

Effect of School Grounds Safety Guidelines on Students' Safety in Public Boarding Secondary Schools in Homa Bay County

Dr. Nichanor Agonda Onyango (PhD)

Faculty of Education, Tom Mboya University

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Abstract: Students' safety in public secondary schools is a matter of global concern. For instance, in Nigeria, there were cases of kidnapping and killing of teachers and students while school buildings were burnt down. In Kenya, students in public secondary schools had faced a number of insecurity. They included porous school fences exposing learners to attack by strangers, unlabeled trees in schools some of which produce poisonous fruits, and school gates being porous enabling strangers into the school which led to stealing of school property. The Government of Kenya, in the year 2008, launched Safety and Standards manual for schools. It was expected that implementations of school grounds safety guidelines would enhance students' safety in the schools. From 2009 to 2018, however, media reported cases of loss of school properties due to laxity amongst the security personnel and porous gate and fences. The purpose of this study was to establish the effect of school grounds safety guidelines on students' safety in Public Boarding Secondary Schools (P.B.S.S) in Homa Bay County. The objective of the study was to: determine the effect of school ground safety guidelines on students' safety, in P.B.S.S in Homa Bay County. Invitational theory was used conceptualize the study. A conceptual framework showing the effect of school grounds safety guidelines (independent variables) on students' safety (dependent variables) was used. Descriptive and correlational research designs were adopted. Study population consisted of 34 Principals, 8 Sub County Quality Assurance and Standards Officers (SCQASOs) and 4,800 students. Saturated sampling was used to sample 31 Principals and 8 SCQASOs whereas purposive sampling and simple random sampling was used to sample 369 students. Researcher's observation schedule/document analysis guide, students' focus group discussions and interviews were used as research instruments. Face and content validity of the instruments was determined by experts in education administration and their advice was incorporated. Reliability of the instruments was determined by making observations once in 3 schools and computing Cronbach's Alpha, giving a coefficient of 0.935 which was reliable. Quantitative data was analyzed by use of descriptive statistics in form of frequency counts, means and percentages, whereas inferential statistics was used to carry out regression analysis with change statistics to determine whether school grounds safety guidelines had statistically significant effect on students' safety or not and also to show whether there is effect of school grounds safety guidelines on students' safety or not. Qualitative data was thematically analyzed. The study revealed that school ground safety guidelines had statistically significant effect on students' safety since $p < 0.05$ and accounted for 20.3% of the variation in students' safety. The study also established that school ground safety guidelines had moderate and positive effect on students' safety with coefficients of 0.479 at p - value of 0.01. The study recommended that school administrators should strive to fully implement school grounds safety guidelines given to enhance students' safety in P.B.S.S in Homa bay County, Kenya. The study may be useful to the Ministry of Education stakeholders and policy makers in establishing the status of students' safety and identifying school

grounds safety guidelines which have not been fully implemented and pose threat to the safety of the students. This would enable the Ministry of Education to develop strategies to enhance students' safety in public secondary schools in Kenya.

Keywords: Effect, School Grounds, Safety Guidelines, Students' Safety, Public Boarding Secondary Schools, Kenya, Study across Secondary Schools, Homa Bay County.

I. INTRODUCTION

School grounds refer to the entire school enclosure or environment designated for its use for any of its activities such as playing, games or sports and learning (Republic of Kenya, 2008). Few studies had been carried out on school grounds safety guidelines. In Jordan, Malak (2015) conducted a study focusing on violence and unintentional injuries among students aged between 15 years and 19 years. It was established that 26.8% of the students had been attacked physically, 43.3% of the students were involved in physical fight whereas 20.1% were bullied. Serious injuries were sustained by 45.3% of the students out of which, 31.2% sustained injuries while playing and training for sports, 35.2% of the students fell down and got injured, whereas 60.3% of the students sustained injuries through accident with broken bones or dislocated joints.

In Kenya, Migiro (2012) conducted a study entitled implementation of safety standards recommended by the Ministry of Education in public secondary schools in Borabu District, Kenya, where it was established that most schools had not provided safe grounds and visitors coming to school failed to provide personal details to the security personnel at the school gate, thus exposing students to physical danger. This finding could have been corroborated by the other finding that out of the 11 schools visited; only 1 was fenced off from the outside community. This study however, did not determine the effectiveness of school grounds safety guidelines on students' safety in public boarding secondary schools.

