



INFLUENCE OF SAFETY STANDARDS AND GUIDELINES IMPLEMENTATION ON TRANSPORTATION SAFETY IN PUBLIC BOARDING SECONDARY SCHOOLS IN KITUI COUNTY, KENYA

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Abstract:

There is a current concern caused by rampant tragedies in secondary schools in Kenya which demands for the need to look at the school safety system. The aim of this research was to look into the implementation of safety standards and guidelines on transportation safety in public boarding secondary schools in Kitui County. The objective was to find out the influence of transportation safety implementation. The investigation was led by the securitization and disaster management theories. The mixed methodology approach was adopted and the design was concurrent triangulation. Targeted population was 16,875 which included; 1,940 teachers and 14,903 students, 16 education officers and 16 senior police officers. The sample was 650 participants which included: 240 teachers, 400 students, 5 education officers and 5 security personnel. Stratified sampling was used to get 5 schools from each of the 8 constituencies; then random sampling was used to get 20 schools. Principals and deputies were purposively sampled. The researcher used random sampling for teachers and learners and purposive for education and security officers. Likert scale surveys were utilized in the case of teachers and learners. Interview schedules were used for education and security officers and an observation checklist was used too. The data collection tools were tested in 2 boarding institutions which were not included in the last study sample. The specialists examined data collection tools for validity and test retest technique was done for reliability with coefficient of .902. For credibility, simultaneous triangulation was employed. Quantitative data were evaluated in expressive data using tables, frequencies and percentages. Chi-square was employed to

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find out the degree to which the variables related with one another. Qualitative data were explained through narrative form. The study established that there was need to check the use of safety belts and overloading among other issues. It was recommended that strict measures be put in place to safeguard learners using school vehicles. Further research was recommended in security in tertiary institutions and universities.

Keywords: school buses, transportation, public boarding schools, safety standards and guidelines

1. Background of the Study

This study was exploring the influence of the safety standards and guidelines on transportation safety implementation in public boarding secondary schools in Kitui in the Republic of Kenya. The use of security as an academic and professional accountability was invented after the post-World War II. It was generally regarded as part of study of International Relations. Until the years of the Cold War, it was a field of study and organized by the Anglo-American philosophy (Williams, 2008).

In the year 2008, the police were called to respond to school disaster incidents in England more than 7,000 times according to the British schools' statistics. The number of these incidents that led to the police being called was worrying (Janet, 2009). In America, it was reported the country's worst school shooting whereby twenty children were brutally murdered by a gunman. This took place in Sandy Hook Elementary School (The Independent, 2012).

In the Republic of Uganda, 20 learners in Budo Junior School died in a dormitory fire as all their bodies were severely charred. This was the 33rd incident of school infernos in four years then. The then Minister for Education said that the Ministry had minimum security requirements to be followed by all schools in the country strictly. Nevertheless, 93 % of Uganda schools failed to have fire extinguishers. Condition in the dorms was so wretched such that learners were found to be seriously overcrowded as some were sleeping in triple and quadruple deckers (New Vision, 2008).

In 2001, the Government of Kenya appointed The Task Force on Student Discipline and Unrest in Secondary Schools in determination to create security in schools. Cases of disturbances begun as early as 1908 in Maseno School. Subsequently, the trends had been terrifyingly intensifying to higher heights (MoEST, 2001). According to the Task Force, disastrous occurrences of unrests continued to be witnessed when on the 13th of July, 1991 the male students of the then St Kizito Mixed School attacked the girls' dormitory raping some of them. Some nineteen female students lost their lives in the tragedy.

In Kitui County, a form one school teenager was charged over dorm inferno at St Ursula Girls' Secondary School. The fourteen-year aged girl appeared before the Resident Magistrate. This was not just a mere unruliness case but a court one (The Star, 2014). In the same county, the St Charles Lwanga Secondary School, fire reduced a dormitory into ashes. The fire was started by form four boys who were protesting

against holiday tuition that was taking place at the school during that time. Property valued millions of shillings was lost (Daily Post, 2015). This study examined transportation safety as part of security management in learning institutions in the study county.

2. Statement of the Problem

To express the importance of safety in schools, the Ministry of Education in Kenya rolled out a safety Manual to be followed to ensure security management in the in the year 2008. However, there was an impending concern on the increasing cases of tragedies in secondary schools in this country. It may not be accurately established neither documented, as to what degree the Manual had been implemented in schools in the study county. The Manual published by the Government in 2008 proposed to guarantee safe schools but there were still problems for instance, of transportation safety among the institutions.

