel more vulnerable.

In India, Bhayya and Shyagali (2013) reported that medical and oro-facial factors may predispose a child or adolescent to trauma, but environmental factors could also predispose a child to injuries. For example, the authors have shown that dental injuries in students usually occur at home, but reports also show that injuries occur in schools, particularly during recreation and on playgrounds.

The Government of Kenya shows its commitment to the provision of quality education as a basic right entitled to

every child. This is enshrined in Kenya's Constitution and stressed in the Vision 2030 (The Kenya sector of the International Commission of Jurists, 2010). Although Kenya experienced unprecedented insecurity in the year 2007/2008, which resulted in disruption of learning in the country, the Safety Standards and guidelines Manual was developed in 2008 from this informal point of view (MOE, 2008). The conviction that a secure and safe school environment facilitates and promotes quality learning and teaching in educational institutions motivated the development of Safety Standards and Guidelines (Action Aid, 2011).

However, student safety remains a great concern. For instance, in the year 2012, eight pupils from Asumbi Girls' Boarding Primary School in Homa Bay County were burnt to death (Oduor & Omoro, 2012). More so, unsafe schools disrupt learning, destruction of resources and worst of all, lives are lost hence placing head teachers in the spotlight (Kirui et al., 2011). Thus there was a need to study the relationship between the implementation of safety standards and guidelines for school grounds and student safety in public mixed boarding secondary schools in Nakuru County, Kenya.

Implementation of Safety Standards and Guidelines for School Grounds and Student Safety in Public Mixed Boarding Secondary Schools

School grounds refer to the whole enclosure designated for use by the school activities such as learning, playing, games or sports. School grounds should be large to house the required physical infrastructure, including classrooms, offices, latrines, playing grounds, and assembly walkways, among others (MOE, 2008). The safety of children is every parent's concern, and as Bill Clinton once put it, "there is nothing more precious to a parent than a child and nothing more precious to our future than the safety of all our children."

The School Safety Standard No.1 in the Safety and Standards Manual for schools in Kenya is on the safety on

the school grounds. The Standard directs that the school should have properly demarcated and fenced grounds with a secure gate. It further states that the grounds should be safe, beautiful and neat for use by learners, parents, and staff and community members at all times. It further gives guidelines to ensure safety on the school grounds. Some of these are that: the school grounds should be levelled to make them easier for use by learners and teachers. Secondly, the bare areas of the grounds should be planted with grass to minimise the effects of dust. Also, trees in the school should be labelled indicating their uses and those that may be poisonous.

They should be located in sites with proper drainage to prevent wash-outs of the loose-fill materials in the user zones. Schools should thus have clearly demarcated school grounds with proper fencing and secure gates/boundaries. This can be construed to mean that failure to adhere to laid down School Grounds Safety Standards and Guidelines negatively influences student safety. Therefore, this study is important in establishing this relationship, especially in public mixed boarding secondary schools in Nakuru County, Kenya.

Steinberg et al. (2018) in the United States of America emphasised the need for the safety of walkways, given that these are places that the student passes within the school compound from one area to another. The state of these walkways is important in relation to student safety in the schools (Steinberg et al., 2018). The position of the walkways relative to the school fence and the roads influence whether the students have access to outsiders and, therefore, the possibility of accessing contrabands in the school such as drugs and alcoholic drinks (Kahunga, 2013). The walkways should not be surrounded by bushes and long grasses that could act as potential hideaways for snakes and other harmful animals. The presence of huge trees beside the walkways could lead to students facing physical danger if the tree branches were to fall off (Ali & Fatima, 2016). The walkways should also be clean and

devoid of rubbish as well as other aspects that could lead to falls.

According to Arizona Schools (2018), the walkways, motorways and parking ways should be sufficient for student safety concerns. The positions of these facilities influence student safety in diverse ways, including their position, usage and state. The location of the parking ways is important in the sense that in the presence of student traffic in school, the parkways should be located in a manner that the students do not face the danger of being knocked by vehicular movements. This could occur as the drivers are either parking or reversing to exit from parkways (Jaarsveld, 2011).