Studies have shown that implementation of safety policies have met challenges in a number of learning institutions in public secondary schools. For instance, Nyakundi (2012) conducted a study to establish why safety policy had not been fully implemented by school management in public secondary schools in Marani District, Kenya. The study revealed that inadequate funds and inadequate supervision hindered the full implementation of safety policy. This finding shows that adhering to safety policy in schools was important and therefore stakeholders and education policy makers must devise best strategies to ensure school safety to avoid possibility of disasters in schools. This study however, only concentrated on the role of school management in implementation of safety policies and did not look at school physical infrastructure and environment. Similarly, Migiro (2012), revealed that teachers acknowledged the existence of safety policy manual in schools in Borabu Sub-County of Kenya, however, safety policy guidelines had not been fully implemented in the majority of the schools. The study revealed a need to enhance the implementation of school safety in public secondary schools, despite the fact that implementation of safety standards faced challenges key among them lack of funds. Both Nyakundi (2012) and Migiro (2012), concurred that implementation of the safety standards had not been fully met due to inadequate funds.

II. RESEARCH OBJECTIVE

To establish the effect of school grounds safety guidelines on students' safety in Public Boarding Secondary Schools (P.B.S.S) in Homa Bay County

III. CONCEPTUAL FRAMEWORK

Invitational Theory of Practice (Purkey, 1999) guided the study. The theory states that; People, Places, Policies, Programs and Processes when addressed adequately, make schools safer and more appealing. It is expected that when these safety guidelines are implemented, then the students would be safe. The invitational theory was used to conceptualize the study since implementation of this policy would make schools safer. Therefore, the conceptual framework postulates that when safety guidelines are implemented, the learners are safe. Safety policy manual spelt out that when safety policies are fully implemented, the students were expected to be safe in their schools (Republic of Kenya, 2008).

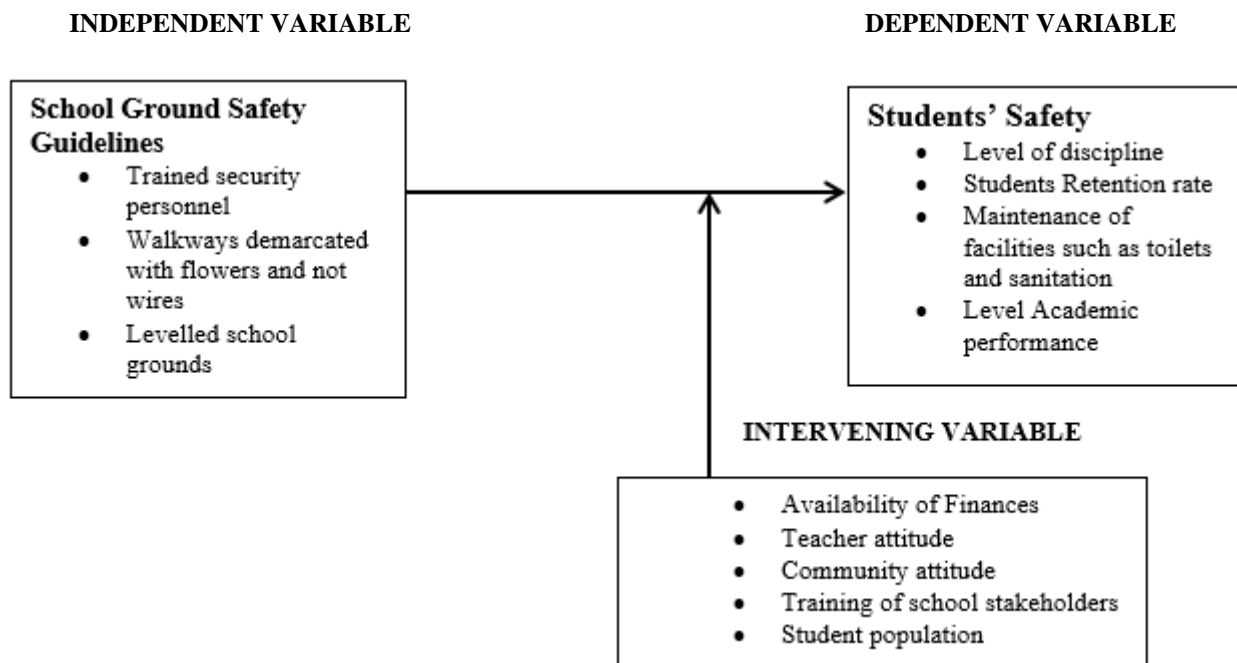


Figure 1: A Conceptual Framework showing the Effect of School Grounds Safety Guidelines on Safety of Students in Public Boarding Secondary Schools (Source: Author)