Schools are thought to be shelters of harmony and steadiness, which should be the real state, but should not be muddled places. There was, subsequently, a pressing need for proper planning to make schools safer places for learners to study in. If there were no safety measures taken, schools could not achieve the intended goals of giving desired skills, attitudes and knowledge to the learners. This study endeavoured to sensitize all participants of education in this country to come up with better and safer institutions. There is, therefore, an urgent need for proper interventions to make schools safer places especially in terms of transportation. If there are no interventions involved, schools would not achieve the intended goals of giving desired skills, attitudes and knowledge to the students. Indeed, schools would end up losing lives in accidents.

3. Purpose of the Study

This research was an examining influence of safety standards and guidelines implementation on transportation safety in public boarding secondary schools in Kitui County, Kenya.

4. The Research Objective

The research was controlled by one objective as follows:

- To find out the influence of transportation safety implementation on security management in public boarding secondary schools in Kitui County, Kenya.

5. Study Question

Reflecting on the study objective, the following question was constructed:

- How has transportation safety implementation influenced security management in public boarding secondary schools in Kitui County, Kenya?

6. Significance of the Study

The current body of knowledge relating to security management in secondary schools desires extra new data. Therefore, this study prominently subsidized to this field of study. The investigator gathered vital information from the field to discourse this problem of security management to add value to the present data in this field of study. Investigators in school security management acquired treasured evidence to utilize in their researches.

There were barely any acknowledged or renowned studies which had been steered in the study county on school security and especially in school transportation safety. This study, thus, served as a pioneer on controlling security matters in the schools in the county. All schools in the county were to benefit from this study since they were alerted on security supervision henceforth heightened the same on obtaining enhanced skills and information. This study benefited education participants to help make safe schools for the students in this republic.

The outcomes of this study were intended to give useful data to the Ministry of Education who would create improved policies and practical interventions on security management. Proper implementation of transportation safety would be expected to enhance security management in public schools and other learning institutions in this country. Institutions need to be secure places permanently where students would attain knowledge, skills and attitudes harmoniously.

7. Literature Review

The literature was reviewed according to the study objective regarding transportation safety implementation.

7.1 Transportation Safety in Schools

In USA, students recalled horrifying bus accident that killed ten and wounded thirty in Orland High School. Five students were among the killed, three chaperones and the drivers of both vehicles. The accident instantly sparked a fire that quickly spread out causing the passengers to smash their windows open to escape. Lots of Los Angeles youths were on board the bus to Humboldt State University when the truck collided into it causing fire (Boroff & Walsh, 2014). School transport at all times is a delicate matter since students can endanger their lives. All care must be taken to ensure that safety has been maintained for instance good maintenance of school vehicles.

The AFP (2014) informed that five kids died in India when a school bus bumped into a locomotive. Thirteen passengers plus the driver were rushed to hospital following the accident in Uttar Pradesh State. It was said that there were more than twenty learners on board when the calamity befell. India's roads are hazardous. Data indicated that in 2013, some 166,506 persons perished in road traffic accidents owing to poor roads, speedy automobiles and uncaring driving amongst other causative factors.

Astonishingly, sixteen students died in a school bus accident in the Republic of South Africa. The bus was transporting students to a school function when it collided with a mini bus injuring thirty one commuters. The students were going to play rugby. It is said that though there was commendable infrastructure, roads in South Africa were among the most dangerous in the world with some 13,000 road users killed yearly, being an average of more than 35 losses in a day (TheJournal.ie, 2012).

Going by the Al Jazeera (2015) more than thirty road users, mostly students, were killed when returning from sports in Morocco. Their bus caught fire after a head-on collision with a trailer truck. This road accident in Southern Morocco was the most fatal in the North African kingdom since 2012 when a bus plunged into a ravine killing 42 people. The majority of the victims were students aged between eight and fourteen. The bus was transporting the young athletes with their coaches from a competition in Bouznika near the capital city, Rabat, when the bus caught fire.

Kenya is not exceptional. There were chains of school bus calamities throughout 2013. Some students were coming from National Music Festival in Nakuru when their school bus they were boarding rammed into the one from Vidhu Ramji School. The driver and one student died on the spot as more than sixteen persons were admitted in hospital. One more accident involved a school bus belonging to Rioma Secondary School which was said to have been overloaded with more than sixty learners at the time of the accident. In addition, five students who were on a school trip to Lake Bogoria perished while some of their classmates were wounded after their bus was involved in a grisly accident in Koibatek. The students of Nambale boys were on their way to the lake when the accident occurred (Ndonga, 2013).

A sad story was reported whereby a Kenyan school bus got involved in a horrific accident. More than fifteen students lost their lives. The victims were traveling from Nyamache for annual school games. They were drawn from five schools within Kisii County and were traveling from Marani to Nyamache district for county games. The President expressed concern over road carnage in the Republic and called on the police to enforce the traffic laws (Daily Nation, 2013). It is evident that many school accidents occur during official trips for games, drama, study tours and the like. Consequently, measures should be taken not only to minimize these trips but also to secure students. Cases of overloading are reported since schools want to economize by using one vehicle instead of several. Security of students comes first, particularly where loss of lives is evident. Saving school money cannot be compared with lives lost.