The motorways often have a substantive amount of vehicular traffic that could pose a risk to the students. Drivers speeding could lead to students being knocked, resulting in physical harm (Ali & Fatima, 2016). The motorways should thus be placed away from the students playing areas. This is to prevent collision with students who are often playful in nature. The research was done in the United States of America context, and the situation of traffic and parking ways may not be the same in Kenya. However, the maintenance of parking ways in Kenya was an issue that needed to be studied with respect to its influence on student safety.

According to ASEAN Safe Schools Initiative (ASSI) (2018), student safety has been a significant concern in the Philippines, whereby an average of 20 typhoons visits the Philippines every year. Therefore, schools are mandated to form a School Disaster Risk Reduction and Management (DRRM) team headed by a designated coordinator. The team is responsible for ensuring the establishment of an early warning system for the school and ensuring the students and the school is safe. This school safety initiative is meant to address natural disasters such as typhoons. The MOE Safety Standards Manual also addresses disaster risk reduction but does not address natural disasters, as in the case of the Philippines. Moreover, in Kenya, Nakuru County

included, the challenges of natural disasters are very minimal.

According to Bachman et al. (2011), the school staff plays a critical role in student safety in India. The teachers act as the guidance and mentoring persons for the students to shape the student behaviours, attitudes and practices towards diverse issues that may shape their safety (Bachman et al., 2011). These issues include negative peer pressure and drug abuse that may lead to activities that may compromise their psychological and physical health (Al-Shahrani, 2016). The school staff also put policies and measures that enhance student safety, including guidelines on school entry and exit points also policies on lights off and general student conduct. In this study, the teachers propose policies and measures to promote student safety in that specific school. Bachman et al. (2011)'s study describes a situation where policies originate from within the school. In Kenya, guidelines are developed by the government and implemented in all the schools in the republic. The current study focused on safety in public mixed boarding secondary schools, considering the fact that safety policies originated from outside the school and are not developed within the school.

Macharia (2012) in Central Division, Naivasha District, Kenya, describes school playgrounds as the designated outdoor areas within the school localities where children play or participate in amusements games and sports with or without stationary and manipulative equipment. The researcher found that despite the numerous constraints that make it impossible in ensuring total playground safety, children continue using the playgrounds for outdoor activities. Therefore, there is a need to guarantee the safety of facility users. School facilities must conform to some standard specifications or guidelines to make them safe for the students and teachers. It is only through monitoring, supervision, control and regular maintenance that the provision of these school facilities in an educational institution can be safely guaranteed. Macharia's study may not have been reflective of the

situation of the entire Nakuru County. There was, therefore, a need to find out how the implementation of Safety Standards and Guidelines for School Grounds influenced Student Safety in public mixed boarding secondary schools in Nakuru County.

RESULTS

Respondents Response Rate

The study was able to obtain a response from 275 students, translating to 93.54%; the response rate from interview schedules was as follows: for principals (92.86%) and the for the deputy principals (100%). This was sufficient to enable the researcher to come up with reliable conclusions and recommendations. In addition, Nulty (2008) reports that the acceptable response rate for on-paper surveys is 75 per cent therefore, the attained percentage was good and found acceptable to the researcher.

General Characteristics of the Respondents

The results show that 51.27 per cent of the respondents were males while 48.73 per cent were female. This implied that both genders were equally represented in the study, and thus the researcher was able to capture both perspectives. The collection of data from both genders enabled the researcher to understand the gender-specific safety needs. The results further show that the distribution of the students per school category was as follows: Extra County (24.0%), County (30.55%) and Sub County (45.45%). This gave the researcher an opportunity to get a fair representation of the students per school category.