Implementation of school grounds safety guidelines (independent variables) are some of the ways by which safety of the students (dependent variables) can be achieved. In the process of doing this, some variables such as finances, teachers' attitude, community attitude and student population can influence the implementation. For the school grounds safety guidelines to be implemented, a lot of money is required and can only be implemented when finances are available. On the other hand, the attitude of teacher and the community needs to be positive for the implementation to be successful. The goodwill of the community is needed in order to have these policies implemented; otherwise the principal's efforts may not be supported. Whether or not the stakeholders are trained on implementation of safety guidelines will tell whether the guidelines would be fully implemented or not. Ongori (2014) established that lack of training of school stakeholders hindered the implementation of safety policy. According to Lucheli and Masese (2009), the then Kenya Secondary School Heads Association chairman, Cleopas Tirop reported that funding interfered with efforts by schools to purchase and install firefighting equipment. Lucheli and Masese (2009) also indicated that the then Kapsabet Boys Principal said that "Schools started single sourcing after the government stopped funding, and stringent budgets frustrated the efforts of school heads". The students' safety therefore would be based on whether or not these safety policies are implemented in public boarding secondary schools. Student population would actually be useful in determining the extent of implementation as observed by Ng'ang'a (2013) whose study findings suggest that the increasing student population was a challenge to achieving successful implementation of safety standards because there was congestion among the students. The findings were also in agreement with Muthuiya (2013) and Chabari (2010) who in their studies had established that free secondary education had allowed more students to pursue secondary education which in turn increased school population ultimately stressing the schools' resources and facilities compromising both the quality of education as well as the safety of the students.

IV. RESEARCH METHODOLOGY

Both descriptive survey and correlational research designs were used in this study. The study was carried out in Public Boarding Secondary Schools in Homa Bay County, Kenya. The population involved in the study consisted of 34 Principals, 8 Sub County Quality Assurance and Standards Officers (SCQASOs) and 4,800 students. The sample size consisted of 31 principals, 8 SCQASOs and 369 students. Saturated sampling was used to select 31 schools with 31 principals from public boarding secondary schools and 8 SCQASOs as all the public boarding secondary schools and Sub Counties were used. Piloting was done using the 3 public boarding secondary schools remaining.

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Table 1: Study Population and Sample Frame

Category of Respondents	Target Population (N)	Sample Size (n)
Principals	34	31
SCQASOs	8	8
Students	4, 800	369
TOTAL	4, 876	408

Source: Author

Yamane Taro’s Formula (Yamane, 1967) was used to determine the sample size for students:

$$n_y = \frac{N}{1 + Ne^2}$$

Where:

n_y = Yamane Sample size;

N = Underlying population

e = Determined from the confidence level e.g. $e = 0.05$ for being 95% sure about the results. (The error of 5% points)

$$n_y = \frac{4800}{1 + 4800 \times 0.05^2}$$

$$n_y = \frac{4800}{13}$$

$n_y = 369.23$ (369 Students).

Observation Schedule (OS), Document Analysis Guide (DAG), Focus Group Discussions Guide (FGDGs) and Interviews Schedule were used for data collection. Both face and content validity of the researcher’s observation schedule/ document analysis guide, focus group discussion guide and interview schedules were determined by research experts at the Faculty of Education at Tom Mboya University. Reliability of these instruments was ascertained by piloting the instruments in 3 schools. The 3 schools did not form part of the sample population. Mugenda and Mugenda, (2003), recommend a representation of between 9-10% of the population to be used for a pilot study. Cronbach’s Alpha was used to determine reliability of the instrument. According to Mugenda (2008), Cronbach’s Alpha Coefficient which measures the internal consistencies was assessed. The coefficient is estimated using factor analysis, which is a statistical procedure that analyzes the inter–correlations among a large set of data in order to identify a smaller number of common factors, each of which is internally consistent.

$$Alpha(\alpha) = \frac{Nr}{(1 + r(N - 1))}$$

Where:

r = is the mean inter-item correlation;

N = is the number of items in the scale

The Cronbach’s Alpha was computed using Statistical Package for Social Sciences (SPSS) and a coefficient of 0.935 was obtained as shown in Table 2.

International Journal of Novel Research in Education and Learning

Vol. 10, Issue 2, pp: (53-65), Month: March - April 2023, Available at: www.noveltyjournals.com

Table 2: Chronbach’s Alpha Calculation

Case Processing Summary		N	%
Cases	Valid	2	66.7
	Excluded ^a	1	33.3
	Total	3	100.0

a. List wise deletion based on all variables in the procedure.

Reliability Statistics

Cronbach's Alpha	N of Items
.935	85

Source: Field Data

From Table 2, it is noted that the Cronbach’s alpha (α) coefficient was 0.935 which was considered to be excellent as suggested by Holton, Brownlow, McMurray, and Cozens (2004), who suggested four points of reliability with coefficient of above 0.90 (excellent), 0.70 to 0.89 (high), 0.50 to 0.69 (moderate) and below 0.5 (low). The instrument was thus considered reliable to collect data for this study. Both qualitative and quantitative approaches were adopted for analysis. Data collected through observation schedule and document analysis guide were coded, tallied and presented through descriptive statistics in terms of frequency counts, percentages, and means. Data collected through focus group discussions and interviews were analyzed thematically based on the study objectives as they emerged from the field.