According to Onyango (2013) it was shocking that most school buses in Homa Bay County did not have working speed governors. Again, parents were required to give consent in writing before students could use school buses to go for study tours, a thing which may not have been in practice. It has been revealed that a number of accidents have occurred during trips for games, music festivals and athletics. Failure to keep school vehicles in good condition is against the traffic law in this country. While this study was looking for solutions, it is imperative that the law takes its course to prevent students' deaths in road accidents while at school.

8. Research Methodology and Design

The researcher used mixed approach methodology. Both quantitative and qualitative data were collected. The Design adopted was the Concurrent Triangulation. This design was chosen due to its elasticity in addressing both quantitative and qualitative data at the same time. The total targeted populace was the teachers (principals, deputies and teachers) and students (form fours) in all the public boarding secondary schools in the study county. Education and security officers were also included in the population. Institutions investigated included boys' boarding, girls' boarding and mixed boarding schools. Seventy school principals were targeted in the study and same number of their deputies. One thousand and eight hundred teachers were targeted. And 14,903 form 4 learners were included in the target since they had long involvement in school life and better English language command to understand the questionnaires well. The table below shows the targeted population.

Table 1: Target population

Participants	Target population	% Proportion
Principals	70	28.57
Deputies	70	28.57
Teachers	1,800	11.11
F4 students	14,903	2.68
Education officers	16	31.25
Senior police officers	16	31.25
Totals	16,875	3.85

Source: County Director of Education Kitui, 2017.

8.1 Sampling Procedures and Sample Size

Kitui County consists of eight parliamentary constituencies. Stratified sampling was used to enable fair coverage of the huge study area. All the constituencies were included in the study; however, the sampling did not include day schools because they had a lower risk of being affected by all kinds of insecurity. For all the 8 constituencies stratified sampling was conducted, 5 public boarding secondary schools were randomly sampled from each constituency totaling to 40 institutions. The names of these 40 public boarding schools were written on pieces of papers and put into a basket whereby two people were asked to alternately pull out any one school after the basket is rolled up. This continued till twenty schools were selected in the lottery.

Twenty (20) form four students from each school were randomly sampled so as to give each student a chance to participate in the research. If a school had more than one stream, the names of the streams were written and put in a basket and randomly sampled. The researcher wrote 20 pieces of paper "yes" and the rest "no" depending on the number of form four students in the sampled class. The students with "yes" papers were included. Ten teachers were randomly sampled using similar lottery method from each of the schools. Twenty principals and their deputies were purposively sampled because they belonged to the same schools, making a total of two hundred and forty

(240) teachers. Random sampling used lottery methods where all respondents had equal chances of being selected. Five education officers and five police officers were included in the sample through purposive sampling. The total number of participants was six hundred and fifty (650) from the sampled schools and officers.

8.2 Sample Size

The proposed sample size for the study was 650 participants comprising of principals, deputies, teachers, form four students, education officers and security men. The sample covered 20 public boarding secondary schools from which 20 principals and 20 deputies were drawn. The schools also provided 200 teachers and 400 students. This sample also included 5 education officers and 5 senior police officers. The sample size is as indicated in the table below.

Table 2: Sampling grid

Category of population	Total population	Sampling procedure	Sample size
Boarding schools	70	Stratified	20
Principals	70	Purposive	20
Deputies	70	Purposive	20
Teachers	1,800	Random	200
F4 students	14,903	Random	400
Education officers	16	Purposive	5
Senior police officers	16	Purposive	5
Total	16,875		650

Source: The researcher, 2017.

8.3 Data Collection Procedures

On arrival in the schools, the researcher observed protocol by visiting the principal's office for self-introduction and signing of the visitors' book. The researcher requested the principal to assign a teacher to assist in the research process. The teacher was the coordinator of the research process in that particular school. The first visit was to give questionnaires to the principals, deputies and randomly sampled teachers. The researcher wrote 10 pieces of papers "yes" and the rest "no" depending on the number of teachers in the school. The teachers were requested to pick the papers and only those with "yes" were given questionnaires to fill at their own pace.

The other reason was to do observations as per the checklist. The researcher went round the schools' compounds and made security management observations. The final reason was to make appointments with schools as to when to visit and collect filled questionnaires from the coordinating teachers. The teachers and students filled the questionnaires at their own pace before the next visit of the researcher and the coordinating teacher collected the same and handed them to him. The coordinating teachers made sure that the students were prepared to participate in the study as per the appointment made between the researcher and the school. This ensured a high return rate of questionnaires from the school community.