Relationship between Safety Standards and Guidelines Implementation for School Grounds and Student Safety Collective Responsibility for Playground Safety

The results in Table 2 show that 64.1 per cent of the students in sub-county schools, 97.4 per cent of those in county schools, and 86.3 per cent of those in extra county schools agreed that both learners and staff are collectively responsible for playground safety. The results show that 35.9 per cent of the students in sub-county schools, 2.6 per cent of those in county schools, and 13.7 per cent of those

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in extra county schools did not agree to the assertion that there was collective responsibility for playground safety at their school. This implied that even though the learners and staff were obligated to keep the school playgrounds safe in some schools, this was not the case. Results from the interview of the principals and the deputy principals indicated that everyone in the school was tasked to ensure that the safety of the playground. A principal is quoted stating: “The playground is to be watched over by everybody in the school. Instructions are issued to keep it clean and safe”. Collective responsibility of the playground means that students were made to understand the essence of safe playgrounds. The school management believed that unsafe grounds are sources of injury and that all needed to be involved in maintaining grounds safety.

Another response from captured through interview schedules with respect to who is responsible for playground safety revealed that in all the schools, the responsibility of keeping the school playground safe was in the hands of the staff and learners. Everybody was involved. One Deputy Principal is quoted: “Our school grounds are everybody’s responsibility. This makes the students appreciate the value of having safe grounds, and it has worked very well”. The results from the analysis of data from both tools are similar to those in a study by Wanderi (2018), where it was established that everyone in most of the schools visited was tasked to ensure that the safety of the playground.

Table 2: Collective Responsibility for Playground Safety

		Category of the School					
		Extra County		County		Sub County	
		F	%	F	%	F	%
Both learners and staff are collectively responsible for playground safety	Strongly disagree	7	10.6%	0	0.0%	6	4.6%
	Disagree	2	3.0%	2	2.6%	41	31.3%
	Agree	36	54.5%	42	53.8%	54	41.2%
	Strongly agree	21	31.8%	34	43.6%	30	22.9%

Location of the School Relative to Climatic Hazards

The results in Table 3 show that 63.5% of the students in sub-county schools, 82% of those in county schools, and 66.6% of those in extra county schools agreed that their school is located in a place with the least climatic hazards such as floods, wind effects and other natural hazards. This was not the case with 36.5% of the students in sub-county schools, 18% of those in county schools, and 33.4% of those in extra county schools, who indicated that their school was located in an area prone to climatic hazards. On being asked if there were any climatic hazards affecting the

schools, one deputy principal is quoted saying." *It is bad during the rainy season. Last year one dormitory was flooded, and in fact, one toilet sank due to floods*". The results are onto those in a study by Achoka and Maiyo (2008), where it was established that schools in the region are hampered in their operation when the disaster occurs. The researchers reported that many schools were unable to open in some instances due to flooding; students were taken to other schools, while others dropped out of the system. Therefore, the students were actually not safe in these schools.

Table 3: Location of the School Relative to Climatic Hazards

	Category of the School		
	Extra County	County	Sub County

		F	%	F	%	F	%
Our school is located in a place with the least climatic hazards such as floods, wind effects and other natural hazards	Strongly disagree	11	16.7%	8	10.3%	11	8.5%
	Disagree	11	16.7%	6	7.7%	36	27.9%
	Agree	16	24.2%	22	28.2%	35	27.1%
	Strongly agree	28	42.4%	42	53.8%	47	36.4%

Regular Inspection and Supervision of the School Grounds

The results in Table 4 revealed that 43.8 per cent of the students in sub-county schools, 66.7 per cent of those in county schools, and 66.7 per cent of those in extra county schools agreed that there is regular inspection and supervision of the school grounds to ensure there are no items such as broken glass, stones, loose sticks that can cause injury to learners. In contrast, rest in all the three categories of schools disagreed. However, the regular inspection was not done in some schools, as indicated by 56.2 per cent of the students in sub-county schools, 33.3 per cent of those in county schools, and 66.7 per cent of those in extra county schools. This implied that inspection and supervision of the school grounds were not done regularly in many schools. Thus, students could be exposed

to harmful items such as broken glass and loose sticks. Therefore, this compromised the safety of school grounds in these schools. However, the interview schedules' results appear to suggest that there was regular supervision of school grounds. For example, one of the deputy principals stated: "I personally ensure that inspection and supervision of school grounds are done regularly, and an inspection report filed." The study findings are in agreement with those in a study by Oguye (2012), where it was found that inspection of school grounds was not properly done. The Safety Standard Manual (2008) provides that there should be regular and proper supervision and inspection of school grounds in ensuring that there are no items such as loose sticks, broken glass, pot-holes or stones that can cause injury to the learner's teachers or other school personnel.