V. RESULTS

The objective of the study was to determine the effect of school ground safety guidelines on students’ safety in public boarding secondary schools in Homa Bay County. For this objective to be achieved, observations were made in public boarding secondary schools to establish the status of implementation of school ground safety guidelines and the status of students’ safety, and the null hypothesis that: School ground safety guidelines have no effect on students’ safety in public boarding secondary schools in Homa Bay County, was tested. First, the status of implementation of school ground safety guidelines and the status of students’ safety were established and results tabulated as shown in Table 3 and Table 4.

Table 3: Status of Implementation of School Ground Safety Guidelines as Observed by the Researcher (n = 31)

Aspects of School Ground Safety Guidelines		Ratings					Total Score	MR
		1	2	3	4	5		
Gate and Security	F	0	1	2	10	18	138	4.45
Security arrangement	F	0	1	0	13	17	139	4.48
Classrooms cleanliness	F	0	0	7	18	6	123	3.97
State of lockers and chairs	F	0	0	2	15	14	136	4.39
Playgrounds	F	0	3	11	7	10	117	3.77
Walkways, motorways and parking	F	0	4	15	6	6	107	3.45
Fence	F	0	6	17	8	0	95	3.06
Reception at the gate	F	0	0	12	13	6	118	3.81
Trees in the school	F	6	20	3	1	1	64	2.06
Walkway demarcations	F	0	4	13	13	1	104	3.35
OVERALL MEAN RATING	F	6	39	82	104	79	1141	3.68

KEY: MR: Mean Rating OMR: Overall Mean Rating F: Frequency

Source: Field Data

- 1.00- 1.44 = Not Accomplished,
- 1.45 – 2.44 = Less Accomplished,
- 2.45 – 3.44 = Moderately Accomplished,
- 3.45 – 4.44 = Partly Accomplished,
- 4.45 – 5.00 = Fully Accomplished

From Table 3, it can be seen that implementation of school grounds safety guidelines with respect to security arrangement and gate and security were fully accomplished as rated at 4.48 and 4.45 respectively. This means that public boarding secondary schools in Homa Bay County had adhered to the requirement of Ministry of Education on security arrangement, and the gate and security. On the other hand, state of lockers and chairs (4.39), classrooms cleanliness (3.97), reception at the gate (3.81), playgrounds (3.77) and walkways, motorways and parking (3.45) were rated as partly accomplished, meaning above average. Walk way demarcations (3.35) and Fence (3.06) were moderately accomplished. Less accomplishment was observed with trees in the schools which was rated at 2.06.

The high rating of security arrangement at 4.48 means that it was fully accomplished due to the fact that most of the schools had provision for both day and night security personnel and most of the schools had engaged security officers from registered security firms. However, it was noted that some of the security personnel were locals. A school principal interviewed noted that:

It has not been easy to have the local security officers to work together with those from registered firm work together. The school is at a risk because of the division among the security personnel. I would encourage that we either purely have security officers from registered firms or purely local security officers if the school cannot afford to pay security firms, but the best is from registered security firms (**Principal 4**).

Contrary to the idea of engaging security personnel from registered firms, one of the principals indicated that:

The major challenges that we have with security officers from registered security firms are poor remuneration, late payment, high turnover and failure to look at the welfare of the officers by their firms. The security officers are paid poorly and their welfare is not taken care off. This makes them relax in discharging their duties and as a result, makes the students are not safe in schools. High turnover of the personnel actually exposes a school a risk zone (**Principal 1**).

Whereas the two principals differed at some point on whether to have security personnel from registered firms or the locals, it was clear that when the challenges faced by security officers from a given firm are addressed, then the best category to have in these schools would be the security officers from the security firms. These schools however, had not accomplished the implementation of school grounds guidelines with respect to safety arrangement.

Gate and security aspect was also found to be fully accomplished as reflected by the mean rating of 4.45. Many schools visited had well fitted gates with sufficient security personnel working on shifts. A scrutiny of the duty rota at the gate showed that some schools had up to 12 security officers in the night manning different regions within the compound. However, some schools had not implemented this aspect since there were schools having only 2 security officers in the day and only 3 in the night. This finding was contrary to that of Ozmen, Dur and Akgul (2010), whose results revealed that problems threatened the school safety; there were insufficient school policies and decisions; and insufficient and ineffective school support services. In public boarding secondary schools in Homa Bay County, most of these challenges had been fixed, evident in the fact that most of the schools contracted security personnel from registered security firms.

The aspect of lockers and chairs (4.39) was found to be partly accomplished in public boarding secondary schools in Homa Bay County. Many schools had procured comfortable lockers and chairs for their students and there was provision for their repairs in the schools. In a number of schools, there existed a workshop where repairs of lockers were repaired immediately unless there was need to purchase something. One of the principals said in an interview that:

During the recruitment of casual laborers, I proposed that we get one employee who has some knowledge in carpentry. This has greatly helped us because we no longer spend extra levies on repairs involving furniture made of timber. Apart from doing other school chores as assigned, the employee is able to make new and repair lockers and chairs to students (**Principal 16**).