The second visit was to collect questionnaires from the institutions as per appointments. Random selection of students was done using lottery method and all participants were from form four students of age 18 years and above. If a school had more than one stream, the coordinator picked only one class at random. In getting students, small papers written “yes” and “no” were used. The “yes” papers were only 20 in number as the sample required. The participants in any one of the form four classes were requested to pick the papers from a basket. Students with “yes” papers were separated into a room and used in the study to fill questionnaires. At the same time, the researcher made appointments with education and senior police officers to conduct the interviews.

8.4 Data Analysis Procedures

The facts in this study were both quantitative and qualitative in nature. Numerical facts were examined descriptively and displayed in frequencies, tables and percentages. Inferential statistics was also used to analyze numerical data as Chi-square was utilized. Qualitative data was analyzed thematically.

Collected data from the field was analyzed through descriptive and inferential statistics as well as thematic. All field data was analyzed to find out meaning in it. This means sorting out the data, editing, coding, entering and cleaning. This data processing gave results that the researcher read between the lines and made conclusions. Captured data was analyzed as per the study objectives to answer the study questions. The research objectives dealt with security management issues pertaining transportation. The objective was treated as a sub topic under which data was analyzed for interpretation. The data analysis was arranged such that the research questions were answered one by one. Descriptive statics was presented in tables, frequencies and percentages. Inferential statistics used Chi-square in the SPSS version 21.

There was, finally, the mixing and interpretation of both quantitative and qualitative data to draw out further meanings of the data collected. The researcher further analyzed the data to cover the variables and indicate the analysis approaches employed.

9. Research Findings and Discussions

The findings for the study objective were put together by the researcher as it is seen here below. The investigator sought views from principals and deputies on part E of their survey on the issue of transportation safety as shown below in the sub section.

9.1 Descriptive Statistics Analysis

The investigator prepared a questionnaire for principals and deputies to importune data on the problem. The data captured the indicators of the independent variable such as vehicles with speed governors and safety belts, avoiding overloading, consent by parents, well serviced vehicles, insurance and safety on public vehicles ferrying learners. The data also captured the dependent variable indicator; disaster

preparedness. This is seen in the questionnaires which balance both independent and dependent variables. Responses from the school administrators were presented in Table 3.

Table 3: Principals' and deputies' responses on transportation safety

Statements	D (1)	SD (2)	U (3)	A (4)	SA (5)
School buses are fitted with working speed governors and safety belts to enhance disaster preparedness	f 00 0.00%	f 00 0.00%	f 02 5.71%	f 19 54.29%	f 14 40%
School buses in Kitui are always checked to avoid overloading when ferrying students to enhance disaster preparedness	f 05 14.28%	f 04 11.43%	f 05 14.29%	f 17 48.57%	f 04 11.43%
Your school parents give consent for the students traveling in school vehicles to enhance disaster preparedness	f 10 28.57%	f 11 31.43%	f 00 0%	f 08 22.86%	f 06 17.14%
School buses always have comprehensive insurance to protect students, teachers and workers to propel disaster preparedness	f 00 0.0%	f 00 0.0%	f 02 5.71%	f 16 45.71%	f 17 48.57%
Safety on public vehicles transporting your students to various school trips is observed to enhance disaster preparedness	f 02 5.71%	f 01 2.86%	f 02 5.71%	f 18 51.43%	f 12 34.29%
Students are given advice on safety on public vehicles and motorcycle taxis known as <i>boda boda</i> that they board to and fro home to enhance disaster preparedness among them	f 07 20%	f 04 11.43%	f 01 2.86%	f 15 42.86%	f 08 22.86%

Source: The researcher, 2017.

From the table, transportation safety implementation influenced security management positively as it was unquestionable that school automobiles had functional speed governors and safety belts as 33 (94.29 %) of the school managers ascertained. Only 2 (5.71 %) were unsure as their institutions did not own buses. Nevertheless, it was perturbing to note that 9 (25.71 %) of the administrators did not pay attention on overloading when transporting learners. Nevertheless majority of 21 (60 %) made sure that buses were not overloaded. It was noted that in most institutions 21 (60 %) of the parents did not give approval for their children when travelling in school buses as it was mandatory. Only 14 (40 %) made sure that parents were consulted each time learners used school buses. No doubt the work must have been too much as many schools engaged frequent journeys throughout the school term. This agrees with

Onyango (2013) who established that in Homa Bay County, parents did not give approval in writing each time their children were travelling in school buses.

It was not doubtful that school buses in the study county had comprehensive insurance to safeguard their learners. This was ascertained by a majority of 33 (94.28 %) of the participants. The 2 (5.71 %) were from schools which did not own vehicles. Safety on public automobiles ferrying learners to numerous school trips was observed by majority of administrators with a record of 30 (85.72 %). Only 3 (8.57 %) did not reach agreement with the rest and 2 (5.71 %) were unsure. It was noted that various schools did not give their students advice on safety on public vehicles and motorcycle taxis drivers known as *boda boda* which they boarded to and fro their homes. However, a majority of 23 (65.72 %) claimed that they gave advice to their students on the same issue. The schools that did not advise their students on safety during travelling out of schools were worrying and could have caused tragedies between the institutions and homes. This was a matter to worry about.