Table 4: Regular inspection and supervision of the school grounds

		Category of the School					
		Extra County		County		Sub County	
		F	%	F	%	F	%
There is regular inspection and supervision of the school grounds to ensure there are no items such as broken glass, loose sticks, stones that can cause injury to learners	Strongly disagree	15	22.7%	12	15.4%	20	15.4%
	Disagree	7	10.6%	14	17.9%	53	40.8%
	Agree	37	56.1%	30	38.5%	38	29.2%
	Strongly agree	7	10.6%	22	28.2%	19	14.6%

Handling of Strangers in the School Grounds

The results presented in Table 5 show that 77.7 per cent of the students in sub-county schools, 94.7 per cent of those in county schools, and 83.3 per cent of those in extra

county schools agreed that any stranger found within the school grounds is questioned. In comparison, 22.3 per cent of the students in sub-county schools, 5.3 per cent % of those in county schools, and 12.7 per cent of those in extra

county schools indicated that this was not the case. This implied that most schools' school management questioned strangers, so students were protected from strangers who may pose a risk to them. When strangers are not checked, some of them can drop harmful items and objects in the playgrounds, causing injuries to students during games time. The results are contrary to those in Ogunyo (2012) study, where it was established that in most schools, unauthorised visitors or strangers were not screened or questioned before entry into the compound.

The results from the interview schedule further revealed that the principals and deputy principals indicated that if a stranger is found near or within the school, he/she would be questioned and contained by the security then reported to the authority or reported to the police. For example, one principal stated as follows: “Strangers found within the school compound or grounds are usually confined, questioned by the security personnel and then reported to the school authority.”

Table 5: Handling of Strangers in the School Grounds

		Category of the School					
		Extra County		County		Sub County	
		F	%	F	%	F	%
Any stranger found within the school grounds are questioned	Strongly disagree	9	13.6%	0	0.0%	7	5.4%
	Disagree	2	3.0%	4	5.3%	22	16.9%
	Agree	32	48.5%	34	44.7%	29	22.3%
	Strongly agree	23	34.8%	38	50.0%	72	55.4%

Location away from Disruptive Land Use activities

The results in Table 6 revealed that 83.8 per cent of the students in sub-county schools, 97.4 per cent of those in county schools, and 73.5 per cent of those in extra county schools agreed that their school is located away from disruptive land use activities such as industrial facilities, bars, heavy traffic routes sewage and dumpsites. In comparison, 16.2% in sub-county schools, 2.6 per cent in county schools, and 16.5 per cent in extra county schools disagreed. This implied that some secondary schools were located in unsafe environments (neighbourhood), likely

affecting their health due to noise and air pollution. Upon being asked if the school was located away from disruptive land use activities, one principal is reported saying, ' At the beginning of this year, a quarry was established in the neighbourhood; it's just terrible. At times there is a lot of noise; leave alone the dust.' The findings agree with those in a study by Nzilano (2018). It was found that motor vehicles, welding machines and construction and other activities related to promotions adverts, people's movements and music sounds were affecting teachers and students in teaching in the selected schools

Table 6: Location away from Disruptive Land Use activities

		Category of the School					
		Extra County		County		Sub County	
		F	%	F	%	F	%
My school is located away from disruptive land-use activities like Industrial facilities, bars,	Strongly disagree	12	18.8%	0	0.0%	12	9.2%
	Disagree	5	7.8%	2	2.6%	9	6.9%
	Agree	20	31.3%	26	33.3%	54	41.5%
	Strongly agree	27	42.2%	50	64.1%	55	42.3%

heavy traffic routes, sewage, dumpsites etc.							
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Security measures at the school gate