By doing this, the principal ensured that the school developed a workforce that would ensure that the school does not spend more on repairs of lockers and chairs. Indeed, having such a worker around, would also ensure that repairs are done immediately thus accomplishing the guideline on the aspect of lockers and chairs.

The study also established that classrooms cleanliness (3.97) was partly achieved in many public boarding secondary schools in Homa Bay County. The highest number of schools had their classes' mopped at least 3 times a week. A major advantage that was noticed was that many schools had tiled floors and large pavements which ensured that the classrooms

would remain clean for long. However, it was also noticed in some schools that the absence of pavements was a very big set back to class cleanliness in the sense that the classes would become dirty any moment it rains or drizzles. Huge chunks of mud were witnessed in classrooms in some schools which the researcher visited during the rains, making the classes untidy.

Reception at the gate by the security personnel was rated as partly accomplished, 3.81. Whereas in a good number of schools there was correct procedure to allow visitors in, some security personnel seriously flouted the procedures. Visitors were easily allowed into the compound even without showing National Identification Cards. In some places, even writing the name was omitted which was very dangerous to the school community. These findings were consistent with one of the principal's response that:

Our reception procedure at the gate is very clear and has always been followed to the letter. However, there are a few of my security officers who forget to put them in place. I have always insisted that any visitor coming into the school must be given a note, which must be signed and stamped by the one receiving the guest, and must indicate the time of departure **(Principal 27)**.

This means that schools may be having these rules set in place for use by security guards, but they fail to follow these rules. This was found to be more common when the school engages the locals as security guards in which case, those whom they know from home or some known prominent personalities, are allowed into the school without asking them to follow due procedures, the students insecure in schools.

The rating of playgrounds at 3.77 meant that it was partly accomplished. Most of the schools visited had properly maintained fields for various sporting activities and general play area for students. However, there were also a few schools where the playgrounds were shared with the primary schools. Maintenance of these fields was a challenge because of the question of ownership. Unfortunately, for sporting practices, students in some schools would walk long distances to reach playgrounds.

Walkways, motorways and parking aspect was rated as partly accomplished as shown by the mean rating of 3.45. A few schools had properly maintained walkways, motorways and parking which were far from classrooms and did not pose any interference to the students. However, most schools had the walkways, motorways passing between classrooms and parking closer to the classrooms causing a lot of interference. This is because many of these schools lacked enough land for expansion or due to poor planning by the school. Students need to have a peaceful environment free from destructions which may be brought about by vehicles coming into and out of school. Parking in the school compound should therefore be located away from the learning area to minimize interference with learning activities.

The finding about the walk way demarcations as 3.35 meant that it was moderately accomplished. Whereas many schools had walk ways demarcations made of shrubs and flowers, some had plain wires while a few others had barbed wires. Consistent with this finding was the response given by one of the students during a focus group discussion who stated that:

At one time when we had a fire breakout in one of our dormitories, as students were running all over to rescue themselves and to put off fire in the dormitory, a good number of students were injured by the barbed wires used to demarcate walkways within the school compound **(Student 24)**.

The scenario given by the student is an indication that some schools still have barbed wire used to demarcate walk way which was also confirmed by the researcher during the school visits.

The rating of fence at 3.06 meant that the school was fenced by a barbed wire around and was moderately accomplished. Whereas many of these schools had fences made of barbed wire without well maintained live fence, there were a few which had both barbed wire and well maintained live fences. The live fences acted as reinforcement to the barbed. However, there were a few other schools which had majorly the live fences around the school. This was porous and posed security threat to the students in these schools.

The aspect of trees in the schools was rated at 2.06, meaning that it was least accomplished. In schools where trees were labeled, it was noticed that the trees had been planted by prominent people in the school during special events for the school. This is an aspect that had not been implemented to its fullest. However, there are also schools that had no labels on trees at all.

International Journal of Novel Research in Education and Learning

 Vol. 10, Issue 2, pp: (53-65), Month: March - April 2023, Available at: www.noveltyjournals.com

Overall, the implementation of school grounds safety guidelines in public boarding secondary schools in Homa Bay County was rated as partly accomplished as was shown by the overall mean rating of 3.68, which was above average.