In line with this, there were many school bus accidents reported in this country in 2013. For instance some students were coming from National Music Festival in Nakuru when their bus rammed into another school bus. The driver and a learner perished whereas more than sixteen learners were wounded and got hospitalized (Ndonga, 2013).

9.2 Teachers' Responses

To gather more information on the objective, teachers filled their questionnaire and their responses were presented in Table 4.

Table 4: Teachers' Responses on Transportation Safety

Statements	D (1)	SD (2)	U (3)	A (4)	SA (5)
School buses are fitted with working speed governors and safety belts to enhance disaster preparedness of learners	f 16 9.30%	f 07 4.07%	f 14 8.14%	f 99 57.56%	f 36 20.93%
When you take students for school trips you ensure that safety belts are used and the vehicle has First Aid kit and a fire extinguisher to enhance disaster preparedness	f 28 16.28%	f 12 6.97%	f 11 6.40%	f 103 59.88%	f 18 10.47%
Parents of your school give consent for the students traveling in school vehicles and overloading is not allowed so as to enhance disaster preparedness	f 20 11.63%	f 12 6.98%	f 17 9.88%	f 95 55.23%	f 28 16.28%
School buses are always well serviced to enhance disaster preparedness	f 07 4.07%	f 10 5.81%	f 15 8.72%	f 103 59.88%	f 37 21.52%
School buses have comprehensive insurance to enhance disaster	f 04	f 04	f 22	f 95	f 47

preparedness	2.33%	2.33%	12.78%	55.23%	27.33%
You observe safety on public vehicles transporting students to various school trips to enhance disaster preparedness	f 16 9.30%	f 10 5.81%	f 13 7.56%	f 101 58.73%	f 32 18.60%
When your students travel by vehicles on school missions, it is often times 100 % safe to enhance disaster preparedness	f 24 13.96%	f 10 5.81%	f 16 9.30%	f 100 58.14%	f 22 12.79%
In your school, teachers and students can get road accidents while on school trips hence threatening disaster preparedness	f 34 19.77%	f 14 8.14%	f 21 12.21%	f 87 50.58%	f 16 9.30%

Source: The researcher, 2017.

Judging from the table, school buses were fitted with working speed governors and safety belts as 135 (78.46 %) of the teachers concurred. Only an insignificant minority of 23 (13.37 %) did not agree. Majority of the teachers 121 (70.35 %) reported that they made sure that safety belts were used by the students and that buses had First Aid kits and fire extinguishers. However, it was perturbing since 40 (23.25 %) of the teachers did not ensure safety of students when using institutional vehicles. Majority of the teachers, 123 (71.51 %) said that parents gave consent for students travelling in school vehicles and that they did not allow overloading. Some 32 (18.61 %) did not think this way. The teachers may not have adequate information from the administrators on the issue of parents signing consent whenever their children boarded the vehicles.

It was found that buses were always serviced to propel security management of the users transported in them as 140 (81.40 %) of the teachers indicated. Only 17 (19.88 %) did not agree. The issue of insurance of school vehicles was unquestionable as 142 (82.56 %) of the teachers indicated. It was agreed that when students used vehicles on school missions they were safe. This was shown by a majority of 122 (70.93 %). However, a few of the teachers thought that students were not safe as 34 (19.77 %) indicated while on official tours. On the issue of school bus calamities, 103 (59.88 %) showed that road misfortunes were likely while 48 (27.91 %) went on the contrary. Some 21 (12.21 %) were unsure on this matter. In conclusion, transportation safety implementation was not badly off as many schools had precautions on their vehicles.

9.3 Students' Responses

The investigator wanted further clarification from the students on transportation safety and therefore prepared questionnaires for this purpose. The results were presented in Table 5.

Table 5: Students' responses on transportation safety

Statements	D (1)	SD (2)	U (3)	A (4)	SA (5)
School buses are fitted with a speed governors and safety belts for disaster preparedness	f 30 8.174%	f 48 13.08%	f 46 12.53%	f 149 40.61%	f 94 25.61%

When you travel in a school bus during trips you use safety belts to enhance disaster preparedness	f 71 19.35%	f 67 18.26%	f 30 8.17%	f 134 36.51%	f 65 17.71%
Sometimes school buses are overloaded which is a threat to disaster preparedness	f 90 24.52%	f 125 34.06%	f 21 5.72%	f 81 22.08%	f 50 13.62%
School buses are always in good mechanical order so as to enhance disaster preparedness	f 34 9.26%	f 41 11.18%	f 30 8.17%	f 154 41.96%	f 108 29.43%
Safety is observed in public vehicles that transport students when school buses are not available to enhance disaster preparedness	f 50 13.62%	f 122 33.24%	f 35 9.54%	f 107 29.16%	f 53 14.44%
Public vehicles ferrying students have proper insurance cover to enhance disaster preparedness	f 50 13.62%	f 90 24.52%	f 48 13.08%	f 127 34.60%	f 52 14.18%

Source: The researcher, 2017.