According to results from the school principals and deputy principals through interview schedules, the main security measures set at the gate concerning visitors to the school included: use of visitors' books, engagement of security officers, and searches on suspected persons. One principal is quoted saying, "All visitors have to sign in the visitors' indicating the purpose of their visit." When measures have been put at the gate, it ensures that no one with ill intentions gains entry into the school. This is important because some people may visit the school but with bad intentions, such as peddling drugs and attacks on students. The results agree with that Nyakundi (2012), who reported that schools' measures to secure gates included the use of visitors' books and the engagement of security officers.

A lockable gate

The findings in Table 7 show that all the schools had adhered to the guideline that the school should have a lockable gate to promote safety in the school. This meant that when the gate has been locked, especially at night, then the students, school property and staff who reside within the school are safe. Besides, anyone who wants to access the school will have to use the right channel. For example, one of the deputy principals indicated as follows: "The school has lockable gates and a security guard manning the gate has been given to only open the gate upon authorisation from the school administration." The results resonate with those in a survey by the National Center for Education Statistics (2019), where it was found that the use of lockable gates was one of the commonly used practices and procedures by the school to promote the safety of secondary school students.

Table 7: A lockable School Gate

Response	Frequency	Percentage
Yes	14	100

Security signs at the Main Gate

The results in Table 8 show that most of the schools (78.6%) did not have the sign at the main gate, while 21.4 per cent had the sign. This means that people with ill intentions can get into the school and not report to the principals' office but roam around the school, which may pose a risk to the learners. On being asked how the visitors were guided from the main gate, one of the principals is quoted saying, "It is the work of the security officer to direct the visitors or even escort them to respective offices." The findings are similar to those in Karuri (2015) study, which observed that most schools did not have signposts directing visitors to report to the principals' office first. Consequently, there was that possibility of strangers being found in restricted areas, to the detriment of students' safety.

Table 8: The Presence of Security signs at the Main Gate

Response	Frequency	Percentage
Yes	3	21.4
No	11	78.6
Total	14	100

Presence of Sign Posts Showing Various Facilities within the School

The results provided in Table 9 show that only 4 (28.6%) of the public mixed boarding secondary schools had erected signposts to show directions to various facilities within the school, while the majority of the schools 10 (71.4%) had not done so. This shows that majority of the secondary schools had not adhered to the Safety Standard Manual, which requires that schools should erect to show directions to various facilities within the school. Signposts will help control the movement of strangers to restricted areas, as such strangers may have ill motives of harming the students. This could explain the increasing incidences like stealing, as in the Nakuru County Director of Education office (2019). The results were similar to those in a study by

Karuri (2015), where it was found that the majority of the schools had no signs prohibiting people from trespassing in the schools. Karuri observed that the signs prohibit people from entering illegal areas, and it also prevents theft.

Table 9: Presence of Sign Posts Showing Various Facilities within the School

Response	Frequency	Percentage
Yes	4	28.6%
No	10	71.4%
Total	14	100.0%

Segregation of the school ground

When asked how they separated the school playground to reflect the diversity of sports talent in the school, the principals and deputy principals indicated that separation was informed by gender-related activities (boys or girls) and by the nature of the sport.

A deputy principal stated as follows: “In our school, we have ensured that boys and girls have separate playgrounds.” In another school, the Principal indicated that: There is a football and volleyball standard adopted field and indoor games”. The Safety Standards Manual requires that proper segregation (separation) of these grounds should be ensured in schools. The results are similar to those of Kiuppis (2018). They found that schools were keen on ensuring the separation of playgrounds to ensure that even disabled students were able to participate in games without being injured.