Table 4: Status of Students' Safety in Relation to School Ground Safety Guidelines as Observed by the Researcher (n = 31)

Aspects of Students' Safety		Ratings					Total Score	MR
		1	2	3	4	5		
Students' property stolen due to lack of fence and a gate;	F	0	0	2	4	25	147	4.73
Injury of students due to ruggedness of the school compound;	F	0	0	1	5	25	148	4.77
Sickness of students due to eating of fruits of strange plants not labeled as poisonous;	F	0	1	1	1	28	149	4.81
Students not physically fit as they lack sufficient play grounds;	F	0	0	1	1	29	152	4.90
Injuries of students due to walk ways demarcated using barbed wires;	F	0	1	1	10	19	140	4.52
Students property stolen by strangers due to poor identification;	F	0	0	0	15	16	140	4.52
Sickness of students arising from dusty classrooms and dining halls;	F	0	0	1	18	12	135	4.35
Injuries of students falling from unprotected or unidentified pits in the compound;	F	0	0	0	1	30	154	4.97
OVERALL MEAN RATING	F	0	2	7	55	184	1165	4.70

KEY: MR: Mean Rating OMR: Overall Mean Rating F: Frequency

Source: Field Data

1.00- 1.44 = Once per Week (Not Safe)

2.45 – 3.44 = Once per Term (Fairly Safe)

4.45 – 5.00 = Nil Occurrence (Very Safe)

1.45 – 2.44 = Once per Month (Less Safe)

3.45–4.44 = Once per Year (More Safe)

From Table 4, it is evident that students were very safe with respect to injuries of students falling in unprotected or unidentified pits (4.97), students not physically fit as they lack sufficient play grounds (4.90), sickness of students due to eating of fruits of strange plants not labeled as poisonous (4.81), injury of students due to ruggedness of the school compound (4.77), students' property stolen due to lack of fence and a gate (4.73), injuries of students due to walk ways demarcated using barbed wires (4.52) and students property stolen by strangers due to poor identification (4.52). Sickness of students arising from dusty classrooms and dining halls was rated as more safe with a mean rating of 4.35.

The rating of injuries of students falling in unprotected or unidentified pits at 4.97 meant that the students were very safe. It is clear that out of 31 secondary schools visited, there was only one school where such injury had taken place. The rest of the thirty (30) schools had well protected pits. This finding however was contrary to a student's comment during focus group discussion, who stated that:

One of the safety threats that we have in this school are the condemned pit latrines which are not protected. One of these pits is located along the route to the football field. It is dangerous and the administration needs to check on it, as it poses a lot of risk especially when we are running to the field for games. **(Student 18)**

International Journal of Novel Research in Education and Learning

Vol. 10, Issue 2, pp: (53-65), Month: March - April 2023, Available at: www.noveltyjournals.com

The location of this open pit makes it even more dangerous to the students, when it was on the path to football field. In a good number of school visited, there was policy that students were to be on toes as they moved from one point to the other in the school. Students in public boarding secondary schools in Homa Bay County were however, found to be very safe with respect to this aspect.

Students not physically fit as they lack sufficient play grounds was rated at 4.90, meaning that the students were very safe. Twenty nine (29) schools had provision of playgrounds to enable students to exercise, except in two (2) schools where some students showed lack of physical fitness. Whereas in the two (2) schools playgrounds were available, it was noticed that very little time was given for students' recreation. The students in public boarding secondary schools in Homa Bay County were however found to be very safe.

Sickness of students due to eating of fruits of strange plants not labeled as poisonous was highly rated at 4.81, meaning that students were very safe. With exception of three schools where such cases had been noticed, the rest of the twenty eight (28) schools had not experienced poisoning due to wild fruits. The students in public boarding secondary schools in Homa Bay County were found to be very safe, despite the fact that in many schools, the trees were not labeled including the poisonous trees.

The aspect of injury of students due to ruggedness of the school compound was rated at 4.77, meaning that the students were very safe. On observation, many schools had well leveled compound which is an indicator that the students were safe. Moreover, in a few of the schools, the walkways were made using concrete slab, improving the learners' safety. In twenty five (25) schools, there were no such injuries reported and indeed, the compounds were not rugged. Some six schools had cases of students with injuries due to the ruggedness of the compound. The students were however very safe with respect to this aspect.

Students' property stolen due to lack of fence and a gate was rated at 4.74, which meant that the students were equally very safe with respect to this aspect. From the observation, it was noticed that stealing had occurred in some six (6) schools due to lack of fence or poor fencing while in the rest of the 25 schools, such theft had not occurred, probably because of good fencing done with gates well fitted. The students were however found to be very safe in public boarding secondary schools in Homa Bay County.

Injuries of students due to walkways demarcated using barbed wires, was rated at 4.52, meaning that the students were very safe. In majority of the schools (19), these injuries had not been noticed. However, it was noted that in some twelve (12) schools, some students had been injured by barbed wires used to demarcate the walkways. Overall, the students in public boarding secondary schools in Homa Bay County were found to be very safe.

The rating of safety status of students in relation to students' property stolen by strangers due to poor identification at 4.52 meant that the students were very safe. From the data collected, sixteen (16) secondary schools had not witnessed stealing. However, in 15 schools, students' properties had been stolen under such circumstances. This can be ascertained by the fact that in most of the schools visited, the security personnel, never bothered to check the visitors' bags either as they walked in or as they walked out. This was quite dangerous to the safety of the learners. Students were however found to be very safe with respect to this aspect.