As of the table, majority of learners 243 (66.22 %) agreed that school vehicles had speed governors and safety belts for their safety. However, 78 (21.25 %) did not approve and 46 (12.53 %) were unclear. These last two groups total to 124 (33.78 %) of the learners who did not care about speed governors and safety belts. This is why 138 (37.61 %) of the learners indicated that they did not use safety belts while on official tours. A larger percentage 99 (54.22 %) claimed that they used safety belts while 30 (8.17 %) remained undecided. The percentage of students that did not care about safety belts was perturbing since safety on school vehicles had to be maintained. At the same time, a majority of 215 (58.58 %) of the students did not agree with the statement that school buses were sometimes overloaded. This was so since students are known to compete for trips even when they were not on the travelling list. So for them, an overloaded bus would make sure that it ferried additional unwelcome passengers which was advantageous for them.

Another group of 131 (35.70 %) indicated that school buses could be overloaded sometimes and this was a fact that was witnessed by this researcher during data collection period. In this connection, Abuga (2016) reported a case of St Mary's Nyamagwa Girls' school bus where 3 girls lost their lives and 68 got injured. The vehicle was overloaded and it was evident that the learners did not use safety belts during the short trip.

9.4 Inferential Statistics Analysis

The researcher conducted Chi-square test of independence to examine the influence of transportation safety implementation on security management in terms of disaster preparedness. After keying in the participants' responses in SPSS in Chi-square test, the average result was 0.8816. This outcome was greater than α value which is normally

0.05. The variables related were the responses of the participants in the fourth objective. This is shown in Table 6.

Table 6: Chi-square test on transportation safety

Test Statistics					
Chi-Square	.667 ^a	.667 ^b	2.000 ^b	.000 ^c	.000 ^c
df	4	3	3	5	5
Asymp. Sig.	.955	.881	.572	1.000	1.000

Source: The researcher, 2017.

From the table, 0.8816 was > than 0.05. This means there was a significant association between influence of transportation safety implementation and security management in terms of disaster preparedness. It is therefore necessary to take precautions since road accidents are inevitable for instance the Murang'a High School and Rioma Secondary School buses among others (Ndonga, 2013).

9.4 Thematic Analysis

The investigator arranged data collected from the field interviews and observations to measure disaster preparedness in the schools. There were five education officers and a similar number of senior police officers interrogated and observations were made throughout data gathering. These codes were reviewed and combined into themes as seen below.

9.4.1 Safe Vehicles

It was apparent that the government was serious in making sure that institutional vehicles were secure. The parents had purchased comprehensive insurance covers for the buses. It was ensured that safety belts and speed governors were working before buses were used by learners. The officers could ensure safety of school vehicles even during inspections. The Ministry of Education was concerned as an officer said,

"The Ministry of Education always makes sure that the parents buy comprehensive insurance on all school buses before they are used on the road which enables disaster preparedness in case of any accident" (EO1).

Police officers did not have much say on vehicles. They could not assist in maintaining them but they could offer some safety talks to learners. Every time school buses were on the road, they could stop them and check overloading. The police officers did not have control on transportation safety as one officer observed,

"If the buses go against the law, the driver can be arrested and charged in a court of law but we have no control over this. This would occur especially if there was no disaster preparedness measures in advance" (SPO1).

There was no way officers could get into schools and check vehicles unless there was a tip off on some issue. They believe teachers are responsible enough to carry out regular checks on the vehicles. The trust given to teachers was enough to ensure safety of vehicles as another officer added,

“We don’t interfere with teachers regarding controlling institutional vehicles unless need be. It is their duty to ensure that there is safety preparedness before vehicles get into the road” (SPO2).

Carrying out of safety in the school vehicles was scoring high as the officers said that the conditions of institutional vehicles were improving hence becoming disaster compliant. The schools were observing traffic laws to evade accidents. School bus accidents were rare paralleled to public transportation accidents. An officer agreed,

“Nowadays schools are careful to insure their vehicles and keep them well maintained with working speed governors. They seem to be prepared for any accidents that may occur during school trips hence observing disaster preparedness” (SPO4).