The school Title Deed

According to most of the school principals, the findings from the interview schedules were that ten schools (71%) did not have land title deeds for the school grounds. The guideline states that a school should have a valid title deed. Its absence meant that schools could easily be snatched landed property by selfish individuals or organisations of Cartels. When asked if the school had the land title deed, one principal is quoted saying, “There is an ongoing court case over this land, as it initially belonged to our primary

school. Someone is claiming that part of the primary school land belongs to the family”. Mwenesi (2017) observes that many schools did not have title deeds and suggested that any school confirmed to have no valid title deed after verification with the Ministry of Lands or any other authority related should be assisted in securing ownership of the land or be moved to own grounds.

Bare Areas of the Ground

The results in Table 10 from the observation checklist revealed that the majority of the schools (78.5 %) did not have bare areas planted with grass to minimise the effects of dust, while only in 3 schools (21.4 %) in which the bare areas of the grounds have been planted with grass. Further probing with one of the principals revealed that the existence of bare grounds in some schools was not deliberate. The principal stated: “As you can see, the whole place is rocky, and also due to unfavourable climatic conditions, planting of grass in the compound was unthinkable.” The implication was that if the bare areas of the ground had not been planted with grass, dust was likely to cause health complications such as respiratory and eye problems. The results affirmed with those in a study by Macharia (2012), where it was found that few schools had taken seriously the task of planting grass in the playground to minimise dust. As such, dust affected the learners' eyes and chests and also made them dirty.

Table 10: Bare Areas of the Ground

Response	Frequency	Percentage
Yes	3	21.4
No	11	78.6
Total	14	100

Labelling of Trees

The results show in Table 11 that in most schools 8 (57.1%), trees in the school are not labelled, indicating those that may be poisonous, while only in 6 (42.9%) schools had adhered to this requirement the Safety Standards Manual. This means the learners were unaware of poisonous trees on the school grounds. This is a hazardous trend as the learners may use these trees for various purposes like sweeping or chewing, which would expose them to ailments. The results agree with those in a study by Cheruiyot (2019) in Molo, Nakuru County, where it was established that trees had not been labelled in most of the schools in the county.

Table 11: Labeling of Trees

Response	Frequency	Percentage
Yes	6	42.9
No	8	57.1
Total	14	100

Levelling of School Grounds

The results in Table 11 show that 9(64.3%) of the schools had the school grounds that have been levelled to make it easier for learners, whereas 5 (35.7%) of the schools have not adhered to this guideline. When the school grounds have not been levelled, it could cause injuries amongst the students while playing. One principal, while pointing through the window of her office, explains. "Before this ongoing exercise of ground levelling, we have many injuries reported, and besides, when it rains, it is worse. So we are levelling the grounds, removing stones and tree stumps and also improving on the drainage". The essence

of levelling school grounds was highlighted in a study by Malone and Tranter (2003), who observed that levelled school grounds were safe for students as they reported fewer injuries or accidents from the grounds.

Table 11: Levelling of School Grounds

Response	Frequency	Percentage
Yes	9	64.3
No	5	35.7
Total	14	100

Demarcation of Walkways

The findings in Table 12 show that 5(35.7%) schools out of 14 had their walkways demarcated with wires rather than flowers. This posed a risk to the learners in case of an emergency or stampede. Considering the high number of learners in these schools and narrow walkways, then it would be difficult for the learners to move around within the school. One deputy principal explains as follows: "The reason why we are using wires is to protect the flowers from some students, who deliberately find pleasure in destroying them". The incidences of injuries of the students are some of the incidences reported at the county director of education offices, and this could explain why. The results are the same as those in a study by Mong'are (2015), where it was found that in many schools, the walkways were not demarcated with flowers and shrubs but with wires.

Table 12: Demarcation of walkways

Response	Frequency	Percentage
Yes	5	35.7
No	9	64.3
Total	14	100

Rating of Student Safety with respect to School Grounds

The results in Table 13 show that 38.9 per cent of the students in sub-county schools, 73.1 per cent of those in county schools, and 68.2 per cent of those in extra county

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schools described their playground as safe, while the rest, 61.1 per cent of the students in sub-county schools, 26.9 per cent of those in county schools, and 31.8 per cent of those in extra county schools described them as unsafe. This implied that in many schools, the school grounds were not safe.