Lastly, the aspect of sickness of students arising from dusty classrooms and dining halls was rated as more safe with a mean rating of 4.35. Whereas, many of the schools had classrooms which were tiled, cleaning of these classrooms was a big challenge especially in boys' schools. Twelve (12) schools had good cleaning arrangement and therefore sickness arising from dusty classrooms and dining halls had not been witnessed. However, in some nineteen (19) schools, this incident had occurred. The students were however found to be more safe with respect to this aspect in public boarding secondary schools in Homa Bay County.

Overall, the students in public boarding secondary schools in Homa Bay County were found to be very safe, with respect to school grounds safety guidelines, as shown by the overall mean rating of 4.70.

To test the hypothesis that: school grounds safety guidelines have no effect on students' safety in public boarding secondary schools in Homa Bay County, simple regression analysis was run at 0.05 level of significance. To do this, mean ratings of implementation of school grounds safety guidelines and the mean ratings of students' safety were used to run the regression analysis and the results tabulated in Table 5.

Table 5: Model Summary on School Ground Safety Guidelines on Students' Safety

Model Summary ^b									
Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change
						F Change	df1	df2	
1	.479 ^a	.229	.203	.18623	.229	8.618	1	29	.006

a. Predictors: (Constant), School Grounds Safety Guidelines

b. Dependent Variable: Students' Safety

Source: Field Data

From Table 5, it was revealed that there was a moderate and positive effect of school ground safety guidelines on students' safety of 0.479, which was also found to be statistically significant as $p < 0.05$. Hence the study rejected the null hypothesis that: school grounds safety guidelines have no effect on students' safety in public boarding secondary schools in Homa Bay County. The adjusted R^2 value of 0.203 implies that the implementation of school grounds safety guidelines accounted for up to 20.3% of the total variance in students' safety in public boarding secondary schools in Homa Bay County. Hence other factors contribute 79.7% of the changes in students' safety. This means that contribution of school grounds safety guidelines on students' safety was below average and therefore the students were not safe with respect to school grounds safety guidelines.

The low percentage of 20.3% means that the students were still not safe with respect to implementation of school ground safety guidelines. One of the weakest aspects of school ground safety guidelines was on labeling of trees where it was established that in a total of 26 schools, trees were not labeled and only the ones planted by prominent people in the society were labeled. It was thus overall rated at 2.06 meaning least accomplished. By this, it is meant that students were not aware of the types of plants in the school compound and at the same time, the students could not know the trees that produced poisonous fruits, making it a great risk to the lives of the students in these schools.

Another area where there was a challenge was on the fence where it was established that there was barbed wire around the school without live fence. This actually exposed the learners to the surrounding community and could even lead to exchange of illegal stuff like drugs across the fence making the students not safe. Yet, in a few schools, the barbed wire fence was worn out and only had live fence. This was even more dangerous to the students as they would easily sneak out and strangers could sneak in the school compound putting the students at a great risk. Indeed this explains why there was little contribution of school ground guidelines on students' safety in public boarding secondary schools in Homa Bay County.

The study also revealed that there were shared playgrounds for sporting activities with provision of free area for general play in many schools. This means that whenever one school had sporting activities, the other school could not find an opportunity to use the same pitch. The frequency of using the same playground is reduced impacting negatively on physical fitness of the students. Moreover, maintenance of the shared playground was a challenge since each administrator expected the other to do repair and maintenance for improvement thus making the playground not safe to the students using it.

Reception at the school gate as an aspect of school grounds was also rated at 3.81 meaning partly accomplished and not fully accomplished. It was established that in most cases, visitors are either allowed to write their names and national identification card numbers but don't leave it at the gate or in others, national identification cards are left at the gate but there is no gate pass issued. It was revealed that only 6 schools adhered to the school rules and procedures to maintain safety at the gate. This finding thus shows that the students were not safe in public boarding secondary schools in Homa Bay County.

On students' safety aspects, sickness of students due to dusty classrooms and dining halls was found to be annual meaning that the students were not fully safe. Indeed, classroom cleanliness was rated at 3.97 meaning that it was partly accomplished. In most of the schools, it was observed that classes and dining halls were mopped 3 times a week and swept the rest of the days. This would easily allow for the availability of dust in these classrooms leading to sickness from dust related diseases.

International Journal of Novel Research in Education and Learning

Vol. 10, Issue 2, pp: (53-65), Month: March - April 2023, Available at: www.noveltyjournals.com

The findings that the school grounds safety guidelines only accounts for 20.3% of the variation of students safety is corroborated by a study conducted by Migiro (2012) on implementation of the safety standards policy in public secondary schools in Borabu District. The study established that safety grounds had not been provided in most of the schools especially by allowing visitors to enter the school compound without providing personal details at the school gate, which exposed students to physical danger and possibly bad influence from individuals with bad characters who would have entered the school compound unnoticed.