9.4.2 Travelling

The participants stated their fear about learners when they hung between the school and home. They are not prepared for the worst. There was freedom which could be abused by the students. There were lots of issues in the media about what was happening between schools and homes. It was established that students do a lot of vices between schools and homes as one officer said,

“You never know what happens when these young people are neither in school nor home. We have heard bad reports of drug abuse and sexual immorality going on during this gap. This means that they are not prepared for casualties” (EO3).

Policemen do not control students when out of school. Some even wear home attires so that the teachers may not recognize them. There is a gap between the schools and homes. Teachers have no control of the learners out of school compounds. There is very little education officers can do to control students out of school as another officer pointed,

“Whenever learners are not in schools, our hands are tied up; we do not have control of them and I think even the teachers. Their safety will depend on the level to which they are disaster prepared” (EO4).

It is a common thought that parents and teachers do not care for their children when they are travelling home from schools. The teachers and officers have no powers over learners out of school. Similarly, parents have no control of their children till they arrive home. One officer lamented,

"Nobody seems to care for students' welfare outside the schools including the so called parents and care givers. One wonders if these boys and girls are well prepared for the unknown disasters" (EO5).

This means whatever happens to the students between the schools and homes may not be a responsibility of officers and teachers. Then the big question is who is responsible for them yet they are not at home with their parents? This study tried to venture into this issue and established that learners were not well prepared for disasters away from the schools.

9.4.3 Student Precautions

Security alertness was possible if appropriate care was taken during trips. It was not likely for the officers to establish if safety belts were used. In many instances they were not used due to overloading of the vehicles hence hindering disaster preparedness. They could only be used in the case where all passengers were seated. Often times than not, schools were reminded to ensure that safety was observed during trips. An officer added,

"Issues with safety belts being used or not used as well as overloading are addressed by teachers; you do not expect us to be omnipresent to see all this happen. It is the matter of preparing learners in case they face any calamities; they should prepare for any accident!" (EO2).

To overload a school bus could have been a necessary evil. Numerous trips are done in the year. Buses are overloaded to avoid spending much. Students from different schools are transported in one bus. It was agreed that buses could be overloaded to economize on the transportation cost as one officer said,

"Many a time schools may not afford extra vehicles when students go for activities. I have seen buses from various schools ferrying students from other schools to economize on the travelling cost. The main issue is that the learners should be sensitized on casualties that they may face during the trips; this is safety awareness" (SPO3).

The situation in this county was different from what Onyango (2013) found in Homa Bay that school buses were ill maintained without speed governors. It is possible that schools were taking care of their vehicles. However, buses may have safety belts which are not used by learners as it was seen in this study.

9.4.4 Observation Results

Schools were disaster compliant as vehicles inspected had functional speed governors and safety belts. There were First Aid kits and fire extinguishers. The vehicles were clean with insurance covers pasted on the windscreens. Only two institutions did not have school buses. From the outside, buses looked wonderful but when the investigator

observed the inside; some safety belts were not working and were untidy showing evidence of not being used for a long time.

This investigator observed overloading of buses during the data gathering period which coincided with the county athletics competitions where all teams from all schools come together. Learners were seen hanging on the buses in front of their teachers and even some waving from the windows; their heads outside hence threatening their security. Cases of overloaded school buses are common in this country. This is in line with what happened when a newly bought bus for St Mary's Nyamagwa Girls was overloaded then got involved in a horrific accident leaving 3 girls dead and 68 injured (Abuga, 2016).

9.4.5 Mixing and Interpreting Data

Data analysis has shown that there is noteworthy safety on the vehicles particularly the speed governors, safety belts, First Aid kits and fire extinguishers. From the descriptive statistics, most administrators 33 (94.29 %) concurred that they had safe vehicles in terms of working speed governors, safety belts, insurance covers and the like. In most schools 21 (60 %) parents did not give consent when their children were travelling in institutional vehicles. Similarly, most teachers 135 (78.46 %) and most learners 243 (66.22 %) agreed on safety on their vehicles.

However, an observed problem of learners' not using safety belts and another issue of overloading school buses can cause worry. It is seen that parents don't give consent whenever their children are travelling in school vehicles as the manual requires. If anything goes wrong, for instance an accident, the parents can turn round and sue the schools. Public vehicles used by learners have no guarantee of safety as nobody cares if they are properly insured or not.

From the inferential statistics, it is seen that responses from the participants were not by chance but what it was projected under normal observations showing that the p value achieved, 0.8816, was higher than α value which is usually .05, signifying that their views were what would be estimated under usual conditions. The association was significant hence acceptable.

While there is evidence of good care and maintenance of school vehicles, precautions need to be taken to secure more safety on the vehicles. Accidents are inevitable with school vehicles as it is seen in the case of South African school accident whereby 16 students died on the spot (TheJournal.ie, 2012). It should not be assumed that accidents will not occur. They should be prevented by taking extra care before they take people unexpectedly.