The results also show that 70.3 per cent of the students in sub-county schools, 74.4 per cent of those in county schools, and 66.7 per cent of those in extra county schools

described the location of the school as safe. Conversely, the study shows that 29.7 per cent of the students in sub-county schools, 25.6 per cent from county schools, and 66.7 per cent of those in extra county schools described the location of the school as unsafe. This implied that there were safety concerns related to playgrounds and locations in many schools. The results show that in failing to keep the playgrounds and locations of schools safe, many schools had not complied with the Safety Standards and Guidelines for School Grounds.

Table 1: Rating of Student Safety with respect to School Grounds

School Ground Aspects	Response	Category of the School					
		Extra County		County		Sub County	
		F	%	F	%	F	%
Playgrounds	Very Unsafe	4	6.1%	0	0.0%	8	6.1%
	Unsafe	17	25.8%	21	26.9%	72	55.0%
	Safe	20	30.3%	41	52.6%	37	28.2%
	Very Safe	25	37.9%	16	20.5%	14	10.7%
Location of the school	Very Unsafe	0	0.0%	0	0.0%	0	0.0%
	Unsafe	22	33.3%	20	25.6%	39	29.8%
	Safe	25	37.9%	28	35.9%	61	46.6%
	Very Safe	19	28.8%	30	38.5%	31	23.7%

Correlations on Implementation of Safety Standards and Guidelines for School Grounds and Student Safety

The results in Table 14 show that the Pearson correlation results between the implementation of safety standards and guidelines for school grounds and student safety were as follows. There was a positive Pearson correlation between the implementation of safety standards and guidelines for school grounds and student safety ($r = 0.149^*$, $p = 0.013$). This is a weak uphill (positive) linear relationship. This means that an increase in the implementation of safety standards and guidelines attracts an increase in student safety and vice versa. This shows that the implementation of Safety Standards and Guidelines for School Grounds has an influence on student safety in public mixed secondary schools in Nakuru County. Given that the p-value (0.013) was less than the test significance level ($p < 0.05$, this association is statistically significant.

Table 14: Correlations on Implementation of Safety Standards and Guidelines for School Grounds and Student Safety

		Implementation of Safety Standards and Guidelines for School Grounds	Student Safety
Implementation of Safety Standards and Guidelines for School Grounds and	Pearson Correlation	1	.149*
	Sig. (2-tailed)		.013
	N	275	275
Student Safety	Pearson Correlation	.149*	1
	Sig. (2-tailed)	.013	
	N	275	275

*. Correlation is significant at the 0.05 level (2-tailed).

Test of Hypothesis

The hypothesis read, "H₀: There is no statistically significant relationship between implementation of Safety Standards and Guidelines for School Grounds, and student safety in public mixed boarding secondary schools in Nakuru County, Kenya." The beta value was 0.168; since the p-value associated with SSGSG was 0.015, a value less than 0.05 (p<0.05), the null hypothesis is rejected and therefore, it shows that implementation of Safety Standards and Guidelines for School Grounds has a relationship with the safety of the students in public mixed boarding secondary schools in the county. Therefore, rejecting the null hypothesis means that implementing Safety Standards and Guidelines for School Grounds contributes positively to student safety in schools. This was mainly because, in the majority of the secondary schools, the Safety Standards and Guidelines for School Grounds were carefully implemented. This was seen by the fact that

there was collective responsibility in the implementation process; there was a regular inspection of school grounds and proactive handling of strangers.

CONCLUSION AND RECOMMENDATION

Conclusion: The study found that implementation of Safety Standards and Guidelines for School Grounds have a statistically significant relationship with student safety in public mixed boarding secondary schools in Nakuru County, Kenya.

Recommendations: The school management should consider taking inspection and supervision of the school grounds seriously, as this was not done regularly in many schools. There should be serious compliance with the Safety Standards and Guidelines for School Grounds. The schools should follow the schools' guidelines on labelling trees showing those that may be poisonous as this had not been done.

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