This finding is also in agreement with the findings of Nyakundi (2012) targeting implementation of safety standards guidelines in public secondary schools in Marani District, and established that the MoESTs safety guidelines was unimplemented due to inadequate funds and supervision. This would therefore mean that school ground safety guidelines would not be implemented thus exposing students to school ground safety insecurity.

When asked about the general students' safety status with respect to school ground safety guidelines, one of the SCQASO responded:

With respect to implementation of school ground safety guidelines, the students in the schools within this sub County are still not safe. Most of these schools struggle to get funds to put some of these policies in place yet the principals are unable to do all. Moreover, school grounds safety is so wide that it requires a lot of funds to be fully implemented (SCQASO 8).

The response of the SCQASO meant that the students were not safe because most of the school grounds safety guidelines had not been implemented due to lack of funds.

The above findings actually explain why there is little contribution of school ground safety guidelines on students' safety of 20.3% in public boarding secondary schools in Homa Bay County.

To confirm whether school grounds safety guidelines is a significant predictor of students' safety or not, ANOVA was computed and the results were as shown in Table 6.

Table 6: ANOVA Output on School Ground Safety Guidelines on Students' Safety

ANOVA ^b						
Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	.299	1	.299	8.618	.006 ^a
	Residual	1.006	29	.035		
	Total	1.305	30			

a. Predictors: (Constant), School Grounds Safety Guidelines

b. Dependent Variable: Students' Safety

Source: Field Data

From Table 6, it was revealed that school grounds safety guidelines was a significant predictor of students' safety, (**F (1, 29) = 8.618, p = 0.006**). This means that implementation of school grounds safety guidelines can be relied on in enhancing students' safety in public boarding secondary schools in Homa Bay County.

To establish the actual effect, linear regression analysis was computed. The results were as shown in Table 7.

Table 7: Linear Regression on School Ground Safety Guidelines on Students' Safety

Coefficients ^a						
Model		Unstandardized Coefficients		Standardized Coefficients		
		B	Std. Error	Beta	t	Sig.
1	(Constant)	3.589	.373		9.616	.000
	School_Ground	.293	.100	.479	2.936	.006

a. Dependent Variable: Students' Safety

Source: Field Data

International Journal of Novel Research in Education and Learning

 Vol. 10, Issue 2, pp: (53-65), Month: March - April 2023, Available at: www.noveltyjournals.com

The regression equation is $Y = \beta_0 + \beta_1 X$

Where:

Y is dependent variable (students' safety),

X is independent variable (school grounds safety guidelines),

β_1 is the slope of the regression line and

β_0 is constant (y- intercept) value when **x** is zero.

From Table 7, it can be observed that one unit increase in implementation of school grounds safety guidelines (**X**) leads to an increase in students' safety by 0.293 as signified by the coefficient 0.293. This means that if the implementation of school grounds safety guidelines is increased by one unit then the safety of the students would be increased by 0.293 units e.g.

$$Y = 3.589 + 0.293X$$

$$Y = 3.589 + 0.293 (1)$$

$$Y = 3.882 \text{ Units}$$

For example, two units increase in implementation of school grounds safety guidelines, leads to an increase of students' safety by:

$$Y = 3.589 + 0.293X$$

$$Y = 3.589 + 0.293 \times 2$$

$$Y = 4.175 \text{ Units}$$

The findings of this study, indicates that school grounds safety guidelines accounts for 20.3% of the variation in the students' safety. The effect is significant and this means school grounds safety guidelines can be relied on when enhancing the students' safety. The study thus concluded that school grounds safety guidelines had statistically significant effect on students' safety in public boarding secondary schools in Homa Bay County, Kenya.

VI. CONCLUSION

The study established that school grounds safety guidelines had strong and positive effect on students' safety with a coefficient of 0.479 and was also found to be statistically significant as $p < 0.01$. It was also established that implementation of school grounds safety guidelines account for up to 20.3% of the variation in students' safety and that its implementation was a significant predictor of students' safety, ($F(1, 29) = 8.618, p < 0.05$). This means that implementation of school grounds safety guidelines can be relied on to determine the students' safety. A unit increase in implementation of school grounds safety guidelines led to an increase of students' safety by 0.293. With regards to the effect of school grounds safety guidelines on students' safety, the study concluded that school grounds safety guidelines had moderate and positive effect on students' safety in public secondary schools in Homa Bay County. The low contribution of school grounds safety guidelines on students' safety can be attributed to the interview finding that the students were not safe with respect to implementation of school grounds safety guidelines. The principals cited inadequate funds as the biggest challenge preventing them from implementing school grounds safety guidelines.

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