10. Discussions of Research Findings

The research looked into indicators like buses fitted with speed governors and safety belts, avoiding overloading, consents by parents when learners used school vehicles and safety on public service vehicles ferrying learners. Securitization theory alerted that there could be dangers in school transportation and this was evident in the literature

review. Disaster management theory encouraged disaster preparedness if security was to be achieved.

Kyambi (2013) among other researchers did not address this issue. Most schools have good buses which are insured, fitted with working speed governors and safety belts. Nonetheless, there is the issue of congestion of the buses while on official trips to save on the cost of transport. The students seem not to care to fasten safety belts for their safety. Failure to use safety belts can increase fatalities when accidents occur.

11. Summary, Conclusions and Recommendations

School buses were found to be fitted with working speed governors and safety belts. While majority of the administrators checked overloading, a quarter of them did not care about this. In most cases, parents did not give consent when their children travelled in institutional vehicles. School buses had proper insurance covers but safety on public vehicles ferrying students was not observed. Although majority of administrators said that they cautioned their students on *boda boda* motorcycle taxi drivers, the number of schools that did not do this was worrying.

On their questionnaire, the teachers agreed with their administrators that school vehicles were well insured, had safety belts and ensured that the belts were used to a certain extent. Although most of the teachers agreed that they had safe buses, they too agreed that there was possibility of road accidents involving same vehicles. There was therefore necessity to keep supervising trips to ensure safety of the learners.

The learners agreed on the safety of their institutional vehicles that they were using but a third of them did not use safety belts while travelling on school tours. A group of more than a third of them agreed that school buses sometimes were overloaded. Most students did not think that the public vehicles ferrying them were safe. All this translated into the fact that disaster preparedness was not significantly captured. It was then concluded that vehicles were safe although there was overloading and the students were not encouraged to use safety belts.

12. The Study Conclusions

Although buses were fitted with working speed governors and safety belts, it is the responsibility of the teachers to ensure that students use these belts when travelling and that the school buses were not overloaded. The parents should give written consent whenever their children boarded school vehicles on trips. Learners should be given advice on public transportation especially the *boda boda* motorcycle taxi drivers. All in all, there was no evidence of significant disaster preparedness in the schools.

12.1 Recommendations for Practice

Based on the study findings, the researcher recommended that:

- There is need to check on the overloading in school buses and the use of safety belts. Teachers taking students on trips should ensure that traffic regulations are observed by all the learners on board to ensure disaster preparedness

12.2 Further Study Recommendations

It was suggested that additional study be done on:-

- Implementing safety standards and guidelines in post-secondary institutions to protect safety of students.

References

- Abuga, E. (2016, August 12). 3 students killed in Kisii accident involving school bus. *Standard Digital News*. Retrieved from: <http://www.standardmedia.co.ke>
- AFP (2014, December 4). School bus crash kills five children in India. *Standard Digital News*. Retrieved from: <http://www.standardmedia.co.ke>
- Boroff, D. and Walsh, M. (2014, April 11). Students recall horrific bus crash that killed 10 in California. *New York Daily News*. Retrieved from: <http://www.nydailynews.com>
- Daily Nation* (2013, July 10). Fifteen killed in bus accident. *Daily Nation*. Retrieved from: <http://www.nation.co.ke>
- Daily Post* (2015, April 21). Students torch school to protest against holiday tuition in Kitui. *Daily Post*. Retrieved from: <http://www.dailypost.co.uk>
- Kyambi, C. (2013). Disaster preparedness in public secondary schools in Mutito constituency, Kitui County, Kenya. M.Ed Research Project, Kenyatta University
- MoEST (2001). *Task force on student discipline and unrest in secondary schools*. Nairobi: Jomo Kenyatta Foundation
- Morocco bus crash kills at least 33, mostly school athletes. (2015, April 10). *Al Jazeera News*. Retrieved from: <http://www.aljazeera.com/news>
- Ndonga, W. (2013, August 13). Student, driver dies in Nakuru bus crash. *Capital News*. Retrieved from: <http://www.capitalfm.co.ke>
- New Vision* (2008, April 22). 93 % of Uganda schools have no fire extinguishers. *New Vision*. Retrieved from: <http://www.newvision.com>
- Onyango, M. (2013). Disaster awareness and preparedness of secondary schools in Homa Bay County, Kenya. PhD Research Thesis, University of Nairobi
- The Independent* (2012, December 15). America's worst school shooting: Nation rocked by massacre as gunman kills 20 children. *The Independent*. Retrieved from: <http://www.independent.co.uk>
- TheJournal.ie* (2012). South Africa: 16 dead in school bus crash. Retrieved from: <http://jrnl.ie/528507>
- Williams, P. (2008). *Security studies: An introduction*. Oxon: Routledge

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